



# BURGER KING TRAFFIC IMPACT ANALYSIS Florence, Oregon

BEI Project 20-113

Prepared for:  
2812 Architecture, LLC  
2812 Colby Ave  
Everett, WA 98201



civil • transportation  
structural • geotechnical  
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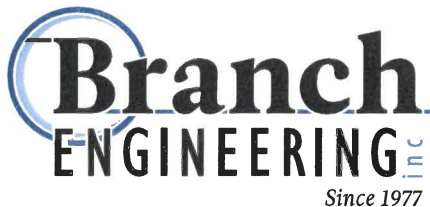
June 30, 2020

310 5th Street  
Springfield, OR 97477  
p: 541.746.0637  
f: 541.746.0389

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# **1.0 EXECUTIVE SUMMARY**

## **1.1 DESCRIPTION**

The development site is located at the northeast quadrant of HWY 101 at 35<sup>th</sup> Street in Florence, Oregon. The site is located on tax lot 06800 of assessor's map 18-12-23-22. The site is currently undeveloped and vacant. The site is planned to be developed with a 2,992SF fast food restaurant with drive-through window. The subject site is zoned and designated for highway commercial land uses that supports the proposed use. Construction is expected to begin late in 2020 and the site is expected to be open for the second quarter in 2021.

## **1.2 TRAFFIC**

The proposed development is projected to generate 120 AM and 98 PM peak hour automobile trips accessing the site at the street frontages at HWY 101 and at 35<sup>th</sup> Street. On average, 58 of the AM trips and 48 of the PM trips are expected to be pass-by trips already on the public roadway system. Traffic impacts are evaluated for full development build-out for the years 2021 and 2026 during the AM and PM peak hours.

## **1.3 VEHICLE SAFETY, ACCESS**

Crash history is evaluated for the intersection of 35<sup>th</sup> Street and HWY 101. The crash analysis did not identify a significantly high intersection crash frequency or unusual crash pattern occurring at the intersection of 35<sup>th</sup> St. and HWY 101. Driveway queuing and onsite vehicle and pedestrian circulation are evaluated to determine the operational safety of the site's proposed access configuration.

The site currently has a grant of access for one driveway approach on HWY 101 that includes provisions for restricting the operation of the access to right-in and right-out only turning movements. As planned, development and operation at the site will include utilizing the access entitlement to HWY 101, constructing a pork chop to comply with the permitted operation of the approach, and constructing an unrestricted access connection at the 35<sup>th</sup> Street frontage. The access at the 35<sup>th</sup> Street frontage will provide primary access via the traffic signal at 35<sup>th</sup> Street and HWY 101.

## **1.4 RESULTS**

In summary, the proposed development will not result in any identifiable significant impacts to the performance or operation of background traffic conditions with the added traffic from the proposed development during the anticipated year of opening 2021 peak hour conditions nor the projected year 2026 horizon year peak hour conditions.

## 2.0 INTRODUCTION

Branch Engineering Inc. has been retained to evaluate potential traffic impacts associated with the proposed site development. This report strives to meet the City of Florence Traffic Impact Study requirements as presented in a scoping memorandum from March 2020, which is included as Appendix A. Included in the analysis is a summary of existing and proposed transportation infrastructure, documentation of observed traffic volumes, projected post development 'Build' traffic volumes, an analysis of crashes at study area street intersections, an analysis of City of Florence access management code, an intersection performance evaluation for the studied intersections, and a queuing and blocking analysis at site driveways and the studied public street intersection at HWY 101 and 35<sup>th</sup> Street. A site plan is included in Appendix B.

The following is a list of analysis year scenarios analyzed in this report:

- ❖ Year 2020 'Existing' Traffic Volumes (AM and PM Design Peak Hours);
- ❖ Year 2021 'Background' Traffic Volumes (AM and PM Design Peak Hours);
- ❖ Year 2021 'Build' Traffic Volumes (AM and PM Design Peak Hours);
- ❖ Year 2026 'Background' Traffic Volumes (AM and PM Design Peak Hours), and;
- ❖ Year 2026 'Build' Traffic Volumes (AM and PM Design Peak Hours).

The aerial below illustrates the location of the proposed development site.



Figure 1: Site Location  
(Aerial Photography from Lane County Maps)

## 3.0 EXISTING CONDITIONS

### 3.1 ROADWAY NETWORK

The relevant roadways for this study are:

- ❖ 35<sup>th</sup> Street;
- ❖ Redwood Street, and;
- ❖ HWY 101.

The following table shows characteristics of the study area roadways in the vicinity of the site:

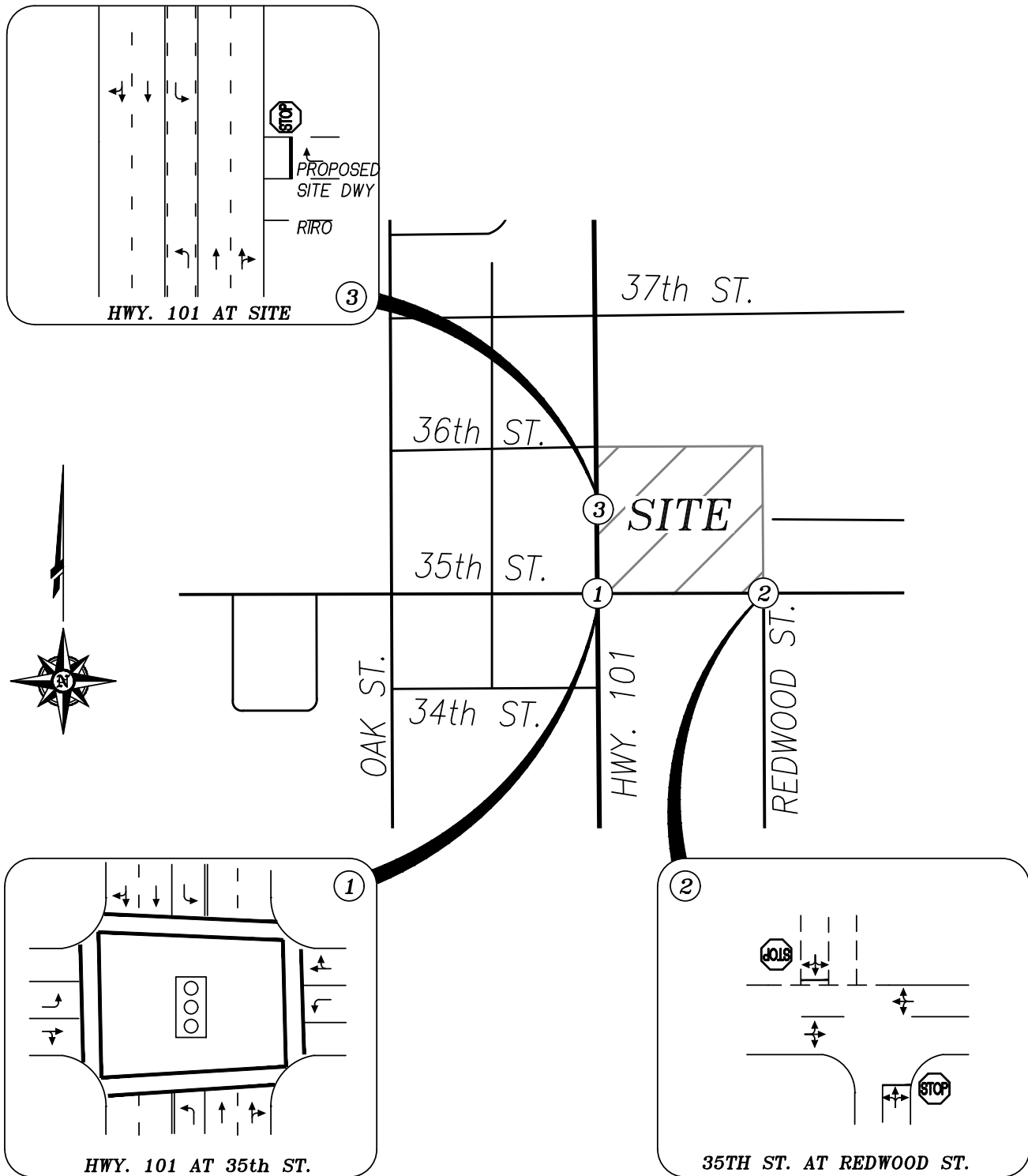
| Table 1: Roadway Network                                                                                                                                                                                                                                                                                   |                              |                |                  |            |                   |              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|----------------|------------------|------------|-------------------|--------------|
| Roadway                                                                                                                                                                                                                                                                                                    | Classification               | Travel Lanes   | Sidewalks        | Bike Lanes | On-Street parking | Posted Speed |
| HWY 101                                                                                                                                                                                                                                                                                                    | Major/<br>Principal Arterial | 4 <sup>1</sup> | Yes              | Yes        | No                | 40MPH        |
| 35 <sup>th</sup> Street                                                                                                                                                                                                                                                                                    | Minor Arterial <sup>2</sup>  | 2              | Yes              | Yes        | No                | 25MPH        |
| Redwood Street                                                                                                                                                                                                                                                                                             | Local                        | 2              | Yes <sup>3</sup> | Yes        | No                | 25MPH        |
| <sup>1</sup> HWY 101 is developed with a continuous center two-way left-turn lane (CTWLTL)<br><sup>2</sup> The 2012 City of Florence TSP identifies 35 <sup>th</sup> Street as a Minor Arterial, while ODOT maps identify it as a Major/Urban Collector<br><sup>3</sup> Sidewalk present on east side only |                              |                |                  |            |                   |              |

HWY 101 is within ODOT's jurisdiction and is maintained by ODOT. 35<sup>th</sup> street is within the City of Florence's jurisdiction and is maintained by the City. The intersection of 35<sup>th</sup> Street and HWY 101 is fully controlled by a traffic signal that is maintained by ODOT. The traffic signal features protected and permissive left-turn phasing with dedicated left turn lane approaches developed from a center two-way left-turn lane that is present on northbound and southbound approaches to 35<sup>th</sup> Street. The eastbound and westbound side street approaches on 35<sup>th</sup> Street to HWY 101 feature permissive left turn phasing and are each developed with dedicated left-turn lanes for storage.

The intersection at Redwood and 35<sup>th</sup> Streets is a three-way stopped controlled ("tee") intersection, with the northbound Redwood Street approach to 35<sup>th</sup> Street stopped and the approaches on 35<sup>th</sup> Street free movements.

Figure 2 shows the lane configurations and intersection controls of the study area intersections and roadways.

# EXISTING LANE CONFIGURATIONS & INTERSECTION CONTROLS



SCALE: NTS

**FIGURE 2**



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TRAFFIC IMPACT ANALYSIS

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## 3.2 NON-MOTORIZED FACILITIES AND TRANSIT

The site frontages include adjacent curbside sidewalks to accommodate pedestrian traffic and striped bike lanes to accommodate bicycles. Rhody Express is the local transit service and is a subsidiary of Lane Transit District. Rhody Express makes two route loops in Florence, with one north loop and one south loop that meet along 21<sup>st</sup> Street. The north loop travels north and south on Spruce Street between 21<sup>st</sup> and 42<sup>nd</sup> Streets with a slight detour to Redwood Street between 32<sup>nd</sup> and 35<sup>th</sup> Streets. At 42<sup>nd</sup> Street, the north loop travels to HWY 101, then via HWY 101 to Bi Mart and then to Fred Meyer before turning around and traveling south back to 21<sup>st</sup> Street. The Rhody express operates on a 60-minute circuit around the loop Tuesday through Friday from 10:00AM through 6:00PM. The routes (north and south loops) provide public transportation to key parts of Florence, including retail centers, schools, food share, the Old Town district, the hospital and several city parks. The availability of transit, pedestrian and bicycle facilities can help to reduce the reliance on single occupant motorized vehicles. A Rhody Express route schedule is included as Appendix C.

## 3.3 INTERSECTIONS

With City concurrence, the following intersections are evaluated with background and proposed post-development traffic scenarios:

- ❖ 35<sup>th</sup> Street at HWY 101;
- ❖ HWY 101 at proposed site right-in right-out only driveway, and;
- ❖ 35<sup>th</sup> Street at proposed driveway access and Redwood Street (treated as one intersection).

The intersection of 35<sup>th</sup> Street at Redwood Street is currently a three-approach (“tee”) intersection. The proposed driveway approach on 35<sup>th</sup> Street would add a southbound approach and a northbound receiving lane to the site, and would operate effectively as a fourth leg to the intersection at 35<sup>th</sup> and Redwood Street. The southbound site driveway approach alignment to 35<sup>th</sup> Street would be offset from the northbound Redwood Street approach alignment by approximately 35 feet at the proposed centerline of the site.

## 3.4 CRASHES

An analysis of crash history is performed for the public street intersections at HWY 101 and 35<sup>th</sup> Street and 35<sup>th</sup> Street at Redwood Street. Detailed crash data reports were downloaded from the Oregon Department of Transportation’s (ODOT’s) crash data system online for the most recent five-years of available data, which at the time of this report is the period from January 1, 2014 through December 31, 2018. Crash data reports are available from ODOT’s Crash Analysis and Reporting Unit web tool at: <https://www.oregon.gov/odot/Data/Pages/Crash.aspx>. The current crash reporting methodology utilized by ODOT accounts for crashes only if an injury occurred or if a loss in property value of \$1,500 or more occurred as a result of the crash. There were no crashes reported to have occurred at the intersection of 35<sup>th</sup> Street and Redwood Street. The following table illustrates the overall five-year crash history and frequency for the intersection at 35<sup>th</sup> Street and HWY 101.

| Table 2: Intersection Crashes at HWY 101 and 35 <sup>th</sup> Street                                               |             |         |     |          |             |          |                    |               |                         |                            |
|--------------------------------------------------------------------------------------------------------------------|-------------|---------|-----|----------|-------------|----------|--------------------|---------------|-------------------------|----------------------------|
| Year                                                                                                               | AADT Volume | Head-On | Ped | Angle/SS | Turn Mvmnts | Rear End | Fixed Object/Other | Total Crashes | Crash Rate <sup>1</sup> | Critical Rate <sup>2</sup> |
| 2014                                                                                                               | 16,000      | 0       | 0   | 0        | 2           | 0        | 0                  | 2             | 0.07                    | 0.62                       |
| 2015                                                                                                               | 16,000      | 0       | 0   | 0        | 0           | 0        | 1 <sup>3</sup>     | 1             | 0.17                    | 0.62                       |
| 2016                                                                                                               | 16,000      | 0       | 0   | 1        | 2           | 0        | 0                  | 3             | 0.51                    | 0.62                       |
| 2017                                                                                                               | 16,000      | 0       | 0   | 0        | 1           | 0        | 1                  | 2             | 0.07                    | 0.62                       |
| 2018                                                                                                               | 16,000      | 0       | 0   | 2        | 2           | 0        | 0                  | 4             | 0.68                    | 0.62                       |
| Totals                                                                                                             | 16,000      | 0       | 0   | 3        | 7           | 0        | 2                  | 12            | 0.41                    | 0.62                       |
| 1. Crash Rate (Crashes per Million Entering Vehicles = CPMEV) = (total 5-year crashes x 1,000,000)/(5 x ADT x 365) |             |         |     |          |             |          |                    |               |                         |                            |
| 2. Critical rate per Highway Safety Manual (HSM) methodology                                                       |             |         |     |          |             |          |                    |               |                         |                            |
| 3. One reported crash was the result of a backing maneuver                                                         |             |         |     |          |             |          |                    |               |                         |                            |

While the year 2018 annual crash rate was greater than the referenced critical five-year average crash rate of 0.68 crashes per million entering vehicles for comparable signalized four-way urban intersections, the cumulative average of 0.41 crashes per million entering vehicles over the five-year analysis period was below the critical rate of 0.62 CPMEV, which is the standard applicable criteria. The crash frequency and types of crashes that are reported to have occurred are not considered abnormal and no additional crash reducing measures are necessary.

ODOT Crash Data System intersection crash data reports are included as Appendix D.

### 3.5 EXISTING TRAFFIC VOLUMES

AM and PM peak hour traffic volumes were collected by manual traffic counts conducted by Gary's Traffic Data and Branch Engineering in March 2020, and are included as Appendix E. The turning movement traffic counts at HWY 101 and 35<sup>th</sup> Street were collected between 7:00AM and 9:00AM and between 4:00PM and 6:00PM on a typical weekday (Tuesday-Thursday, non-holiday week), which was Thursday March 19, 2020. Peak hours extrapolated from the collected traffic count volumes were determined to occur between 8:00 AM and 9:00 AM and between 4:30 PM and 5:30 PM. Using the peak hour collected traffic count data for HWY 101 at 35<sup>th</sup> Street are balanced through for design hour conditions to the proposed driveway intersection on HWY 101. The observed traffic volumes are provided on Figure 3 on page 9.

### 3.6 SPECIAL TRANSPORTATION TREND ADJUSTMENT

Because traffic count data was collected during the week prior to the Oregon Governor's Stay Home Stay Safe (SHSS) guidelines that were implemented on March 23<sup>rd</sup>, 2020 due to concerns about spreading the Corona Virus/COVID-19, an adjustment factor is necessary to adjust collected traffic count data to account for reduced approaching traffic volume and trip making trends on the nearby transportation system. During the weeks leading to the SHSS guidelines, traffic had been declining, and public school was first temporary closed starting the week of March 16<sup>th</sup>, which was the week traffic count data was collected for the subject site and this traffic impact analysis. The Oregon Department of Transportation has been keeping track of traffic trends on statewide highways where there are Automated Traffic Recorder (ATR) Stations installed that continuously collect and record traffic volume data in real time. ODOT Weekly COVID-19 Traffic Trend Reports are available online at: <https://www.oregon.gov/odot/Data/Pages/Traffic-Counting.aspx>. For the



week immediately prior to the Governor's SHSS order, the data is available by clicking the link for April 10, 2020 - Observed Statewide Traffic Volume Patterns, which will take the user to collected data for the years 2019 and 2020 corresponding to the week that that traffic count data was collected for the site. Per the statewide data, the overall average daily traffic trend for the week of March 16<sup>th</sup>, 2020 was approximately 19 percent lower than 2019 traffic volume data for the ATR stations, therefore; an adjustment factor of 1.19 is assumed appropriate for adjusting collected traffic count data to simulate the effects of COVID-19 on transportation trends that were already occurring the week prior to the Governor's SHSS guidelines. The Oregon Department of Transportation's April 10, 2020 Traffic Report comparing year 2019 and 2020 traffic data collected at ATR stations during the week of March 16<sup>th</sup>, 2020 that data was collected for the site, is included in Appendix E with the collected traffic count data.

### **3.7 SEASONAL ADJUSTMENT**

Typically, peak hour traffic data collected for interior City streets within urbanized areas do not require seasonal adjustments to represent design hourly approaching traffic volumes (i.e. 30<sup>th</sup> highest hour conditions), however, since the application of the Special Transportation Trend Adjustment Factor discussed and developed in the previous section is based on Statewide highways where there is seasonal fluctuation, and for the purpose of providing a conservative analysis herein, the collected year 2020 turning movement traffic count data with adjustments for the effects of COVID-19 are factored again by a calculated seasonal adjustment factor. The seasonal adjustment factor is calculated by using the most recent available ODOT Seasonal Trend Table (2018) available online at the ODOT Analysis Procedures Manual website (<https://www.oregon.gov/odot/Planning/Pages/APM.aspx>) with the coastal destination traffic trend assumed applicable for each approach/movement and by applying linear interpolation to the count date from tabulated values for the corresponding dates of those values. The adjustment methodology is consistent with the methodology outlined in the current edition of the Oregon Department of Transportation's (ODOT's) Analysis Procedures Manual (APM) at the link above. Tabulated seasonal trend values contained within the ODOT Seasonal Trend Table are available for the 1<sup>st</sup> and the 15<sup>th</sup> days of each month throughout the year. Per the 2018 Seasonal Trend Table, the coastal destination trend's peak seasonal period is represented during the period from July 1<sup>st</sup> to July 15<sup>th</sup> with the Seasonal Trend Peak Period Factor of 0.8074. For approaching traffic data collected on the March 19<sup>th</sup>, 2020 count date, the seasonal trend is linearly interpolated for four days for tabulated values of between 1.04732 and 1.0504 corresponding to dates of March 15<sup>th</sup> and April 1<sup>st</sup>. The interpolated seasonal trend value is 1.048 for March 19<sup>th</sup>, and the calculated seasonal adjustment factors applied to the turning movement traffic count data is 1.298.

Design Hour year 2020 traffic volumes with the product of the Special Transportation Trend and the calculated Seasonal Adjustment Factors applied are provided on Figure 4 on page 10.

### **3.8 PIPELINE TRAFFIC VOLUMES**

In addition to existing roadway traffic volumes, pending local area land use development projects in construction that have been approved by the City of Florence but not yet issued occupancy may add traffic to the study area intersections and travel routes that would not be accounted for when traffic count data was collected. Motor vehicle trips that are included in a traffic impact analysis that has been approved, but not yet subject to post-development occupancy level day-to-day design hour trip generation conditions are known as pipeline trips. At the time of this traffic study, one approved traffic impact analyses for a residential subdivision located north of 35<sup>th</sup> Street on



Rhododendron Drive northwest of the site with 31 single family residential detached housing units and 101 apartment units was approved but not built-out yet. The City of Florence furnished the approved traffic study for said development, which will add left-turns at the northbound and eastbound approaches to HWY 101 at 35<sup>th</sup> Street and eastbound right-turns during design hour traffic conditions by the end of the year 2021. Figure 5 on page 11 shows the pipeline trips in the study area.

### 3.9 TRAFFIC GROWTH AND FUTURE TRAFFIC

The City of Florence codified Traffic Impact Analysis requirements do not contain analysis details pertaining to analysis years that need to be included in a TIA. Per the Oregon Department of Transportation's (ODOT's) development review guidelines, Table 3.3, proposed developments that that generate between 1,000 and 2,999 average daily trips (ADT) and include a single-phase year of opening are suggested to include the year of opening and a five-year post-development planning horizon year in the analysis scenarios. Although ODOT does not require an analysis for this proposed development, the analysis required by the City of Florence is proposed to include the year of opening (anticipated to be 2021), and a five-year post-development horizon year, 2026, consistent with the suggested analysis year scenarios by ODOT.

To grow year 2020 design hour traffic volumes displayed on Figure 4 to represent year 2021 and year 2026 background design hour conditions, an average annual growth rate (AAGR) is calculated from the ODOT Future Volume Tables (FVT). The ODOT FVT provides base year 2018 and future year 2038 traffic volume data based on collected annual average daily traffic volumes for the base year and statewide traffic growth models that account for land use, transportation and employment trends associated with projected population growth and planned transportation improvements. The FVT for HWY 101 near the study area includes three sites on HWY 101 (ODOT HWY #9). The following table provides the local area FVT tabulated values for three sites near the subject development site.

| Table 3: ODOT Future Volumes Table Data (AADT) |     |                                |       |       |        |
|------------------------------------------------|-----|--------------------------------|-------|-------|--------|
| Site ID                                        | HWY | Description                    | 2018  | 2038  | RSQ    |
| 1170                                           | 9   | 0.03 Mile South Munsel Lake Rd | 9500  | 9600  | 0.2347 |
| 1171                                           | 9   | 0.02 Mile South of 36th Street | 12500 | 12600 | 0.4298 |
| 1172                                           | 9   | 0.02 Mile South of 29th Street | 14100 | 14200 | 0.805  |

As shown in the table, one site has an RSQ ( $R^2$ ) value greater than 0.75 that generally indicates that the data is reliable and usable. The usable data was collected at site 1172, which is located approximately 0.375 mile south of the intersection at 35<sup>th</sup> Street and HWY 101. Using the data for site 1172, the average annual growth rate (AAGR) calculation over the 20-year period between the 2018 base year and the 2038 future year is as follows:

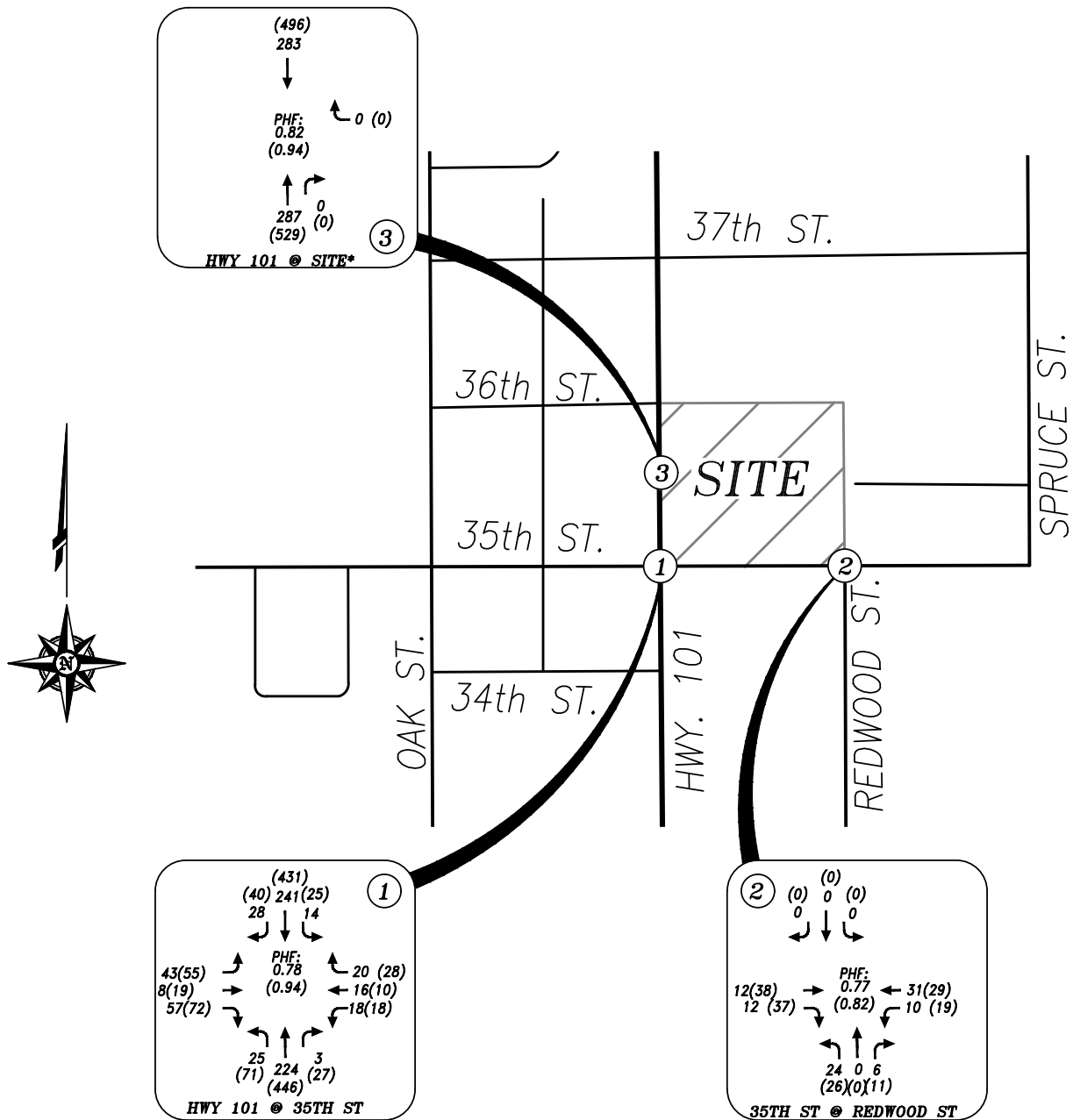
$$\text{AAGR} = (14,200 - 14,100) / (14,100 \times 20) = 0.0355\%/\text{year}$$

The AAGR is then factored for one year and six years to project year 2021 year of opening background traffic volumes and year 2026 five-year post development horizon design hour background traffic volumes. The AAGR and growth rate factors are calculated and applied using

the linear growth methodology discussed in the current ODOT Analysis Procedures Manual (APM), Section 6.4.

Pipeline trips discussed in section 3.8, previously, are expected to be added to projected background growth calculated in the above steps by the year 2021 analysis year, therefore, background traffic volumes for the year 2021 and 2026 design hours will include growth of 2020 design hour traffic and pipeline trips. Background traffic volumes for the 2021 design hours are provided on Figure 6 on page 13. Year 2026 background traffic volumes are provided on Figure 7 on page 14.

# YEAR 2020 COLLECTED PEAK HOUR TRAFFIC VOLUMES



## LEGEND

xx = AM PEAK HOUR

(xx) = PM PEAK HOUR

\*BALANCED TO 35TH AND HWY 101  
IN & OUT FLOWS

SCALE: NTS



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**FIGURE 3**

JUNE 30, 2020

Z:\2020\20-113 Florence Burger King\Traffic\Figures\20-113 TRAFFIC FIGURES.dwg FIG4 6/30/2020 11:28 AM DANH 23.1s (LMS Tech)

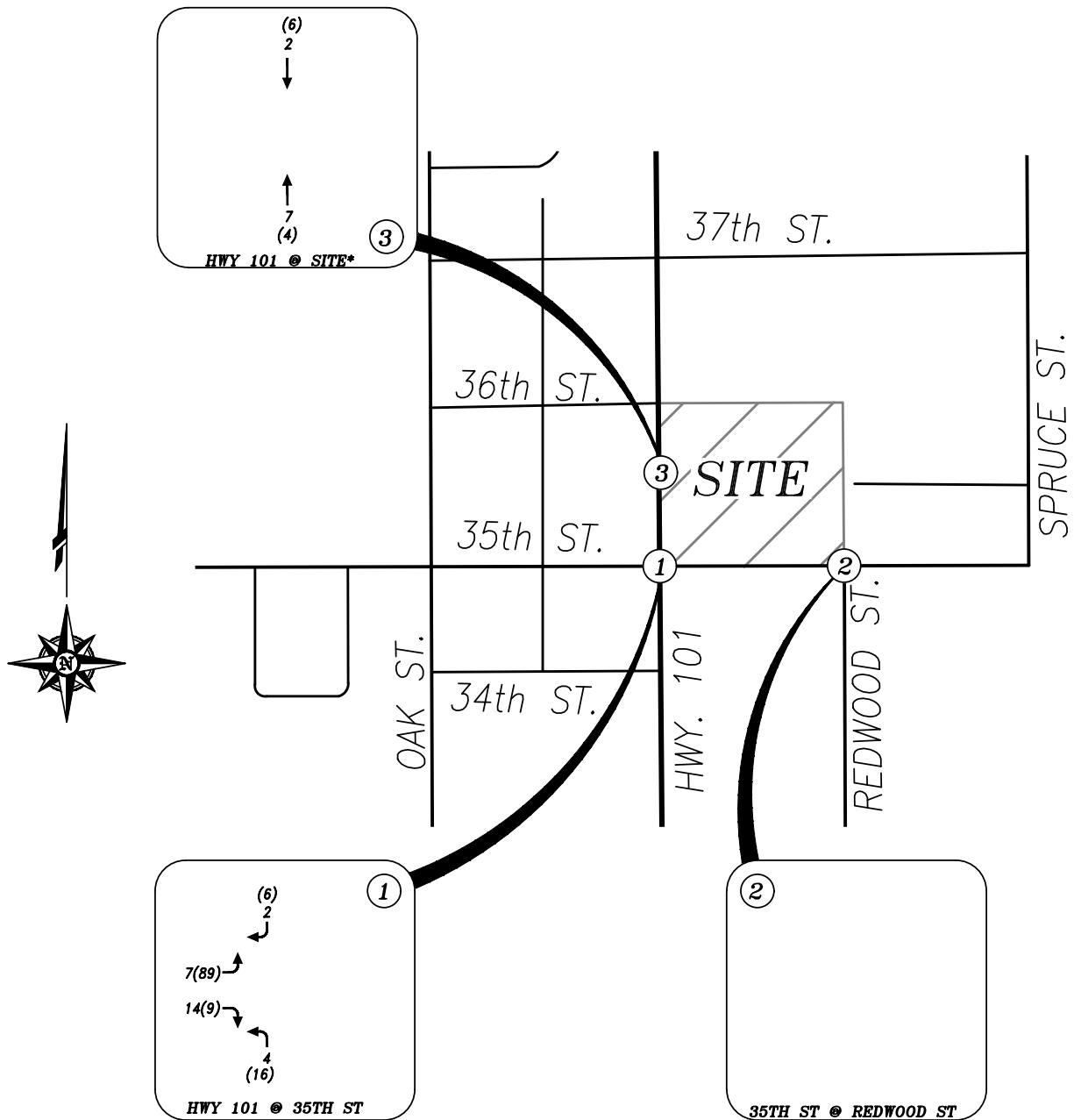


IN &amp; OUT FLOWS

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# **PIPELINE TRIPS FROM APPROVED TRAFFIC IMPACT ANALYSES**



## **LEGEND**

xx = AM PEAK HOUR

(xx) = PM PEAK HOUR

\*BALANCED TO 35TH AND HWY 101  
IN & OUT FLOWS

SCALE: NTS

**FIGURE 5**

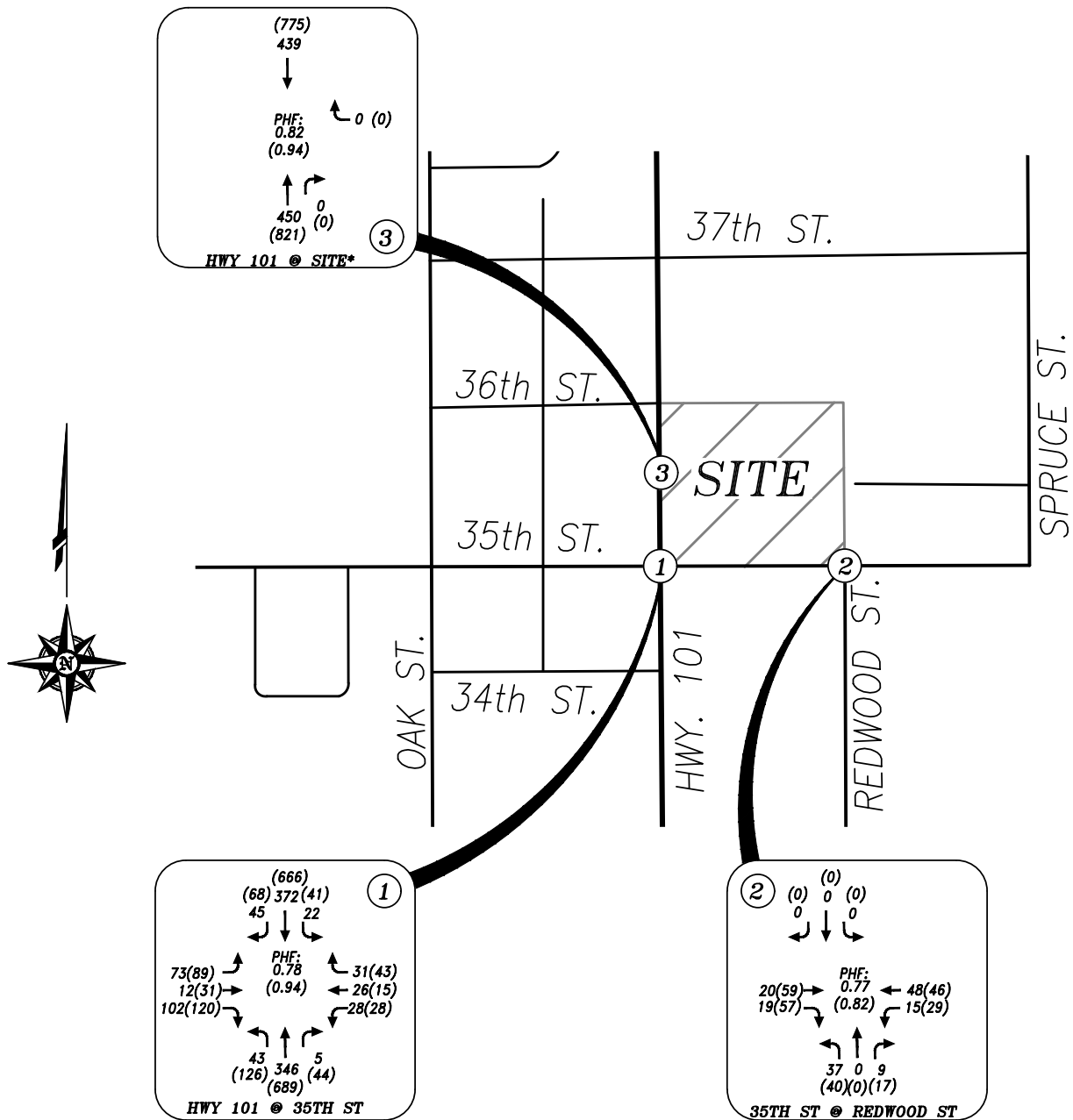


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TRAFFIC IMPACT ANALYSIS

JUNE 30, 2020

# YEAR 2021 DESIGN HOUR "BACKGROUND/NO-BUILD" TRAFFIC VOLUMES



## LEGEND

xx = AM PEAK HOUR

(xx) = PM PEAK HOUR

\*BALANCED TO 35TH AND HWY 101  
IN & OUT FLOWS

SCALE: NTS

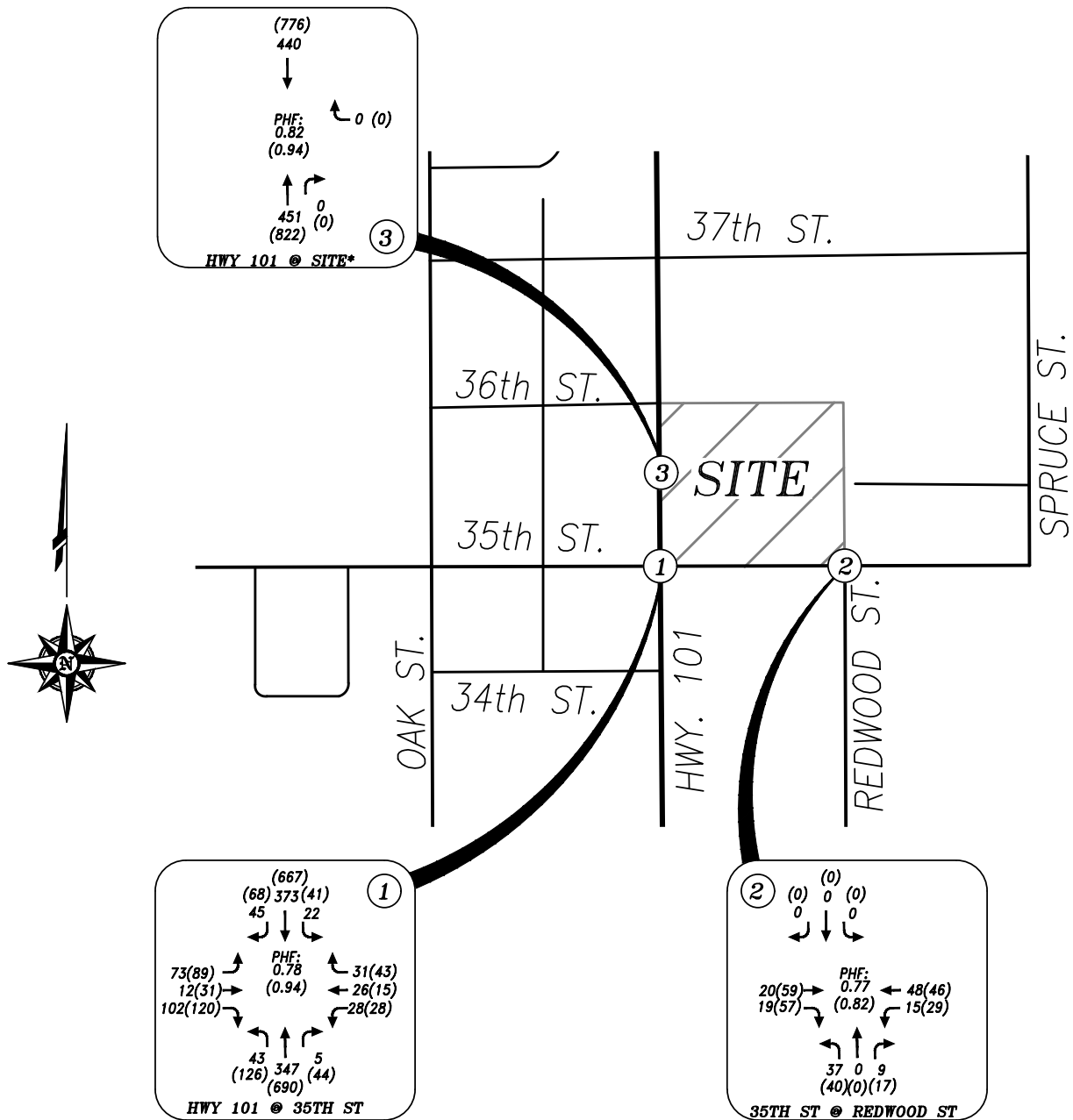
FIGURE 6



FLORENCE BURGER KING  
TRAFFIC IMPACT ANALYSIS

JUNE 30, 2020

# YEAR 2026 DESIGN HOUR "BACKGROUND/NO-BUILD" TRAFFIC VOLUMES



## LEGEND

xx = AM PEAK HOUR

(xx) = PM PEAK HOUR

\*BALANCED TO 35TH AND HWY 101  
IN & OUT FLOWS

SCALE: NTS



**FLORENCE BURGER KING**  
TRAFFIC IMPACT ANALYSIS

**FIGURE 7**

JUNE 30, 2020

## **4.0 DEVELOPMENT CONDITIONS**

### **4.1 LAND USE**

The potential developer entity is seeking land use approval for development of a 2.992 KSF GFA single occupant fast food restaurant with a drive-through window on the site. As planned and shown on the current site plan, the remaining land area in the area of disturbance abutting 35<sup>th</sup> Street and approximately mid-block between 35<sup>th</sup> Street and the extension of the right-of-way of 36<sup>th</sup> Street will be utilized for parking and drive-through facilities to serve the proposed use. The drive through facilities will feature two parallel ordering kiosks that will allow two entrance lanes that will merge downstream into a single drive-through lane. The dual kiosks will allow approximately six vehicles to queue in three vehicle lengths from the entrance to the merge point in the drive-through lane downstream of the kiosks. As discussed in the introduction, a site plan is included as Appendix B.

### **4.2 SITE ACCESS**

The site has frontage on HWY 101 between 35<sup>th</sup> Street and the projected extension of the centerline of 36<sup>th</sup> Street across the north subject property line. The HWY 101 frontage has an existing curb cut at approximately mid-block between 35<sup>th</sup> and 36<sup>th</sup> Streets, where there was previously a right-of-way provided in the 1891 Frasier and Berry's Subdivision Plat between lots 1-10 and lots 11-20 of Block 10. This right-of-way was vacated within the last couple of decades, and the approximate location of the existing curb cut is planned to be improved and utilized with right-in right-out access controls between the site and HWY 101. Early correspondence with ODOT indicated that an access permit to occupy at this location will be supported by ODOT, given the proposed configuration and that all the applicant will need to do is submit for a driveway approach permit or for a construction permit for work within the right-of-way of HWY 101.

The site entitlements currently include a crossover access easement to the existing driveway approach at the adjacent site to the north, which is currently an unrestricted approach. The site plan does not currently show a connection to this existing driveway, which is aligned with the centerline of 36<sup>th</sup> Street.

### **4.3 35<sup>TH</sup> STREET ACCESS**

The site plan includes a proposed 25-foot wide unrestricted access connection on the site's 35<sup>th</sup> Street frontage that is shown as a fourth leg (dog-leg) to the existing three-way intersection at Redwood Street. The proposed driveway centerline shown on the site plan is located approximately 35 feet west of the existing centerline of Redwood Street. Redwood Street's centerline is aligned approximately with the existing eastern property line at the site. The placement of this access is shown on the site plan to maximize the spacing from the stop bar at the westbound 35<sup>th</sup> Street approach to HWY 101, where the designer presumably is concerned with impacting the existing striped queue storage and driveway operation within close proximity to the intersection of HWY 101 at 35<sup>th</sup> Street. The City of Florence Code requires a minimum of 25 feet of spacing distance between access and intersections (Title 8, section 8-2-3-4(D)), but it is not clear from this section of the code if the code is applicable to the centerlines or the nearside of the edges of the approach throats when offsetting driveway and public street driveway approaches are across the street from



one another. The subdivision code, Title 10, Chapter 35, also discusses approach spacing in section 10-35-2-7, where it says the minimum separation of accesses and public street intersections on the same side of the street shall be 30 feet between the near side surfacing of the approach and the near right-of way of collector streets. Title 10-35-2-7 also includes a minimum offset of 50 feet of separation between near side edge of surfacing of the approach and the right-of way of arterials streets. The proposed access location offset from the intersection at Redwood Street shown on the site plan does not involve conflicting left turns, since left-turns are allowed to be executed in front of one another approaching the driveway from the west and approaching Redwood Street from the east. The approach also leads to an access easement, which is presumably for future development of parcels to the north that are not currently proposed to be developed.

## 4.4 TRIP GENERATION

To project trip generation for the proposed post development traffic conditions, references were made to the Trip Generation Manual, 10<sup>th</sup> Edition, and the Trip Generation Handbook, 3<sup>rd</sup> Edition, both published by the Institute of Transportation Engineers (ITE). The table on the following page summarizes the projected peak hour site generated traffic based on the available published data.

## 4.5 PASS-BY TRIPS

The development site's type of land use is expected generate a significant amount of pass-by and diverted linked traffic during AM and PM peak hour trip generation periods, since most motorists do not make exclusive or long trips across town, passing similar competing markets on the way to make fast food restaurant purchases, but rather visit these types of establishments on the way to or from a primary origination/destination in the vicinity. The presence of competing markets nearby will have a significant effect on the distance motorists are willing to travel to make a trip to the site, since the HWY 101 corridor is developed with a significant density of competing uses similar to the site's proposed use.

According to the ITE Trip Generation Handbook, 3<sup>rd</sup> Edition, *"Pass-by trips are trips that are made as intermediate stops on the way from an origin to a destination without a route diversion. Pass-by trips are attracted from traffic passing the site on an adjacent street or roadway that offers direct access to the trip generator. Pass-by trips are not diverted from another roadway."* The Trip Generation Handbook contains the following average pass-by trip rate percentages for the proposed use as a fast food restaurant with drive through window: 49 percent of AM and 50 percent of PM trip generation during the peak hours of adjacent street traffic.

Based on the site's proposed access configuration, most northbound pass-by trips by familiar drivers on HWY 101 would be expected to enter the site via a right-turn at 35<sup>th</sup> Street to access the site driveway, traverse the drive-through, then exit the site at the proposed RIRO driveway, which will be similar to a diverted linked trip. Similarly, southbound pass-by trips are likely to be disguised as diverted linked trips, that will enter the site via a left-turn from HWY 101 at 35<sup>th</sup> Street to access the driveway, traverse the drive-through and re-enter southbound traffic on HWY 101 as left-turns from 35<sup>th</sup> Street's westbound approach.

The trip generation potential for the development of the site is illustrated in the following table.

| <b>Table 4: Site Trip Generation</b>                                                                               |               |             |                    |       |                |                 |
|--------------------------------------------------------------------------------------------------------------------|---------------|-------------|--------------------|-------|----------------|-----------------|
| Land Use/ ITE Land Use Code                                                                                        | Ind. Variable | Units (QTY) | TG Rate Trips/Unit | Trips | Trips IN (%/#) | Trips OUT (%/#) |
| <b>AM Peak Hour</b>                                                                                                |               |             |                    |       |                |                 |
| Fast Food Restaurant with Drive-Through Window/934                                                                 | KSF GFA       | 2.992       | 40.19              | 120   | 51%/61         | 49%/59          |
| Pass-By Trips:                                                                                                     |               |             | 49%                | 58*   | 29             | 29              |
| <b>PM Peak Hour</b>                                                                                                |               |             |                    |       |                |                 |
| Fast Food Restaurant with Drive-Through Window/934                                                                 | KSF GFA       | 2.992       | 32.67              | 98    | 52%/51         | 48%/47          |
| Pass-By Trips:                                                                                                     |               |             | 50%                | 48*   | 24             | 24              |
| <b>ADT</b>                                                                                                         |               |             |                    |       |                |                 |
| Fast Food Restaurant with Drive-Through Window/934                                                                 | KSF GFA       | 2.992       | 470.95             | 1,409 | 50%/705        | 50%/704         |
| *AM and PM Pass-by trips (59 and 49) are rounded down to nearest even number for 50% even directional split in/out |               |             |                    |       |                |                 |

As indicated above, the proposed post-development traffic conditions could result in an average of 120 AM peak hour vehicle trips and 98 PM peak hour vehicle trips accessing the site. Out of the total peak hour vehicle trips, 49 percent of the AM and 50 percent of the PM peak hour trips are expected to be pass-by trips, which are trips already on the roadway that would be expected to make a route diversion at the site driveway to enter and exit the site, but will otherwise continue in the same direction they were traveling upon leaving the site between primary trip origins and destinations. Per City of Florence Title 10, Chapter 1, Section 10-1-1-4(E), any development that generates 250 or more average daily trips is required to provide a traffic impact analysis. Because the proposed development will generate 1,409 average daily trips during typical weekday, the proposed development requires a traffic impact analysis.

## 4.6 TRIP DISTRIBUTION AND ASSIGNMENT

To project the proposed development's trip distribution, references were made to the ODOT Future Volumes Table (FVT) for HWY 101 locations, projected design hour traffic volumes, recent traffic impact analyses and the location of the site with respect to local land use patterns (trip origin and destination pairs). The ODOT FVT includes daily traffic volumes that were most recently collected in 2018 at a location 0.02 miles south of the intersection at 36<sup>th</sup> Street that is north of the site and has the highest AADT reported (12,500) between the site and the north UGB on HWY 101. A second location south of the site located approximately 0.02 mile south of the intersection at 17<sup>th</sup> and HWY 101 had an AADT of 16,400, and was the highest ADT reported for the corridor between the south UGB and the site. Using these data and the approaching traffic volumes on east and west approaches to the intersection at HWY 101 and 35<sup>th</sup> Street, and the relative distribution of residential land uses near the site, the expected primary non-pass-by trip assignment is anticipated to be split with the following assignments:

- ❖ 35% of primary trip origins and destinations north via HWY 101;
- ❖ 45% of primary trip origins and destinations south (east and west) via HWY 101;

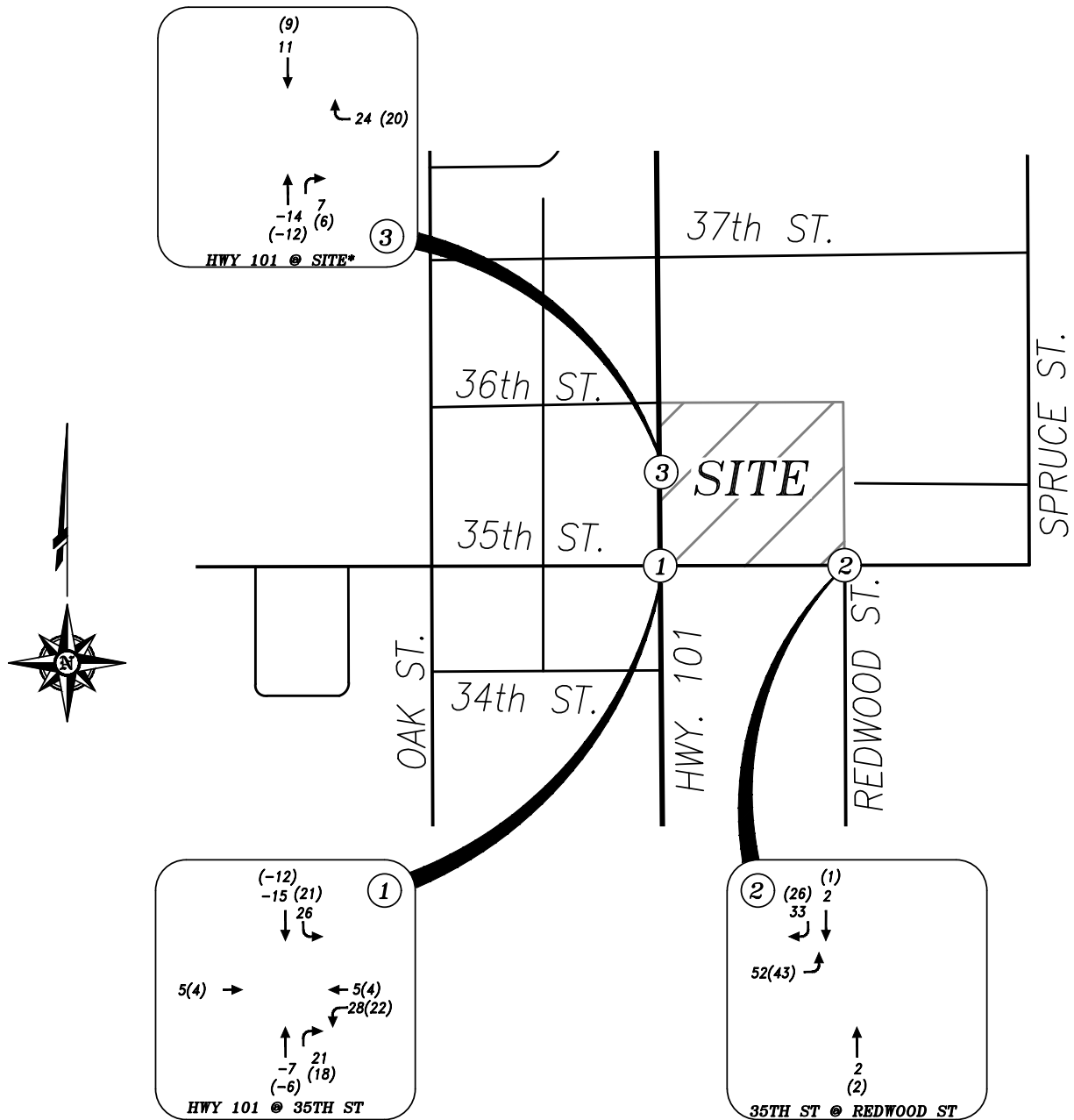
- ❖ 15% of primary trip origins and destinations west via 35<sup>th</sup> Street, and;
- ❖ 5% of primary trip origins and destinations south and east via Redwood Street and Spruce Streets.

Anticipated pass-by (non-primary) trip assignments are based on AM and PM design hour approaching traffic volumes, which are generally evenly split between northbound and southbound directions at the site frontage during AM and PM design hour conditions. The distribution of pass-by trips is therefore evenly split, with approximately 50 percent of pass-by trips coming from and destined to each the northbound and southbound direction at the site frontage. As described previously, the site's access configuration will result in a significant number of would-be pass-by trips at the site's driveway on HWY 101 being redistributed from through movements to turning movements at the intersection at 35<sup>th</sup> Street and HWY 101 because the site driveway is limited to right-in and right-out only turning movements and will be located at the northern extent of the site. The arrangement of access on the site places the RIRO approach on HWY 101 north of the drive-through window entrance and parking area, with the site located on the east side of the highway. The approaching traffic volumes on 35<sup>th</sup> Street are not likely to contribute significantly to the pass-by trip making phenomenon, and it is assumed that there will not be a significant number of pass-by trips out of 35<sup>th</sup> Street's approaching traffic volume.

An illustration of the site's peak hour site generated traffic distribution is provided on the following page as Figure 8.

To analyze the post-development build scenario traffic conditions in the design hours of the analysis years, the site generated traffic was added to the year 2021 and 2026 background traffic volumes. These "build" total traffic volumes are provided on Figures 9 and 10 on pages 20 and 21.

# PEAK HOUR SITE GENERATED TRAFFIC DISTRIBUTION



## LEGEND

xx = AM PEAK HOUR

(xx) = PM PEAK HOUR

-(-) = AM & (PM) PASS-BY TRIPS

| PEAK HOUR | PRIMARY TRIPS |     | PASS-BY TRIPS |     | TOTAL |     |
|-----------|---------------|-----|---------------|-----|-------|-----|
|           | IN            | OUT | IN            | OUT | IN    | OUT |
| AM        | 32            | 30  | 29            | 29  | 61    | 59  |
| PM        | 27            | 23  | 24            | 24  | 51    | 47  |

SCALE: NTS

**FIGURE 8**

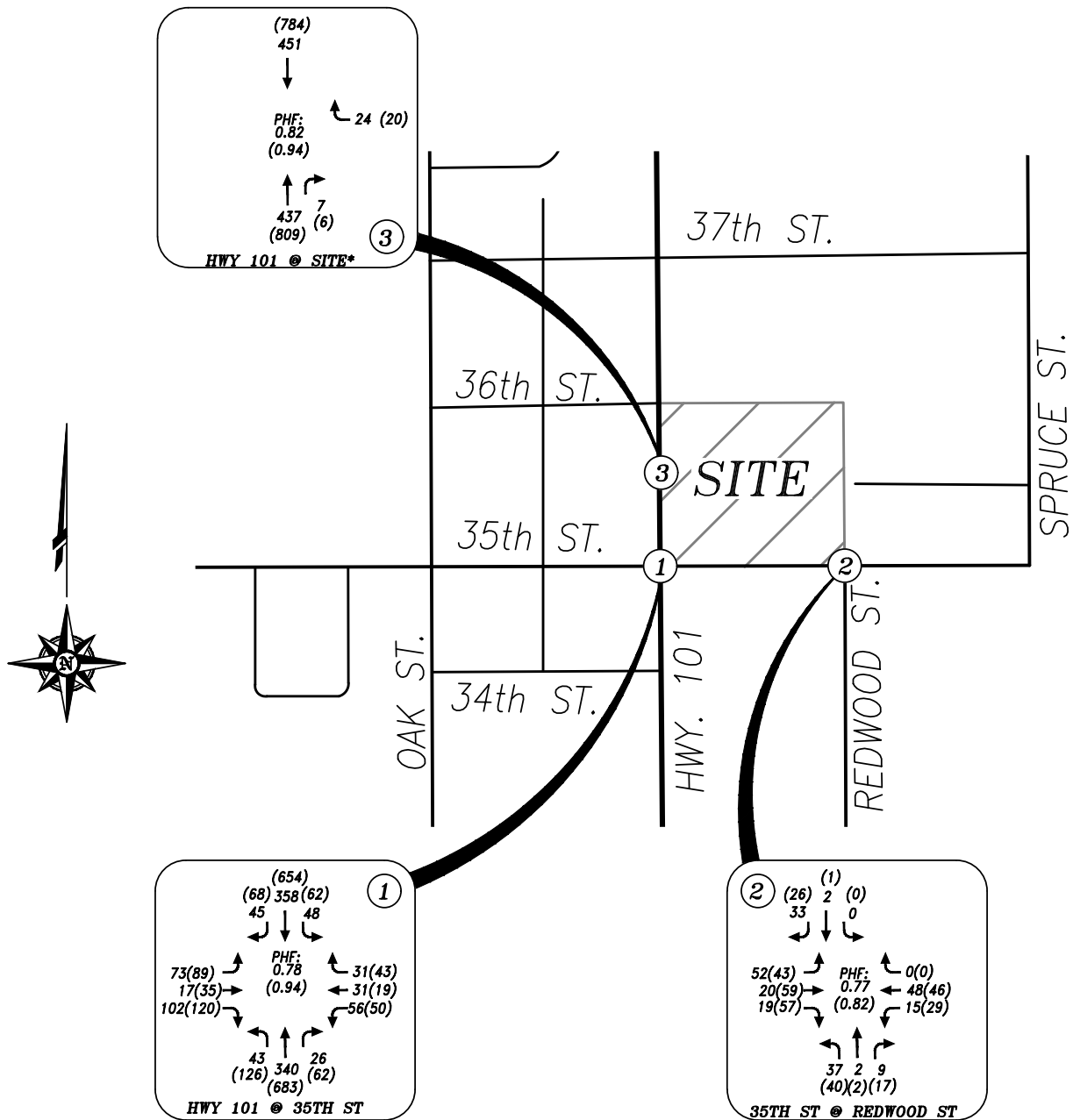


**FLORENCE BURGER KING**

TRAFFIC IMPACT ANALYSIS

JUNE 30, 2020

# YEAR 2021 DESIGN HOUR 'BUILD' TOTAL TRAFFIC VOLUMES



## LEGEND

xx = AM PEAK HOUR  
(xx) = PM PEAK HOUR

SCALE: NTS



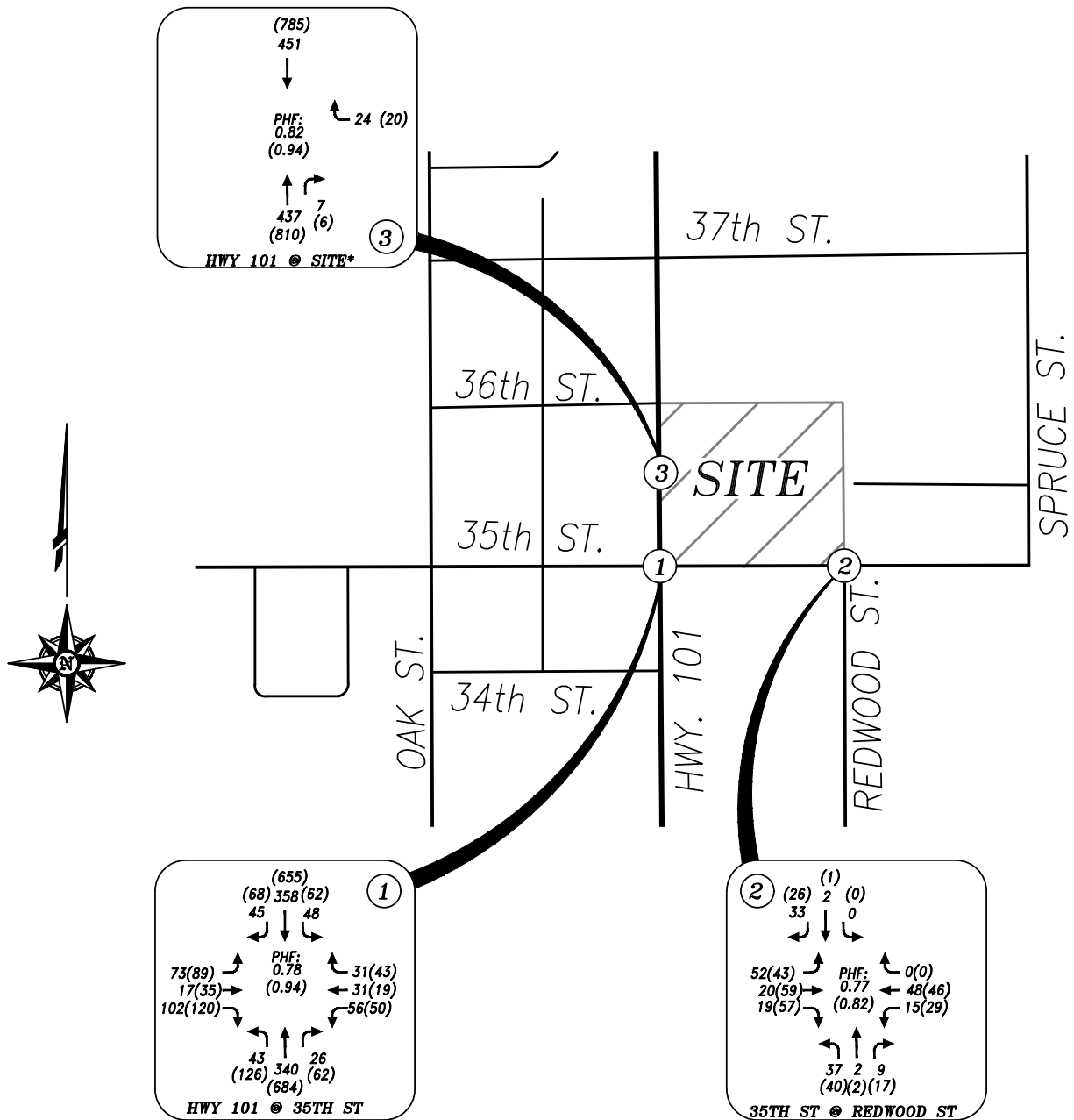
FLORENC BURGER KING

TRAFFIC IMPACT ANALYSIS

FIGURE 9

JUNE 30, 2020

# 2026 DESIGN HOUR' BUILD' TOTAL TRAFFIC VOLUMES



N.T.S.

## LEGEND

xx = PM PEAK HOUR  
TRAFFIC VOLUME

SCALE: NTS

FIGURE 10



FLORENCE BURGER KING  
TRAFFIC IMPACT ANALYSIS

JUNE 30, 2020

## 4.7 INTERSECTION PERFORMANCE

Study area intersections are evaluated to determine Level of Service (LOS) based on average vehicle delay. Calculations for the signalized and unsignalized intersections are performed with the computer program SYNCHRO 10, by Trafficware, which utilizes selectable Highway Capacity Manual (HCM) methodologies to analyze intersection and approach lane performance characteristics. Per the Oregon Department of Transportation Analysis Procedures Manual's (APM's) recommended analysis procedure, the HCM 2000 methodology is utilized to analyze signalized intersections and the HCM 2010 methodology is utilized to analyze unsignalized intersection and approach performances.

Level of service is classified by a letter scale from 'A' to 'F'. LOS 'A' represents optimum operating conditions and minimal delay. LOS 'F' indicates over capacity conditions causing unacceptable delay. The City of Florence's current transportation system plan (TSP) identifies with LOS 'D' at all signalized and all-way stop controlled intersections if the V/C ratio is not higher than 1.0 for the facility. The City of Florence standard for unsignalized two-way stop-controlled intersections is LOS 'E' at the critical movement (poorest performing approach). Mitigation measures may be necessary to remedy performance level conditions when level(s) of service fall(s) below the codified City standard or when the ODOT V/C performance standard is not met and the condition is identified to be the result of development impacts.

The LOS determined by average delay per vehicle as established in the Highway Capacity Manual, 2000 and HCM, 2010 are as follows:

| Table 5: HCM Level of Service Criteria |                         |                       |
|----------------------------------------|-------------------------|-----------------------|
| Level of Service                       | Unsignalized – HCM 2010 | Signalized – HCM 2000 |
| A                                      | < 10 sec                | < 10 sec              |
| B                                      | >10 and ≤ 15 sec        | >10 and ≤ 20 sec      |
| C                                      | >15 and ≤ 25 sec        | >20 and ≤ 35 sec      |
| D                                      | >25 and ≤ 35 sec        | >35 and ≤ 55 sec      |
| E                                      | >35 and ≤ 50 sec        | >55 and ≤ 80 sec      |
| F                                      | > 50 sec                | > 80 sec              |

Another measure of performance and congestion is volume to capacity ratio (v/c), which can indicate the level of demand as a proportion of the roadway's theoretical capacity. As described previously, ODOT does not require a formal traffic impact analysis for the proposed development, but HWY 101 is an ODOT facility and ODOT performance standards apply to their facilities. The ODOT mobility performance standard "target" that would be applicable to a statewide highway with a speed limit of 40 MPH, not designated a freight route and within an urban growth boundary of a non MPO area, is to maintain a not-to exceed v/c of 0.85 for the entire intersection at signalized intersections or state highway approaches to unsignalized intersections. In order to maintain safe operation, non-state highway approaches at unsignalized intersections are expected to meet or not to exceed the v/c of 0.90, based on the same area and speed characteristics, applicable for District/Local interest roads. The v/c of 0.90 is applicable to stop controlled driveway approaches to the state highway. The basic peak hour performance standard for evaluation of intersection performance at HWY 101 at 35<sup>th</sup> Street would be the not-to-exceed v/c ratio of 0.85 based on the highway designation.

To analyze the study area intersections, the intersection peak hour factors calculated from collected traffic count data are utilized for all existing year design hour conditions and for future build and background/no-build traffic conditions, as shown on the figures representing traffic volumes. For driveway approaches that do not currently serve any inflow or outflow traffic (background/no-build conditions) peak hour factors from the approaches at the intersection of HWY 101 and 35<sup>th</sup> Street are calculated from balancing the approaching traffic stream and utilized in the build conditions, with appropriate adjustments made consistent with the Oregon Department of Transportation's (ODOT's) Analysis Procedures Manual for future conditions (where applicable).

Per the Analysis Procedures Manual, the default saturation flow rate of 1750 pchpl is utilized in the SYNCHRO analysis software program models for all background and build traffic analysis scenarios, since the site is within the Florence Urban Growth Boundary, which is not identified as an MPO area. Saturation flow rate is defined by the ODOT Analysis Procedures Manual (APM) as the maximum departure (queue discharge) flow rate achieved by vehicles departing from the queue during the green period at traffic signals.

Results of the intersection performance analysis calculations are documented in Appendices G and H and are summarized in the following table:



| Table 6: Intersection Performance Analysis                                                                                                                                                                                                                                                |                                     |                          |                      |                    |                      |                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|----------------------|--------------------|----------------------|--------------------|
| Intersection                                                                                                                                                                                                                                                                              | Performance Standard <sup>(1)</sup> | 2020 Existing Conditions | 2021 No-Build        | 2021 Build         | 2026 No-Build        | 2026 Build         |
| AM Peak Hour                                                                                                                                                                                                                                                                              |                                     |                          |                      |                    |                      |                    |
| HWY 101 at 35 <sup>th</sup> Street                                                                                                                                                                                                                                                        | LOS D/<br>v/c 0.85                  | LOS A/<br>v/c 0.41       | LOS A/<br>v/c 0.43   | LOS A/<br>v/c 0.43 | LOS A/<br>v/c 0.43   | LOS A/<br>v/c 0.43 |
| 35 <sup>th</sup> Street at Redwood Street/Site Dwy <sup>(2)</sup>                                                                                                                                                                                                                         | LOS E                               | LOS A                    | LOS A                | LOS B              | LOS A                | LOS B              |
| HWY 101 at Site Dwy <sup>(2)</sup>                                                                                                                                                                                                                                                        | LOS E/<br>v/c 0.85                  | LOS A <sup>(3)</sup>     | LOS A <sup>(3)</sup> | LOS B/<br>v/c 0.04 | LOS A <sup>(3)</sup> | LOS B/<br>v/c 0.04 |
| PM Peak Hour                                                                                                                                                                                                                                                                              |                                     |                          |                      |                    |                      |                    |
| HWY 101 at 35 <sup>th</sup> Street                                                                                                                                                                                                                                                        | LOS D/<br>v/c 0.85                  | LOS B/<br>v/c 0.50       | LOS B/<br>v/c 0.52   | LOS B/<br>v/c 0.52 | LOS B/<br>v/c 0.52   | LOS B/<br>v/c 0.52 |
| 35 <sup>th</sup> Street at Redwood Street/Site Dwy <sup>(2)</sup>                                                                                                                                                                                                                         | LOS E                               | LOS B                    | LOS B                | LOS B              | LOS B                | LOS B              |
| HWY 101 at Site Dwy <sup>(2)</sup>                                                                                                                                                                                                                                                        | LOS E/<br>v/c 0.85                  | LOS A <sup>(3)</sup>     | LOS A <sup>(3)</sup> | LOS A/<br>v/c 0.04 | LOS A <sup>(3)</sup> | LOS B/<br>v/c 0.04 |
| <sup>(1)</sup> LOS = Level Of Service<br><sup>(2)</sup> LOS & v/c at stop controlled approach<br><sup>(3)</sup> HCM 2010 analysis methodology of unsignalized intersections (driveways) that are not serving traffic do not report a v/c for free movements or stop controlled approaches |                                     |                          |                      |                    |                      |                    |

As shown in the table, under the build scenario traffic conditions, the study area street and site driveway intersections are projected to continue to operate within the identified City of Florence and Oregon Department of Transportation mobility standards for level of service and v/c. Background/No-Build and Build HCM 2000 performance reports for the signalized intersection at HWY 101 and 35<sup>th</sup> Street and HCM 2010 performance reports for the unsignalized driveway intersections are included as Appendices G and H.

## 4.8 VEHICLE QUEUING ANALYSIS

In addition to mobility performance calculations, vehicle queue length calculations are performed for the public street intersections at HWY 101 and 35<sup>th</sup> Street and 35<sup>th</sup> Street at Redwood Street, as well as the proposed site driveway approach on the HWY 101 site frontage. To simulate and review approximate vehicle queue lengths, the analysis software program SimTraffic 10, by TrafficWare is utilized to model development scenario traffic conditions to determine if vehicle queue lengths are increased significantly with traffic added from the proposed development, or if blocking conditions exist or are worsened with the development traffic. SimTraffic utilizes random number seeding to generate approaching traffic scenarios and to simulate resulting traffic conditions. For queuing reports, a minimum five runs are simulated with the vehicle queue lengths calculated from the average of the five runs.

To accurately model the signalized intersection approach queue lengths at the site driveway on HWY 101 the driveway approach intersection node representing the driveway location was relocated out of the potential traffic signal queue area at the street intersection at HWY 101 and 35<sup>th</sup> Street. The iteration was performed because SimTraffic does not report overlapping queues appropriately when an approach is located within an intersection approach queue, and it is unknown if the intersection's southbound approach queue is as long or longer than the link length.

The SimTraffic report splits the queue length between the two intersection nodes and reports through movement queues for the uncontrolled approaches at the upstream intersection and the downstream intersection, rather than reporting the queue for the intersection where vehicles are required to stop downstream. In some instances, SimTraffic also reports through movement queues at uncontrolled approaches that are not influenced by downstream metering at partially controlled (unsignalized) intersections. For these reasons, ODOT allows alternate manual calculation methods for calculating vehicle queue lengths at stopped controlled approaches, such as the AASHTO two-minute rule.

Background/No-Build and Build output files from SimTraffic documenting calculated vehicle queue lengths are included as Appendices I and J. The following table summarizes the SimTraffic queuing microsimulation results:

| Table 7: Design Hour Intersection Queuing |                   |                           |                                        |                                      |                                   |                                      |                                   |
|-------------------------------------------|-------------------|---------------------------|----------------------------------------|--------------------------------------|-----------------------------------|--------------------------------------|-----------------------------------|
| Intersection:                             | Approach Movement | Queue Storage Length (ft) | Current Year 2020 Ave/95 <sup>th</sup> | 2021 "No-Build" Ave/95 <sup>th</sup> | 2021 'Build' Ave/95 <sup>th</sup> | 2026 'No-Build' Ave/95 <sup>th</sup> | 2026 'Build' Ave/95 <sup>th</sup> |
| AM Peak Hour                              |                   |                           |                                        |                                      |                                   |                                      |                                   |
| HWY 101 at 35 <sup>th</sup> Street        | EBL               | 110'                      | 50/75                                  | 50/75                                | 50/75                             | 50/75                                | 50/75                             |
|                                           | EBTR              | 250+                      | 50/75                                  | 50/75                                | 50/75                             | 50/75                                | 50/75                             |
|                                           | WBL               | 140'                      | 25/50                                  | 25/50                                | 25/75                             | 25/50                                | 25/50                             |
|                                           | WBTR              | 275'                      | 25/50                                  | 25/50                                | 25/50                             | 25/50                                | 25/50                             |
|                                           | NBL               | 150'                      | 25/50                                  | 25/50                                | 25/50                             | 25/50                                | 25/50                             |
|                                           | NBT               | 250'                      | 50/100                                 | 50/100                               | 50/125                            | 50/100                               | 25/50                             |
|                                           | NBTR              | 250'                      | 25/50                                  | 25/75                                | 50/75                             | 25/75                                | 50/75                             |
|                                           | SBL               | 93'                       | 25/50                                  | 25/50                                | 25/75                             | 25/50                                | 25/75                             |
|                                           | SBT               | 140'                      | 50/100                                 | 50/100                               | 50/100                            | 50/100                               | 50/100                            |
|                                           | SBTR              | 245'                      | 50/100                                 | 50/100                               | 50/100                            | 50/100                               | 50/100                            |
| 35 <sup>th</sup> Street at Redwood        | NBLTR             | 150'+                     | 25/50                                  | 25/50                                | 25/50                             | 25/50                                | 25/50                             |
|                                           | SBLTR             | 55'                       | 0/0                                    | 0/0                                  | 25/50                             | 0/0                                  | 25/50                             |
| HWY 101 at Site Dwy                       | WBR               | 50'                       | 0/0                                    | 0/0                                  | 25/50                             | 0/0                                  | 25/50                             |
| PM Peak Hour                              |                   |                           |                                        |                                      |                                   |                                      |                                   |
| HWY 101 at 35 <sup>th</sup> Street        | EBL               | 110'                      | 50/75                                  | 50/75                                | 50/75                             | 50/75                                | 50/100                            |
|                                           | EBTR              | 250+                      | 50/100                                 | 50/100                               | 50/100                            | 50/100                               | 50/100                            |
|                                           | WBL               | 140'                      | 25/50                                  | 25/50                                | 25/50                             | 25/50                                | 50/75                             |
|                                           | WBTR              | 275'                      | 25/50                                  | 25/75                                | 25/75                             | 25/75                                | 25/75                             |
|                                           | NBL               | 150'                      | 50/75                                  | 50/100                               | 50/75                             | 50/75                                | 50/100                            |
|                                           | NBT               | 250'                      | 75/150                                 | 75/150                               | 75/150                            | 75/150                               | 100/150                           |
|                                           | NBTR              | 250'                      | 75/125                                 | 75/125                               | 75/125                            | 75/150                               | 75/150                            |
|                                           | SBL               | 93'                       | 25/75                                  | 25/75                                | 50/75                             | 25/75                                | 50/75                             |
|                                           | SBT               | 140'                      | 100/150                                | 100/150                              | 100/150                           | 100/175                              | 100/175                           |
|                                           | SBTR              | 245'                      | 75/150                                 | 75/150                               | 100/150                           | 100/150                              | 100/175                           |
| 35 <sup>th</sup> Street at Redwood        | NBLTR             | 150'+                     | 50/50                                  | 25/50                                | 25/50                             | 25/50                                | 50/75                             |
|                                           | SBLTR             | 55'                       | 0/0                                    | 0/0                                  | 25/50                             | 0/0                                  | 25/50                             |
| HWY 101 at Site Dwy                       | WBR               | 50'                       | 0/0                                    | 0/0                                  | 25/50                             | 0/0                                  | 25/50                             |

As shown in the table, the projected vehicle queuing on the study area roadways is not significantly increased with the addition post-development traffic.

As discussed previously, approaches that are unsignalized are not modeled as well as signalized approaches in the SimTraffic microsimulation analysis software. Although ODOT allows alternate manual calculations for unsignalized intersections, such as the AASHTO 2-minute rule, the results reported above are from SimTraffic for both signalized and unsignalized intersection approaches within the study area. The SimTraffic reports also show a westbound queue at the 35<sup>th</sup> Street approach to Redwood Street for no-build conditions and east- and westbound queues for the build traffic scenarios. The eastbound and westbound approaches are not likely to result in tangible queues, since the approaches are free movements, and most reported queues are less than one standard car length which is generally considered 25 feet. The ODOT Analysis Procedures Manual

discusses the use of the AASHTO 2-minute rule for approximating unsignalized intersection vehicle queues, specifically at stop-controlled approaches. The AASHTO 2-minute rule does not calculate through street non-stopped movement traffic queues, which are also not shown here.

## 4.9 VEHICLE CIRCULATION

The site plan includes a proposed unrestricted driveway approach on 35<sup>th</sup> street that is currently shown offset west from the centerline of Redwood Street. Redwood Street approaches 35<sup>th</sup> street from the south with the site driveway approach at the north side of 35<sup>th</sup> Street approximately 35 feet west of Redwood Street. During the scoping process, the City of Florence mentioned the proposed offset of the driveway to the intersection of Redwood Street and requested a discussion about the operation of offsetting left turns from 35<sup>th</sup> Street to the site and from 35<sup>th</sup> Street to Redwood Street. Optimally, the site driveway would be aligned with the Redwood Street approach centerline, except the site's eastern property boundary is aligned with the centerline of Redwood Street and does not allow such a configuration to be constructed. To add to the discussion regarding the offset intersection and driveway approach on 35<sup>th</sup> Street that was provided in section 4.3 previously, a driveway approach movement simulation is provided as Figure 11 on the following page that simulates vehicle maneuvers from the site directly to Redwood Street and from Redwood Street directly into the site. The turning movement simulations are prepared based on AUTOTURN® version 10.2.3.70, and demonstrate that a full-size crew cab pickup truck with a 168-inch (14.0 foot) wheel base is capable of maneuvering to the site driveway from Redwood Street and the reverse, simultaneously, without any noted physical conflicts. There are not likely to be a large number of vehicles making these maneuvers, as was demonstrated in section 4.6 and on Figures 8 through 10 (trip distribution and build traffic volumes).

Vehicular traffic destined to the drive-through can either enter the site at the RIRO (right-in right-out only) approach on HWY 101, which requires circulation through the parking area to the drive-through, or enter via the unrestricted approach on 35<sup>th</sup> Street which is generally aligned with the drive-through entrance. The site plan shows stacking for up to 13 vehicles total with approximately 20 feet of linear space for each vehicle. The drive-through features two ordering kiosks (two) that will be located in the southeast quadrant of the parcel that allow simultaneous ordering for two vehicles. Downstream of the ordering kiosks (between the kiosks and the pick-up window), there is a merge point where the two lines from the two kiosks merge to form one single lane through the drive-through pick-up window. Including vehicles at the ordering kiosks, there is stacking available for approximately 7 vehicles at the ordering kiosks and upstream to the drive-through entrance in the parking area. The drive-through window is shown in the northwest portion of the building where drive-through egress vehicles can circulate counter clockwise back through the site parking area to the unrestricted driveway approach on 35<sup>th</sup> Street for destinations to the south or to the west, or make a right turn followed by a left turn to get to HWY 101 and travel northbound.

Although the drive-through appears to work as it is shown with available space for up to 13 vehicles, and 7 of those vehicles at the ordering kiosks and upstream within the designated aisle, if/when the number of vehicles waiting to order is greater than 8 vehicles, there is a propensity for traffic entering the site to be blocked from accessing the parking area from the driveway. It is recommended that the driveway approach be relocated 70 to 75 feet west to avoid a direct alignment with the drive-through queue and to allow more vehicles to be stored on site leading to the drive-through facilities, and to improve access to the parking area when the drive-through is experiencing peak usage. A scenario showing a possible access location on 35<sup>th</sup> Street is shown

on Figure 12. The relocated proposed access shown on the site plan would be accommodated with parking adjustments that would replace the area currently shown on the site plan with the proposed driveway. There may be issues with crossover access as is shown on the site plan for future use if the parcels to the north are developed, however the proposed driveway access stub shown at the RIRO is assumed to provide access to the property north of the Burger King Site as well for future considerations. If there is currently a recorded deed covenant regarding an access easement, the currently shown location of the approach will meet the City's codified requirements, but is otherwise recommended to be widened to 35 feet to allow two ingress lanes, one of which will allow the drive-through to be by-passed during peak usage to access parking on the site.

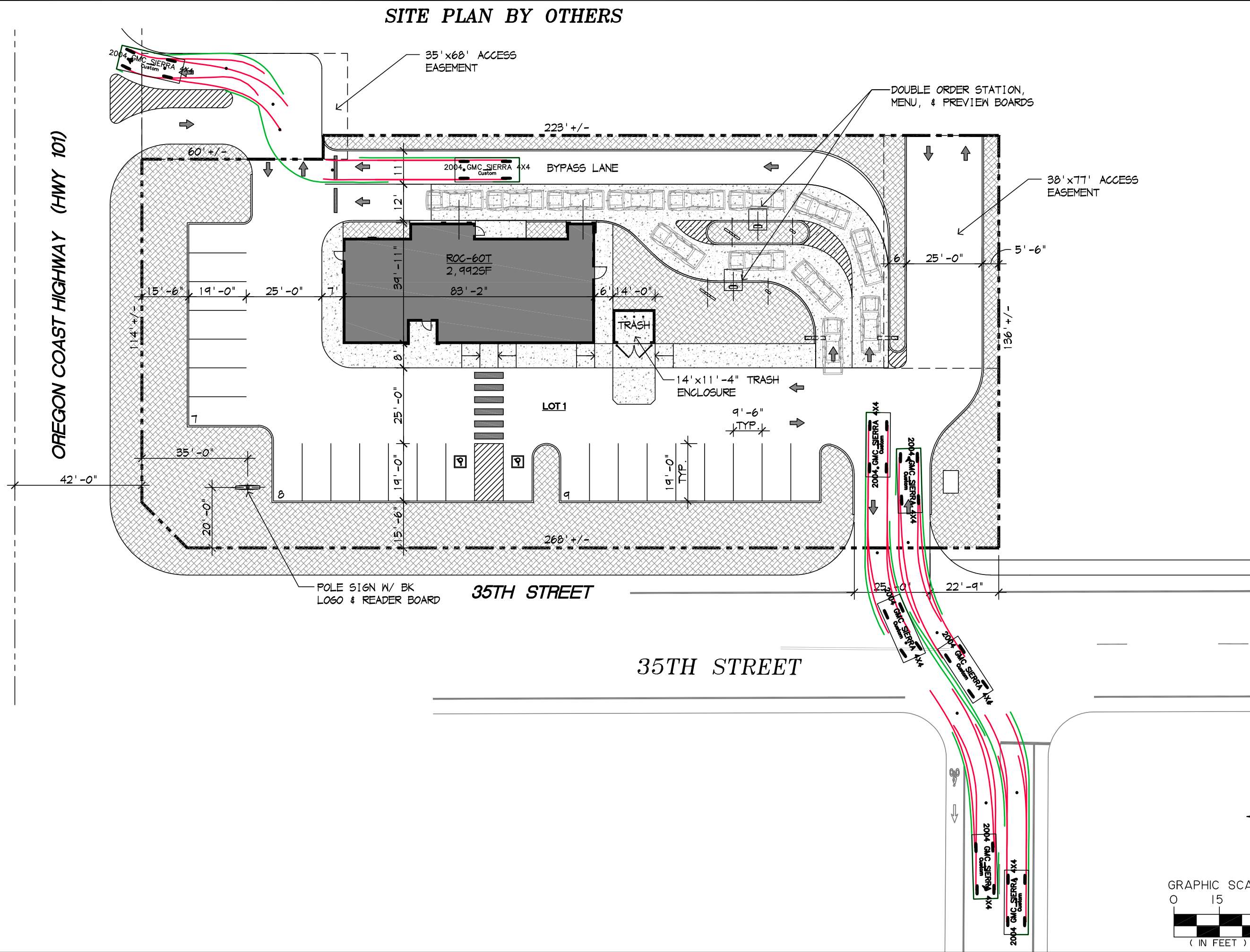
In addition to the recommended access relocation, some additional motor vehicle traffic related circulation improvements are recommended to keep onsite circulation flowing at optimal flow conditions and to maintain a high level of safety and situational awareness for the traveling public. The recommended improvements include signage for egress vehicles reminding drivers not to block the driveway entrance on HWY 101 when departing the site (turn left against a queue when queue is present to turn right onto HWY 101 northbound – mostly for future consideration when parcels to the north are developed and the driveway is extended); do not enter signage for vehicles entering the site designating the operation of the drive-through egress; do-not enter signage for southbound traffic on HWY 101 to remind drivers not to enter the RIRO approach via left-turn, and; signage showing the channelization of the approach at HWY 101, which will be restricted to right-in right-out only. These recommended improvements are shown on Figure 12 on page 30.

## **4.10 PEDESTRIAN ACCESS AND CIRCULATION**

Florence Development Code Title 10, Chapter 35, Section 3-2 (10-35-3-2B) provides direction on pedestrian access and circulation from public rights-of-way at development site street frontages to building entrances on site. A few recommended improvements to the site plan are included on Figure 12 on Page 30. The recommended improvements include the following:

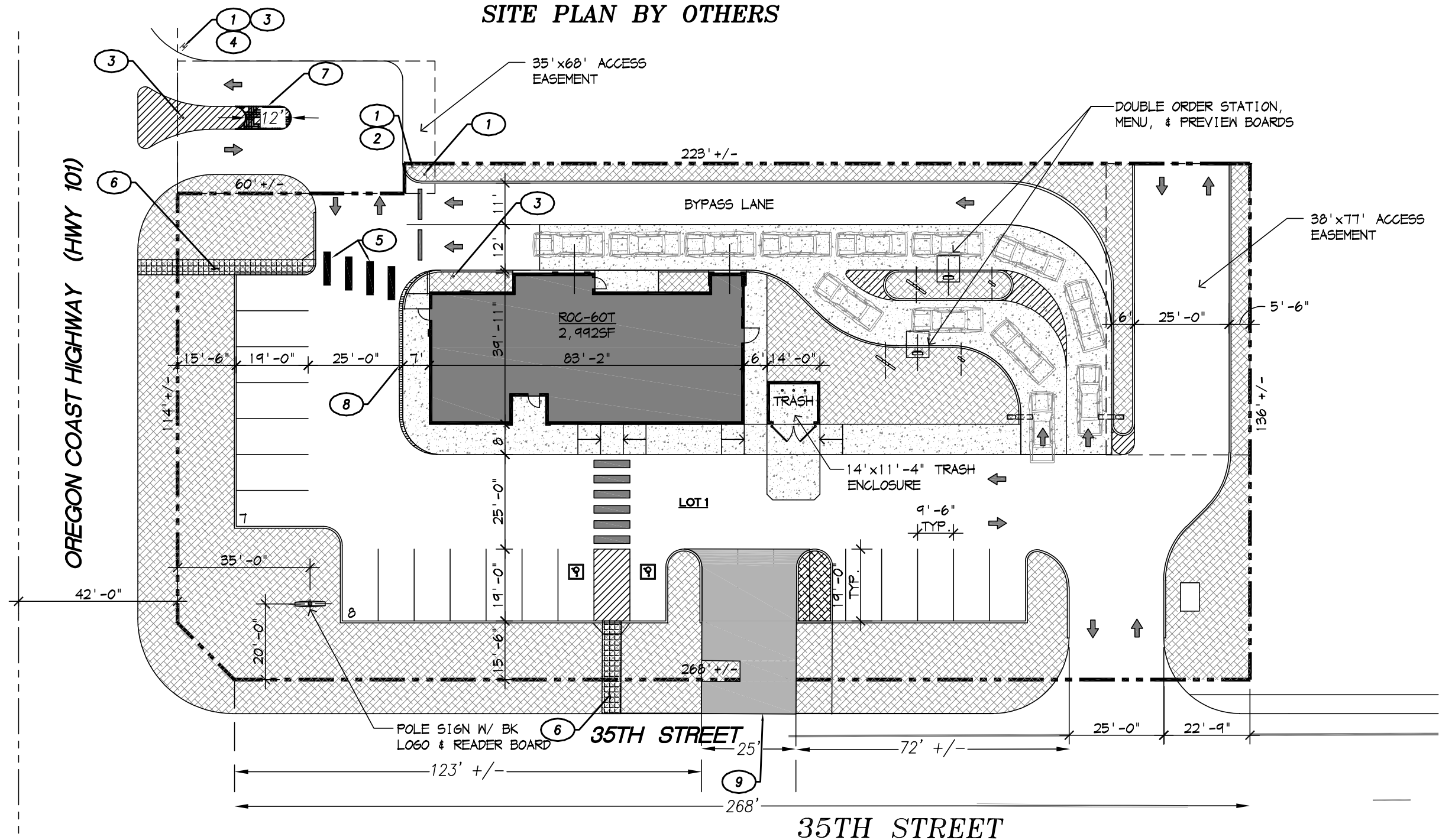
- ❖ An ADA compliant raised walkway adjacent to the parking stalls at the north side of the western parking area that connects to the HWY 101 sidewalk at the frontage. The walkway should lead to the building entrance area near the door facing HWY 101 and should include accessible ramps as needed as well as crosswalk markings across the area exposed to vehicular traffic;
- ❖ An ADA compliant walkway from the 35<sup>th</sup> street frontage to the main building entrance facing 35<sup>th</sup> street. There is currently an ADA accessway between two ADA parking stalls shown that would be a suitable location. The walkway should connect to the existing sidewalk on 35<sup>th</sup> Street and there may be a need for a ramp in the parking area. The crossing is already shown with suitable markings

The site plan layout provides pedestrian access and circulation around the perimeter of the building where applicable (not including adjacent to the drive-through lane, where it would be between the drive-through and the building).



Z:\2020\20-113 Florence Burger King\Traffic\Figures\20-113 TRAFFIC FIGURES.dwg 6/30/2020 4:27 PM DANH  
copyright © 2018 Branch Engineering, Inc.

## SITE PLAN BY OTHERS



### SITE CIRCULATION NOTES:

- |   |                                           |   |                                                                                                                         |
|---|-------------------------------------------|---|-------------------------------------------------------------------------------------------------------------------------|
| 1 | RECOMMENDED SIGN 1: STOP SIGN             | 6 | RECOMMENDED PEDESTRIAN CONNECTION TO SIDEWALK AT STREET FRONTAGE.                                                       |
| 2 | RECOMMENDED SIGN 2: DO NOT BLOCK DRIVEWAY | 7 | RECOMMENDED SHORTEN CONCRETE ISLAND                                                                                     |
| 3 | RECOMMENDED SIGN 3: DO NOT ENTER          | 8 | RECOMMENDED WIDEN SIDEWALK TO 8' FOR CLEARANCE AROUND EXTERIOR DOOR SWING (OPENS OUT). NARROW DRIVE-AISLE TO 24.0 FEET. |
| 4 | RECOMMENDED SIGN 4: RIGHT-TURN ONLY       | 9 | RECOMMENDED RELOCATE DRIVEWAY APPROACH                                                                                  |
| 5 | RECOMMENDED ADDITIONAL MARKED CROSSWALK   |   |                                                                                                                         |



SIGN 1



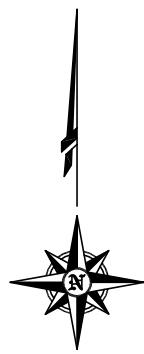
SIGN 2



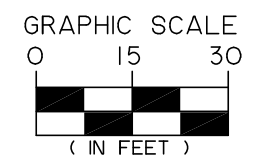
SIGN 3



SIGN 4



N.T.S.



## BURGER KING W. 11th AVE SITE

### TRAFFIC IMPACT ANALYSIS

W. 11th AVE  
EUGENE, OREGON

revisions:

date: JUNE 30, 2020

drawn by:

designer:

project no: 20-113

FIGURE 12  
RECOMMENDED  
ONSITE TRAFFIC  
CONTROL

sheet:

1/1



## **5.0 RECOMMENDATIONS AND CONCLUSION**

### **Crash Analysis**

No crash reducing measures are necessary to accommodate the proposed project. The accident histories show that the intersection at 35<sup>th</sup> Street and HWY 101 has been relatively safe for the five-year period of available crash data received from ODOT. HWY 101 at the site frontage is not identified as a 95<sup>th</sup> percentile ODOT Safety Priority Index System (SPIS) location on the most recent SPIS maps.

### **Access**

Based on access locations and geometries, there are no unusual safety related concerns associated with the existing and proposed access locations or conditions. The site's proposed driveway approach on the HWY 101 is proposed as a right-in right-out only restricted access. The site plan shows a second unrestricted access on 35<sup>th</sup> Street that may have an access easement associated with it for future development of the parcels on the site that are not proposed to be developed at this time. It is recommended that the site driveway approach on 35<sup>th</sup> Street be considered for relocation to approximately 70 to 75 feet to the west to improve onsite circulation during peak drive-through usage. There appears to be adequate available queue storage at the westbound approach to HWY 101 with the recommended relocation of the driveway and the recommended driveway location meets the spacing criteria from the intersection at HWY 101 required by City of Florence code. All accesses are necessary to accommodate existing on-site circulation of the expected site generated levels of vehicle traffic and for access and circulation of delivery vehicles.

### **Trip Generation**

The proposed development is projected to generate an average of 120 AM and 98 PM new vehicle trips and 1,409 new average daily trips accessing the site split between the approach at the site driveway at the frontage on HWY 101 and the unrestricted access on 35<sup>th</sup> Street .

### **Intersection Performance**

The studied public street intersection at 35<sup>th</sup> Street and HWY 101 and the site driveway approaches are projected to operate at acceptable levels of service under all analyzed scenarios. The LOS are currently within the mobility standards of the City of Florence for LOS E or better and are not projected to exceed that standard under the analyzed conditions for the anticipated year 2021 year of opening or the future year 2026 post development analysis scenarios. As modeled, the vehicle queue lengths are accommodated within available storage and no modifications are necessary to accommodate incremental traffic increases from the proposed development on the public street frontages and approaches.

### **Site Traffic Control**

The site plan was reviewed and recommendations were made to improve access and circulation on the site and to and from the public streets. The improvements are mostly related to providing inexpensive signage and pavement markings to enhance situational awareness of pedestrians on the site and provide logical wayfinding for the general traveling public to ensure traffic flows on and off the site efficiently and safely.

### **Conclusion**

In summary, the proposed development project will not cause significant adverse impact on the performance of the public transportation system.



# **APPENDIX A**

## **SCOPE OF WORK MEMO AND E-MAILS**

**Dan H**

---

**To:** Mike Miller  
**Subject:** RE: 35th St BK Site TIA

---

**From:** Mike Miller <mike.miller@ci.florence.or.us>  
**Sent:** Thursday, March 19, 2020 1:46 PM  
**To:** Dan H <danh@branchengineering.com>  
**Cc:** Wendy Farley-Campbell <wendy.farleycampbell@ci.florence.or.us>; planningdepartment <planningdepartment@ci.florence.or.us>  
**Subject:** RE: 35th St BK Site TIA

Hi Dan,

Myself and one of our engineers reviewed the scoping memo (attached for the benefit of our planning staff) for the Burger King TIA. We do not have any concerns, but wanted you to be aware of a couple of items:

- The 35<sup>th</sup> and Hwy 101 intersection will have some impact due to a new proposed residential development at Rhody and 35<sup>th</sup>. You might want to include the information in your analysis (I have attached their TIA)
- If a traffic count is used for the study, we recommend if possible, to complete a count in July/August instead of just relying on a seasonal adjustment.

Thank you!

Mike

---

**From:** Dan H <[danh@branchengineering.com](mailto:danh@branchengineering.com)>  
**Sent:** Monday, March 16, 2020 9:33 AM  
**To:** Mike Miller <[mike.miller@ci.florence.or.us](mailto:mike.miller@ci.florence.or.us)>  
**Subject:** [Suspected SPAM] 35th St BK Site TIA  
**Importance:** Low

Hi Mike,

I got your voice mail last week, and have prepared the attached memo with the proposed scope of work for the forthcoming TIA. Per your request, we will look at the driveway on 35<sup>th</sup> with respect to offsetting left turns with the intersection of Redwood Street and discuss the access configuration as well as looking at the intersections of 35<sup>th</sup> and Redwood and 35<sup>th</sup> and HWY 101 for operations and safety.

Please let me know if this sounds reasonable.

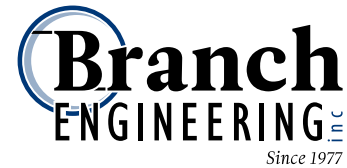
Thanks,

---

**DAN HAGA, P.E.**  
Project Engineer

**BRANCH ENGINEERING, INC.**  
310 5th Street, Springfield, OR 97477  
[p\\_ 541.746.0637](tel:541.746.0637)

# TECHNICAL MEMORANDUM



civil • transportation  
structural • geotechnical  
SURVEYING

**DATE:** March 16, 2020

**PROJECT:** HWY 101/35<sup>th</sup> St. BK Site, BEI Project 20-113

**TO:** Mike Miller  
City of Florence Public Works

**FROM:** Dan Haga, P.E.  
Branch Engineering

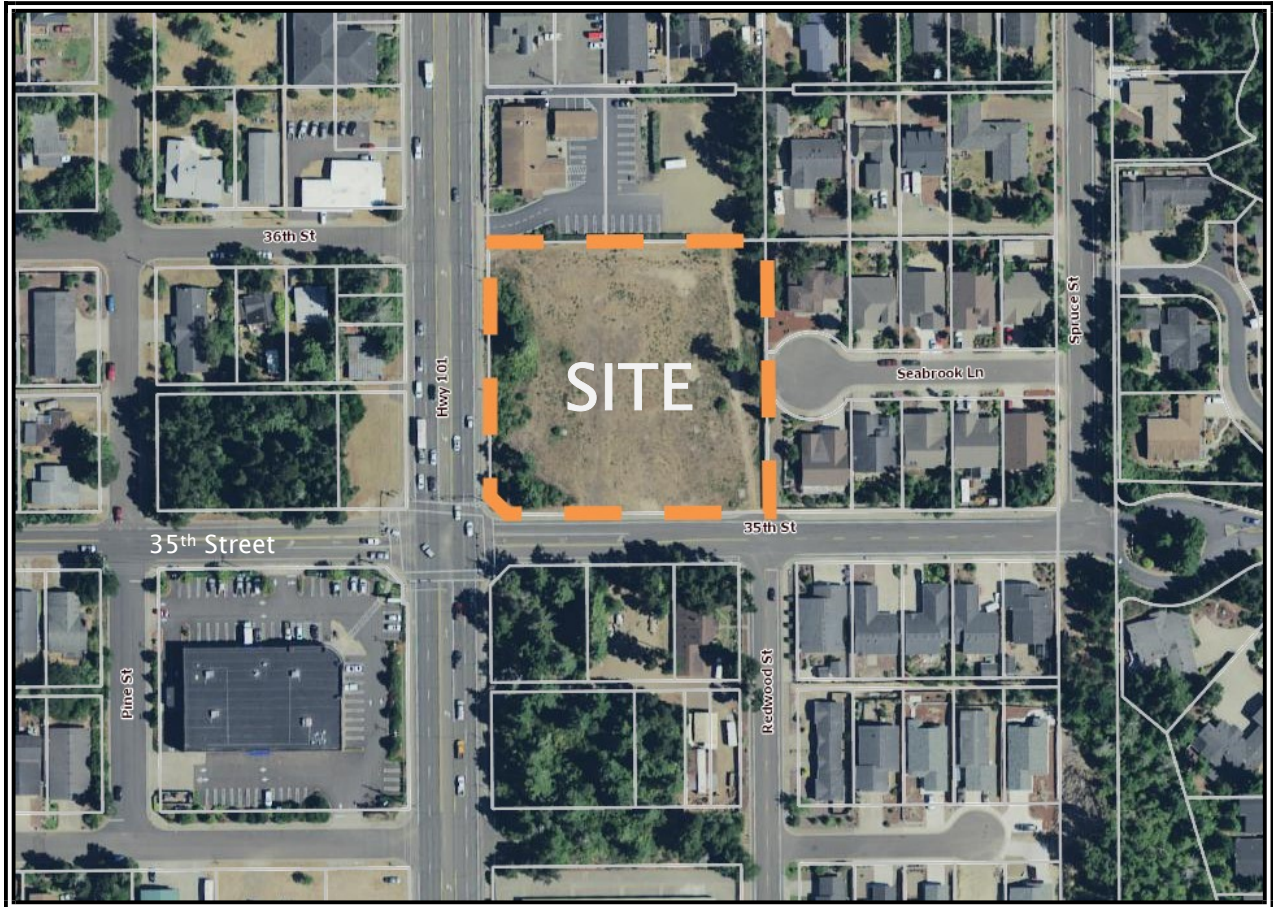
**RE:** Burger King Development Site,  
Map lot: 18-12-23-22-06800



In an effort to assist the City of Florence in the process of concurring on the scope of traffic impact analysis required to address applicable approval criteria for the proposed development of the subject site referred to in the subject line, identified as taxlot 06800 of tax map 18-12-23-22, I am supplying this memorandum summarizing the land use assumptions and associated site generated traffic, the proposed study area and details to be included in the forthcoming analysis. The proposed uses of the site are in compliance with the City of Florence's existing Highway Commercial zone and Comprehensive Plan Map designations for the site. The result of this memorandum is intended to be the basis for concurring on the scope of analysis required to analyze development impacts in compliance with City of Florence Development Code, Title 10, Chapter 1, Section 10-1-1-4: E and Title 10, Chapter 35, Section 10-35-2-5.

## Existing Conditions

The subject site is located in the northeast quadrant of the intersection of HWY 101 at 35<sup>th</sup> Street. The site is within the urban growth boundary and city limits and is within an urbanized area of Florence, Oregon. The property is approximately 1.85 acres in size and is currently vacant and undeveloped. The aerial photograph on the following page shows the approximate site location.



Site Location (Aerial by Lane County Maps)

The currently proposed development of the site includes a 2.992KSF fast-food restaurant with a drive-through window and improvements for parking on the site. Primary access to the proposed development would be at a right-in right-out approach to be constructed at the site's frontage on the east side of HWY 101, and at an unrestricted access at the site's frontage on the north side of 35<sup>th</sup> Street west of the intersection at Redwood Street. There is a possibility for secondary access to the vacated right-of-way of 36<sup>th</sup> Street that serves as the primary access to the adjacent property to the north. The vacated 36<sup>th</sup> Street right-of-way to the north borders the subject site's north property boundary. The adjacent property to the north is developed as a full-service restaurant.

### **Trip Generation**

To project trip generation for the proposed development's use, a reference was made to the *Trip Generation Manual, 10<sup>th</sup> Edition*, and the *Trip Generation Handbook, 3<sup>rd</sup> Edition*, both published by the Institute of Transportation Engineers (ITE). The table on the following page summarizes the projected peak hour site generated traffic based on the available published data:

| Florence Burger King Site Trip Generation          |               |             |                    |       |                |                 |
|----------------------------------------------------|---------------|-------------|--------------------|-------|----------------|-----------------|
| Land Use/ ITE Land Use Code                        | Ind. Variable | Units (QTY) | TG Rate Trips/Unit | Trips | Trips IN (%/#) | Trips OUT (%/#) |
| AM Peak Hour                                       |               |             |                    |       |                |                 |
| Fast Food Restaurant with Drive-Through Window/934 | KSF GFA       | 2.992       | 40.19              | 120   | 51%/61         | 49%/59          |
| Pass-By Trips:                                     |               |             | 49%                | 59    | 30             | 29              |
| PM Peak Hour                                       |               |             |                    |       |                |                 |
| Fast Food Restaurant with Drive-Through Window/934 | KSF GFA       | 2.992       | 32.67              | 98    | 52%/51         | 48%/47          |
| Pass-By Trips:                                     |               |             | 50%                | 49    | 25             | 24              |
| ADT                                                |               |             |                    |       |                |                 |
| Fast Food Restaurant with Drive-Through Window/934 | KSF GFA       | 2.992       | 470.95             | 1,409 | 50%/705        | 50%/704         |

As indicated above, the proposed post-development traffic conditions could result in up to 120 new AM peak hour vehicle trips and up to 98 new PM peak hour vehicle trips accessing the site. Out of the total peak hour vehicle trip totals, 49 percent of the AM and 50 percent of the PM peak hour ingress and egress trips would be expected to be pass-by trips, which are trips already on the roadway that would be expected to make a route diversion at the driveway to enter and exit the site, but will otherwise continue in the same direction they were traveling upon leaving the site. Pass-by trip occur between primary origins and destinations and do not add traffic to intersections or facilities, other than the site driveway approach. Per City of Florence Zoning Administration, any development that generates 250 or more vehicle trips per day is required to provide a traffic impact analysis. Because the proposed development will generate a potential 1,409 ADT (daily) trips during typical weekday traffic conditions, the proposed development requires a traffic impact analysis.

### Study Area and Analysis Scoping

The site plan is proposing a primary access at the site's frontage on HWY 101, that will be restricted to right-in and right-out only turning movements. HWY 101 at the frontage is within the jurisdiction of the Oregon Department of Transportation. A second unrestricted primary access is proposed to be located on the site's 35<sup>th</sup> Street frontage, which is within the City of Florence's jurisdiction. A secondary access connection may be provided with a crossover access agreement with the adjacent neighbor to the north, where there is an existing unrestricted access that serves the existing restaurant at that site. For the scope of this traffic impact analysis, all post-development site generated traffic will be assumed to utilize the site's driveways for access. The potential crossover access connection to the adjacent unrestricted access is unlikely to detract a lot of additional turning movements, since it is out of direction for left-turns from the site to HWY 101 southbound. Once developed and a connection is established, there may be a few left-turns into the shared access from the north, but there does not appear to be a particular benefit to turning left at the shared approach over turning left at the traffic signal at HWY 101 and 35<sup>th</sup> Street, since the public roads have a higher rate of speed than a route through the parking area, and the site's parking area and drive-through are aligned the accommodate arrivals from the site's frontage on 35<sup>th</sup> Street. Per City of Florence

comments, offsetting left -turns at the proposed site driveway approach on 35<sup>th</sup> Street with respect to the public street intersection at 35<sup>th</sup> St. and Redwood St. will be evaluated and discussed.

The Oregon Department of Transportation (ODOT) has indicated that ODOT will not require a traffic impact analysis with this development as the proposed access on HWY 101 remains proposed as a right-in right-out restricted access. The City of Florence requires a traffic impact analysis and has indicated that the TIA should include both of the site's driveway approaches, the intersection at HWY 101 and 35<sup>th</sup> St. and at the intersection of 35<sup>th</sup> Street and Redwood St., therefore; these intersections will be analyzed for operational performance, queuing and safety.

#### **Analysis Year(s)**

The City of Florence Traffic Impact Analysis requirements do not contain analysis details that include a definition of the study area that the TIA needs to analyze, nor what analysis years need to be included in a TIA. Per the Oregon Department of Transportation's development review guidelines, Table 3.3, proposed developments that require a traffic impact analysis from ODOT that generate between 1,000 and 2,999 ADT and include a single-phase development horizon year are suggested to include the year of opening and a five-year post-development planning horizon year in the analysis scenarios. Although ODOT does not require an analysis for this proposed development, the analysis required by the City of Florence is proposed to include the year of opening (assumed to be the current year 2020/year of application), and a five-year post-development horizon year, 2025, consistent with the suggested analysis year scenarios by ODOT. The forthcoming analysis will include AM and PM peak hour scenarios with and without additional traffic from the proposed development during those years.

#### **Pipeline Traffic**

Branch Engineering is not aware of any nearby pending land use applications or traffic impact analyses that may add a significant amount of incremental traffic to the study area that is in the approval process at the time of scoping for this application. If there are any known in-process developments that have pending approved TIA applications in with the City and have not been constructed and opened yet at the time of this scoping exercise, please provide any information on those if they include pipeline trips at the site's frontages or at the intersection of 35<sup>th</sup> Street and HWY 101.

#### **Conclusion**

In summary, based on the City of Florence Traffic Impact Analysis trip generation threshold of 250 ADT trips provided in Title 10, Chapter 1, Section 10-1-1-4: E, the proposed Burger King development site will require a traffic impact analysis to determine if there is an identifiable impact to existing and background future traffic performance conditions during the design hour of the year of application (year 2020) and at the end of a five (5) year post-development planning horizon (year 2025). The forthcoming analysis will determine traffic impacts based on any updates to the preliminary site plan. We look forward to working with you to get concurrence on the scope of work to be provided through this traffic impact analyses and land development approval process. Please do not hesitate to contact me if I can provide any additional information.



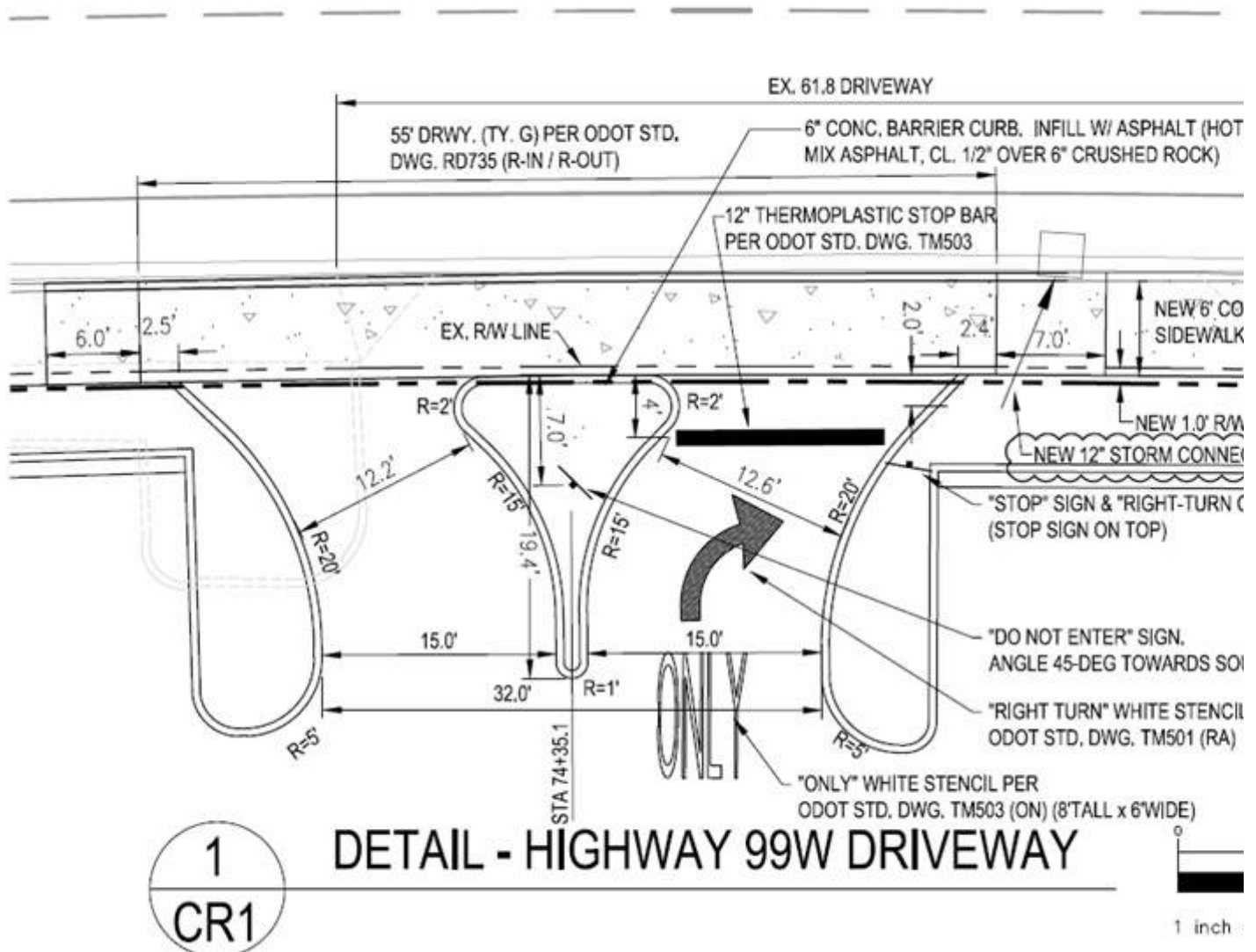
**Dan H**

**From:** NELSON Brian S \* Scott <Brian.S.NELSON@odot.state.or.us>  
**Sent:** Tuesday, March 10, 2020 1:52 PM  
**To:** Dan H; BLAIR Keith P  
**Cc:** (mike.miller@ci.florence.or.us); BAUMGARTNER Douglas G  
**Subject:** RE: Florence BK TIA

Hi Dan, our concerns related to the new private approach would be addressed with a restriction to right-in/right-out. If the developer agrees to this no TIA will be required with the approach permit process. If the developer is not in agreement with the right-in/right-out approach they should expect a TIA addressing our operational and safety concerns to be required.

If the City's code requires a TIA that looks at highway intersections we are always happy to assist with that review. Keith is handling a few positions right now as he was promoted to the Region 2 Traffic Manager, but we will find resources to take a look at it if the City wishes to include us.

Below is a design for a curb tight sidewalk right-in/right-out porkchop that was done about 5 years ago in McMinnville. It operates pretty effectively.



Thanks

**B Scott Nelson, P.E.**

Region 2 Access Management Engineer



455 Airport Rd SE, Bldg. B

Salem, OR 97301

Office 503.986.2882

Cell 503.602.0703

---

**From:** Dan H <danh@branchengineering.com>

**Sent:** Tuesday, March 10, 2020 12:04 PM

**To:** NELSON Brian S \* Scott <Brian.S.NELSON@odot.state.or.us>; BLAIR Keith P <Keith.P.BLAIR@odot.state.or.us>

**Cc:** (mike.miller@ci.florence.or.us) <mike.miller@ci.florence.or.us>

**Subject:** Florence BK TIA

Hi Scott and Keith,

I spoke with Scott a while back regarding a site in Florence at the NE corner of HWY 101 and 35<sup>th</sup> Street regarding access and TIA applicability. It sounded like a TIA may not necessarily be required by ODOT. I have attached a preliminary site plan for the proposed development. It looks like the plan includes approximately 2.992KSF GFA, which equates to 98 PM peak hour trips, with 50% of those as pass-by trips per the 10<sup>th</sup> Edition ITE and Trip Gen Handbook, 3<sup>rd</sup> Edition. The AM trip gen comes to 120 trips, with 48% of those as pass-by. The ADT based on the ITE rate would be 1409.

Can we get confirmation if ODOT will or will not require a TIA for this site? If a study is required, please let me know if you need anything for scoping.

Also, FYI, the City's Trip Generation threshold is 250 ADT trips, so it looks like we will at least need to provide a TIA to meet the City's requirements. I contacted Mike Miller (Public Works Director) regarding scoping for that, and am waiting for a response to see what the City requires, or whom I should contact as engineer of record for the City to negotiate scoping for the City. Will ODOT want to review the TIA if it isn't required by ODOT? I suspect that most of the potential for impact would be on HWY 101, with primary trip origins and destinations filtering out fairly evenly to side streets in the vicinity. It looks like they are proposing access control on HWY 101 at the proposed driveway approach.

Thanks,

---

**DAN HAGA, P.E.**

Project Engineer

**BRANCH ENGINEERING, INC.**

310 5th Street, Springfield, OR 97477

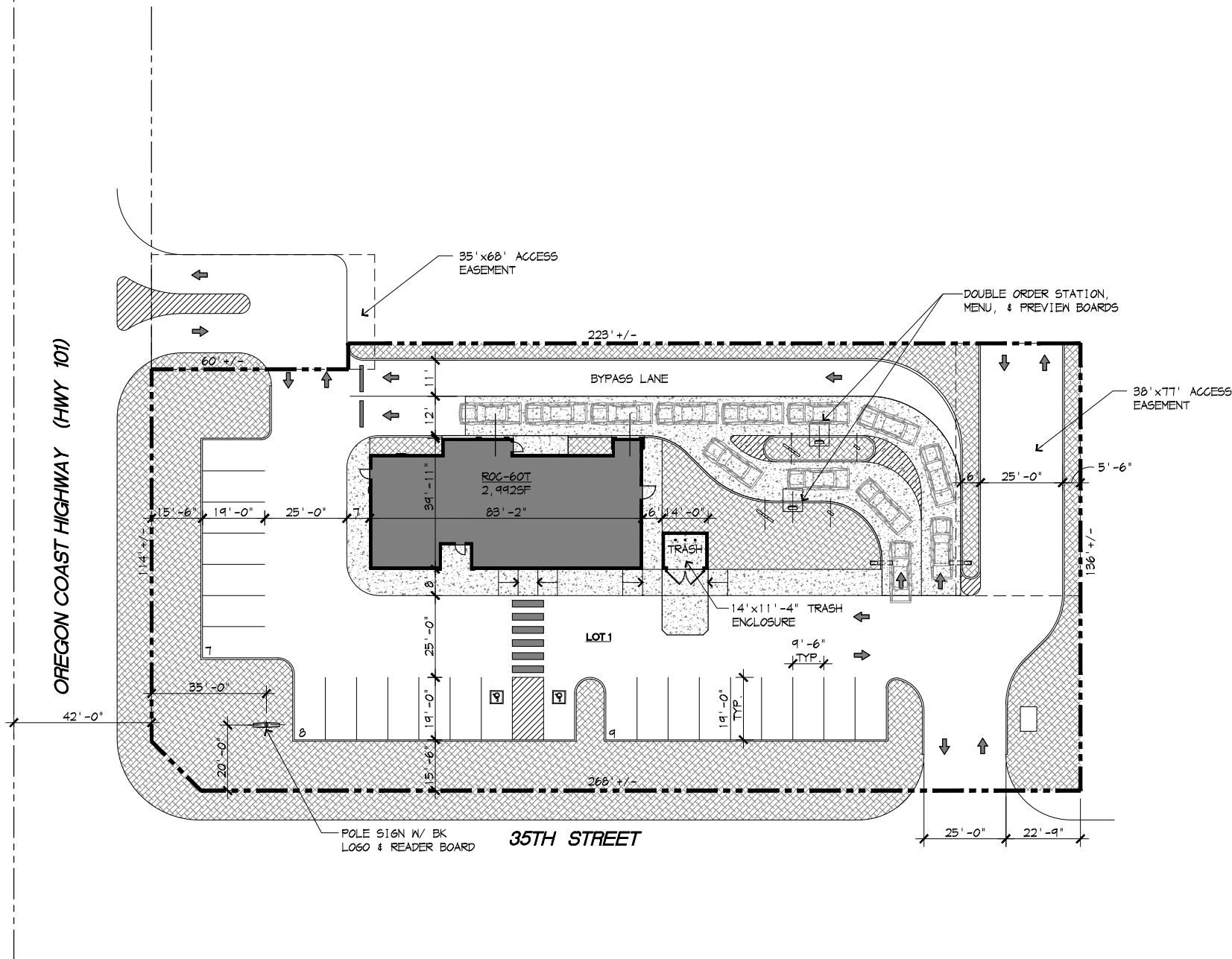
p\_ 541.746.0637

[www.branchengineering.com](http://www.branchengineering.com)



# **APPENDIX B**

## **SITE PLAN**



## SITE PLAN

SCALE: 1" = 20'-0"

## DEFERRED SUBMITTALS:

SIGNS

## GENERAL NOTES:

1. ALL DIMENSIONS ARE TO FACE OF STUD, FACE OF CONC. OR CENTERLINE OF COLUMN, U.N.O.
2. CONTRACTOR TO VERIFY ALL DIMENSIONS IN THE FIELD W/ DIMENSIONS SHOWN ON PLAN PRIOR TO CONSTRUCTION & ORDERING MATERIALS. ARCHITECT OF RECORD SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES BETWEEN THESE DRAWINGS AND ACTUAL FIELD CONDITIONS.
3. CONTRACTOR TO VERIFY DIMENSIONS OF MANUFACTURED PRODUCTS TO ASSURE COMPATIBILITY WITH THE PLANS.



## NEW BURGER KING ROC-60T RESTAURANT W/ BKOT IMAGE

## PROJECT CRITERIA:

|                    |                                                                      |
|--------------------|----------------------------------------------------------------------|
| PARCEL NO.:        | 1812292206800000                                                     |
| LEGAL DESCRIPTION: | LOT NUMBER 1-20 BLOCK 10<br>SEC 23 T1N 18 R16 12                     |
| BUILDING CRITERIA: |                                                                      |
| JURISDICTION:      | CITY OF FLORENCE                                                     |
| CODE:              | 2015 IBC                                                             |
| ZONING:            | HIGHWAY                                                              |
| LOT SIZE:          | 1.07 ACRES                                                           |
| BUILDING AREA:     | 2,492 S.F.                                                           |
| DINING SEATS:      | 60-62 SEATS                                                          |
| CONSTRUCTION:      | V-B (NOT-SPRINKLERED)                                                |
| OCCUPANCY TYPE:    | A-2 RESTAURANT                                                       |
| PARKING REQUIRED:  | 1 PER 125SF FLOOR AREA<br>2,492SF / 125SF =<br>24 STALLS REQUIRED    |
| PARKING PROVIDED:  | 22 STANDARD STALLS<br>2 ACCESSIBLE STALLS<br>24 TOTAL PARKING STALLS |



## VICINITY MAP SCALE: N. T. S.

|           |         |             |                       |       |  |
|-----------|---------|-------------|-----------------------|-------|--|
| DRAWN BY: | RRE     | CHECKED BY: | ABC                   | DATE: |  |
| NO.       | 18DEC19 | REVISION    | PRELIMINARY SITE PLAN |       |  |



AMBROSIA GSR OREGON, LLC  
522 SW 5TH, SUITE 925  
PORTLAND, OR 97204

2812 Colby Avenue  
Everett WA 98201  
(425) 252-2153 p  
www.2812architecture.com  
JOB NO.: 19C-4146

2017  
ARCHITECTURE

STORE NO.: BK# xxxxx  
A NEW ROBOT BUILDING FOR:  
**BURGER KING RESTAURANT**  
35XX HIGHWAY 101  
FLORENCE, OREGON 97439  
SITE PLAN, PROJECT CRITERIA, VICINITY MAP

SP-1

# **APPENDIX C**

## **RHODY EXPRESS ROUTE SCHEDULES**





## RHODY EXPRESS IS ACCESSIBLE

The Rhody Express vehicle is accessible to people who use mobility devices. The driver will assist with lift boarding and securement. Anyone can request the lift to help board the bus.

## BUS BUDDIES ARE HERE TO HELP

If you need help learning how to use the bus or would like a buddy to ride with you the first few times, call the Rhody Express and ask for a Bus Buddy. These experienced riders are available and ready to help. **541-902-2067** or **7-1-1 (TTY – Oregon Relay)**.

## WHAT IF I CANNOT ACCESS THE BUS?

If you experience a disabling condition that prevents you from using the Rhody Express, you may qualify for the Rhody Dial-a-Ride, a service that can take you from point A to point B. You must live within three-quarters of a mile from the bus route and participate in an in-person eligibility assessment to access this service. **For more information, including eligibility questions, call the RideSource Call Center toll free at 1-877-800-9899 or 7-1-1 (TTY – Oregon Relay).**



## WELCOME ABOARD

Welcome to the Rhody Express, your public transportation provider in Florence. We are here to help.

**541-902-2067 or 7-1-1 (TTY – Oregon Relay)**

## SERVICE HOURS

Monday – Friday  
10:00 a.m. – 6:00 p.m.

## HOLIDAY SERVICE

The Rhody Express does not operate on New Year's Day, Memorial Day, 4th of July, Labor Day, Thanksgiving Day and Christmas Day.

## FARES

\$1 for single trip  
\$2 for day pass  
\$20 for 20-Ride ticket book  
Ticket books sold only at River Cities Taxi/  
Rhody Express, 1699 Pine Street

## HOW TO READ THE TIMETABLE

The Rhody Express route is divided into two loops – the North Loop and the South Loop. The timetable contains timepoints for major stops along the route. Locate the timepoint before the stop you where you want to catch the bus. Read down the column to find the time you want to travel, and wait at your stop at the time listed on the timetable. For example, if you are boarding between the stop at Grocery Outlet and the stop at the Dollar Tree, be sure to be at your stop at the time listed for the Grocery Outlet rather than the time listed for the Dollar Tree.

## RHODY EXPRESS CAPACITY

The Rhody Express bus has capacity for 16 people seated facing forward. The front seats are designated for older adults and people with disabilities. A bike rack on the front bumper has capacity for two bicycles.



# Rhody Express FLORENCE PUBLIC TRANSIT



# Rhody Express

## NORTH LOOP

| Leave<br>Florence<br>Food<br>Share | Bi-Mart | Fred Meyer | Arrive<br>Grocery<br>Outlet |
|------------------------------------|---------|------------|-----------------------------|
| 8                                  | 9       | 10         | 1                           |
| 10:38                              | 10:45   | 10:47      | 10:58                       |
| 11:38                              | 11:45   | 11:47      | 11:58                       |
| 12:38                              | 12:45   | 12:47      | 12:58                       |
| 1:38                               | 1:45    | 1:47       | 1:58                        |
| 2:38                               | 2:45    | 2:47       | 2:58                        |
| 3:38                               | 3:45    | 3:47       | 3:58                        |
| 4:38                               | 4:45    | 4:47       | 4:58                        |
| 5:38                               | 5:45    | 5:47       | 5:58                        |

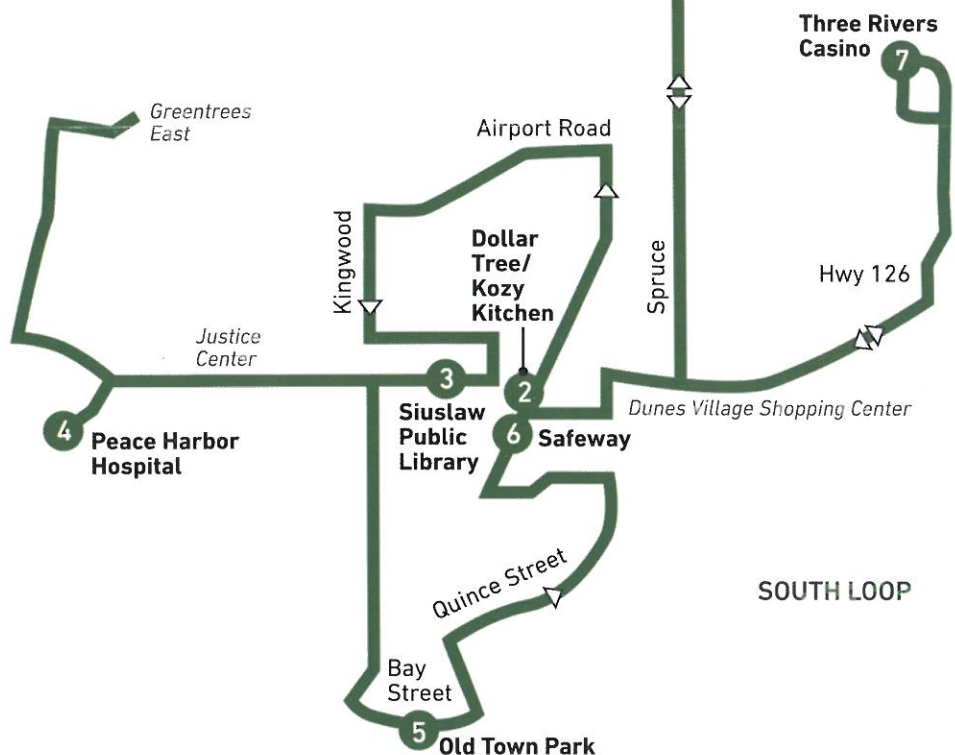
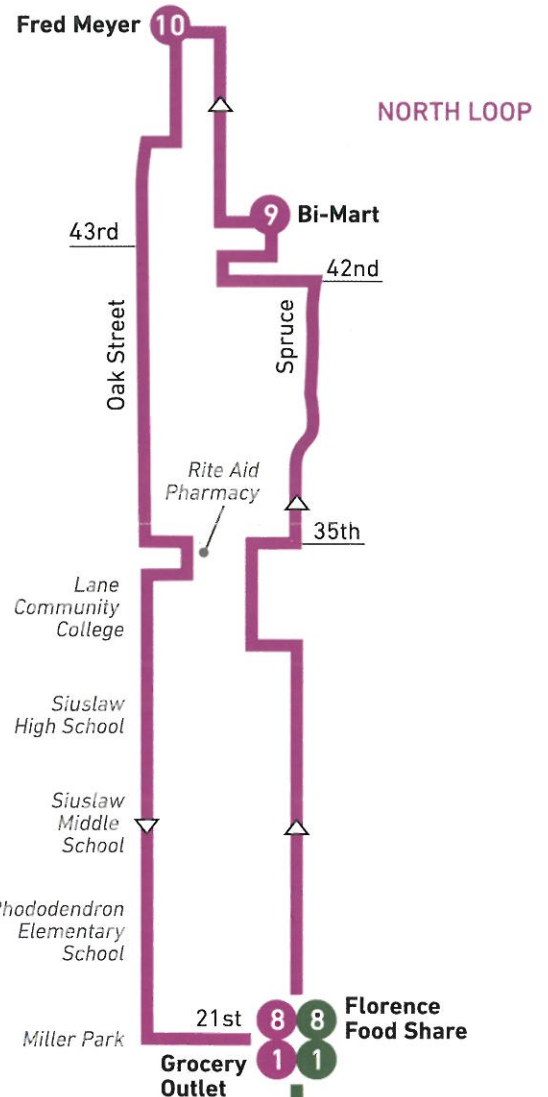
## SOUTH LOOP

| Leave<br>Grocery<br>Outlet | Dollar<br>Tree/<br>Kozy<br>Kitchen | Siuslaw<br>Public<br>Library | Peace<br>Harbor<br>Hospital | Old Town<br>Park | Safeway | Three<br>Rivers<br>Casino | Arrive<br>Florence<br>Food<br>Share |
|----------------------------|------------------------------------|------------------------------|-----------------------------|------------------|---------|---------------------------|-------------------------------------|
| 1                          | 2                                  | 3                            | 4                           | 5                | 6       | 7                         | 8                                   |
| 10:00                      | 10:05                              | 10:10                        | 10:17                       | 10:23            | 10:28   | 10:33                     | 10:38                               |
| 11:00                      | 11:05                              | 11:10                        | 11:17                       | 11:23            | 11:28   | 11:33                     | 11:38                               |
| 12:00                      | 12:05                              | 12:10                        | 12:17                       | 12:23            | 12:28   | 12:33                     | 12:38                               |
| 1:00                       | 1:05                               | 1:10                         | 1:17                        | 1:23             | 1:28    | 1:33                      | 1:38                                |
| 2:00                       | 2:05                               | 2:10                         | 2:17                        | 2:23             | 2:28    | 2:33                      | 2:38                                |
| 3:00                       | 3:05                               | 3:10                         | 3:17                        | 3:23             | 3:28    | 3:33                      | 3:38                                |
| 4:00                       | 4:05                               | 4:10                         | 4:17                        | 4:23             | 4:28    | 4:33                      | 4:38                                |
| 5:00                       | 5:05                               | 5:10                         | 5:17                        | 5:23             | 5:28    | 5:33                      | 5:38                                |

## RIDING FROM SOUTH TO NORTH

The Rhody Express operates a 60-minute circuit by first traveling the South Loop and then the North Loop.

If your destination is not on the loop on which you are boarding, remain on the bus as it switches to the next loop, and you will reach your destination.



# **APPENDIX D**

## **CRASH DATA**



[illegible]



OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION  
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT  
CRASH SUMMARIES BY YEAR BY COLLISION TYPE

35TH ST at REDWOOD ST, City of Florence, Lane County, 01/01/2014 to 12/31/2018

| COLLISION TYPE | FATAL<br>CRASHES | NON-<br>PROPERTY |                | TOTAL<br>CRASHES | PEOPLE<br>KILLED | PEOPLE<br>INJURED | TRUCKS | DRY<br>SURF | WET<br>SURF | DAY | DARK | INTER-<br>SECTION<br>RELATED | INTER-<br>SECTION<br>RELATED | OFF-<br>ROAD |
|----------------|------------------|------------------|----------------|------------------|------------------|-------------------|--------|-------------|-------------|-----|------|------------------------------|------------------------------|--------------|
|                |                  | FATAL<br>CRASHES | DAMAGE<br>ONLY |                  |                  |                   |        |             |             |     |      |                              |                              |              |
| FINAL TOTAL    |                  |                  |                |                  |                  |                   |        |             |             |     |      |                              |                              |              |

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## TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

## CRASH SUMMARIES BY YEAR BY COLLISION TYPE

35TH ST at OREGON COAST HY, City of Florence, Lane County, 01/01/2013 to 12/31/2018

| COLLISION TYPE         | FATAL<br>CRASHES | NON-<br>FATAL<br>CRASHES | PROPERTY<br>DAMAGE<br>ONLY | TOTAL<br>CRASHES | PEOPLE<br>KILLED | PEOPLE<br>INJURED | TRUCKS   | DRY<br>SURF | WET<br>SURF | DAY       | DARK     | INTER-<br>SECTION<br>RELATED | INTER-<br>SECTION<br>RELATED | OFF-<br>ROAD |
|------------------------|------------------|--------------------------|----------------------------|------------------|------------------|-------------------|----------|-------------|-------------|-----------|----------|------------------------------|------------------------------|--------------|
| <b>YEAR: 2018</b>      |                  |                          |                            |                  |                  |                   |          |             |             |           |          |                              |                              |              |
| ANGLE                  | 0                | 1                        | 1                          | 2                | 0                | 1                 | 0        | 1           | 1           | 1         | 1        | 2                            | 0                            | 0            |
| TURNING MOVEMENTS      | 0                | 2                        | 0                          | 2                | 0                | 3                 | 0        | 2           | 0           | 2         | 0        | 2                            | 0                            | 0            |
| <b>YEAR 2018 TOTAL</b> | <b>0</b>         | <b>3</b>                 | <b>1</b>                   | <b>4</b>         | <b>0</b>         | <b>4</b>          | <b>0</b> | <b>3</b>    | <b>1</b>    | <b>3</b>  | <b>1</b> | <b>4</b>                     | <b>0</b>                     | <b>0</b>     |
| <b>YEAR: 2017</b>      |                  |                          |                            |                  |                  |                   |          |             |             |           |          |                              |                              |              |
| FIXED / OTHER OBJECT   | 0                | 0                        | 1                          | 1                | 0                | 0                 | 0        | 1           | 0           | 1         | 0        | 1                            | 0                            | 1            |
| TURNING MOVEMENTS      | 0                | 1                        | 0                          | 1                | 0                | 5                 | 0        | 1           | 0           | 1         | 0        | 1                            | 0                            | 0            |
| <b>YEAR 2017 TOTAL</b> | <b>0</b>         | <b>1</b>                 | <b>1</b>                   | <b>2</b>         | <b>0</b>         | <b>5</b>          | <b>0</b> | <b>2</b>    | <b>0</b>    | <b>2</b>  | <b>0</b> | <b>2</b>                     | <b>0</b>                     | <b>1</b>     |
| <b>YEAR: 2016</b>      |                  |                          |                            |                  |                  |                   |          |             |             |           |          |                              |                              |              |
| ANGLE                  | 0                | 1                        | 0                          | 1                | 0                | 1                 | 0        | 1           | 0           | 1         | 0        | 1                            | 0                            | 0            |
| TURNING MOVEMENTS      | 0                | 2                        | 0                          | 2                | 0                | 5                 | 0        | 2           | 0           | 2         | 0        | 2                            | 0                            | 0            |
| <b>YEAR 2016 TOTAL</b> | <b>0</b>         | <b>3</b>                 | <b>0</b>                   | <b>3</b>         | <b>0</b>         | <b>6</b>          | <b>0</b> | <b>3</b>    | <b>0</b>    | <b>3</b>  | <b>0</b> | <b>3</b>                     | <b>0</b>                     | <b>0</b>     |
| <b>YEAR: 2015</b>      |                  |                          |                            |                  |                  |                   |          |             |             |           |          |                              |                              |              |
| BACKING                | 0                | 0                        | 1                          | 1                | 0                | 0                 | 0        | 1           | 0           | 1         | 0        | 1                            | 0                            | 0            |
| <b>YEAR 2015 TOTAL</b> | <b>0</b>         | <b>0</b>                 | <b>1</b>                   | <b>1</b>         | <b>0</b>         | <b>0</b>          | <b>0</b> | <b>1</b>    | <b>0</b>    | <b>1</b>  | <b>0</b> | <b>1</b>                     | <b>0</b>                     | <b>0</b>     |
| <b>YEAR: 2014</b>      |                  |                          |                            |                  |                  |                   |          |             |             |           |          |                              |                              |              |
| TURNING MOVEMENTS      | 0                | 0                        | 2                          | 2                | 0                | 0                 | 0        | 2           | 0           | 2         | 0        | 2                            | 0                            | 0            |
| <b>YEAR 2014 TOTAL</b> | <b>0</b>         | <b>0</b>                 | <b>2</b>                   | <b>2</b>         | <b>0</b>         | <b>0</b>          | <b>0</b> | <b>2</b>    | <b>0</b>    | <b>2</b>  | <b>0</b> | <b>2</b>                     | <b>0</b>                     | <b>0</b>     |
| <b>FINAL TOTAL</b>     | <b>0</b>         | <b>7</b>                 | <b>5</b>                   | <b>12</b>        | <b>0</b>         | <b>15</b>         | <b>0</b> | <b>11</b>   | <b>1</b>    | <b>11</b> | <b>1</b> | <b>12</b>                    | <b>0</b>                     | <b>1</b>     |

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OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION

04/09/2020

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

CITY OF FLORENCE, LANE COUNTY

URBAN NON-SYSTEM CRASH LISTING

35TH ST at OREGON COAST HWY, City of Florence, Lane County, 01/01/2013 to 12/31/2018

1 - 4 of 12 Crash records shown.

[illegible]

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URBAN NON-SYSTEM CRASH LISTING

CITY OF FLORENCE, LANE COUNTY

**35TH ST at OREGON COAST HW, City of Florence, Lane County, 01/01/2013 to 12/31/2018**

CDS360  
04/09/2020

OREGON . . DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION  
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT  
URBAN NON-SYSTEM CRASH LISTING

35TH ST at OREGON COAST HW, City of Florence, Lane County, 01/01/2013 to 12/31/2018

5 - 8 of 12 Crash records shown.

CITY OF FLORENCE, LANE COUNTY

| S D M  |                         |                |               |                 |            |            |       |       |            |           |         |         |       |         |       |  |  |  |  |  |  |  |
|--------|-------------------------|----------------|---------------|-----------------|------------|------------|-------|-------|------------|-----------|---------|---------|-------|---------|-------|--|--|--|--|--|--|--|
| SER#   | F R J S W DAY           | CLASS          | CITY STREET   | RD CHAR         | INT-TYPE   | INT-REL    | OFFRD | WTHR  | CRASH      | SPCL USE  | MOVE    | FROM    | A S   | PED     | CAUSE |  |  |  |  |  |  |  |
| INVEST | E A U I C O DAY         | DIST           | FIRST STREET  | DIRECT          | LEGS       | TRF SIGNAL | DRY   | TURN  | PRVTE      | TURN-L    | TO      | P# TYPE | SVRTY | E X RES | LOC   |  |  |  |  |  |  |  |
| RD DPT | E L G N H R TIME        | FROM           | SECOND STREET | LOCIN           | (#LANES)   | CONTL      | DRVMY | LIGHT | SVRTY      | VE TYPE   | 02 NONE | TURN-L  | S -W  | 000     | 00    |  |  |  |  |  |  |  |
| UNLOC? | D C S V L K LAT         | LONG           | 1RS           |                 |            |            |       |       |            | PSNGR CAR | 02 PSNG | INJC    | 95 F  | 000     | 00    |  |  |  |  |  |  |  |
| 01865  | N N N                   | N N 05/26/2016 | 14            | OREGON COAST HW | INTER      | CROSS      | N     | CLR   | O-1 L-TURN | 01 NONE   | 0       | TURN-L  |       |         | 02    |  |  |  |  |  |  |  |
| NO RPT | TH                      |                | 35TH ST       | CN              | TRF SIGNAL | N          | DRY   | TURN  | PRVTE      | W -N      |         |         |       | 000     | 00    |  |  |  |  |  |  |  |
| N      | 10A                     |                |               | 02              | 0          | N          | DAY   | INJ   | PSNGR CAR  | 01 DRVR   | NONE    | 25 F    | OR-Y  | 004,028 | 02    |  |  |  |  |  |  |  |
| N      | 43 59 48.99 -124 6 5.19 |                | 000900100S00  |                 |            |            |       |       | 02 NONE    | 0         | STRGHT  | E -W    |       |         | 00    |  |  |  |  |  |  |  |
|        |                         |                |               |                 |            |            |       |       | PSNGR CAR  | 01 DRVR   | INJC    | 69 F    | OR-Y  | 000     | 00    |  |  |  |  |  |  |  |
| 02544  | N N N                   | 07/13/2016     | 14            | OREGON COAST HW | INTER      | CROSS      | N     | CLR   | ANGL-OPH   | 01 NONE   | 0       | STRGHT  |       |         | 04    |  |  |  |  |  |  |  |
| STATE  | WE                      |                | 35TH ST       | CN              | TRF SIGNAL | N          | DRY   | ANGL  | PRVTE      | N -S      |         |         |       | 000     | 00    |  |  |  |  |  |  |  |
| N      | 2P                      |                |               | 01              | 0          | N          | DAY   | INJ   | PSNGR CAR  | 01 DRVR   | INJC    | 71 M    | OR-Y  | 020     | 04    |  |  |  |  |  |  |  |
| N      | 43 59 48.99 -124 6 5.19 |                | 000900100S00  |                 |            |            |       |       | 02 NONE    | 0         | STRGHT  | E -W    |       |         | 00    |  |  |  |  |  |  |  |
|        |                         |                |               |                 |            |            |       |       | PSNGR CAR  | 01 DRVR   | NONE    | 62 F    | OR-Y  | 000     | 00    |  |  |  |  |  |  |  |
| 01567  | N N N                   | N N 05/07/2017 | 14            | OREGON COAST HW | INTER      | CROSS      | N     | CLR   | O-1 L-TURN | 01 NONE   | 0       | TURN-L  |       |         | 02    |  |  |  |  |  |  |  |
| COUNTY | SU                      |                | 35TH ST       | CN              | TRF SIGNAL | N          | DRY   | TURN  | PRVTE      | S -W      |         |         |       | 000     | 00    |  |  |  |  |  |  |  |
| N      | 2P                      |                |               | 01              | 0          | N          | DAY   | INJ   | PSNGR CAR  | 01 DRVR   | INJC    | 46 M    | SUSE  | 004,028 | 02    |  |  |  |  |  |  |  |
| N      | 43 59 48.99 -124 6 5.19 |                | 000900100S00  |                 |            |            |       |       | 01 NONE    | 0         | TURN-L  | S -W    |       |         | 00    |  |  |  |  |  |  |  |
|        |                         |                |               |                 |            |            |       |       | PSNGR CAR  | 02 PSNG   | INJC    | 63 M    |       | 000     | 00    |  |  |  |  |  |  |  |
|        |                         |                |               |                 |            |            |       |       | 01 NONE    | 0         | TURN-L  | S -W    |       |         | 00    |  |  |  |  |  |  |  |
|        |                         |                |               |                 |            |            |       |       | PSNGR CAR  | 03 PSNG   | INJC    | 03 F    |       | 000     | 00    |  |  |  |  |  |  |  |
|        |                         |                |               |                 |            |            |       |       | 02 NONE    | 0         | STRGHT  | N -S    |       |         | 00    |  |  |  |  |  |  |  |
|        |                         |                |               |                 |            |            |       |       | PSNGR CAR  | 01 DRVR   | INJB    | 24 F    | OR-Y  | 000     | 00    |  |  |  |  |  |  |  |
|        |                         |                |               |                 |            |            |       |       | 02 NONE    | 0         | STRGHT  | N -S    |       |         | 00    |  |  |  |  |  |  |  |
|        |                         |                |               |                 |            |            |       |       | PSNGR CAR  | 02 PSNG   | INJB    | 01 F    |       | 000     | 00    |  |  |  |  |  |  |  |

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CDS380  
04/09/2020

OREGON . . DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION  
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

URBAN NON-SYSTEM CRASH LISTING

CITY OF FLORENCE, LANE COUNTY

**35TH ST at OREGON COAST HW, City of Florence, Lane County, 01/01/2013 to 12/31/2018**

OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION  
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

CITY OF FLORENCE, LANE COUNTY

35TH ST at OREGON COAST HY, City of Florence, Lane County, 01/01/2013 to 12/31/2018

9 - 12 of 12 Crash records shown.

[illegible]

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CITY OF FLORENCE, LANE COUNTY

URBAN NON-SYSTEM CRASH LISTING

**35TH ST at OREGON COAST HW, City of Florence, Lane County, 01/01/2013 to 12/31/2018**



## ACTION CODE TRANSLATION LIST

| ACTION CODE | SHORT DESCRIPTION | LONG DESCRIPTION                                                                          |
|-------------|-------------------|-------------------------------------------------------------------------------------------|
| 000         | NONE              | NO ACTION OR NON-WARRANTED                                                                |
| 001         | SKIDDED           | SKIDDED                                                                                   |
| 002         | ON/OFF V          | GETTING ON OR OFF STOPPED OR PARKED VEHICLE                                               |
| 003         | LOAD OVR          | OVERHANGING LOAD STRUCK ANOTHER VEHICLE, ETC.                                             |
| 006         | SLOW DN           | SLOWED DOWN                                                                               |
| 007         | AVOIDING          | AVOIDING MANEUVER                                                                         |
| 008         | PAR PARK          | PARALLEL PARKING                                                                          |
| 009         | ANG PARK          | ANGLE PARKING                                                                             |
| 010         | INTERFERE         | PASSENGER INTERFERING WITH DRIVER                                                         |
| 011         | STOPPED           | STOPPED IN TRAFFIC NOT WAITING TO MAKE A LEFT TURN                                        |
| 012         | STP/L TRN         | STOPPED BECAUSE OF LEFT TURN SIGNAL OR WAITING, ETC.                                      |
| 013         | STP TURN          | STOPPED WHILE EXECUTING A TURN                                                            |
| 014         | EMR V PKD         | EMERGENCY VEHICLE LEGALLY PARKED IN THE ROADWAY                                           |
| 015         | GO A/STOP         | PROCEED AFTER STOPPING FOR A STOP SIGN/FLASHING RED.                                      |
| 016         | TRN A/RED         | TURNED ON RED AFTER STOPPING                                                              |
| 017         | LOSTCTRL          | LOST CONTROL OF VEHICLE                                                                   |
| 018         | EXIT DWY          | ENTERING STREET OR HIGHWAY FROM ALLEY OR DRIVEWAY                                         |
| 019         | ENTR DWY          | ENTERING ALLEY OR DRIVEWAY FROM STREET OR HIGHWAY                                         |
| 020         | STR ENTR          | BEFORE ENTERING ROADWAY, STRUCK PEDESTRIAN, ETC. ON SIDEWALK OR SHOULDER                  |
| 021         | NO DRVR           | CAR RAN AWAY - NO DRIVER                                                                  |
| 022         | PREV COL          | STRUCK, OR WAS STRUCK BY, VEHICLE OR PEDESTRIAN IN PRIOR COLLISION BEFORE ACC. STABILIZED |
| 023         | STALLED           | VEHICLE STALLED OR DISABLED                                                               |
| 024         | DRVR DEAD         | DEAD BY UNASSOCIATED CAUSE                                                                |
| 025         | FATIGUE           | FATIGUED, SLEEPY, ASLEEP                                                                  |
| 026         | SUN               | DRIVER BLINDED BY SUN                                                                     |
| 027         | HDLGHTS           | DRIVER BLINDED BY HEADLIGHTS                                                              |
| 028         | ILLNESS           | PHYSICALLY ILL                                                                            |
| 029         | THRU MED          | VEHICLE CROSSED, PLUNGED OVER, OR THROUGH MEDIAN BARRIER                                  |
| 030         | PURSUIT           | PURSuing OR ATTEMPTING TO STOP A VEHICLE                                                  |
| 031         | PASSING           | PASSING SITUATION                                                                         |
| 032         | PRKOFFRD          | VEHICLE PARKED BEYOND CURB OR SHOULDER                                                    |
| 033         | CROS MED          | VEHICLE CROSSED EARTH OR GRASS MEDIAN                                                     |
| 034         | X N/SGNL          | CROSSING AT INTERSECTION - NO TRAFFIC SIGNAL PRESENT                                      |
| 035         | X W/SGNL          | CROSSING AT INTERSECTION - TRAFFIC SIGNAL PRESENT                                         |
| 036         | DIAGONAL          | CROSSING AT INTERSECTION - DIAGONALLY                                                     |
| 037         | BTWN INT          | CROSSING BETWEEN INTERSECTIONS                                                            |
| 038         | DISTRCT           | DRIVER'S ATTENTION DISTRACTED                                                             |
| 039         | W/TRAF-S          | WALKING, RUNNING, RIDING, ETC., ON SHOULDER WITH TRAFFIC                                  |
| 040         | A/TRAF-S          | WALKING, RUNNING, RIDING, ETC., ON SHOULDER FACING TRAFFIC                                |
| 041         | W/TRAF-P          | WALKING, RUNNING, RIDING, ETC., ON PAVEMENT WITH TRAFFIC                                  |
| 042         | A/TRAF-P          | WALKING, RUNNING, RIDING, ETC., ON PAVEMENT FACING TRAFFIC                                |
| 043         | PLAYINRD          | PLAYING IN STREET OR ROAD                                                                 |
| 044         | PUSH MV           | PUSHING OR WORKING ON VEHICLE IN ROAD OR ON SHOULDER                                      |
| 045         | WORK ON           | WORKING IN ROADWAY OR ALONG SHOULDER                                                      |
| 046         | W/ TRAFIC         | NON-MOTORIST WALKING, RUNNING, RIDING, ETC. WITH TRAFFIC                                  |
| 047         | A/ TRAFIC         | NON-MOTORIST WALKING, RUNNING, RIDING, ETC. FACING TRAFFIC                                |
| 050         | LAY ON RD         | STANDING OR LYING IN ROADWAY                                                              |
| 051         | ENT OFFRD         | ENTERING / STARTING IN TRAFFIC LANE FROM OFF ROAD                                         |
| 052         | MERGING           | MERGING                                                                                   |
| 055         | SPRAY             | BLINDED BY WATER SPRAY                                                                    |

ACTION CODE TRANSLATION LIST

| ACTION<br>CODE | SHORT<br>DESCRIPTION | LONG DESCRIPTION |
|----------------|----------------------|------------------|
| 088            | OTHER                | OTHER ACTION     |
| 099            | UNK                  | UNKNOWN ACTION   |

CAUSE CODE TRANSLATION LIST

| CAUSE CODE | SHORT DESCRIPTION | LONG DESCRIPTION                                  |
|------------|-------------------|---------------------------------------------------|
| 00         | NO CODE           | NO CAUSE ASSOCIATED AT THIS LEVEL                 |
| 01         | TOO-FAST          | TOO FAST FOR CONDITIONS (NOT EXCEED POSTED SPEED  |
| 02         | NO-YIELD          | DID NOT YIELD RIGHT-OF-WAY                        |
| 03         | PAS-STOP          | PASSED STOP SIGN OR RED FLASHER                   |
| 04         | DIS SIG           | DISREGARDED TRAFFIC SIGNAL                        |
| 05         | LEFT-CTR          | DROVE LEFT OF CENTER ON TWO-WAY ROAD; STRADDLING  |
| 06         | IMP-OVER          | IMPROPER OVERTAKING                               |
| 07         | TOO-CLOS          | FOLLOWED TOO CLOSELY                              |
| 08         | IMP-TURN          | MADE IMPROPER TURN                                |
| 09         | DRINKING          | ALCOHOL OR DRUG INVOLVED                          |
| 10         | OTHR-IMP          | OTHER IMPROPER DRIVING                            |
| 11         | MECH-DEF          | MECHANICAL DEFECT                                 |
| 12         | OTHER             | OTHER (NOT IMPROPER DRIVING)                      |
| 13         | IMP LN C          | IMPROPER CHANGE OF TRAFFIC LANES                  |
| 14         | DIS TCD           | DISREGARDED OTHER TRAFFIC CONTROL DEVICE          |
| 15         | WRNG WAY          | WRONG WAY ON ONE-WAY ROAD; WRONG SIDE DIVIDED RO. |
| 16         | FATIGUE           | DRIVER DROWSY/FATIGUED/SLEEPY                     |
| 17         | ILLNESS           | PHYSICAL ILLNESS                                  |
| 18         | IN RDWY           | NON-MOTORIST ILLEGALLY IN ROADWAY                 |
| 19         | NT VISBL          | NON-MOTORIST NOT VISIBLE; NON-REFLECTIVE CLOTHING |
| 20         | IMP PKNG          | VEHICLE IMPROPERLY PARKED                         |
| 21         | DEF STER          | DEFECTIVE STEERING MECHANISM                      |
| 22         | DEF BRKE          | INADEQUATE OR NO BRAKES                           |
| 24         | LOADSHT           | VEHICLE LOST LOAD OR LOAD SHIFTED                 |
| 25         | TIREFAIL          | TIRE FAILURE                                      |
| 26         | PHANTOM           | PHANTOM / NON-CONTACT VEHICLE                     |
| 27         | INATTENT          | INATTENTION                                       |
| 28         | NM INATT          | NON-MOTORIST INATTENTION                          |
| 29         | F AVOID           | FAILED TO AVOID VEHICLE AHEAD                     |
| 30         | SPEED             | DRIVING IN EXCESS OF POSTED SPEED                 |
| 31         | RACING            | SPEED RACING (PER PAR)                            |
| 32         | CARELESS          | CARELESS DRIVING (PER PAR)                        |
| 33         | RECKLESS          | RECKLESS DRIVING (PER PAR)                        |
| 34         | AGGRESV           | AGGRESSIVE DRIVING (PER PAR)                      |
| 35         | RD RAGE           | ROAD RAGE (PER PAR)                               |
| 40         | VIEW OBS          | VIEW OBSCURED                                     |
| 50         | USED MDN          | IMPROPER USE OF MEDIAN OR SHOULDER                |
| 51         | FAIL LN           | FAILED TO MAINTAIN LANE                           |
| 52         | OFF RD            | RAN OFF ROAD                                      |

COLLISION TYPE CODE TRANSLATION LIST

| COLL CODE | SHORT DESCRIPTION | LONG DESCRIPTION             |
|-----------|-------------------|------------------------------|
| 6         | OTH               | MISCELLANEOUS                |
| -         | BACK              | BACKING                      |
| 0         | PED               | PEDESTRIAN                   |
| 1         | ANGL              | ANGLE                        |
| 2         | HEAD              | HEAD-ON                      |
| 3         | REAR              | REAR-END                     |
| 4         | SS-M              | SIDESWIPE - MEETING          |
| 5         | SS-O              | SIDESWIPE - OVERTAKING       |
| 6         | TURN              | TURNING MOVEMENT             |
| 7         | PARK              | PARKING MANEUVER             |
| 8         | NCOL              | NON-COLLISION                |
| 9         | FIX               | FIXED OBJECT OR OTHER OBJECT |

CRASH TYPE CODE TRANSLATION LIST

| CRASH TYPE | SHORT DESCRIPTION | LONG DESCRIPTION                                    |
|------------|-------------------|-----------------------------------------------------|
| 6          | OVERTURN          | OVERTURNED                                          |
| 0          | NON-COLL          | OTHER NON-COLLISION                                 |
| 1          | OTH RDWY          | MOTOR VEHICLE ON OTHER ROADWAY                      |
| 2          | PRKD MV           | PARKED MOTOR VEHICLE                                |
| 3          | PED               | PEDESTRIAN                                          |
| 4          | TRAIN             | RAILWAY TRAIN                                       |
| 6          | BIKE              | PEDALCYCLIST                                        |
| 7          | ANIMAL            | ANIMAL                                              |
| 8          | FIX OBJ           | FIXED OBJECT                                        |
| 9          | OTH OBJ           | OTHER OBJECT                                        |
| A          | ANGL-STP          | ENTERING AT ANGLE - ONE VEHICLE STOPPED             |
| B          | ANGL-OTH          | ENTERING AT ANGLE - ALL OTHERS                      |
| C          | S-STRGHT          | FROM SAME DIRECTION - BOTH GOING STRAIGHT           |
| D          | S-LTURN           | FROM SAME DIRECTION - ONE TURN, ONE STRAIGHT        |
| E          | S-LSTOP           | FROM SAME DIRECTION - ONE STOPPED                   |
| F          | S-OTHER           | FROM SAME DIRECTION-ALL OTHERS, INCLUDING PARKING   |
| G          | O-STRGHT          | FROM OPPOSITE DIRECTION - BOTH GOING STRAIGHT       |
| H          | O-1 L-TURN        | FROM OPPOSITE DIRECTION-ONE LEFT TURN, ONE STRAIGHT |
| I          | O-LSTOP           | FROM OPPOSITE DIRECTION - ONE STOPPED               |
| J          | O-OTHER           | FROM OPPOSITE DIRECTION-ALL OTHERS INCL. PARKING    |

DRIVER LICENSE CODE TRANSLATION LIST

| LIC CODE | SHORT DESC | LONG DESCRIPTION                                |
|----------|------------|-------------------------------------------------|
| 0        | NONE       | NOT LICENSED (HAD NEVER BEEN LICENSED)          |
| 1        | OR-Y       | VALID OREGON LICENSE                            |
| 2        | OTH-Y      | VALID LICENSE, OTHER STATE OR COUNTRY           |
| 3        | SUSP       | SUSPENDED/REVOKED                               |
| 4        | EXP        | EXPIRED                                         |
| 8        | N-VAL      | OTHER NON-VALID LICENSE                         |
| 9        | UNK        | UNKNOWN IF DRIVER WAS LICENSED AT TIME OF CRASH |

DRIVER RESIDENCE CODE TRANSLATION LIST

| RES CODE | SHORT DESC | LONG DESCRIPTION                             |
|----------|------------|----------------------------------------------|
| 1        | OR<25      | OREGON RESIDENT WITHIN 25 MILE OF HOME       |
| 2        | OR>25      | OREGON RESIDENT 25 OR MORE MILES FROM HOME   |
| 3        | OR-2       | OREGON RESIDENT - UNKNOWN DISTANCE FROM HOME |
| 4        | N-RES      | NON-RESIDENT                                 |
| 9        | UNK        | UNKNOWN IF OREGON RESIDENT                   |

ERROR CODE TRANSLATION LIST

| ERROR CODE | SHORT DESCRIPTION | FULL DESCRIPTION                                                                            |
|------------|-------------------|---------------------------------------------------------------------------------------------|
| 000        | NONE              | NO ERROR                                                                                    |
| 001        | WIDE TRN          | WIDE TURN                                                                                   |
| 002        | CUT CORN          | CUT CORNER ON TURN                                                                          |
| 003        | FAIL TRN          | FAILED TO OBEY MANDATORY TRAFFIC TURN SIGNAL, SIGN OR LANE MARKINGS                         |
| 004        | L IN TRF          | LEFT TURN IN FRONT OF ONCOMING TRAFFIC                                                      |
| 005        | L PROHIB          | LEFT TURN WHERE PROHIBITED                                                                  |
| 006        | FRM WRNG          | TURNED FROM WRONG LANE                                                                      |
| 007        | TO WRONG          | TURNED INTO WRONG LANE                                                                      |
| 008        | ILLEG U           | U-TURNED ILLEGALLY                                                                          |
| 009        | IMP STOP          | IMPROPERLY STOPPED IN TRAFFIC LANE                                                          |
| 010        | IMP SIG           | IMPROPER SIGNAL OR FAILURE TO SIGNAL                                                        |
| 011        | IMP BACK          | BACKING IMPROPERLY (NOT PARKING)                                                            |
| 012        | IMP PARK          | IMPROPERLY PARKED                                                                           |
| 013        | IMP UNPK          | IMPROPER START LEAVING PARKED POSITION                                                      |
| 014        | IMP STRT          | IMPROPER START FROM STOPPED POSITION                                                        |
| 015        | IMP LGHT          | IMPROPER OR NO LIGHTS (VEHICLE IN TRAFFIC)                                                  |
| 016        | INATTENT          | INATTENTION (FAILURE TO DIM LIGHTS PRIOR TO 4/1/97)                                         |
| 017        | UNSF VEH          | DRIVING UNSAFE VEHICLE (NO OTHER ERROR APPARENT)                                            |
| 018        | OTH PARK          | ENTERING/EXITING PARKED POSITION W/ INSUFFICIENT CLEARANCE; OTHER IMPROPER PARKING MANEUVER |
| 019        | DIS DRIV          | DISREGARDED OTHER DRIVER'S SIGNAL                                                           |
| 020        | DIS SGNL          | DISREGARDED TRAFFIC SIGNAL                                                                  |
| 021        | RAN STOP          | DISREGARDED STOP SIGN OR FLASHING RED                                                       |
| 022        | DIS SGN           | DISREGARDED WARNING SIGN, FLARES OR FLASHING AMBER                                          |
| 023        | DIS OFCR          | DISREGARDED POLICE OFFICER OR FLAGMAN                                                       |
| 024        | DIS EMER          | DISREGARDED SIREN OR WARNING OF EMERGENCY VEHICLE                                           |
| 025        | DIS RR            | DISREGARDED RR SIGNAL, RR SIGN, OR RR FLAGMAN                                               |
| 026        | REAR-END          | FAILED TO AVOID STOPPED OR PARKED VEHICLE AHEAD OTHER THAN SCHOOL BUS                       |
| 027        | BIKE ROW          | DID NOT HAVE RIGHT-OF-WAY OVER PEDALCYCLIST                                                 |
| 028        | NO ROW            | DID NOT HAVE RIGHT-OF-WAY                                                                   |
| 029        | PED ROW           | FAILED TO YIELD RIGHT-OF-WAY TO PEDESTRIAN                                                  |
| 030        | PAS CURV          | PASSING ON A CURVE                                                                          |
| 031        | PAS WRNG          | PASSING ON THE WRONG SIDE                                                                   |
| 032        | PAS TANG          | PASSING ON STRAIGHT ROAD UNDER UNSAFE CONDITIONS                                            |
| 033        | PAS X-WK          | PASSED VEHICLE STOPPED AT CROSSWALK FOR PEDESTRIAN                                          |
| 034        | PAS INTR          | PASSING AT INTERSECTION                                                                     |
| 035        | PAS HILL          | PASSING ON CREST OF HILL                                                                    |
| 036        | N/PAS 2N          | PASSING IN "NO PASSING" ZONE                                                                |
| 037        | PAS TRAF          | PASSING IN FRONT OF ONCOMING TRAFFIC                                                        |
| 038        | CUT-IN            | CUTTING IN (TWO LANES - TWO WAY ONLY)                                                       |
| 039        | WRNGSIDE          | DRIVING ON WRONG SIDE OF THE ROAD (2-WAY UNDIVIDED ROADWAYS)                                |
| 040        | THRU MED          | DRIVING THROUGH SAFETY ZONE OR OVER ISLAND                                                  |
| 041        | F/ST BUS          | FAILED TO STOP FOR SCHOOL BUS                                                               |

ERROR CODE TRANSLATION LIST

| ERROR CODE | SHORT DESCRIPTION | FULL DESCRIPTION                                                    |
|------------|-------------------|---------------------------------------------------------------------|
| 042        | F/SLO MV          | FAILED TO DECREASE SPEED FOR SLOWER MOVING VEHICLE                  |
| 043        | TOO CLOSE         | FOLLOWING TOO CLOSELY (MUST BE ON OFFICER'S REPORT)                 |
| 044        | STRDL LN          | STRADDLING OR DRIVING ON WRONG LANES                                |
| 045        | IMP CHG           | IMPROPER CHANGE OF TRAFFIC LANES                                    |
| 046        | WRNG WAY          | WRONG WAY ON ONE-WAY ROADWAY; WRONG SIDE DIVIDED ROAD               |
| 047        | BASCRULE          | DRIVING TOO FAST FOR CONDITIONS (NOT EXCEEDING POSTED SPEED)        |
| 048        | OPN DOOR          | OPENED DOOR INTO ADJACENT TRAFFIC LANE                              |
| 049        | IMPEDING          | IMPEDING TRAFFIC                                                    |
| 050        | SPEED             | DRIVING IN EXCESS OF POSTED SPEED                                   |
| 051        | RECKLESS          | RECKLESS DRIVING (PER PAR)                                          |
| 052        | CARELESS          | CARELESS DRIVING (PER PAR)                                          |
| 053        | RACING            | SPEED RACING (PER PAR)                                              |
| 054        | X N/SGNL          | CROSSING AT INTERSECTION, NO TRAFFIC SIGNAL PRESENT                 |
| 055        | X W/SGNL          | CROSSING AT INTERSECTION, TRAFFIC SIGNAL PRESENT                    |
| 056        | DIAGONAL          | CROSSING AT INTERSECTION - DIAGONALLY                               |
| 057        | BTWN INT          | CROSSING BETWEEN INTERSECTIONS                                      |
| 059        | W/TRAF-S          | WALKING, RUNNING, RIDING, ETC., ON SHOULDER WITH TRAFFIC            |
| 060        | A/TRAF-S          | WALKING, RUNNING, RIDING, ETC., ON SHOULDER FACING TRAFFIC          |
| 061        | W/TRAF-P          | WALKING, RUNNING, RIDING, ETC., ON PAVEMENT WITH TRAFFIC            |
| 062        | A/TRAF-P          | WALKING, RUNNING, RIDING, ETC., ON PAVEMENT FACING TRAFFIC          |
| 063        | PLAYINRD          | PLAYING IN STREET OR ROAD                                           |
| 064        | PUSH MV           | PUSHING OR WORKING ON VEHICLE IN ROAD OR ON SHOULDER                |
| 065        | WORK IN RD        | WORKING IN ROADWAY OR ALONG SHOULDER                                |
| 070        | LAY ON RD         | STANDING OR LYING IN ROADWAY                                        |
| 071        | NM IMP USE        | IMPROPER USE OF TRAFFIC LANE BY NON-MOTORIST                        |
| 073        | ELUDING           | ELUDING / ATTEMPT TO ELUDE                                          |
| 079        | F NEG CURV        | FAILED TO NEGOTIATE A CURVE                                         |
| 080        | FAIL IN           | FAILED TO MAINTAIN LANE                                             |
| 081        | OFF RD            | RAN OFF ROAD                                                        |
| 082        | NO CLEAR          | DRIVER MISJUDGED CLEARANCE                                          |
| 083        | OVRSSTEER         | OVER-CORRECTING                                                     |
| 084        | NOT USED          | CODE NOT IN USE                                                     |
| 085        | OVLORD            | OVERLOADING OR IMPROPER LOADING OF VEHICLE WITH CARGO OR PASSENGERS |
| 097        | UNA DIS TC        | UNABLE TO DETERMINE WHICH DRIVER DISREGARDED TRAFFIC CONTROL DEVICE |

EVENT CODE TRANSLATION LIST

| EVENT CODE | SHORT DESCRIPTION | LONG DESCRIPTION                                                                              |
|------------|-------------------|-----------------------------------------------------------------------------------------------|
| 001        | FEL/JUMP          | OCCUPANT FELL, JUMPED OR WAS EJECTED FROM MOVING VEHICLE                                      |
| 002        | INTERFER          | PASSENGER INTERFERED WITH DRIVER                                                              |
| 003        | BUG INTF          | ANIMAL OR INSECT IN VEHICLE INTERFERED WITH DRIVER                                            |
| 004        | INDRCT PED        | PEDESTRIAN INDIRECTLY INVOLVED (NOT STRUCK)                                                   |
| 005        | SUB-PED           | "SUB-PED": PEDESTRIAN INJURED SUBSEQUENT TO COLLISION, ETC.                                   |
| 006        | INDRCT BIK        | PEDALCYCLIST INDIRECTLY INVOLVED (NOT STRUCK)                                                 |
| 007        | HITCHIKR          | HITCHHIKER (SOLICITING A RIDE)                                                                |
| 008        | PNGR TOW          | PASSENGER OR NON-MOTORIST BEING TOWED OR PUSHED ON CONVEYANCE                                 |
| 009        | ON/OFF V          | GETTING ON/OFF STOPPED/PARKED VEHICLE (OCCUPANTS ONLY; MUST HAVE PHYSICAL CONTACT W/ VEHICLE) |
| 010        | SUB OTRN          | OVERTURNED AFTER FIRST HARMFUL EVENT                                                          |
| 011        | MV PUSHD          | VEHICLE BEING PUSHED                                                                          |
| 012        | MV TOWED          | VEHICLE TOWED OR HAD BEEN TOWING ANOTHER VEHICLE                                              |
| 013        | FORCED            | VEHICLE FORCED BY IMPACT INTO ANOTHER VEHICLE, PEDALCYCLIST OR PEDESTRIAN                     |
| 014        | SET MOTN          | VEHICLE SET IN MOTION BY NON-DRIVER (CHILD RELEASED BRAKES, ETC.)                             |
| 015        | RR ROW            | AT OR ON RAILROAD RIGHT-OF-WAY (NOT LIGHT RAIL)                                               |
| 016        | LT RL ROW         | AT OR ON LIGHT-RAIL RIGHT-OF-WAY                                                              |
| 017        | RR HIT V          | TRAIN STRUCK VEHICLE                                                                          |
| 018        | V HIT RR          | VEHICLE STRUCK TRAIN                                                                          |
| 019        | HIT RR CAR        | VEHICLE STRUCK RAILROAD CAR ON ROADWAY                                                        |
| 020        | JACKNIFE          | JACKKNIFE; TRAILER OR TOWED VEHICLE STRUCK TOWING VEHICLE                                     |
| 021        | TRL OTRN          | TRAILER OR TOWED VEHICLE OVERTURNED                                                           |
| 022        | CN BROKE          | TRAILER CONNECTION BROKE                                                                      |
| 023        | DETACH TRL        | DETACHED TRAILING OBJECT STRUCK OTHER VEHICLE, NON-MOTORIST, OR OBJECT                        |
| 024        | V DOOR OFN        | VEHICLE DOOR OPENED INTO ADJACENT TRAFFIC LANE                                                |
| 025        | WHEELOFF          | WHEEL CAME OFF                                                                                |
| 026        | HOOD UP           | HOOD FLEW UP                                                                                  |
| 028        | LOAD SHIFT        | LOST LOAD, LOAD MOVED OR SHIFTED                                                              |
| 029        | TIREFAIL          | TIRE FAILURE                                                                                  |
| 030        | PET               | PET: CAT, DOG AND SIMILAR                                                                     |
| 031        | LYSTOCK           | STOCK: COW, CALF, BULL, STEER, SHEEP, ETC.                                                    |
| 032        | HORSE             | HORSE, MULE, OR DONKEY                                                                        |
| 033        | HRSE&RID          | HORSE AND RIDER                                                                               |
| 034        | GAME              | WILD ANIMAL, GAME (INCLUDES BIRDS; NOT DEER OR ELK)                                           |
| 035        | DEER ELK          | DEER OR ELK, WAPITI                                                                           |
| 036        | ANML VEH          | ANIMAL-DRAWN VEHICLE                                                                          |
| 037        | CULVERT           | CULVERT, OPEN LOW OR HIGH MANHOLE                                                             |
| 038        | ATENUATN          | IMPACT ATTENUATOR                                                                             |
| 039        | PK METER          | PARKING METER                                                                                 |
| 040        | CURB              | CURB (ALSO NARROW SIDEWALKS ON BRIDGES)                                                       |
| 041        | JIGGLE            | JIGGLE BAR OR TRAFFIC SNAKE FOR CHANNELIZATION                                                |
| 042        | GRRL END          | LEADING EDGE OF GUARDRAIL                                                                     |
| 043        | GARDRAIL          | GUARD RAIL (NOT METAL MEDIAN BARRIER)                                                         |
| 044        | BARRIER           | MEDIAN BARRIER (RAISED OR METAL)                                                              |
| 045        | WALL              | RETAINING WALL OR TUNNEL WALL                                                                 |
| 046        | BR RAIL           | BRIDGE RAILING OR PARAPET (ON BRIDGE OR APPROACH)                                             |
| 047        | BR ABUTMNT        | BRIDGE ABUTMENT (INCLUDED "APPROACH END" THRU 2013)                                           |
| 048        | BR COLMN          | BRIDGE PILLAR OR COLUMN                                                                       |
| 049        | BR GIRDR          | BRIDGE GIRDER (HORIZONTAL BRIDGE STRUCTURE OVERHEAD)                                          |
| 050        | ISLAND            | TRAFFIC RAISED ISLAND                                                                         |
| 051        | GORE              | GORE                                                                                          |
| 052        | POLE UNK          | POLE - TYPE UNKNOWN                                                                           |
| 053        | POLE UTIL         | POLE - POWER OR TELEPHONE                                                                     |
| 054        | ST LIGHT          | POLE - STREET LIGHT ONLY                                                                      |
| 055        | TRF SGNL          | POLE - TRAFFIC SIGNAL AND PED SIGNAL ONLY                                                     |
| 056        | SGN BRDG          | POLE - SIGN BRIDGE                                                                            |
| 057        | STOPSIGN          | STOP OR YIELD SIGN                                                                            |
| 058        | OTH SIGN          | OTHER SIGN, INCLUDING STREET SIGNS                                                            |
| 059        | HYDRANT           | HYDRANT                                                                                       |

## EVENT CODE TRANSLATION LIST

| EVENT CODE | SHORT DESCRIPTION | LONG DESCRIPTION                                                                 |
|------------|-------------------|----------------------------------------------------------------------------------|
| 060        | MARKER            | DELINATOR OR MARKER (REFLECTOR POSTS)                                            |
| 061        | MAILBOX           | MAILBOX                                                                          |
| 062        | TREE              | TREE, STUMP OR SHRUBS                                                            |
| 063        | VEG OHED          | TREE BRANCH OR OTHER VEGETATION OVERHEAD, ETC.                                   |
| 064        | WIRE/CBL          | WIRE OR CABLE ACROSS OR OVER THE ROAD                                            |
| 065        | TEMP SGN          | TEMPORARY SIGN OR BARRICADE IN ROAD, ETC.                                        |
| 066        | PERM SGN          | PERMANENT SIGN OR BARRICADE IN/OFF ROAD                                          |
| 067        | SLIDE             | SLIDES, FALLEN OR FALLING ROCKS                                                  |
| 068        | FRGN OBJ          | FOREIGN OBSTRUCTION/DEBRIS IN ROAD (NOT GRAVEL)                                  |
| 069        | EQP WORK          | EQUIPMENT WORKING IN/OFF ROAD                                                    |
| 070        | OTH EQP           | OTHER EQUIPMENT IN OR OFF ROAD (INCLUDES PARKED TRAILER, BOAT)                   |
| 071        | MAIN EQP          | WRECKER, STREET SWEEPER, SNOW PLOW OR SANDING EQUIPMENT                          |
| 072        | OTHER WALL        | ROCK, BRICK OR OTHER SOLID WALL                                                  |
| 073        | IRGL PYMT         | OTHER BUMP (NOT SPEED BUMP), POTHOLE OR PAVEMENT IRREGULARITY (PER PAR)          |
| 074        | OVERHD OBJ        | OTHER OVERHEAD OBJECT (HIGHWAY SIGN, SIGNAL HEAD, ETC.); NOT BRIDGE              |
| 075        | CAVE IN           | BRIDGE OR ROAD CAVE IN                                                           |
| 076        | HI WATER          | HIGH WATER                                                                       |
| 077        | SNO BANK          | SNOW BANK                                                                        |
| 078        | LO-HI EDGE        | LOW OR HIGH SHOULDER AT PAVEMENT EDGE                                            |
| 079        | DITCH             | CUT SLOPE OR DITCH EMBANKMENT                                                    |
| 080        | OBJ FRM MV        | STRUCK BY ROCK OR OTHER OBJECT SET IN MOTION BY OTHER VEHICLE (INCL. LOST LOADS) |
| 081        | FLY-OBJ           | STRUCK BY ROCK OR OTHER MOVING OR FLYING OBJECT (NOT SET IN MOTION BY VEHICLE)   |
| 082        | VEH HID           | VEHICLE OBSCURED VIEW                                                            |
| 083        | VEG HID           | VEGETATION OBSCURED VIEW                                                         |
| 084        | BLDG HID          | VIEW OBSCURED BY FENCE, SIGN, PHONE BOOTH, ETC.                                  |
| 085        | WIND GUST         | WIND GUST                                                                        |
| 086        | IMMERSED          | VEHICLE IMMERSED IN BODY OF WATER                                                |
| 087        | FIRE/EXP          | FIRE OR EXPLOSION                                                                |
| 088        | FENC/BLD          | FENCE OR BUILDING, ETC.                                                          |
| 089        | OTHER CRASH       | CRASH RELATED TO ANOTHER SEPARATE CRASH                                          |
| 090        | TO 1 SIDE         | TWO-WAY TRAFFIC ON DIVIDED ROADWAY ALL ROUTED TO ONE SIDE                        |
| 091        | BUILDING          | BUILDING OR OTHER STRUCTURE                                                      |
| 092        | PHANTOM           | OTHER (PHANTOM) NON-CONTACT VEHICLE                                              |
| 093        | CELL PHONE        | CELL PHONE (ON PAR OR DRIVER IN USE)                                             |
| 094        | VIOL GDL          | TEENAGE DRIVER IN VIOLATION OF GRADUATED LICENSE PGM                             |
| 095        | GUY WIRE          | GUY WIRE                                                                         |
| 096        | BERM              | BERM (EARTHEN OR GRAVEL MOUND)                                                   |
| 097        | GRAVEL            | GRAVEL IN ROADWAY                                                                |
| 098        | ABR EDGE          | ABRUPT EDGE                                                                      |
| 099        | CELL WTNSD        | CELL PHONE USE WITNESSED BY OTHER PARTICIPANT                                    |
| 100        | UNK FIXD          | FIXED OBJECT, UNKNOWN TYPE.                                                      |
| 101        | OTHER OBJ         | NON-FIXED OBJECT, OTHER OR UNKNOWN TYPE                                          |
| 102        | TEXTING           | TEXTING                                                                          |
| 103        | WZ WORKER         | WORK ZONE WORKER                                                                 |
| 104        | ON VEHICLE        | PASSENGER RIDING ON VEHICLE EXTERIOR                                             |
| 105        | PEDAL PSGR        | PASSENGER RIDING ON PEDALCYCLE                                                   |
| 106        | MAN WHLCHR        | PEDESTRIAN IN NON-MOTORIZED WHEELCHAIR                                           |
| 107        | MTR WHLCHR        | PEDESTRIAN IN MOTORIZED WHEELCHAIR                                               |
| 108        | OFFICER           | LAW ENFORCEMENT / POLICE OFFICER                                                 |
| 109        | SUB-BIKE          | "SUB-BIKE": PEDALCYCLIST INJURED SUBSEQUENT TO COLLISION, ETC.                   |
| 110        | N-MTR             | NON-MOTORIST STRUCK VEHICLE                                                      |
| 111        | S CAR VS V        | STREET CAR/TROLLEY (ON RAILS OR OVERHEAD WIRE SYSTEM) STRUCK VEHICLE             |
| 112        | V VS S CAR        | VEHICLE STRUCK STREET CAR/TROLLEY (ON RAILS OR OVERHEAD WIRE SYSTEM)             |
| 113        | S CAR ROW         | AT OR ON STREET CAR OR TROLLEY RIGHT-OF-WAY                                      |
| 114        | RR EQUIP          | VEHICLE STRUCK RAILROAD EQUIPMENT (NOT TRAIN) ON TRACKS                          |
| 115        | DSTRCT GPS        | DISTRACTED BY NAVIGATION SYSTEM OR GPS DEVICE                                    |
| 116        | DSTRCT OTH        | DISTRACTED BY OTHER ELECTRONIC DEVICE                                            |
| 117        | RR GATE           | RAIL CROSSING DROP-ARM GATE                                                      |

## EVENT CODE TRANSLATION LIST

| EVENT<br>CODE | SHORT<br>DESCRIPTION | LONG DESCRIPTION                                                            |
|---------------|----------------------|-----------------------------------------------------------------------------|
| 118           | EXPNSN JNT           | EXPANSION JOINT                                                             |
| 119           | JERSEY BAR           | JERSEY BARRIER                                                              |
| 120           | WIRE BAR             | WIRE OR CABLE MEDIAN BARRIER                                                |
| 121           | FENCE                | FENCE                                                                       |
| 123           | OBJ IN VEH           | LOOSE OBJECT IN VEHICLE STRUCK OCCUPANT                                     |
| 124           | SLIPPERY             | SLIDING OR SWERVING DUE TO WET, ICY, SLIPPERY OR LOOSE SURFACE (NOT GRAVEL) |
| 125           | SHLDR                | SHOULDER GAVE WAY                                                           |
| 126           | BOULDER              | ROCK(S), BOULDER (NOT GRAVEL; NOT ROCK SLIDE)                               |
| 127           | LAND SLIDE           | ROCK SLIDE OR LAND SLIDE                                                    |
| 128           | CURVE INV            | CURVE PRESENT AT CRASH LOCATION                                             |
| 129           | HILL INV             | VERTICAL GRADE / HILL PRESENT AT CRASH LOCATION                             |
| 130           | CURVE HID            | VIEW OBSCURED BY CURVE                                                      |
| 131           | HILL HID             | VIEW OBSCURED BY VERTICAL GRADE / HILL                                      |
| 132           | WINDOW HID           | VIEW OBSCURED BY VEHICLE WINDOW CONDITIONS                                  |
| 133           | SPRAY HID            | VIEW OBSCURED BY WATER SPRAY                                                |
| 134           | TORRENTIAL           | TORRENTIAL RAIN (EXCEPTIONALLY HEAVY RAIN)                                  |



FUNCTIONAL CLASSIFICATION TRANSLATION LIST

| FUNC<br>CLASS | DESCRIPTION |                                                   |
|---------------|-------------|---------------------------------------------------|
|               | CODE        | DESCRIPTION                                       |
| 01            |             | RURAL PRINCIPAL ARTERIAL - INTERSTATE             |
| 02            |             | RURAL PRINCIPAL ARTERIAL - OTHER                  |
| 06            |             | RURAL MINOR ARTERIAL                              |
| 07            |             | RURAL MAJOR COLLECTOR                             |
| 08            |             | RURAL MINOR COLLECTOR                             |
| 09            |             | RURAL LOCAL                                       |
| 11            |             | URBAN PRINCIPAL ARTERIAL - INTERSTATE             |
| 12            |             | URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXP |
| 14            |             | URBAN PRINCIPAL ARTERIAL - OTHER                  |
| 16            |             | URBAN MINOR ARTERIAL                              |
| 17            |             | URBAN MAJOR COLLECTOR                             |
| 18            |             | URBAN MINOR COLLECTOR                             |
| 19            |             | URBAN LOCAL                                       |
| 78            |             | UNKNOWN RURAL SYSTEM                              |
| 79            |             | UNKNOWN RURAL NON-SYSTEM                          |
| 98            |             | UNKNOWN URBAN SYSTEM                              |
| 99            |             | UNKNOWN URBAN NON-SYSTEM                          |

HIGHWAY COMPONENT TRANSLATION LIST

| CODE | DESCRIPTION |                        |
|------|-------------|------------------------|
|      | CODE        | DESCRIPTION            |
| 0    |             | MAINLINE STATE HIGHWAY |
| 1    |             | COULET                 |
| 3    |             | FRONTAGE ROAD          |
| 6    |             | CONNECTION             |
| 8    |             | HIGHWAY - OTHER        |

INJURY SEVERITY CODE TRANSLATION LIST

| CODE | LONG DESCRIPTION |                                                |
|------|------------------|------------------------------------------------|
|      | SHORT<br>DESC    | LONG DESCRIPTION                               |
| 1    | KILL             | FATAL INJURY                                   |
| 2    | INJA             | INCAPACITATING INJURY - BLEEDING, BROKEN BONES |
| 3    | INJB             | NON-INCAPACITATING INJURY                      |
| 4    | INJC             | POSSIBLE INJURY - COMPLAINT OF PAIN            |
| 5    | PRI              | DIED PRIOR TO CRASH                            |
| 7    | NO<5             | NO INJURY - 0 TO 4 YEARS OF AGE                |
| 9    | NONE             | PARTICIPANT UNINJURED, OVER THE AGE OF 4       |

LIGHT CONDITION CODE TRANSLATION LIST

| CODE | LONG DESCRIPTION |                               |
|------|------------------|-------------------------------|
|      | SHORT<br>DESC    | LONG DESCRIPTION              |
| 0    | UNK              | UNKNOWN                       |
| 1    | DAY              | DAYLIGHT                      |
| 2    | DLIT             | DARKNESS - WITH STREET LIGHTS |
| 3    | DARK             | DARKNESS - NO STREET LIGHTS   |
| 4    | DAWN             | DAWN (TWILIGHT)               |
| 5    | DUSK             | DUSK (TWILIGHT)               |

MEDIAN TYPE CODE TRANSLATION LIST

| CODE | LONG DESCRIPTION |                              |
|------|------------------|------------------------------|
|      | SHORT<br>DESC    | LONG DESCRIPTION             |
| 0    | NONE             | NO MEDIAN                    |
| 1    | RSDMD            | SOLID MEDIAN BARRIER         |
| 2    | DIVMD            | EARTH, GRASS OR PAVED MEDIAN |

MILEAGE TYPE CODE TRANSLATION LIST

| CODE | LONG DESCRIPTION |                  |
|------|------------------|------------------|
|      | CODE             | LONG DESCRIPTION |
| 0    |                  | REGULAR MILEAGE  |
| T    |                  | TEMPORARY        |
| Y    |                  | SPUR             |
| Z    |                  | OVERLAPPING      |

MOVEMENT TYPE CODE TRANSLATION LIST

| CODE | SHORT<br>DESC | LONG DESCRIPTION    |
|------|---------------|---------------------|
| 0    | UNK           | UNKNOWN             |
| 1    | STRGHT        | STRAIGHT AHEAD      |
| 2    | TURN-R        | TURNING RIGHT       |
| 3    | TURN-L        | TURNING LEFT        |
| 4    | U-TURN        | MAKING A U-TURN     |
| 5    | BACK          | BACKING             |
| 6    | STOP          | STOPPED IN TRAFFIC  |
| 7    | PKD-P         | PARKED - PROPERLY   |
| 8    | PKD-I         | PARKED - IMPROPERLY |
| 9    | PARKING       | PARKING MANUEVER    |

NON-MOTORIST LOCATION CODE TRANSLATION LIST

| CODE | LONG DESCRIPTION                                   |
|------|----------------------------------------------------|
| 00   | AT INTERSECTION - NOT IN ROADWAY                   |
| 01   | AT INTERSECTION - INSIDE CROSSWALK                 |
| 02   | AT INTERSECTION - IN ROADWAY, OUTSIDE CROSSWALK    |
| 03   | AT INTERSECTION - IN ROADWAY, XWALK AVAIL UNKNOWN  |
| 04   | NOT AT INTERSECTION - IN ROADWAY                   |
| 05   | NOT AT INTERSECTION - ON SHOULDER                  |
| 06   | NOT AT INTERSECTION - ON MEDIAN                    |
| 07   | NOT AT INTERSECTION - WITHIN TRAFFIC RIGHT-OF-WAY  |
| 08   | NOT AT INTERSECTION - IN BIKE PATH OR PARKING LANE |
| 09   | NOT-AT INTERSECTION - ON SIDEWALK                  |
| 10   | OUTSIDE TRAFFICWAY BOUNDARIES                      |
| 13   | AT INTERSECTION - IN BIKE LANE                     |
| 14   | NOT AT INTERSECTION - IN BIKE LANE                 |
| 15   | NOT AT INTERSECTION - INSIDE MID-BLOCK CROSSWALK   |
| 16   | NOT AT INTERSECTION - IN PARKING LANE              |
| 18   | OTHER, NOT IN ROADWAY                              |
| 99   | UNKNOWN LOCATION                                   |

ROAD CHARACTER CODE TRANSLATION LIST

| CODE | SHORT<br>DESC | LONG DESCRIPTION         |
|------|---------------|--------------------------|
| 0    | UNK           | UNKNOWN                  |
| 1    | INTER         | INTERSECTION             |
| 2    | ALLEY         | DRIVEWAY OR ALLEY        |
| 3    | STRGHT        | STRAIGHT ROADWAY         |
| 4    | TRANS         | TRANSITION               |
| 5    | CURVE         | CURVE (HORIZONTAL CURVE) |
| 6    | OPENAC        | OPEN ACCESS OR TURNOUT   |
| 7    | GRADE         | GRADE (VERTICAL CURVE)   |
| 8    | BRIDGE        | BRIDGE STRUCTURE         |
| 9    | TUNNEL        | TUNNEL                   |

PARTICIPANT TYPE CODE TRANSLATION LIST

| CODE | SHORT<br>DESC | LONG DESCRIPTION                       |
|------|---------------|----------------------------------------|
| 0    | OCC           | UNKNOWN OCCUPANT TYPE                  |
| 1    | DRVR          | DRIVER                                 |
| 2    | PSNG          | PASSENGER                              |
| 3    | PED           | PEDESTRIAN                             |
| 4    | CONV          | PEDESTRIAN USING A PEDESTRIAN CONVEYAL |
| 5    | PTOW          | PEDESTRIAN TOWING OR TRAILERING AN OB  |
| 6    | BIKE          | PEDALCYCLIST                           |
| 7    | BTOW          | PEDALCYCLIST TOWING OR TRAILERING AN O |
| 8    | PRKD          | OCCUPANT OF A PARKED MOTOR VEHICLE     |
| 9    | UNK           | UNKNOWN TYPE OF NON-MOTORIST           |

TRAFFIC CONTROL DEVICE CODE TRANSLATION LIST

| CODE | SHORT DESC  | LONG DESCRIPTION                                 |
|------|-------------|--------------------------------------------------|
| 000  | NONE        | NO CONTROL                                       |
| 001  | TRF SIGNAL  | TRAFFIC SIGNALS                                  |
| 002  | FLASHBCN-R  | FLASHING BEACON - RED (STOP)                     |
| 003  | FLASHBCN-A  | FLASHING BEACON - AMBER (SLOW)                   |
| 004  | STOP SIGN   | STOP SIGN                                        |
| 005  | SLOW SIGN   | SLOW SIGN                                        |
| 006  | REG-SIGN    | REGULATORY SIGN                                  |
| 007  | YIELD       | YIELD SIGN                                       |
| 008  | WARNING     | WARNING SIGN                                     |
| 009  | CURVE       | CURVE SIGN                                       |
| 010  | SCHL X-ING  | SCHOOL CROSSING SIGN OR SPECIAL SIGNAL           |
| 011  | OFCDR/FLAG  | POLICE OFFICER, FLAGMAN - SCHOOL PATROL          |
| 012  | BRDG-GATE   | BRIDGE GATE - BARRIER                            |
| 013  | TEMP-BARR   | TEMPORARY BARRIER                                |
| 014  | NO-PASS-ZN  | NO PASSING ZONE                                  |
| 015  | ONE-WAY     | ONE-WAY STREET                                   |
| 016  | CHANNEL     | CHANNELIZATION                                   |
| 017  | MEDIAN BAR  | MEDIAN BARRIER                                   |
| 018  | PILOT CAR   | PILOT CAR                                        |
| 019  | SP PED SIG  | SPECIAL PEDESTRIAN SIGNAL                        |
| 020  | X-BUCK      | CROSSBUCK                                        |
| 021  | THR-GN-SIG  | THROUGH GREEN ARROW OR SIGNAL                    |
| 022  | L-GRN-SIG   | LEFT TURN GREEN ARROW, LANE MARKINGS, OR SIGNAL  |
| 023  | R-GRN-SIG   | RIGHT TURN GREEN ARROW, LANE MARKINGS, OR SIGNAL |
| 024  | WIGWAG      | WIGWAG OR FLASHING LIGHTS W/O DROP-ARM GATE      |
| 025  | X-BUCK WRN  | CROSSBUCK AND ADVANCE WARNING                    |
| 026  | WW W/ GATE  | FLASHING LIGHTS WITH DROP-ARM GATES              |
| 027  | OVHRD SGNL  | SUPPLEMENTAL OVERHEAD SIGNAL (RR XING ONLY)      |
| 028  | SP RR STOP  | SPECIAL RR STOP SIGN                             |
| 029  | ILLUM GRD X | ILLUMINATED GRADE CROSSING                       |
| 037  | RAMP METER  | METERED RAMPES                                   |
| 038  | RUMBLE STR  | RUMBLE STRIP                                     |
| 090  | L-TURN REF  | LEFT TURN REFUGE (WHEN REFUGE IS INVOLVED)       |
| 091  | R-TURN ALL  | RIGHT TURN AT ALL TIMES SIGN, ETC.               |
| 092  | EMR SGN/FL  | EMERGENCY SIGNS OR FLARES                        |
| 093  | ACCEL LANE  | ACCELERATION OR DECELERATION LANES               |
| 094  | R-TURN PRO  | RIGHT TURN PROHIBITED ON RED AFTER STOPPING      |
| 095  | BUS STPSGN  | BUS STOP SIGN AND RED LIGHTS                     |
| 099  | UNKNOWN     | UNKNOWN OR NOT DEFINITE                          |

VEHICLE TYPE CODE TRANSLATION LIST

| CODE | SHORT DESC | LONG DESCRIPTION                                  |
|------|------------|---------------------------------------------------|
| 00   | PDO        | NOT COLLECTED FOR PDO CRASHES                     |
| 01   | PSNGR CAR  | PASSENGER CAR, PICKUP, LIGHT DELIVERY, ETC.       |
| 02   | BOBTAIL    | TRUCK TRACTOR WITH NO TRAILERS (BOBTAIL)          |
| 03   | FARM TRCTR | FARM TRACTOR OR SELF-PROPELLED FARM EQUIPMENT     |
| 04   | SEMI TOW   | TRUCK TRACTOR WITH TRAILER/MOBILE HOME IN TOW     |
| 05   | TRUCK      | TRUCK WITH NON-DETACHABLE BED, PANEL, ETC.        |
| 06   | MOPED      | MOPED, MINIBIKE, SEATED MOTOR SCOOTER, MOTOR BIKE |
| 07   | SCHL BUS   | SCHOOL BUS (INCLUDES VAN)                         |
| 08   | OTH BUS    | OTHER BUS                                         |
| 09   | MTRCYCLE   | MOTORCYCLE, DIRT BIKE                             |
| 10   | OTHER      | OTHER: FORKLIFT, BACKHOE, ETC.                    |
| 11   | MOTRHOME   | MOTORHOME                                         |
| 12   | TROLLEY    | MOTORIZED STREET CAR/TROLLEY (NO RAILS/WIRES)     |
| 13   | ATV        | ATV                                               |
| 14   | MTRSCTR    | MOTORIZED SCOOTER (STANDING)                      |
| 15   | SNOWMOBILE | SNOWMOBILE                                        |
| 99   | UNKNOWN    | UNKNOWN VEHICLE TYPE                              |

WEATHER CONDITION CODE TRANSLATION LIST

| CODE | SHORT DESC | LONG DESCRIPTION |
|------|------------|------------------|
| 0    | UNK        | UNKNOWN          |
| 1    | CLR        | CLEAR            |
| 2    | CLD        | CLOUDY           |
| 3    | RAIN       | RAIN             |
| 4    | SLT        | SLEET            |
| 5    | FOG        | FOG              |
| 6    | SNOW       | SNOW             |
| 7    | DUST       | DUST             |
| 8    | SMOK       | SMOKE            |
| 9    | ASH        | ASH              |

# **APPENDIX E**

## **TRAFFIC COUNT DATA, ADJUSTMENTS AND GROWTH CALCULATIONS**

# Gary's Traffic Data

310 Pitney Lane, Unit 39  
Junction City, OR 97448  
*Fast, Accurate, High Quality Counts*

Weather: Sunny, clear  
34 degrees F. AM, 60 PM  
Collected By: G.Mc.

File Name : FLORENCE 35th St. @ Hwy. 101  
Site Code : US 101  
Start Date : 3/19/2020  
Page No : 1

## Groups Printed- Unshifted

|               | HWY 101<br>From North |      |       |      |            | 35TH<br>From East |      |       |      |            | HWY 101<br>From South |      |       |      |            | 35TH<br>From West |      |       |      |            |            |
|---------------|-----------------------|------|-------|------|------------|-------------------|------|-------|------|------------|-----------------------|------|-------|------|------------|-------------------|------|-------|------|------------|------------|
| Start Time    | Left                  | Thru | Right | Peds | App. Total | Left              | Thru | Right | Peds | App. Total | Left                  | Thru | Right | Peds | App. Total | Left              | Thru | Right | Peds | App. Total | Int. Total |
| 07:00 AM      | 1                     | 37   | 2     | 0    | 40         | 4                 | 3    | 5     | 0    | 12         | 5                     | 40   | 1     | 0    | 46         | 2                 | 0    | 5     | 0    | 7          | 105        |
| 07:15 AM      | 1                     | 37   | 5     | 0    | 43         | 1                 | 2    | 1     | 0    | 4          | 6                     | 41   | 1     | 0    | 48         | 4                 | 0    | 10    | 0    | 14         | 109        |
| 07:30 AM      | 1                     | 68   | 9     | 0    | 78         | 1                 | 4    | 4     | 0    | 9          | 6                     | 43   | 1     | 0    | 50         | 0                 | 1    | 10    | 0    | 11         | 148        |
| 07:45 AM      | 2                     | 74   | 8     | 0    | 84         | 6                 | 4    | 2     | 0    | 12         | 5                     | 61   | 3     | 0    | 69         | 6                 | 1    | 10    | 0    | 17         | 182        |
| Total         | 5                     | 216  | 24    | 0    | 245        | 12                | 13   | 12    | 0    | 37         | 22                    | 185  | 6     | 0    | 213        | 12                | 2    | 35    | 0    | 49         | 544        |
| 08:00 AM      | 3                     | 56   | 7     | 0    | 66         | 7                 | 3    | 1     | 0    | 11         | 3                     | 53   | 2     | 0    | 58         | 5                 | 0    | 17    | 0    | 22         | 157        |
| 08:15 AM      | 3                     | 49   | 6     | 0    | 58         | 3                 | 6    | 6     | 0    | 15         | 5                     | 53   | 1     | 0    | 59         | 11                | 3    | 7     | 0    | 21         | 153        |
| 08:30 AM      | 2                     | 65   | 8     | 0    | 75         | 2                 | 3    | 6     | 0    | 11         | 6                     | 52   | 0     | 0    | 58         | 10                | 1    | 8     | 0    | 19         | 163        |
| 08:45 AM      | 6                     | 71   | 7     | 0    | 84         | 6                 | 4    | 7     | 0    | 17         | 11                    | 66   | 0     | 0    | 77         | 17                | 4    | 25    | 0    | 46         | 224        |
| Total         | 14                    | 241  | 28    | 0    | 283        | 18                | 16   | 20    | 0    | 54         | 25                    | 224  | 3     | 0    | 252        | 43                | 8    | 57    | 0    | 108        | 697        |
| *** BREAK *** |                       |      |       |      |            |                   |      |       |      |            |                       |      |       |      |            |                   |      |       |      |            |            |
| 04:00 PM      | 3                     | 106  | 9     | 0    | 118        | 6                 | 3    | 5     | 0    | 14         | 15                    | 129  | 10    | 0    | 154        | 16                | 5    | 24    | 0    | 45         | 331        |
| 04:15 PM      | 3                     | 95   | 10    | 0    | 108        | 5                 | 5    | 7     | 0    | 17         | 14                    | 88   | 6     | 0    | 108        | 15                | 5    | 10    | 0    | 30         | 263        |
| 04:30 PM      | 9                     | 117  | 11    | 0    | 137        | 2                 | 1    | 5     | 0    | 8          | 17                    | 116  | 3     | 0    | 136        | 15                | 3    | 16    | 0    | 34         | 315        |
| 04:45 PM      | 8                     | 94   | 11    | 1    | 114        | 10                | 1    | 5     | 0    | 16         | 15                    | 98   | 5     | 0    | 118        | 10                | 3    | 19    | 0    | 32         | 280        |
| Total         | 23                    | 412  | 41    | 1    | 477        | 23                | 10   | 22    | 0    | 55         | 61                    | 431  | 24    | 0    | 516        | 56                | 16   | 69    | 0    | 141        | 1189       |
| 05:00 PM      | 4                     | 114  | 6     | 0    | 124        | 1                 | 2    | 9     | 0    | 12         | 22                    | 112  | 14    | 0    | 148        | 21                | 6    | 18    | 1    | 46         | 330        |
| 05:15 PM      | 4                     | 106  | 12    | 0    | 122        | 5                 | 6    | 9     | 0    | 20         | 17                    | 120  | 5     | 0    | 142        | 9                 | 7    | 19    | 0    | 35         | 319        |
| 05:30 PM      | 4                     | 99   | 5     | 2    | 110        | 3                 | 3    | 2     | 0    | 8          | 16                    | 98   | 4     | 2    | 120        | 19                | 6    | 14    | 1    | 40         | 278        |
| 05:45 PM      | 4                     | 97   | 6     | 0    | 107        | 1                 | 2    | 6     | 0    | 9          | 13                    | 72   | 1     | 0    | 86         | 12                | 7    | 16    | 0    | 35         | 237        |
| Total         | 16                    | 416  | 29    | 2    | 463        | 10                | 13   | 26    | 0    | 49         | 68                    | 402  | 24    | 2    | 496        | 61                | 26   | 67    | 2    | 156        | 1164       |
| Grand Total   | 58                    | 1285 | 122   | 3    | 1468       | 63                | 52   | 80    | 0    | 195        | 176                   | 1242 | 57    | 2    | 1477       | 172               | 52   | 228   | 2    | 454        | 3594       |
| Apprch %      | 4                     | 87.5 | 8.3   | 0.2  |            | 32.3              | 26.7 | 41    | 0    |            | 11.9                  | 84.1 | 3.9   | 0.1  |            | 37.9              | 11.5 | 50.2  | 0.4  |            |            |
| Total %       | 1.6                   | 35.8 | 3.4   | 0.1  | 40.8       | 1.8               | 1.4  | 2.2   | 0    | 5.4        | 4.9                   | 34.6 | 1.6   | 0.1  | 41.1       | 4.8               | 1.4  | 6.3   | 0.1  | 12.6       |            |

# Gary's Traffic Data

310 Pitney Lane, Unit 39  
Junction City, OR 97448  
*Fast, Accurate, High Quality Counts*

Weather: Sunny, clear  
34 degrees F. AM, 60 PM  
Collected By: G.Mc.

File Name : FLORENCE 35th St. @ Hwy. 101  
Site Code : US 101  
Start Date : 3/19/2020  
Page No : 4

|                                                            | HWY 101<br>From North |            |           |          |            | 35TH<br>From East |          |          |      |            | HWY 101<br>From South |            |           |      |            | 35TH<br>From West |          |           |          |            |            |
|------------------------------------------------------------|-----------------------|------------|-----------|----------|------------|-------------------|----------|----------|------|------------|-----------------------|------------|-----------|------|------------|-------------------|----------|-----------|----------|------------|------------|
| Start Time                                                 | Left                  | Thru       | Right     | Peds     | App. Total | Left              | Thru     | Right    | Peds | App. Total | Left                  | Thru       | Right     | Peds | App. Total | Left              | Thru     | Right     | Peds     | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 05:45 PM - Peak 1 of 1 |                       |            |           |          |            |                   |          |          |      |            |                       |            |           |      |            |                   |          |           |          |            |            |
| Peak Hour for Entire Intersection Begins at 04:30 PM       |                       |            |           |          |            |                   |          |          |      |            |                       |            |           |      |            |                   |          |           |          |            |            |
| 04:30 PM                                                   | <b>9</b>              | <b>117</b> | 11        | 0        | <b>137</b> | 2                 | 1        | 5        | 0    | 8          | 17                    | 116        | 3         | 0    | 136        | 15                | 3        | 16        | 0        | 34         | 315        |
| 04:45 PM                                                   | 8                     | 94         | 11        | <b>1</b> | 114        | <b>10</b>         | 1        | 5        | 0    | 16         | 15                    | 98         | 5         | 0    | 118        | 10                | 3        | <b>19</b> | 0        | 32         | 280        |
| 05:00 PM                                                   | 4                     | 114        | 6         | 0        | 124        | 1                 | 2        | <b>9</b> | 0    | 12         | <b>22</b>             | 112        | <b>14</b> | 0    | <b>148</b> | <b>21</b>         | 6        | 18        | <b>1</b> | <b>46</b>  | <b>330</b> |
| 05:15 PM                                                   | 4                     | 106        | <b>12</b> | 0        | 122        | 5                 | <b>6</b> | 9        | 0    | <b>20</b>  | 17                    | <b>120</b> | 5         | 0    | 142        | 9                 | <b>7</b> | 19        | 0        | 35         | 319        |
| Total Volume                                               | 25                    | 431        | 40        | 1        | 497        | 18                | 10       | 28       | 0    | 56         | 71                    | 446        | 27        | 0    | 544        | 55                | 19       | 72        | 1        | 147        | 1244       |
| % App. Total                                               | 5                     | 86.7       | 8         | 0.2      |            | 32.1              | 17.9     | 50       | 0    |            | 13.1                  | 82         | 5         | 0    |            | 37.4              | 12.9     | 49        | 0.7      |            |            |
| PHF                                                        | .694                  | .921       | .833      | .250     | .907       | .450              | .417     | .778     | .000 | .700       | .807                  | .929       | .482      | .000 | .919       | .655              | .679     | .947      | .250     | .799       | .942       |

Peak Hour Analysis From 07:00 AM to 05:45 PM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

|              | 04:30 PM |            |           |          |            | 04:30 PM  |          |          |      |           | 04:30 PM  |            |           |      |            | 05:00 PM  |          |           |          |           |
|--------------|----------|------------|-----------|----------|------------|-----------|----------|----------|------|-----------|-----------|------------|-----------|------|------------|-----------|----------|-----------|----------|-----------|
| +0 mins.     | <b>9</b> | <b>117</b> | 11        | 0        | <b>137</b> | 2         | 1        | 5        | 0    | 8         | 17        | 116        | 3         | 0    | 136        | <b>21</b> | 6        | 18        | <b>1</b> | <b>46</b> |
| +15 mins.    | 8        | 94         | 11        | <b>1</b> | 114        | <b>10</b> | 1        | 5        | 0    | 16        | 15        | 98         | 5         | 0    | 118        | 9         | <b>7</b> | <b>19</b> | 0        | 35        |
| +30 mins.    | 4        | 114        | 6         | 0        | 124        | 1         | 2        | <b>9</b> | 0    | 12        | <b>22</b> | 112        | <b>14</b> | 0    | <b>148</b> | 19        | 6        | 14        | 1        | 40        |
| +45 mins.    | 4        | 106        | <b>12</b> | 0        | 122        | 5         | <b>6</b> | 9        | 0    | <b>20</b> | 17        | <b>120</b> | 5         | 0    | 142        | 12        | 7        | 16        | 0        | 35        |
| Total Volume | 25       | 431        | 40        | 1        | 497        | 18        | 10       | 28       | 0    | 56        | 71        | 446        | 27        | 0    | 544        | 61        | 26       | 67        | 2        | 156       |
| % App. Total | 5        | 86.7       | 8         | 0.2      |            | 32.1      | 17.9     | 50       | 0    |           | 13.1      | 82         | 5         | 0    |            | 39.1      | 16.7     | 42.9      | 1.3      |           |
| PHF          | .694     | .921       | .833      | .250     | .907       | .450      | .417     | .778     | .000 | .700      | .807      | .929       | .482      | .000 | .919       | .726      | .929     | .882      | .500     | .848      |

**Florence, Oregon**  
**US 101 @ 35<sup>th</sup> Street**  
**Manual Truck Counts**

**Thursday 3/19/2020 7:00 to 9:00 AM and 4:00 to 6:00 PM**

**Truck**

| <b>Axles</b>  | <b>7:00-7:15</b> | <b>7:15-7:30</b> | <b>7:30-7:45</b> | <b>7:45-8:00</b> |               |
|---------------|------------------|------------------|------------------|------------------|---------------|
| 4             | 0                | 2 (2-11)         | 0                | 0                |               |
| 5             | 1 (1-11)         | 0                | 3 (1-3, 2-11)    | 1 (1-3)          |               |
| 6             | 0                | 0                | 1 (1-14)         | 2 (2-11)         |               |
| 7             | 0                | 2 (1-3, 1-11)    | 0                | 0                |               |
| <b>Totals</b> | <b>1</b>         | <b>4</b>         | <b>4</b>         | <b>3</b>         | <b>... 12</b> |

**Truck**

| <b>Axles</b>  | <b>8:00-8:15</b> | <b>8:15-8:30</b> | <b>8:30-8:45</b> | <b>8:45-9:00</b> |               |
|---------------|------------------|------------------|------------------|------------------|---------------|
| 4             | 2 (1-2, 1-3)     | 1 (1-3)          | 0                | 0                |               |
| 5             | 2 (2-3)          | 1 (1-11)         | 1 (1-3)          | 1 (1-11)         |               |
| 6             | 0                | 0                | 0                | 1 (1-3)          |               |
| 7             | 0                | 0                | 0                | 1 (1-11)         |               |
| <b>Totals</b> | <b>4</b>         | <b>2</b>         | <b>1</b>         | <b>3</b>         | <b>... 10</b> |

**Total of 22 trucks in 2 hrs.**

**Truck**

| <b>Axles</b>  | <b>4:00-4:15</b> | <b>4:15-4:30</b> | <b>4:30-4:45</b> | <b>4:45-5:00</b> |              |
|---------------|------------------|------------------|------------------|------------------|--------------|
| 4             | 0                | 0                | 0                | 1 (1-3)          |              |
| 5             | 1 (1-14)         | 0                | 0                | 0                |              |
| 6             | 0                | 0                | 0                | 0                |              |
| 7             | 1 (1-11)         | 0                | 0                | 0                |              |
| <b>Totals</b> | <b>2</b>         | <b>0</b>         | <b>0</b>         | <b>1</b>         | <b>... 3</b> |

**Truck**

| <b>Axles</b>  | <b>5:00-5:15</b> | <b>5:15-5:30</b> | <b>5:30-5:45</b> | <b>5:45-6:00</b> |              |
|---------------|------------------|------------------|------------------|------------------|--------------|
| 4             | 0                | 0                | 0                | 0                |              |
| 5             | 0                | 1 (1-10)         | 0                | 0                |              |
| 6             | 0                | 0                | 2 (2-11)         | 0                |              |
| <b>Totals</b> | <b>0</b>         | <b>1</b>         | <b>2</b>         | <b>0</b>         | <b>... 3</b> |

**Total of 6 trucks in 2 hrs.**

**Grand Total of 16 heavy trucks during four peak hours**

**LEGEND of MOVEMENTS**

- 2 = Southbound on 101, turning right onto 35<sup>th</sup> St.
- 3 = Southbound Through on 101
- 10 = Northbound on 101, turning right onto 35<sup>th</sup> St.
- 11 = Northbound Through on 101
- 14 = Eastbound on 35<sup>th</sup>, turning right onto 101

G.Mc. 3/20/2020

**Florence, Oregon  
Hwy. 101 @ 35<sup>th</sup> Street  
Manual Bicycle Counts**

**Thursday 3/19/2020 7:00 to 9:00 AM, 4:00 to 6:00 PM**

|               | <b>7:00-7:15</b>                  | <b>7:15-7:30</b>          | <b>7:30-7:45</b> | <b>7:45-8:00</b> |              |
|---------------|-----------------------------------|---------------------------|------------------|------------------|--------------|
|               | 0                                 | 0                         | 1 (1-3)          | 0                |              |
| <b>Totals</b> | <b>0</b>                          | <b>0</b>                  | <b>1</b>         | <b>0</b>         | <b>... 1</b> |
|               |                                   |                           |                  |                  |              |
|               | <b>8:00-8:15</b>                  | <b>8:15-8:30</b>          | <b>8:30-8:45</b> | <b>8:45-9:00</b> |              |
|               | 0                                 | 0                         | 0                | 0                |              |
| <b>Totals</b> | <b>0</b>                          | <b>0</b>                  | <b>0</b>         | <b>0</b>         | <b>... 0</b> |
|               |                                   |                           |                  |                  |              |
|               | <b>4:00-4:15</b>                  | <b>4:15-4:30</b>          | <b>4:30-4:45</b> | <b>4:45-5:00</b> |              |
|               | 1 (1-15)                          | 0                         | 0                | 0                |              |
|               | <b>1</b>                          | <b>0</b>                  | <b>0</b>         | <b>0</b>         | <b>... 1</b> |
|               |                                   |                           |                  |                  |              |
|               | <b>5:00-5:15</b>                  | <b>5:15-5:30</b>          | <b>5:30-5:45</b> | <b>5:45-6:00</b> |              |
|               | 3 (1-7, 2-15)<br>7 was W/W on S/W | 2 (2-16)<br>both used LTL | 1 (1-3)          | 0                |              |
| <b>Totals</b> | <b>3</b>                          | <b>2</b>                  | <b>1</b>         | <b>0</b>         | <b>... 6</b> |

**Grand Total of 8 bicycles observed during two AM and two PM peak hours riding on both sides of Hwy. 101 or 35<sup>th</sup> St. and executing noted movements at the intersection.**

**LEGEND of MOVEMENTS**

3 = Southbound Through on 101  
7 = Westbound Through on 35<sup>th</sup>  
15 = Eastbound Through on 35<sup>th</sup>  
16 = Eastbound on 35<sup>th</sup>, turning left onto 101

S/W = riding on sidewalk  
W/W = Wrong way on wrong side of road  
LTL = used channelized left turn lane



# Gary's Traffic Data

310 Pitney Lane, Unit 39  
Junction City, OR 97448  
*Fast, Accurate, High Quality Counts*

Weather: Clear, sunny  
34 degrees F. AM, 60 PM  
Collected By: MH

File Name : FLRNC 35th @ Redwood  
Site Code : Florence  
Start Date : 3/19/2020  
Page No : 1

| Groups Printed- Unshifted |                      |      |      |            |                            |       |      |            |                      |       |      |            |            |  |
|---------------------------|----------------------|------|------|------------|----------------------------|-------|------|------------|----------------------|-------|------|------------|------------|--|
|                           | 35TH ST<br>From East |      |      |            | REDWOOD LOOP<br>From South |       |      |            | 35TH ST<br>From West |       |      |            |            |  |
| Start Time                | Left                 | Thru | Peds | App. Total | Left                       | Right | Peds | App. Total | Thru                 | Right | Peds | App. Total | Int. Total |  |
| 07:00 AM                  | 0                    | 8    | 0    | 8          | 5                          | 0     | 0    | 5          | 0                    | 1     | 0    | 1          | 14         |  |
| 07:15 AM                  | 2                    | 1    | 0    | 3          | 2                          | 0     | 0    | 2          | 1                    | 1     | 0    | 2          | 7          |  |
| 07:30 AM                  | 0                    | 6    | 0    | 6          | 3                          | 1     | 0    | 4          | 2                    | 1     | 0    | 3          | 13         |  |
| 07:45 AM                  | 3                    | 8    | 0    | 11         | 4                          | 0     | 0    | 4          | 3                    | 3     | 0    | 6          | 21         |  |
| Total                     | 5                    | 23   | 0    | 28         | 14                         | 1     | 0    | 15         | 6                    | 6     | 0    | 12         | 55         |  |
| 08:00 AM                  | 1                    | 7    | 0    | 8          | 5                          | 0     | 0    | 5          | 4                    | 1     | 0    | 5          | 18         |  |
| 08:15 AM                  | 4                    | 8    | 2    | 14         | 7                          | 1     | 0    | 8          | 0                    | 7     | 0    | 7          | 29         |  |
| 08:30 AM                  | 1                    | 6    | 0    | 7          | 5                          | 4     | 0    | 9          | 3                    | 0     | 0    | 3          | 19         |  |
| 08:45 AM                  | 4                    | 10   | 0    | 14         | 7                          | 1     | 0    | 8          | 5                    | 4     | 0    | 9          | 31         |  |
| Total                     | 10                   | 31   | 2    | 43         | 24                         | 6     | 0    | 30         | 12                   | 12    | 0    | 24         | 97         |  |
| *** BREAK ***             |                      |      |      |            |                            |       |      |            |                      |       |      |            |            |  |
| 04:00 PM                  | 0                    | 7    | 0    | 7          | 10                         | 2     | 0    | 12         | 11                   | 4     | 0    | 15         | 34         |  |
| 04:15 PM                  | 5                    | 9    | 0    | 14         | 7                          | 5     | 0    | 12         | 10                   | 6     | 0    | 16         | 42         |  |
| 04:30 PM                  | 0                    | 6    | 0    | 6          | 4                          | 2     | 0    | 6          | 6                    | 12    | 0    | 18         | 30         |  |
| 04:45 PM                  | 8                    | 9    | 0    | 17         | 5                          | 2     | 2    | 9          | 7                    | 7     | 0    | 14         | 40         |  |
| Total                     | 13                   | 31   | 0    | 44         | 26                         | 11    | 2    | 39         | 34                   | 29    | 0    | 63         | 146        |  |
| 05:00 PM                  | 6                    | 6    | 0    | 12         | 7                          | 4     | 0    | 11         | 16                   | 10    | 0    | 26         | 49         |  |
| 05:15 PM                  | 5                    | 8    | 0    | 13         | 10                         | 3     | 0    | 13         | 9                    | 8     | 0    | 17         | 43         |  |
| 05:30 PM                  | 1                    | 2    | 0    | 3          | 4                          | 3     | 1    | 8          | 6                    | 9     | 0    | 15         | 26         |  |
| 05:45 PM                  | 2                    | 2    | 0    | 4          | 7                          | 1     | 0    | 8          | 5                    | 6     | 0    | 11         | 23         |  |
| Total                     | 14                   | 18   | 0    | 32         | 28                         | 11    | 1    | 40         | 36                   | 33    | 0    | 69         | 141        |  |
| Grand Total               | 42                   | 103  | 2    | 147        | 92                         | 29    | 3    | 124        | 88                   | 80    | 0    | 168        | 439        |  |
| Apprch %                  | 28.6                 | 70.1 | 1.4  |            | 74.2                       | 23.4  | 2.4  |            | 52.4                 | 47.6  | 0    |            |            |  |
| Total %                   | 9.6                  | 23.5 | 0.5  | 33.5       | 21                         | 6.6   | 0.7  | 28.2       | 20                   | 18.2  | 0    | 38.3       |            |  |

# Gary's Traffic Data

310 Pitney Lane, Unit 39  
Junction City, OR 97448  
*Fast, Accurate, High Quality Counts*

Weather: Clear, sunny  
34 degrees F. AM, 60 PM  
Collected By: MH

File Name : FLRNC 35th @ Redwood  
Site Code : Florence  
Start Date : 3/19/2020  
Page No : 4

|                                                            | 35TH ST<br>From East |      |      |            | REDWOOD LOOP<br>From South |       |      |            | 35TH ST<br>From West |       |      |            |            |
|------------------------------------------------------------|----------------------|------|------|------------|----------------------------|-------|------|------------|----------------------|-------|------|------------|------------|
| Start Time                                                 | Left                 | Thru | Peds | App. Total | Left                       | Right | Peds | App. Total | Thru                 | Right | Peds | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 05:45 PM - Peak 1 of 1 |                      |      |      |            |                            |       |      |            |                      |       |      |            |            |
| Peak Hour for Entire Intersection Begins at 04:30 PM       |                      |      |      |            |                            |       |      |            |                      |       |      |            |            |
| 04:30 PM                                                   | 0                    | 6    | 0    | 6          | 4                          | 2     | 0    | 6          | 6                    | 12    | 0    | 18         | 30         |
| 04:45 PM                                                   | 8                    | 9    | 0    | 17         | 5                          | 2     | 2    | 9          | 7                    | 7     | 0    | 14         | 40         |
| 05:00 PM                                                   | 6                    | 6    | 0    | 12         | 7                          | 4     | 0    | 11         | 16                   | 10    | 0    | 26         | 49         |
| 05:15 PM                                                   | 5                    | 8    | 0    | 13         | 10                         | 3     | 0    | 13         | 9                    | 8     | 0    | 17         | 43         |
| Total Volume                                               | 19                   | 29   | 0    | 48         | 26                         | 11    | 2    | 39         | 38                   | 37    | 0    | 75         | 162        |
| % App. Total                                               | 39.6                 | 60.4 | 0    |            | 66.7                       | 28.2  | 5.1  |            | 50.7                 | 49.3  | 0    |            |            |
| PHF                                                        | .594                 | .806 | .000 | .706       | .650                       | .688  | .250 | .750       | .594                 | .771  | .000 | .721       | .827       |

Peak Hour Analysis From 07:00 AM to 05:45 PM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

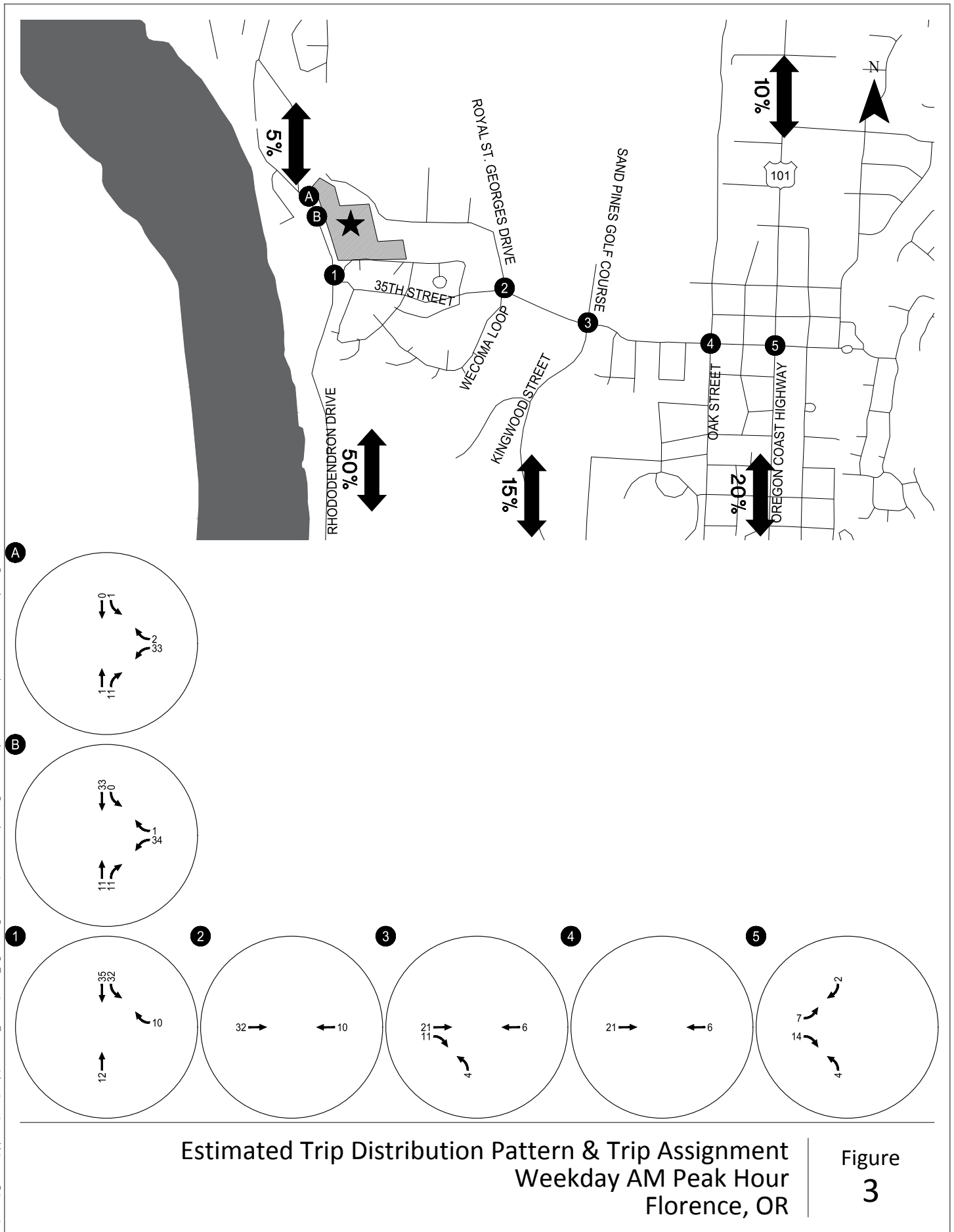
|              | 04:15 PM |      |      |      | 04:45 PM |      |      |      | 04:30 PM |      |      |      |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins.     | 5        | 9    | 0    | 14   | 5        | 2    | 2    | 9    | 6        | 12   | 0    | 18   |
| +15 mins.    | 0        | 6    | 0    | 6    | 7        | 4    | 0    | 11   | 7        | 7    | 0    | 14   |
| +30 mins.    | 8        | 9    | 0    | 17   | 10       | 3    | 0    | 13   | 16       | 10   | 0    | 26   |
| +45 mins.    | 6        | 6    | 0    | 12   | 4        | 3    | 1    | 8    | 9        | 8    | 0    | 17   |
| Total Volume | 19       | 30   | 0    | 49   | 26       | 12   | 3    | 41   | 38       | 37   | 0    | 75   |
| % App. Total | 38.8     | 61.2 | 0    |      | 63.4     | 29.3 | 7.3  |      | 50.7     | 49.3 | 0    |      |
| PHF          | .594     | .833 | .000 | .721 | .650     | .750 | .375 | .788 | .594     | .771 | .000 | .721 |

# PIPELINE TRIPS

Florence Residential Subdivision

January 2019

C:\Users\agriffiths\appdata\local\temp\AcPublish\_18212\24714\_Figures.dwg Dec 20, 2019 - 4:52pm - agriffiths Layout Tab: AM Trip Distribution and Trip Assignment



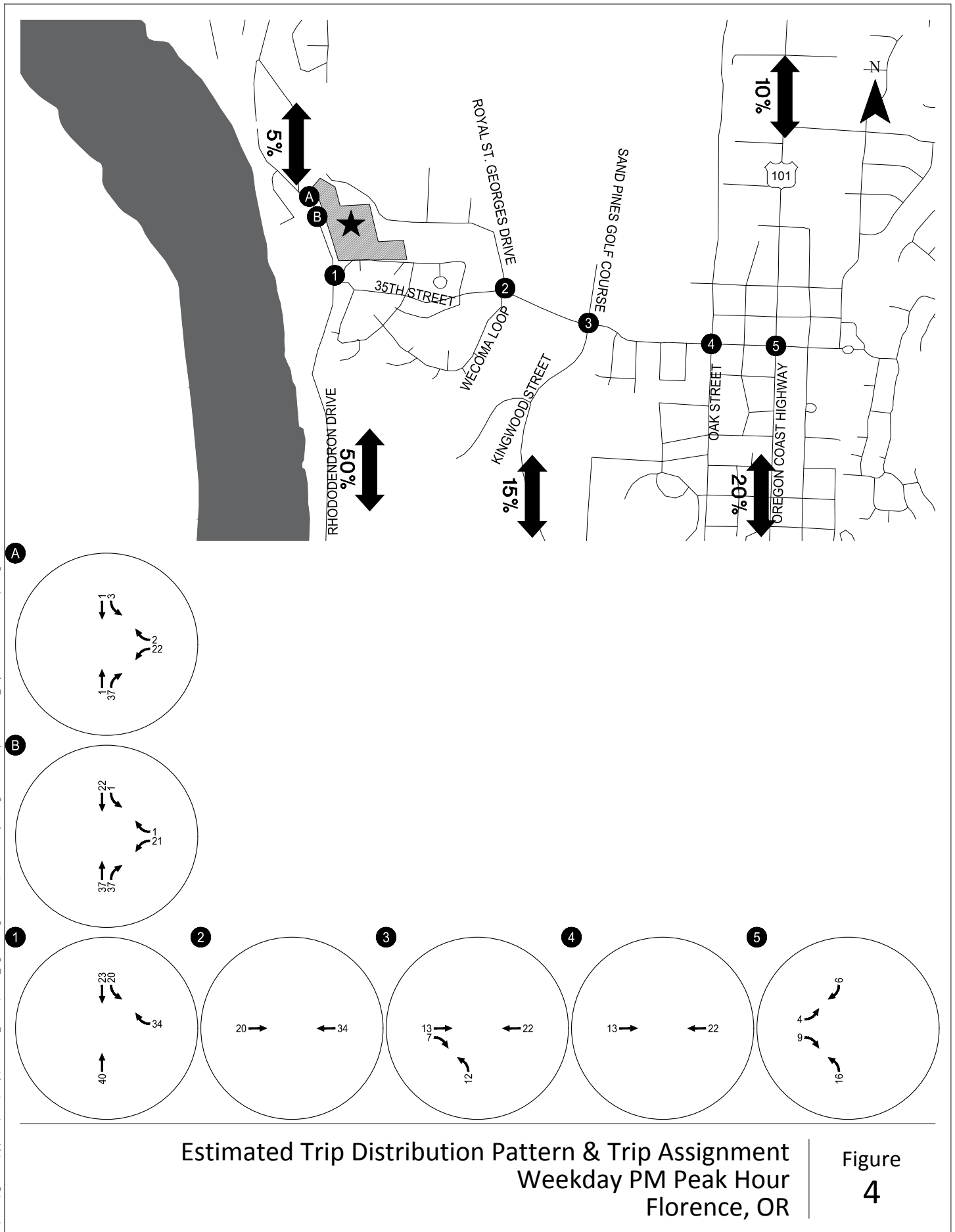
Estimated Trip Distribution Pattern & Trip Assignment  
Weekday AM Peak Hour  
Florence, OR

Figure  
3

# PIPELINE TRIPS

Florence Residential Subdivision

January 2019



Estimated Trip Distribution Pattern & Trip Assignment  
Weekday PM Peak Hour  
Florence, OR

Figure  
4

| TREND                      | SEASONAL TREND TABLE (Updated: 6/26/19) |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | Seasonal Trend<br>Peak Period<br>Factor |
|----------------------------|-----------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------------------------------------|
|                            | 1-Jan                                   | 15-Jan | 1-Feb  | 15-Feb | 1-Mar  | 15-Mar | 1-Apr  | 15-Apr | 1-May  | 15-May | 1-Jun  | 15-Jun | 1-Jul  | 15-Jul | 1-Aug  | 15-Aug | 1-Sep  | 15-Sep | 1-Oct  | 15-Oct | 1-Nov  | 15-Nov | 1-Dec  | 15-Dec |                                         |
| INTERSTATE URBANIZED       | 1.0419                                  | 1.0728 | 1.0640 | 1.0552 | 1.0259 | 0.9966 | 0.9896 | 0.9825 | 0.9768 | 0.9711 | 0.9558 | 0.9404 | 0.9561 | 0.9718 | 0.9804 | 0.9890 | 0.9860 | 0.9830 | 0.9864 | 0.9867 | 1.0055 | 1.0213 | 1.0436 | 1.0659 | 0.9404                                  |
| INTERSTATE NONURBANIZED    | 1.2583                                  | 1.3379 | 1.2962 | 1.2545 | 1.1572 | 1.0900 | 1.0383 | 1.0166 | 0.9863 | 0.9561 | 0.9075 | 0.8588 | 0.8422 | 0.8256 | 0.8325 | 0.8394 | 0.8806 | 0.9218 | 0.9559 | 0.9900 | 1.0158 | 1.0416 | 1.1192 | 1.1969 | 0.8256                                  |
| COMMUTER                   | 1.0577                                  | 1.1050 | 1.0844 | 1.0638 | 1.0406 | 1.0173 | 0.9975 | 0.9777 | 0.9711 | 0.9645 | 0.9542 | 0.9438 | 0.9544 | 0.9649 | 0.9592 | 0.9535 | 0.9637 | 0.9738 | 0.9737 | 0.9737 | 0.9976 | 1.0215 | 1.0520 | 1.0825 | 0.9438                                  |
| COASTAL DESTINATION        | 1.2069                                  | 1.2238 | 1.1889 | 1.1540 | 1.1006 | 1.0472 | 1.0504 | 1.0536 | 1.0125 | 0.9714 | 0.9304 | 0.9074 | 0.8574 | 0.8074 | 0.8100 | 0.8126 | 0.8636 | 0.9145 | 0.9648 | 1.0152 | 1.0683 | 1.1214 | 1.1636 | 1.2058 | 0.8074                                  |
| COASTAL DESTINATION ROUTE  | 1.3738                                  | 1.4039 | 1.3653 | 1.3267 | 1.2268 | 1.1268 | 1.1203 | 1.1138 | 1.0308 | 0.9478 | 0.9031 | 0.8584 | 0.7781 | 0.6978 | 0.7080 | 0.7182 | 0.7932 | 0.8682 | 0.9574 | 1.0486 | 1.1248 | 1.2030 | 1.2836 | 1.3642 | 0.6978                                  |
| AGRICULTURE                | 1.4390                                  | 1.5042 | 1.4606 | 1.4171 | 1.3208 | 1.2246 | 1.1445 | 1.0643 | 0.9843 | 0.9043 | 0.8736 | 0.8429 | 0.8069 | 0.8069 | 0.8114 | 0.8140 | 0.7847 | 0.7554 | 0.8267 | 0.8980 | 0.9879 | 1.0778 | 1.2559 | 1.4339 | 0.7554                                  |
| RECREATIONAL SUMMER        | 1.6714                                  | 1.6739 | 1.6571 | 1.6403 | 1.4889 | 1.3376 | 1.2642 | 1.1909 | 1.0325 | 0.8742 | 0.8177 | 0.7611 | 0.7119 | 0.6626 | 0.6933 | 0.7239 | 0.7598 | 0.7957 | 0.8898 | 0.9588 | 1.028  | 1.2218 | 1.3720 | 1.5221 | 0.6626                                  |
| RECREATIONAL SUMMER WINTER | 1.0752                                  | 0.9963 | 1.0200 | 1.0437 | 1.0500 | 1.0563 | 1.1766 | 1.2970 | 1.1496 | 1.0021 | 0.9514 | 0.9006 | 0.8005 | 0.7005 | 0.7590 | 0.8176 | 0.9133 | 1.0091 | 1.1812 | 1.3532 | 1.4605 | 1.5677 | 1.2312 | 0.8848 | 0.7005                                  |
| RECREATIONAL WINTER        | 0.8178                                  | 0.6528 | 0.7315 | 0.8102 | 0.9326 | 0.8549 | 1.0558 | 1.2586 | 1.1918 | 1.1270 | 1.1295 | 1.1321 | 1.0004 | 0.8687 | 0.9344 | 1.0001 | 1.0823 | 1.1646 | 1.2984 | 1.4323 | 1.7685 | 2.1047 | 1.4326 | 0.7605 | 0.6528                                  |
| SUMMER                     | 1.2007                                  | 1.2609 | 1.2367 | 1.2125 | 1.1528 | 1.0932 | 1.0592 | 1.0252 | 0.9810 | 0.9368 | 0.9061 | 0.8753 | 0.8535 | 0.8317 | 0.8437 | 0.8557 | 0.8872 | 0.9188 | 0.9502 | 0.9816 | 1.0276 | 1.0737 | 1.1341 | 1.1945 | 0.8317                                  |
| SUMMER < 2500              | 1.2437                                  | 1.3130 | 1.2858 | 1.2586 | 1.1886 | 1.1186 | 1.0667 | 1.0147 | 0.9592 | 0.9036 | 0.8816 | 0.8595 | 0.8489 | 0.8382 | 0.8564 | 0.8746 | 0.8721 | 0.8696 | 0.9094 | 0.9491 | 1.0234 | 1.0977 | 1.1830 | 1.2883 | 0.8382                                  |

\*Seasonal Trend Table factors are based on previous year ATR data. The table is updated yearly.

\*Grey shading indicates months were seasonal factor is greater than 30%

March 15-31 Trend  
0.947493  
0.9438  
Seems to be right around 30%!!

March 15th Trend  
1.0472  
1.0394  
16 Day Period

March 19 Trend =  $(\frac{1.0594+1.0472+1.0717}{3})+1.0472= 1.047953$   
Seasonal Adjustment Factor = Count Date Seasonal Trend/Peak Season  
 $3/19/2020 = 1.047953/0.8074 = 1.297935$   
 $= 29.80\%$

Linear Interpolation Calculations: Seasonal Trend Values

15-Mar 16-Mar 17-Mar 18-Mar 19-Mar 20-Mar 21-Mar 22-Mar 23-Mar 24-Mar 25-Mar 26-Mar 27-Mar 28-Mar 29-Mar 30-Mar 31-Mar 1-Apr  
0 1 2 3 4  
1.047200 1.047388 1.047576 1.047765 1.047953 1.048141 1.048329 1.048518 1.048706 1.048894 1.049082 1.049271 1.049459 1.049647 1.049835 1.050024 1.050212 1.050400

ODOT FVT Values:

| Site ID | HWY | DIR | Description                    | 2018  | 2038  | RSQ    |
|---------|-----|-----|--------------------------------|-------|-------|--------|
| 1170    | 9   | 1   | 0.03 Mile South Munsel Lake Rd | 9500  | 9600  | 0.2347 |
| 1171    | 9   | 1   | 0.02 Mile South of 36th Street | 12500 | 12600 | 0.4298 |
| 1172    | 9   | 1   | 0.02 Mile South of 29th Street | 14100 | 14200 | 0.805  |

RSQ OK

Average Annual 20 Year Growth Rate (AAGR) =  $(2038 \text{ ADT} - 2018\text{ADT}) / (2018\text{ADT} * 20 \text{ Years})$

AAGR = 0.0355% per year

0.0004

1 year Growth Factor (2021 DH)

1.0004

6 year Growth Factor (2026 DH)

1.002128

| State Highway Traffic Trends 2020 compared to 2019 |           |           |                      |  |
|----------------------------------------------------|-----------|-----------|----------------------|--|
| Corridor                                           | 2020      | 2019      | Weekday Differential |  |
| I-5                                                | 517,960   | 656,882   | -0.21                |  |
| I-205                                              | 202,741   | 262,471   | -0.23                |  |
| I-405                                              | 99,899    | 142,360   | -0.30                |  |
| I-84                                               | 302,183   | 357,887   | -0.16                |  |
| US 97                                              | 105,554   | 141,194   | -0.25                |  |
| US197                                              | 2,456     | 2,763     | -0.11                |  |
| US20                                               | 19,199    | 23,631    | -0.19                |  |
| US 26                                              | 41,059    | N/A       | N/A                  |  |
| US30                                               | 9,289     | 11,234    | -0.17                |  |
| US395                                              | 22,703    | 27,541    | -0.18                |  |
| OR18                                               | 13,603    | 17,195    | -0.21                |  |
| OR22                                               | 24,708    | 29,600    | -0.17                |  |
| US101                                              | 65,127    | 78,030    | -0.17                |  |
| Σ                                                  | 1,426,481 | 1,750,788 | -0.19                |  |

\*Source:

Oregon Department of Transportation  
Observed Statewide Traffic Volume Patterns:  
Related to COVID-19 Monitoring

[https://www.oregon.gov/odot/Data/Documents/ODOT\\_TrafficReport\\_April10\\_2020.pdf](https://www.oregon.gov/odot/Data/Documents/ODOT_TrafficReport_April10_2020.pdf)

# **APPENDIX F**

## **ITE TRIP GENERATION**



# Land Use: 934

## Fast-Food Restaurant with Drive-Through Window

### Description

This category includes fast-food restaurants with drive-through windows. This type of restaurant is characterized by a large drive-through clientele, long hours of service (some are open for breakfast, all are open for lunch and dinner, some are open late at night or 24 hours a day) and high turnover rates for eat-in customers. These limited-service eating establishments do not provide table service. Non-drive-through patrons generally order at a cash register and pay before they eat. Fast casual restaurant (Land Use 930), high-turnover (sit-down) restaurant (Land Use 932), fast-food restaurant without drive-through window (Land Use 933), and fast-food restaurant with drive-through window and no indoor seating (Land Use 935) are related uses.

### Additional Data

***Users should exercise caution when applying statistics during the AM peak periods, as the sites contained in the database for this land use may or may not be open for breakfast. In cases where it was confirmed that the sites were not open for breakfast, data for the AM peak hour of the adjacent street traffic were removed from the database.***

The outdoor seating area is not included in the overall gross floor area. Therefore, the number of seats may be a more reliable independent variable on which to establish trip generation rates for facilities having significant outdoor seating.

Time-of-day distribution data for this land use for a weekday, Saturday, and Sunday are presented in Appendix A. For the 46 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:45 a.m. and 12:45 p.m. and 12:00 and 1:00 p.m., respectively. For the one dense multi-use urban site with data, the same AM and PM peak hours were observed.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alaska, Alberta (CAN), California, Colorado, Florida, Indiana, Kentucky, Maryland, Massachusetts, Minnesota, Montana, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Dakota, Texas, Vermont, Virginia, Washington, and Wisconsin.

### Source Numbers

163, 164, 168, 180, 181, 241, 245, 278, 294, 300, 301, 319, 338, 340, 342, 358, 389, 438, 502, 552, 577, 583, 584, 617, 640, 641, 704, 715, 728, 810, 866, 867, 869, 885, 886, 927, 935, 962, 977

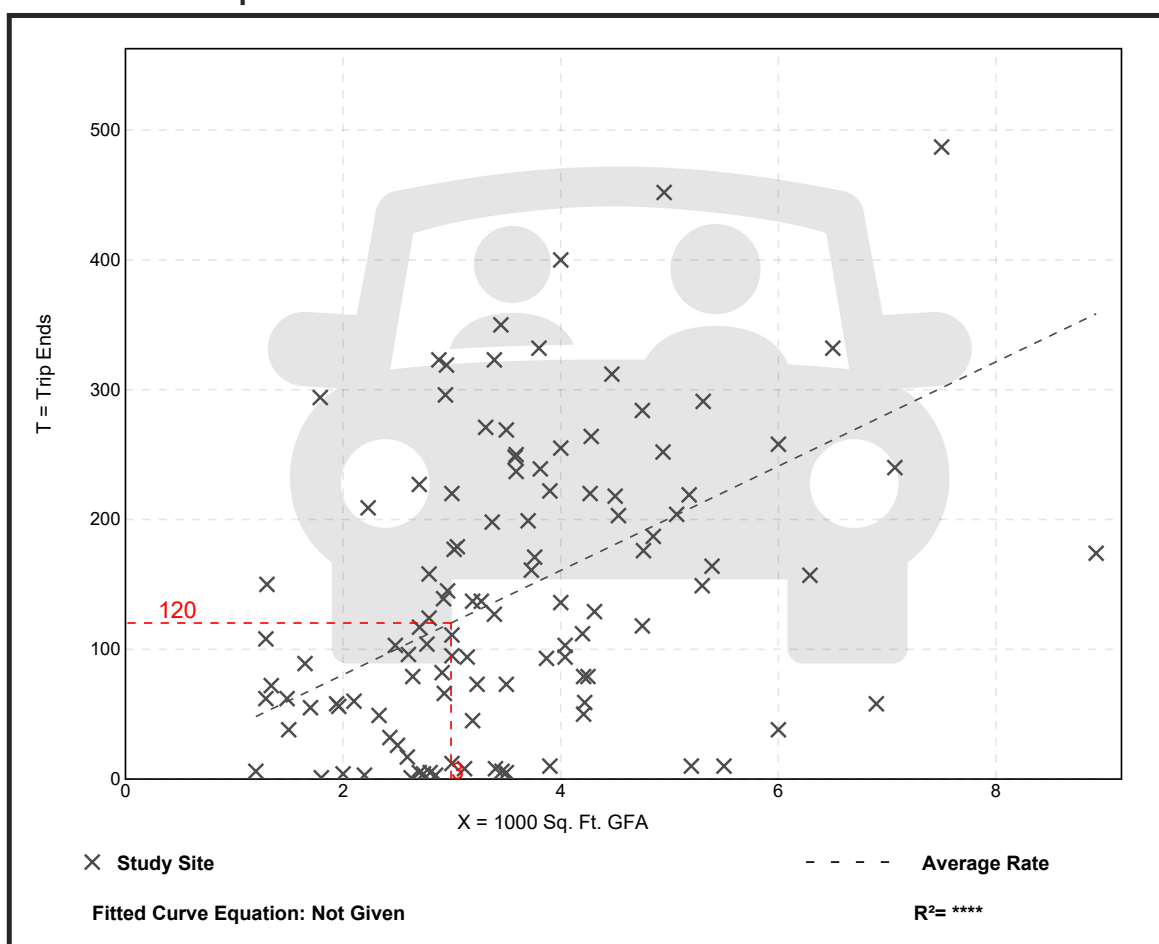
## Fast-Food Restaurant with Drive-Through Window (934)

**Vehicle Trip Ends vs: 1000 Sq. Ft. GFA**  
**On a: Weekday,**  
**Peak Hour of Adjacent Street Traffic,**  
**One Hour Between 7 and 9 a.m.**  
**Setting/Location: General Urban/Suburban**  
 Number of Studies: 111  
 Avg. 1000 Sq. Ft. GFA: 4  
 Directional Distribution: 51% entering, 49% exiting

### Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 40.19        | 0.38 - 164.25  | 28.78              |

### Data Plot and Equation



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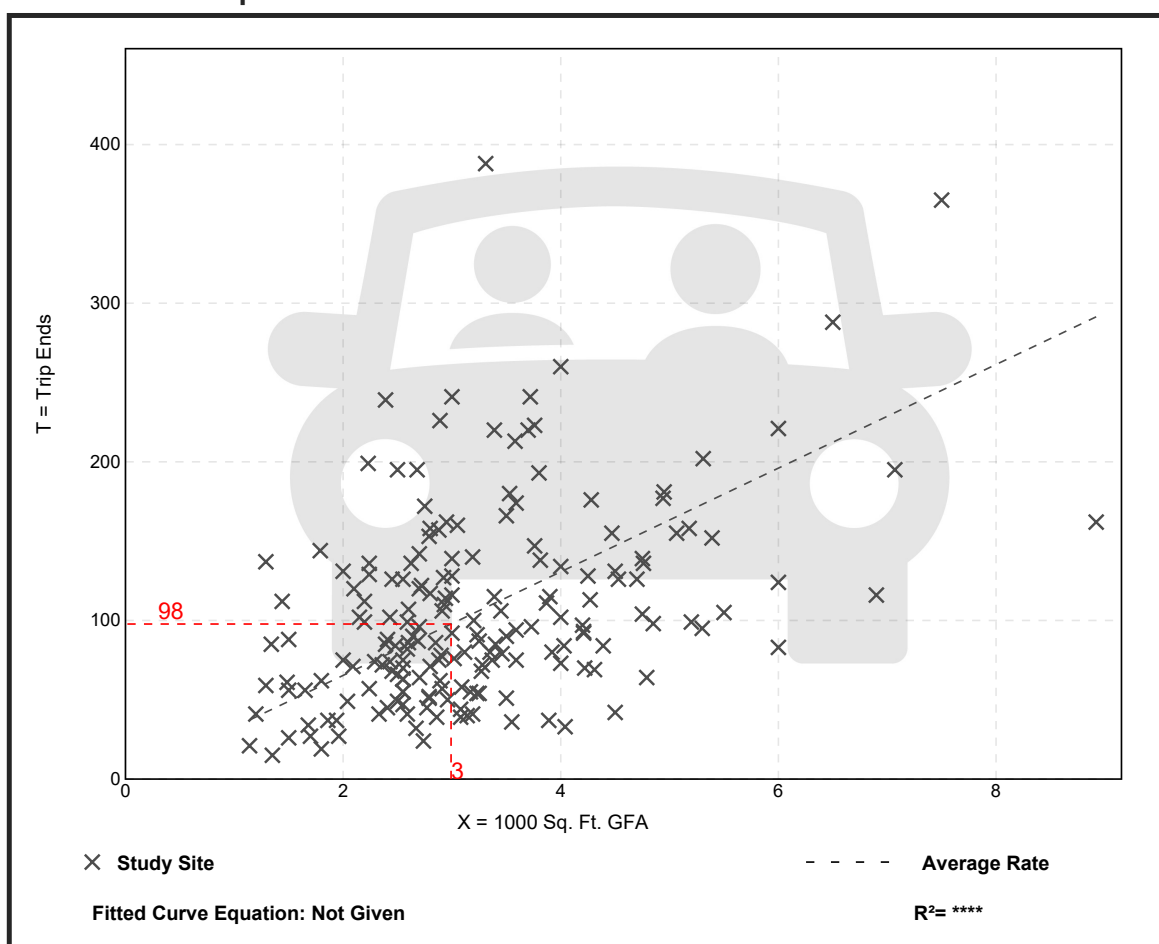
## Fast-Food Restaurant with Drive-Through Window (934)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA  
 On a: Weekday,  
 Peak Hour of Adjacent Street Traffic,  
 One Hour Between 4 and 6 p.m.  
 Setting/Location: General Urban/Suburban  
 Number of Studies: 185  
 Avg. 1000 Sq. Ft. GFA: 3  
 Directional Distribution: 52% entering, 48% exiting

### Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 32.67        | 8.17 - 117.22  | 17.87              |

### Data Plot and Equation



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## Fast-Food Restaurant with Drive-Through Window (934)

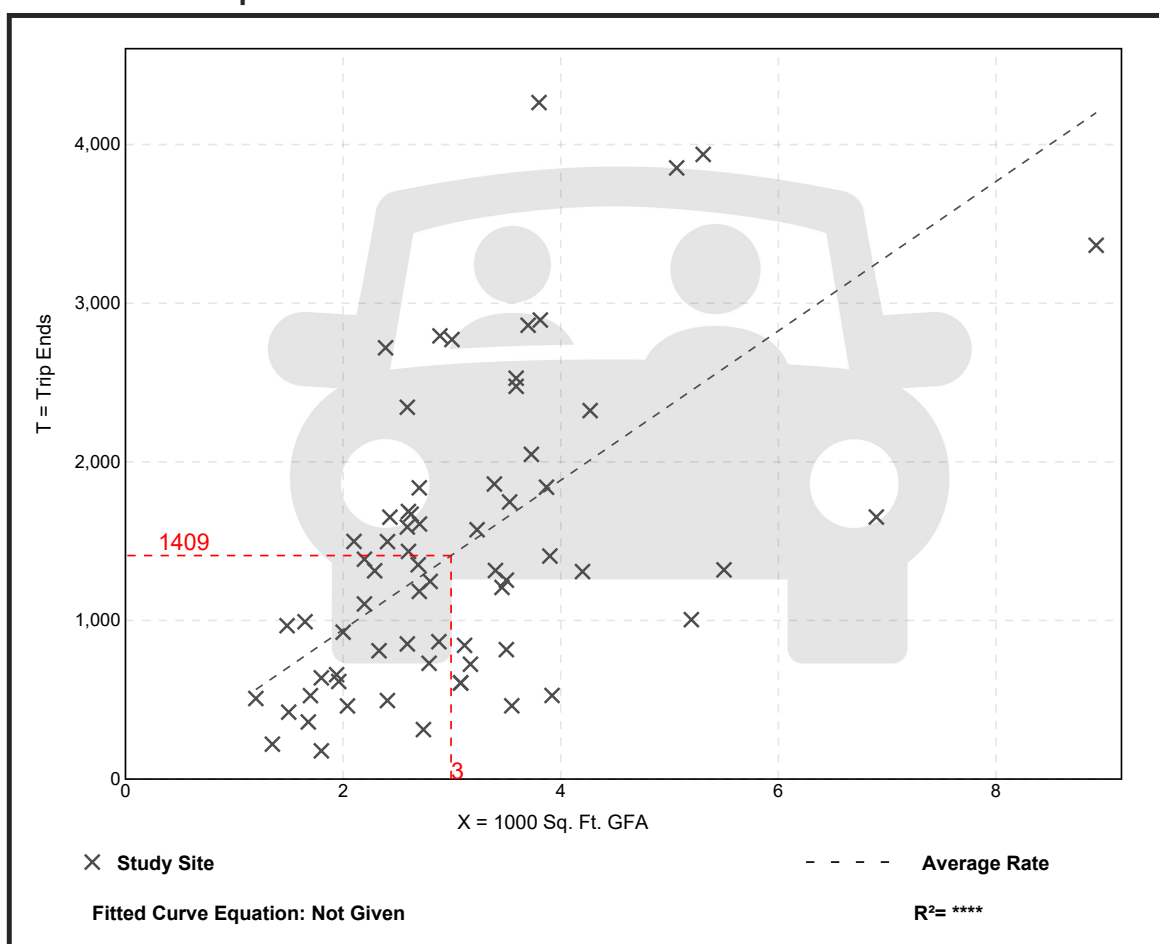
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA  
On a: Weekday

Setting/Location: General Urban/Suburban  
Number of Studies: 67  
Avg. 1000 Sq. Ft. GFA: 3  
Directional Distribution: 50% entering, 50% exiting

### Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates  | Standard Deviation |
|--------------|-----------------|--------------------|
| 470.95       | 98.89 - 1137.66 | 244.44             |

### Data Plot and Equation



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
















# **APPENDIX G**

## **Existing and No-Build SYNCHRO Performance Calculations**

# 2020 AM DESIGN HOUR CONDITIONS

Lanes, Volumes, Timings  
1: HWY 101 & 35th Street













06/12/2020

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Traffic Volume (vph)       | 66                                                                                | 12                                                                                | 88                                                                                | 28                                                                                | 26                                                                                | 31                                                                                | 39                                                                                  | 346                                                                                 | 5                                                                                   | 22                                                                                  | 372                                                                                 | 43                                                                                  |
| Future Volume (vph)        | 66                                                                                | 12                                                                                | 88                                                                                | 28                                                                                | 26                                                                                | 31                                                                                | 39                                                                                  | 346                                                                                 | 5                                                                                   | 22                                                                                  | 372                                                                                 | 43                                                                                  |
| Ideal Flow (vphpl)         | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Storage Length (ft)        | 110                                                                               |                                                                                   | 0                                                                                 | 141                                                                               |                                                                                   | 0                                                                                 | 146                                                                                 |                                                                                     | 0                                                                                   | 91                                                                                  |                                                                                     | 0                                                                                   |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)          | 100                                                                               |                                                                                   |                                                                                   | 55                                                                                |                                                                                   |                                                                                   | 66                                                                                  |                                                                                     |                                                                                     | 54                                                                                  |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                |
| Frt                        |                                                                                   | 0.868                                                                             |                                                                                   |                                                                                   | 0.918                                                                             |                                                                                   |                                                                                     | 0.998                                                                               |                                                                                     |                                                                                     | 0.984                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1662                                                                              | 1506                                                                              | 0                                                                                 | 1662                                                                              | 1606                                                                              | 0                                                                                 | 1662                                                                                | 3223                                                                                | 0                                                                                   | 1662                                                                                | 3208                                                                                | 0                                                                                   |
| Flt Permitted              | 0.709                                                                             |                                                                                   |                                                                                   | 0.675                                                                             |                                                                                   |                                                                                   | 0.424                                                                               |                                                                                     |                                                                                     | 0.492                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 1241                                                                              | 1506                                                                              | 0                                                                                 | 1181                                                                              | 1606                                                                              | 0                                                                                 | 742                                                                                 | 3223                                                                                | 0                                                                                   | 861                                                                                 | 3208                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 113                                                                               |                                                                                   |                                                                                   | 40                                                                                |                                                                                   |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 16                                                                                  |                                                                                     |
| Link Speed (mph)           |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                     | 40                                                                                  |                                                                                     |                                                                                     | 40                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 499                                                                               |                                                                                   |                                                                                   | 317                                                                               |                                                                                   |                                                                                     | 925                                                                                 |                                                                                     |                                                                                     | 716                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 13.6                                                                              |                                                                                   |                                                                                   | 8.6                                                                               |                                                                                   |                                                                                     | 15.8                                                                                |                                                                                     |                                                                                     | 12.2                                                                                |                                                                                     |
| Peak Hour Factor           | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                |
| Heavy Vehicles (%)         | 0%                                                                                | 0%                                                                                | 1%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                  | 3%                                                                                  | 0%                                                                                  | 0%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 85                                                                                | 15                                                                                | 113                                                                               | 36                                                                                | 33                                                                                | 40                                                                                | 50                                                                                  | 444                                                                                 | 6                                                                                   | 28                                                                                  | 477                                                                                 | 55                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 85                                                                                | 128                                                                               | 0                                                                                 | 36                                                                                | 73                                                                                | 0                                                                                 | 50                                                                                  | 450                                                                                 | 0                                                                                   | 28                                                                                  | 532                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |
| Headway Factor             | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                |
| Number of Detectors        | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 2                                                                                   |                                                                                     | 2                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Side St                                                                           | Side St                                                                           |                                                                                   | Side St                                                                           | Side St                                                                           |                                                                                   | Left                                                                                |                                                                                     |                                                                                     | Left                                                                                |                                                                                     |                                                                                     |
| Leading Detector (ft)      | 78                                                                                | 78                                                                                |                                                                                   | 78                                                                                | 78                                                                                |                                                                                   | 78                                                                                  | 223                                                                                 |                                                                                     | 78                                                                                  | 223                                                                                 |                                                                                     |
| Trailing Detector (ft)     | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 157                                                                                 |                                                                                     | 2                                                                                   | 157                                                                                 |                                                                                     |
| Detector 1 Position(ft)    | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 157                                                                                 |                                                                                     | 2                                                                                   | 157                                                                                 |                                                                                     |
| Detector 1 Size(ft)        | 16                                                                                | 16                                                                                |                                                                                   | 16                                                                                | 16                                                                                |                                                                                   | 16                                                                                  | 6                                                                                   |                                                                                     | 16                                                                                  | 6                                                                                   |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(ft)    | 72                                                                                | 72                                                                                |                                                                                   | 72                                                                                | 72                                                                                |                                                                                   | 72                                                                                  | 217                                                                                 |                                                                                     | 72                                                                                  | 217                                                                                 |                                                                                     |
| Detector 2 Size(ft)        | 6                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                   | 6                                                                                   |                                                                                     | 6                                                                                   | 6                                                                                   |                                                                                     |
| Detector 2 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | pm+pt                                                                               | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases           |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Permitted Phases           | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 6                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     |

# 2020 AM DESIGN HOUR CONDITIONS

Lanes, Volumes, Timings  
1: HWY 101 & 35th Street

06/12/2020

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Detector Phase          | 8                                                                                 | 8                                                                                 |                                                                                   | 4                                                                                 | 4                                                                                 |                                                                                   | 1                                                                                  | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                                | 4.0                                                                                 |                                                                                     | 4.0                                                                                 | 4.0                                                                                 |                                                                                     |
| Minimum Split (s)       | 28.0                                                                              | 28.0                                                                              |                                                                                   | 28.0                                                                              | 28.0                                                                              |                                                                                   | 13.0                                                                               | 22.8                                                                                |                                                                                     | 13.0                                                                                | 22.8                                                                                |                                                                                     |
| Total Split (s)         | 34.0                                                                              | 34.0                                                                              |                                                                                   | 34.0                                                                              | 34.0                                                                              |                                                                                   | 17.0                                                                               | 41.0                                                                                |                                                                                     | 15.0                                                                                | 39.0                                                                                |                                                                                     |
| Total Split (%)         | 37.8%                                                                             | 37.8%                                                                             |                                                                                   | 37.8%                                                                             | 37.8%                                                                             |                                                                                   | 18.9%                                                                              | 45.6%                                                                               |                                                                                     | 16.7%                                                                               | 43.3%                                                                               |                                                                                     |
| Maximum Green (s)       | 30.0                                                                              | 30.0                                                                              |                                                                                   | 30.0                                                                              | 30.0                                                                              |                                                                                   | 12.2                                                                               | 36.2                                                                                |                                                                                     | 10.2                                                                                | 34.2                                                                                |                                                                                     |
| Yellow Time (s)         | 3.5                                                                               | 3.5                                                                               |                                                                                   | 3.5                                                                               | 3.5                                                                               |                                                                                   | 4.3                                                                                | 4.3                                                                                 |                                                                                     | 4.3                                                                                 | 4.3                                                                                 |                                                                                     |
| All-Red Time (s)        | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                                | 0.5                                                                                 |                                                                                     | 0.5                                                                                 | 0.5                                                                                 |                                                                                     |
| Lost Time Adjust (s)    | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                                | 0.5                                                                                 |                                                                                     | 0.5                                                                                 | 0.5                                                                                 |                                                                                     |
| Total Lost Time (s)     | 4.5                                                                               | 4.5                                                                               |                                                                                   | 4.5                                                                               | 4.5                                                                               |                                                                                   | 5.3                                                                                | 5.3                                                                                 |                                                                                     | 5.3                                                                                 | 5.3                                                                                 |                                                                                     |
| Lead/Lag                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Lead                                                                               | Lag                                                                                 |                                                                                     | Lead                                                                                | Lag                                                                                 |                                                                                     |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Yes                                                                                | Yes                                                                                 |                                                                                     | Yes                                                                                 | Yes                                                                                 |                                                                                     |
| Vehicle Extension (s)   | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                                | 2.5                                                                                 |                                                                                     | 2.5                                                                                 | 2.5                                                                                 |                                                                                     |
| Minimum Gap (s)         | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                                | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Time Before Reduce (s)  | 8.0                                                                               | 8.0                                                                               |                                                                                   | 8.0                                                                               | 8.0                                                                               |                                                                                   | 8.0                                                                                | 8.0                                                                                 |                                                                                     | 8.0                                                                                 | 8.0                                                                                 |                                                                                     |
| Time To Reduce (s)      | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                                | 4.0                                                                                 |                                                                                     | 4.0                                                                                 | 4.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | None                                                                              |                                                                                   | None                                                                              | None                                                                              |                                                                                   | None                                                                               | Min                                                                                 |                                                                                     | None                                                                                | Min                                                                                 |                                                                                     |
| Walk Time (s)           | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   |                                                                                    | 7.0                                                                                 |                                                                                     |                                                                                     | 7.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     | 17.0                                                                              | 17.0                                                                              |                                                                                   | 17.0                                                                              | 17.0                                                                              |                                                                                   |                                                                                    | 11.0                                                                                |                                                                                     |                                                                                     | 11.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Act Effect Green (s)    | 7.4                                                                               | 7.4                                                                               |                                                                                   | 7.3                                                                               | 7.3                                                                               |                                                                                   | 14.2                                                                               | 14.8                                                                                |                                                                                     | 13.3                                                                                | 13.0                                                                                |                                                                                     |
| Actuated g/C Ratio      | 0.24                                                                              | 0.24                                                                              |                                                                                   | 0.24                                                                              | 0.24                                                                              |                                                                                   | 0.46                                                                               | 0.48                                                                                |                                                                                     | 0.43                                                                                | 0.42                                                                                |                                                                                     |
| v/c Ratio               | 0.29                                                                              | 0.29                                                                              |                                                                                   | 0.13                                                                              | 0.18                                                                              |                                                                                   | 0.10                                                                               | 0.29                                                                                |                                                                                     | 0.05                                                                                | 0.39                                                                                |                                                                                     |
| Control Delay           | 14.6                                                                              | 6.4                                                                               |                                                                                   | 13.0                                                                              | 8.6                                                                               |                                                                                   | 5.7                                                                                | 8.5                                                                                 |                                                                                     | 5.5                                                                                 | 10.8                                                                                |                                                                                     |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             | 14.6                                                                              | 6.4                                                                               |                                                                                   | 13.0                                                                              | 8.6                                                                               |                                                                                   | 5.7                                                                                | 8.5                                                                                 |                                                                                     | 5.5                                                                                 | 10.8                                                                                |                                                                                     |
| LOS                     | B                                                                                 | A                                                                                 |                                                                                   | B                                                                                 | A                                                                                 |                                                                                   | A                                                                                  | A                                                                                   |                                                                                     | A                                                                                   | B                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 9.6                                                                               |                                                                                   |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                    | 8.2                                                                                 |                                                                                     |                                                                                     | 10.6                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | A                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | A                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |

## Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 30.6

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.39

Intersection Signal Delay: 9.5

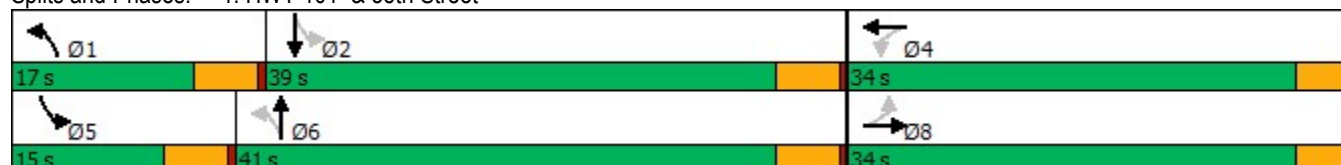
Intersection LOS: A

Intersection Capacity Utilization 39.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: HWY 101 & 35th Street
























# 2020 AM DESIGN HOUR CONDITIONS

## HCM Signalized Intersection Capacity Analysis

1: HWY 101 & 35th Street

06/12/2020

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                          | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Traffic Volume (vph)              | 66                                                                                | 12                                                                                | 88                                                                                | 28                                                                                | 26                                                                                | 31                                                                                | 39                                                                                  | 346                                                                                 | 5                                                                                   | 22                                                                                  | 372                                                                                 | 43                                                                                  |
| Future Volume (vph)               | 66                                                                                | 12                                                                                | 88                                                                                | 28                                                                                | 26                                                                                | 31                                                                                | 39                                                                                  | 346                                                                                 | 5                                                                                   | 22                                                                                  | 372                                                                                 | 43                                                                                  |
| Ideal Flow (vphpl)                | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Total Lost time (s)               | 4.5                                                                               | 4.5                                                                               |                                                                                   | 4.5                                                                               | 4.5                                                                               |                                                                                   | 5.3                                                                                 | 5.3                                                                                 |                                                                                     | 5.3                                                                                 | 5.3                                                                                 |                                                                                     |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 0.95                                                                                |                                                                                     | 1.00                                                                                | 0.95                                                                                |                                                                                     |
| Frt                               | 1.00                                                                              | 0.87                                                                              |                                                                                   | 1.00                                                                              | 0.92                                                                              |                                                                                   | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 0.98                                                                                |                                                                                     |
| Flt Protected                     | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                                | 1.00                                                                                |                                                                                     | 0.95                                                                                | 1.00                                                                                |                                                                                     |
| Satd. Flow (prot)                 | 1662                                                                              | 1505                                                                              |                                                                                   | 1662                                                                              | 1606                                                                              |                                                                                   | 1662                                                                                | 3223                                                                                |                                                                                     | 1662                                                                                | 3209                                                                                |                                                                                     |
| Flt Permitted                     | 0.71                                                                              | 1.00                                                                              |                                                                                   | 0.67                                                                              | 1.00                                                                              |                                                                                   | 0.42                                                                                | 1.00                                                                                |                                                                                     | 0.49                                                                                | 1.00                                                                                |                                                                                     |
| Satd. Flow (perm)                 | 1242                                                                              | 1505                                                                              |                                                                                   | 1181                                                                              | 1606                                                                              |                                                                                   | 742                                                                                 | 3223                                                                                |                                                                                     | 861                                                                                 | 3209                                                                                |                                                                                     |
| Peak-hour factor, PHF             | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                |
| Adj. Flow (vph)                   | 85                                                                                | 15                                                                                | 113                                                                               | 36                                                                                | 33                                                                                | 40                                                                                | 50                                                                                  | 444                                                                                 | 6                                                                                   | 28                                                                                  | 477                                                                                 | 55                                                                                  |
| RTOR Reduction (vph)              | 0                                                                                 | 93                                                                                | 0                                                                                 | 0                                                                                 | 33                                                                                | 0                                                                                 | 0                                                                                   | 1                                                                                   | 0                                                                                   | 0                                                                                   | 10                                                                                  | 0                                                                                   |
| Lane Group Flow (vph)             | 85                                                                                | 35                                                                                | 0                                                                                 | 36                                                                                | 40                                                                                | 0                                                                                 | 50                                                                                  | 449                                                                                 | 0                                                                                   | 28                                                                                  | 522                                                                                 | 0                                                                                   |
| Heavy Vehicles (%)                | 0%                                                                                | 0%                                                                                | 1%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                  | 3%                                                                                  | 0%                                                                                  | 0%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Turn Type                         | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | pm+pt                                                                               | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases                  |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Permitted Phases                  | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 6                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     |
| Actuated Green, G (s)             | 6.6                                                                               | 6.6                                                                               |                                                                                   | 6.6                                                                               | 6.6                                                                               |                                                                                   | 15.8                                                                                | 14.0                                                                                |                                                                                     | 14.0                                                                                | 13.1                                                                                |                                                                                     |
| Effective Green, g (s)            | 6.1                                                                               | 6.1                                                                               |                                                                                   | 6.1                                                                               | 6.1                                                                               |                                                                                   | 14.8                                                                                | 13.5                                                                                |                                                                                     | 13.0                                                                                | 12.6                                                                                |                                                                                     |
| Actuated g/C Ratio                | 0.17                                                                              | 0.17                                                                              |                                                                                   | 0.17                                                                              | 0.17                                                                              |                                                                                   | 0.42                                                                                | 0.38                                                                                |                                                                                     | 0.37                                                                                | 0.36                                                                                |                                                                                     |
| Clearance Time (s)                | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.8                                                                                 | 4.8                                                                                 |                                                                                     | 4.8                                                                                 | 4.8                                                                                 |                                                                                     |
| Vehicle Extension (s)             | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                                 | 2.5                                                                                 |                                                                                     | 2.5                                                                                 | 2.5                                                                                 |                                                                                     |
| Lane Grp Cap (vph)                | 215                                                                               | 261                                                                               |                                                                                   | 205                                                                               | 279                                                                               |                                                                                   | 346                                                                                 | 1239                                                                                |                                                                                     | 328                                                                                 | 1151                                                                                |                                                                                     |
| v/s Ratio Prot                    |                                                                                   | 0.02                                                                              |                                                                                   |                                                                                   | 0.02                                                                              |                                                                                   | c0.01                                                                               | 0.14                                                                                |                                                                                     | 0.00                                                                                | c0.16                                                                               |                                                                                     |
| v/s Ratio Perm                    | c0.07                                                                             |                                                                                   |                                                                                   | 0.03                                                                              |                                                                                   |                                                                                   | 0.06                                                                                |                                                                                     |                                                                                     | 0.03                                                                                |                                                                                     |                                                                                     |
| v/c Ratio                         | 0.40                                                                              | 0.13                                                                              |                                                                                   | 0.18                                                                              | 0.14                                                                              |                                                                                   | 0.14                                                                                | 0.36                                                                                |                                                                                     | 0.09                                                                                | 0.45                                                                                |                                                                                     |
| Uniform Delay, d1                 | 12.9                                                                              | 12.3                                                                              |                                                                                   | 12.4                                                                              | 12.3                                                                              |                                                                                   | 6.1                                                                                 | 7.7                                                                                 |                                                                                     | 7.1                                                                                 | 8.6                                                                                 |                                                                                     |
| Progression Factor                | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     |
| Incremental Delay, d2             | 0.9                                                                               | 0.2                                                                               |                                                                                   | 0.3                                                                               | 0.2                                                                               |                                                                                   | 0.1                                                                                 | 0.1                                                                                 |                                                                                     | 0.1                                                                                 | 0.2                                                                                 |                                                                                     |
| Delay (s)                         | 13.7                                                                              | 12.4                                                                              |                                                                                   | 12.7                                                                              | 12.5                                                                              |                                                                                   | 6.2                                                                                 | 7.9                                                                                 |                                                                                     | 7.2                                                                                 | 8.8                                                                                 |                                                                                     |
| Level of Service                  | B                                                                                 | B                                                                                 |                                                                                   | B                                                                                 | B                                                                                 |                                                                                   | A                                                                                   | A                                                                                   |                                                                                     | A                                                                                   | A                                                                                   |                                                                                     |
| Approach Delay (s)                |                                                                                   | 13.0                                                                              |                                                                                   |                                                                                   | 12.5                                                                              |                                                                                   |                                                                                     | 7.7                                                                                 |                                                                                     |                                                                                     | 8.7                                                                                 |                                                                                     |
| Approach LOS                      |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                     | A                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| <b>Intersection Summary</b>       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2000 Control Delay            |                                                                                   | 9.3                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   | HCM 2000 Level of Service                                                           |                                                                                     | A                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| HCM 2000 Volume to Capacity ratio |                                                                                   | 0.41                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Actuated Cycle Length (s)         |                                                                                   | 35.1                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Sum of lost time (s)                                                                |                                                                                     | 15.1                                                                                |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization |                                                                                   | 39.2%                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   | ICU Level of Service                                                                |                                                                                     | A                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min)             |                                                                                   | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| c Critical Lane Group             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |



















# 2020 AM DESIGN HOUR CONDITIONS

Lanes, Volumes, Timings

2: REDWOOD ST/Site & 35th Street

06/12/2020

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                        | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)              | 0                                                                                 | 20                                                                                | 19                                                                                | 15                                                                                | 48                                                                                | 0                                                                                 | 37                                                                                 | 0                                                                                   | 9                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Future Volume (vph)               | 0                                                                                 | 20                                                                                | 19                                                                                | 15                                                                                | 48                                                                                | 0                                                                                 | 37                                                                                 | 0                                                                                   | 9                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ideal Flow (vphpl)                | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                               | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Frt                               |                                                                                   | 0.934                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.973                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Flt Protected                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.988                                                                             |                                                                                   |                                                                                    | 0.962                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)                 | 0                                                                                 | 1634                                                                              | 0                                                                                 | 0                                                                                 | 1729                                                                              | 0                                                                                 | 0                                                                                  | 1638                                                                                | 0                                                                                   | 0                                                                                   | 1750                                                                                | 0                                                                                   |
| Flt Permitted                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.988                                                                             |                                                                                   |                                                                                    | 0.962                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)                 | 0                                                                                 | 1634                                                                              | 0                                                                                 | 0                                                                                 | 1729                                                                              | 0                                                                                 | 0                                                                                  | 1638                                                                                | 0                                                                                   | 0                                                                                   | 1750                                                                                | 0                                                                                   |
| Link Speed (mph)                  |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                    | 25                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)                |                                                                                   | 317                                                                               |                                                                                   |                                                                                   | 493                                                                               |                                                                                   |                                                                                    | 457                                                                                 |                                                                                     |                                                                                     | 274                                                                                 |                                                                                     |
| Travel Time (s)                   |                                                                                   | 8.6                                                                               |                                                                                   |                                                                                   | 13.4                                                                              |                                                                                   |                                                                                    | 12.5                                                                                |                                                                                     |                                                                                     | 6.2                                                                                 |                                                                                     |
| Peak Hour Factor                  | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                               | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                |
| Adj. Flow (vph)                   | 0                                                                                 | 26                                                                                | 25                                                                                | 19                                                                                | 62                                                                                | 0                                                                                 | 48                                                                                 | 0                                                                                   | 12                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)             | 0                                                                                 | 51                                                                                | 0                                                                                 | 0                                                                                 | 81                                                                                | 0                                                                                 | 0                                                                                  | 60                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment                    | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)                  |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 35                                                                                  |                                                                                     |
| Crosswalk Width(ft)               |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                    | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Two way Left Turn Lane            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor                    | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                               | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                |
| Sign Control                      |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |                                                                                   |                                                                                    | Stop                                                                                |                                                                                     |                                                                                     | Stop                                                                                |                                                                                     |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization | 20.3%                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | ICU Level of Service A                                                             |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# 2020 AM DESIGN HOUR CONDITIONS

HCM 2010 TWSC

2: REDWOOD ST/Site & 35th Street

06/12/2020










| Intersection             |        |      |      |        |       |      |        |       |      |        |      |      |
|--------------------------|--------|------|------|--------|-------|------|--------|-------|------|--------|------|------|
| Int Delay, s/veh         | 3.7    |      |      |        |       |      |        |       |      |        |      |      |
| Movement                 | EBL    | EBT  | EBR  | WBL    | WBT   | WBR  | NBL    | NBT   | NBR  | SBL    | SBT  | SBR  |
| Lane Configurations      |        | ↕    |      |        | ↕     |      |        | ↕     |      |        | ↕    |      |
| Traffic Vol, veh/h       | 0      | 20   | 19   | 15     | 48    | 0    | 37     | 0     | 9    | 0      | 0    | 0    |
| Future Vol, veh/h        | 0      | 20   | 19   | 15     | 48    | 0    | 37     | 0     | 9    | 0      | 0    | 0    |
| Conflicting Peds, #/hr   | 0      | 0    | 0    | 0      | 0     | 0    | 0      | 0     | 0    | 0      | 0    | 0    |
| Sign Control             | Free   | Free | Free | Free   | Free  | Free | Stop   | Stop  | Stop | Stop   | Stop | Stop |
| RT Channelized           | -      | -    | None | -      | -     | None | -      | -     | None | -      | -    | None |
| Storage Length           | -      | -    | -    | -      | -     | -    | -      | -     | -    | -      | -    | -    |
| Veh in Median Storage, # | -      | 0    | -    | -      | 0     | -    | -      | 0     | -    | -      | 0    | -    |
| Grade, %                 | -      | 0    | -    | -      | 0     | -    | -      | 0     | -    | -      | 0    | -    |
| Peak Hour Factor         | 77     | 77   | 77   | 77     | 77    | 77   | 77     | 77    | 77   | 77     | 77   | 77   |
| Heavy Vehicles, %        | 0      | 0    | 0    | 0      | 0     | 0    | 0      | 0     | 0    | 0      | 0    | 0    |
| Mvmt Flow                | 0      | 26   | 25   | 19     | 62    | 0    | 48     | 0     | 12   | 0      | 0    | 0    |
|                          |        |      |      |        |       |      |        |       |      |        |      |      |
| Major/Minor              | Major1 |      |      | Major2 |       |      | Minor1 |       |      | Minor2 |      |      |
| Conflicting Flow All     | 62     | 0    | 0    | 51     | 0     | 0    | 139    | 139   | 39   | 145    | 151  | 62   |
| Stage 1                  | -      | -    | -    | -      | -     | -    | 39     | 39    | -    | 100    | 100  | -    |
| Stage 2                  | -      | -    | -    | -      | -     | -    | 100    | 100   | -    | 45     | 51   | -    |
| Critical Hdwy            | 4.1    | -    | -    | 4.1    | -     | -    | 7.1    | 6.5   | 6.2  | 7.1    | 6.5  | 6.2  |
| Critical Hdwy Stg 1      | -      | -    | -    | -      | -     | -    | 6.1    | 5.5   | -    | 6.1    | 5.5  | -    |
| Critical Hdwy Stg 2      | -      | -    | -    | -      | -     | -    | 6.1    | 5.5   | -    | 6.1    | 5.5  | -    |
| Follow-up Hdwy           | 2.2    | -    | -    | 2.2    | -     | -    | 3.5    | 4     | 3.3  | 3.5    | 4    | 3.3  |
| Pot Cap-1 Maneuver       | 1554   | -    | -    | 1568   | -     | -    | 836    | 756   | 1038 | 828    | 744  | 1009 |
| Stage 1                  | -      | -    | -    | -      | -     | -    | 981    | 866   | -    | 911    | 816  | -    |
| Stage 2                  | -      | -    | -    | -      | -     | -    | 911    | 816   | -    | 974    | 856  | -    |
| Platoon blocked, %       |        | -    | -    |        | -     | -    |        |       |      |        |      |      |
| Mov Cap-1 Maneuver       | 1554   | -    | -    | 1568   | -     | -    | 828    | 746   | 1038 | 811    | 734  | 1009 |
| Mov Cap-2 Maneuver       | -      | -    | -    | -      | -     | -    | 828    | 746   | -    | 811    | 734  | -    |
| Stage 1                  | -      | -    | -    | -      | -     | -    | 981    | 866   | -    | 911    | 805  | -    |
| Stage 2                  | -      | -    | -    | -      | -     | -    | 899    | 805   | -    | 963    | 856  | -    |
|                          |        |      |      |        |       |      |        |       |      |        |      |      |
|                          |        |      |      |        |       |      |        |       |      |        |      |      |
| Approach                 | EB     |      |      | WB     |       |      | NB     |       |      | SB     |      |      |
| HCM Control Delay, s     | 0      |      |      | 1.7    |       |      | 9.5    |       |      | 0      |      |      |
| HCM LOS                  |        |      |      |        |       |      | A      |       |      | A      |      |      |
|                          |        |      |      |        |       |      |        |       |      |        |      |      |
| Minor Lane/Major Mvmt    | NBLn1  | EBL  | EBT  | EBR    | WBL   | WBT  | WBR    | SBLn1 |      |        |      |      |
| Capacity (veh/h)         | 862    | 1554 | -    | -      | 1568  | -    | -      | -     |      |        |      |      |
| HCM Lane V/C Ratio       | 0.069  | -    | -    | -      | 0.012 | -    | -      | -     |      |        |      |      |
| HCM Control Delay (s)    | 9.5    | 0    | -    | -      | 7.3   | 0    | -      | 0     |      |        |      |      |
| HCM Lane LOS             | A      | A    | -    | -      | A     | A    | -      | A     |      |        |      |      |
| HCM 95th %tile Q(veh)    | 0.2    | 0    | -    | -      | 0     | -    | -      | -     |      |        |      |      |

# 2020 AM DESIGN HOUR CONDITIONS

## Lanes, Volumes, Timings

### 3: HWY 101 & RIRO SITE ACCESS

06/12/2020

|                                         |  |  |  |  |  |  |
|-----------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                              | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations                     |                                                                                   |  |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)                    | 0                                                                                 | 0                                                                                 | 443                                                                               | 0                                                                                 | 0                                                                                 | 437                                                                               |
| Future Volume (vph)                     | 0                                                                                 | 0                                                                                 | 443                                                                               | 0                                                                                 | 0                                                                                 | 437                                                                               |
| Ideal Flow (vphpl)                      | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              |
| Lane Util. Factor                       | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              |
| Frt                                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Flt Protected                           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (prot)                       | 0                                                                                 | 1750                                                                              | 3260                                                                              | 0                                                                                 | 0                                                                                 | 3260                                                                              |
| Flt Permitted                           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (perm)                       | 0                                                                                 | 1750                                                                              | 3260                                                                              | 0                                                                                 | 0                                                                                 | 3260                                                                              |
| Link Speed (mph)                        | 30                                                                                |                                                                                   | 40                                                                                |                                                                                   |                                                                                   | 40                                                                                |
| Link Distance (ft)                      | 243                                                                               |                                                                                   | 716                                                                               |                                                                                   |                                                                                   | 923                                                                               |
| Travel Time (s)                         | 5.5                                                                               |                                                                                   | 12.2                                                                              |                                                                                   |                                                                                   | 15.7                                                                              |
| Peak Hour Factor                        | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              |
| Heavy Vehicles (%)                      | 0%                                                                                | 0%                                                                                | 2%                                                                                | 0%                                                                                | 0%                                                                                | 2%                                                                                |
| Adj. Flow (vph)                         | 0                                                                                 | 0                                                                                 | 540                                                                               | 0                                                                                 | 0                                                                                 | 533                                                                               |
| Shared Lane Traffic (%)                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)                   | 0                                                                                 | 0                                                                                 | 540                                                                               | 0                                                                                 | 0                                                                                 | 533                                                                               |
| Enter Blocked Intersection              | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment                          | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              |
| Median Width(ft)                        | 0                                                                                 |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |
| Link Offset(ft)                         | 0                                                                                 |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |
| Crosswalk Width(ft)                     | 12                                                                                |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |
| Two way Left Turn Lane                  |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |
| Headway Factor                          | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              |
| Sign Control                            | Stop                                                                              |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |
| Intersection Summary                    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                              | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type: Unsignalized              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Intersection Capacity Utilization 16.6% |                                                                                   |                                                                                   | ICU Level of Service A                                                            |                                                                                   |                                                                                   |                                                                                   |
| Analysis Period (min) 15                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

# 2020 AM DESIGN HOUR CONDITIONS

HCM 2010 TWSC

3: HWY 101 & RIRO SITE ACCESS

06/12/2020

## Intersection

Int Delay, s/veh 0

| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations      |      | ↗    | ↕    |      |      | ↕    |
| Traffic Vol, veh/h       | 0    | 0    | 443  | 0    | 0    | 437  |
| Future Vol, veh/h        | 0    | 0    | 443  | 0    | 0    | 437  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 82   | 82   | 82   | 82   | 82   | 82   |
| Heavy Vehicles, %        | 0    | 0    | 2    | 0    | 0    | 2    |
| Mvmt Flow                | 0    | 0    | 540  | 0    | 0    | 533  |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 270    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.9    | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.3    | -      |
| Pot Cap-1 Maneuver   | 0      | 734    | -      |
| Stage 1              | 0      | -      | -      |
| Stage 2              | 0      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | -      | 734    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |






















| Approach             | WB | NB | SB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              | A  |    |    |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT |
|-----------------------|-----|----------|-----|
| Capacity (veh/h)      | -   | -        | -   |
| HCM Lane V/C Ratio    | -   | -        | -   |
| HCM Control Delay (s) | -   | 0        | -   |
| HCM Lane LOS          | -   | A        | -   |
| HCM 95th %tile Q(veh) | -   | -        | -   |

# 2020 PM DESIGN HOUR CONDITIONS

Lanes, Volumes, Timings  
1: HWY 101 & 35th Street













06/15/2020

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Traffic Volume (vph)       | 85                                                                                | 31                                                                                | 111                                                                               | 28                                                                                | 15                                                                                | 43                                                                                | 110                                                                                 | 689                                                                                 | 44                                                                                  | 41                                                                                  | 666                                                                                 | 62                                                                                  |
| Future Volume (vph)        | 85                                                                                | 31                                                                                | 111                                                                               | 28                                                                                | 15                                                                                | 43                                                                                | 110                                                                                 | 689                                                                                 | 44                                                                                  | 41                                                                                  | 666                                                                                 | 62                                                                                  |
| Ideal Flow (vphpl)         | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Storage Length (ft)        | 110                                                                               |                                                                                   | 0                                                                                 | 141                                                                               |                                                                                   | 0                                                                                 | 146                                                                                 |                                                                                     | 0                                                                                   | 91                                                                                  |                                                                                     | 0                                                                                   |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)          | 100                                                                               |                                                                                   |                                                                                   | 55                                                                                |                                                                                   |                                                                                   | 66                                                                                  |                                                                                     |                                                                                     | 54                                                                                  |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                |
| Frt                        |                                                                                   | 0.883                                                                             |                                                                                   |                                                                                   | 0.889                                                                             |                                                                                   |                                                                                     | 0.991                                                                               |                                                                                     |                                                                                     | 0.987                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1662                                                                              | 1533                                                                              | 0                                                                                 | 1662                                                                              | 1556                                                                              | 0                                                                                 | 1662                                                                                | 3291                                                                                | 0                                                                                   | 1662                                                                                | 3282                                                                                | 0                                                                                   |
| Flt Permitted              | 0.717                                                                             |                                                                                   |                                                                                   | 0.661                                                                             |                                                                                   |                                                                                   | 0.253                                                                               |                                                                                     |                                                                                     | 0.356                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 1255                                                                              | 1533                                                                              | 0                                                                                 | 1157                                                                              | 1556                                                                              | 0                                                                                 | 443                                                                                 | 3291                                                                                | 0                                                                                   | 623                                                                                 | 3282                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 118                                                                               |                                                                                   |                                                                                   | 46                                                                                |                                                                                   |                                                                                     | 10                                                                                  |                                                                                     |                                                                                     | 13                                                                                  |                                                                                     |
| Link Speed (mph)           |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                     | 40                                                                                  |                                                                                     |                                                                                     | 40                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 499                                                                               |                                                                                   |                                                                                   | 317                                                                               |                                                                                   |                                                                                     | 925                                                                                 |                                                                                     |                                                                                     | 716                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 13.6                                                                              |                                                                                   |                                                                                   | 8.6                                                                               |                                                                                   |                                                                                     | 15.8                                                                                |                                                                                     |                                                                                     | 12.2                                                                                |                                                                                     |
| Peak Hour Factor           | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Heavy Vehicles (%)         | 0%                                                                                | 0%                                                                                | 1%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                  | 0%                                                                                  | 2%                                                                                  | 0%                                                                                  | 0%                                                                                  | 0%                                                                                  |
| Adj. Flow (vph)            | 90                                                                                | 33                                                                                | 118                                                                               | 30                                                                                | 16                                                                                | 46                                                                                | 117                                                                                 | 733                                                                                 | 47                                                                                  | 44                                                                                  | 709                                                                                 | 66                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 90                                                                                | 151                                                                               | 0                                                                                 | 30                                                                                | 62                                                                                | 0                                                                                 | 117                                                                                 | 780                                                                                 | 0                                                                                   | 44                                                                                  | 775                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |
| Headway Factor             | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                |
| Number of Detectors        | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 2                                                                                   |                                                                                     | 2                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Side St                                                                           | Side St                                                                           |                                                                                   | Side St                                                                           | Side St                                                                           |                                                                                   | Left                                                                                |                                                                                     |                                                                                     | Left                                                                                |                                                                                     |                                                                                     |
| Leading Detector (ft)      | 78                                                                                | 78                                                                                |                                                                                   | 78                                                                                | 78                                                                                |                                                                                   | 78                                                                                  | 223                                                                                 |                                                                                     | 78                                                                                  | 223                                                                                 |                                                                                     |
| Trailing Detector (ft)     | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 157                                                                                 |                                                                                     | 2                                                                                   | 157                                                                                 |                                                                                     |
| Detector 1 Position(ft)    | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 157                                                                                 |                                                                                     | 2                                                                                   | 157                                                                                 |                                                                                     |
| Detector 1 Size(ft)        | 16                                                                                | 16                                                                                |                                                                                   | 16                                                                                | 16                                                                                |                                                                                   | 16                                                                                  | 6                                                                                   |                                                                                     | 16                                                                                  | 6                                                                                   |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(ft)    | 72                                                                                | 72                                                                                |                                                                                   | 72                                                                                | 72                                                                                |                                                                                   | 72                                                                                  | 217                                                                                 |                                                                                     | 72                                                                                  | 217                                                                                 |                                                                                     |
| Detector 2 Size(ft)        | 6                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                   | 6                                                                                   |                                                                                     | 6                                                                                   | 6                                                                                   |                                                                                     |
| Detector 2 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | pm+pt                                                                               | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases           |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Permitted Phases           | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 6                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     |

# 2020 PM DESIGN HOUR CONDITIONS

Lanes, Volumes, Timings  
1: HWY 101 & 35th Street

06/15/2020

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Detector Phase          | 8                                                                                 | 8                                                                                 |                                                                                   | 4                                                                                 | 4                                                                                 |                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                                 | 4.0                                                                                 |                                                                                     | 4.0                                                                                 | 4.0                                                                                 |                                                                                     |
| Minimum Split (s)       | 22.0                                                                              | 22.0                                                                              |                                                                                   | 28.0                                                                              | 28.0                                                                              |                                                                                   | 13.0                                                                                | 28.8                                                                                |                                                                                     | 13.0                                                                                | 22.8                                                                                |                                                                                     |
| Total Split (s)         | 29.0                                                                              | 29.0                                                                              |                                                                                   | 29.0                                                                              | 29.0                                                                              |                                                                                   | 18.0                                                                                | 47.0                                                                                |                                                                                     | 14.0                                                                                | 43.0                                                                                |                                                                                     |
| Total Split (%)         | 32.2%                                                                             | 32.2%                                                                             |                                                                                   | 32.2%                                                                             | 32.2%                                                                             |                                                                                   | 20.0%                                                                               | 52.2%                                                                               |                                                                                     | 15.6%                                                                               | 47.8%                                                                               |                                                                                     |
| Maximum Green (s)       | 25.0                                                                              | 25.0                                                                              |                                                                                   | 25.0                                                                              | 25.0                                                                              |                                                                                   | 13.2                                                                                | 42.2                                                                                |                                                                                     | 9.2                                                                                 | 38.2                                                                                |                                                                                     |
| Yellow Time (s)         | 3.5                                                                               | 3.5                                                                               |                                                                                   | 3.5                                                                               | 3.5                                                                               |                                                                                   | 4.3                                                                                 | 4.3                                                                                 |                                                                                     | 4.3                                                                                 | 4.3                                                                                 |                                                                                     |
| All-Red Time (s)        | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                                 | 0.5                                                                                 |                                                                                     | 0.5                                                                                 | 0.5                                                                                 |                                                                                     |
| Lost Time Adjust (s)    | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                                 | 0.5                                                                                 |                                                                                     | 0.5                                                                                 | 0.5                                                                                 |                                                                                     |
| Total Lost Time (s)     | 4.5                                                                               | 4.5                                                                               |                                                                                   | 4.5                                                                               | 4.5                                                                               |                                                                                   | 5.3                                                                                 | 5.3                                                                                 |                                                                                     | 5.3                                                                                 | 5.3                                                                                 |                                                                                     |
| Lead/Lag                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Lead                                                                                | Lag                                                                                 |                                                                                     | Lead                                                                                | Lag                                                                                 |                                                                                     |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Yes                                                                                 | Yes                                                                                 |                                                                                     | Yes                                                                                 | Yes                                                                                 |                                                                                     |
| Vehicle Extension (s)   | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                                 | 2.5                                                                                 |                                                                                     | 2.5                                                                                 | 2.5                                                                                 |                                                                                     |
| Minimum Gap (s)         | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                                 | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Time Before Reduce (s)  | 8.0                                                                               | 8.0                                                                               |                                                                                   | 8.0                                                                               | 8.0                                                                               |                                                                                   | 8.0                                                                                 | 8.0                                                                                 |                                                                                     | 8.0                                                                                 | 8.0                                                                                 |                                                                                     |
| Time To Reduce (s)      | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                                 | 4.0                                                                                 |                                                                                     | 4.0                                                                                 | 4.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | None                                                                              |                                                                                   | None                                                                              | None                                                                              |                                                                                   | None                                                                                | Min                                                                                 |                                                                                     | None                                                                                | Min                                                                                 |                                                                                     |
| Walk Time (s)           | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   |                                                                                     | 7.0                                                                                 |                                                                                     |                                                                                     | 7.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     | 11.0                                                                              | 11.0                                                                              |                                                                                   | 17.0                                                                              | 17.0                                                                              |                                                                                   |                                                                                     | 17.0                                                                                |                                                                                     |                                                                                     | 11.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) | 1                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 1                                                                                   |                                                                                     |
| Act Effect Green (s)    | 8.8                                                                               | 8.8                                                                               |                                                                                   | 8.8                                                                               | 8.8                                                                               |                                                                                   | 24.2                                                                                | 21.7                                                                                |                                                                                     | 20.6                                                                                | 16.3                                                                                |                                                                                     |
| Actuated g/C Ratio      | 0.20                                                                              | 0.20                                                                              |                                                                                   | 0.20                                                                              | 0.20                                                                              |                                                                                   | 0.54                                                                                | 0.49                                                                                |                                                                                     | 0.46                                                                                | 0.37                                                                                |                                                                                     |
| v/c Ratio               | 0.37                                                                              | 0.38                                                                              |                                                                                   | 0.13                                                                              | 0.18                                                                              |                                                                                   | 0.29                                                                                | 0.48                                                                                |                                                                                     | 0.11                                                                                | 0.64                                                                                |                                                                                     |
| Control Delay           | 21.0                                                                              | 9.2                                                                               |                                                                                   | 17.4                                                                              | 9.3                                                                               |                                                                                   | 7.1                                                                                 | 11.2                                                                                |                                                                                     | 6.0                                                                                 | 16.3                                                                                |                                                                                     |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             | 21.0                                                                              | 9.2                                                                               |                                                                                   | 17.4                                                                              | 9.3                                                                               |                                                                                   | 7.1                                                                                 | 11.2                                                                                |                                                                                     | 6.0                                                                                 | 16.3                                                                                |                                                                                     |
| LOS                     | C                                                                                 | A                                                                                 |                                                                                   | B                                                                                 | A                                                                                 |                                                                                   | A                                                                                   | B                                                                                   |                                                                                     | A                                                                                   | B                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 13.6                                                                              |                                                                                   |                                                                                   | 12.0                                                                              |                                                                                   |                                                                                     | 10.6                                                                                |                                                                                     |                                                                                     | 15.7                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                     | B                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |

## Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 44.5

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 13.1

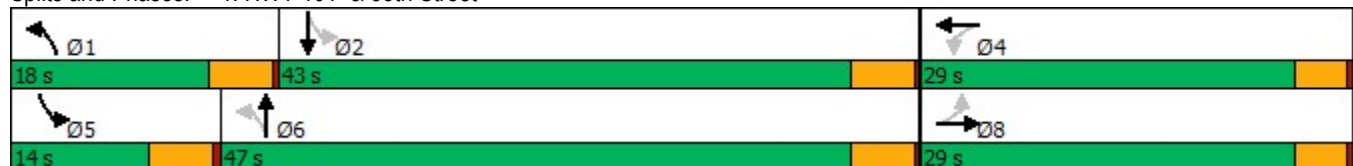
Intersection LOS: B

Intersection Capacity Utilization 57.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: HWY 101 & 35th Street
























# 2020 PM DESIGN HOUR CONDITIONS

## HCM Signalized Intersection Capacity Analysis

1: HWY 101 & 35th Street

06/15/2020

















|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                          | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Traffic Volume (vph)              | 85                                                                                | 31                                                                                | 111                                                                               | 28                                                                                | 15                                                                                | 43                                                                                | 110                                                                                 | 689                                                                                 | 44                                                                                  | 41                                                                                  | 666                                                                                 | 62                                                                                  |
| Future Volume (vph)               | 85                                                                                | 31                                                                                | 111                                                                               | 28                                                                                | 15                                                                                | 43                                                                                | 110                                                                                 | 689                                                                                 | 44                                                                                  | 41                                                                                  | 666                                                                                 | 62                                                                                  |
| Ideal Flow (vphpl)                | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Total Lost time (s)               | 4.5                                                                               | 4.5                                                                               |                                                                                   | 4.5                                                                               | 4.5                                                                               |                                                                                   | 5.3                                                                                 | 5.3                                                                                 |                                                                                     | 5.3                                                                                 | 5.3                                                                                 |                                                                                     |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 0.95                                                                                |                                                                                     | 1.00                                                                                | 0.95                                                                                |                                                                                     |
| Frt                               | 1.00                                                                              | 0.88                                                                              |                                                                                   | 1.00                                                                              | 0.89                                                                              |                                                                                   | 1.00                                                                                | 0.99                                                                                |                                                                                     | 1.00                                                                                | 0.99                                                                                |                                                                                     |
| Flt Protected                     | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                                | 1.00                                                                                |                                                                                     | 0.95                                                                                | 1.00                                                                                |                                                                                     |
| Satd. Flow (prot)                 | 1662                                                                              | 1533                                                                              |                                                                                   | 1662                                                                              | 1555                                                                              |                                                                                   | 1662                                                                                | 3291                                                                                |                                                                                     | 1662                                                                                | 3283                                                                                |                                                                                     |
| Flt Permitted                     | 0.72                                                                              | 1.00                                                                              |                                                                                   | 0.66                                                                              | 1.00                                                                              |                                                                                   | 0.25                                                                                | 1.00                                                                                |                                                                                     | 0.36                                                                                | 1.00                                                                                |                                                                                     |
| Satd. Flow (perm)                 | 1254                                                                              | 1533                                                                              |                                                                                   | 1157                                                                              | 1555                                                                              |                                                                                   | 444                                                                                 | 3291                                                                                |                                                                                     | 624                                                                                 | 3283                                                                                |                                                                                     |
| Peak-hour factor, PHF             | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Adj. Flow (vph)                   | 90                                                                                | 33                                                                                | 118                                                                               | 30                                                                                | 16                                                                                | 46                                                                                | 117                                                                                 | 733                                                                                 | 47                                                                                  | 44                                                                                  | 709                                                                                 | 66                                                                                  |
| RTOR Reduction (vph)              | 0                                                                                 | 96                                                                                | 0                                                                                 | 0                                                                                 | 37                                                                                | 0                                                                                 | 0                                                                                   | 5                                                                                   | 0                                                                                   | 0                                                                                   | 8                                                                                   | 0                                                                                   |
| Lane Group Flow (vph)             | 90                                                                                | 55                                                                                | 0                                                                                 | 30                                                                                | 25                                                                                | 0                                                                                 | 117                                                                                 | 775                                                                                 | 0                                                                                   | 44                                                                                  | 767                                                                                 | 0                                                                                   |
| Heavy Vehicles (%)                | 0%                                                                                | 0%                                                                                | 1%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                  | 0%                                                                                  | 2%                                                                                  | 0%                                                                                  | 0%                                                                                  | 0%                                                                                  |
| Turn Type                         | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | pm+pt                                                                               | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases                  |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Permitted Phases                  | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 6                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     |
| Actuated Green, G (s)             | 9.3                                                                               | 9.3                                                                               |                                                                                   | 9.3                                                                               | 9.3                                                                               |                                                                                   | 27.6                                                                                | 22.2                                                                                |                                                                                     | 21.2                                                                                | 19.0                                                                                |                                                                                     |
| Effective Green, g (s)            | 8.8                                                                               | 8.8                                                                               |                                                                                   | 8.8                                                                               | 8.8                                                                               |                                                                                   | 26.6                                                                                | 21.7                                                                                |                                                                                     | 20.2                                                                                | 18.5                                                                                |                                                                                     |
| Actuated g/C Ratio                | 0.19                                                                              | 0.19                                                                              |                                                                                   | 0.19                                                                              | 0.19                                                                              |                                                                                   | 0.56                                                                                | 0.46                                                                                |                                                                                     | 0.43                                                                                | 0.39                                                                                |                                                                                     |
| Clearance Time (s)                | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.8                                                                                 | 4.8                                                                                 |                                                                                     | 4.8                                                                                 | 4.8                                                                                 |                                                                                     |
| Vehicle Extension (s)             | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                                 | 2.5                                                                                 |                                                                                     | 2.5                                                                                 | 2.5                                                                                 |                                                                                     |
| Lane Grp Cap (vph)                | 233                                                                               | 285                                                                               |                                                                                   | 215                                                                               | 289                                                                               |                                                                                   | 375                                                                                 | 1509                                                                                |                                                                                     | 303                                                                                 | 1284                                                                                |                                                                                     |
| v/s Ratio Prot                    |                                                                                   | 0.04                                                                              |                                                                                   |                                                                                   | 0.02                                                                              |                                                                                   | c0.03                                                                               | c0.24                                                                               |                                                                                     | 0.01                                                                                | c0.23                                                                               |                                                                                     |
| v/s Ratio Perm                    | c0.07                                                                             |                                                                                   |                                                                                   | 0.03                                                                              |                                                                                   |                                                                                   | 0.14                                                                                |                                                                                     |                                                                                     | 0.06                                                                                |                                                                                     |                                                                                     |
| v/c Ratio                         | 0.39                                                                              | 0.19                                                                              |                                                                                   | 0.14                                                                              | 0.08                                                                              |                                                                                   | 0.31                                                                                | 0.51                                                                                |                                                                                     | 0.15                                                                                | 0.60                                                                                |                                                                                     |
| Uniform Delay, d1                 | 16.9                                                                              | 16.3                                                                              |                                                                                   | 16.1                                                                              | 15.9                                                                              |                                                                                   | 5.4                                                                                 | 9.1                                                                                 |                                                                                     | 8.0                                                                                 | 11.4                                                                                |                                                                                     |
| Progression Factor                | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     |
| Incremental Delay, d2             | 0.8                                                                               | 0.2                                                                               |                                                                                   | 0.2                                                                               | 0.1                                                                               |                                                                                   | 0.3                                                                                 | 0.2                                                                                 |                                                                                     | 0.2                                                                                 | 0.6                                                                                 |                                                                                     |
| Delay (s)                         | 17.7                                                                              | 16.5                                                                              |                                                                                   | 16.3                                                                              | 16.0                                                                              |                                                                                   | 5.7                                                                                 | 9.3                                                                                 |                                                                                     | 8.1                                                                                 | 12.1                                                                                |                                                                                     |
| Level of Service                  | B                                                                                 | B                                                                                 |                                                                                   | B                                                                                 | B                                                                                 |                                                                                   | A                                                                                   | A                                                                                   |                                                                                     | A                                                                                   | B                                                                                   |                                                                                     |
| Approach Delay (s)                |                                                                                   | 16.9                                                                              |                                                                                   |                                                                                   | 16.1                                                                              |                                                                                   |                                                                                     | 8.8                                                                                 |                                                                                     |                                                                                     | 11.9                                                                                |                                                                                     |
| Approach LOS                      |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                     | A                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |
| <b>Intersection Summary</b>       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2000 Control Delay            |                                                                                   |                                                                                   | 11.3                                                                              |                                                                                   |                                                                                   |                                                                                   | HCM 2000 Level of Service                                                           |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |
| HCM 2000 Volume to Capacity ratio |                                                                                   |                                                                                   | 0.50                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Actuated Cycle Length (s)         |                                                                                   |                                                                                   | 47.3                                                                              |                                                                                   |                                                                                   |                                                                                   | Sum of lost time (s)                                                                |                                                                                     |                                                                                     | 15.1                                                                                |                                                                                     |                                                                                     |
| Intersection Capacity Utilization |                                                                                   |                                                                                   | 57.6%                                                                             |                                                                                   |                                                                                   |                                                                                   | ICU Level of Service                                                                |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |
| Analysis Period (min)             |                                                                                   |                                                                                   | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| c Critical Lane Group             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# 2020 PM DESIGN HOUR CONDITIONS

Lanes, Volumes, Timings

2: REDWOOD ST/Site & 35th Street

06/15/2020

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                        | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)              | 0                                                                                 | 59                                                                                | 57                                                                                | 29                                                                                | 46                                                                                | 0                                                                                 | 40                                                                                 | 0                                                                                   | 17                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Future Volume (vph)               | 0                                                                                 | 59                                                                                | 57                                                                                | 29                                                                                | 46                                                                                | 0                                                                                 | 40                                                                                 | 0                                                                                   | 17                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ideal Flow (vphpl)                | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                               | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Frt                               | 0.933                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.959                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Flt Protected                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.966                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)                 | 0                                                                                 | 1633                                                                              | 0                                                                                 | 0                                                                                 | 1717                                                                              | 0                                                                                 | 0                                                                                  | 1621                                                                                | 0                                                                                   | 0                                                                                   | 1750                                                                                | 0                                                                                   |
| Flt Permitted                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.966                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)                 | 0                                                                                 | 1633                                                                              | 0                                                                                 | 0                                                                                 | 1717                                                                              | 0                                                                                 | 0                                                                                  | 1621                                                                                | 0                                                                                   | 0                                                                                   | 1750                                                                                | 0                                                                                   |
| Link Speed (mph)                  | 25                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 25                                                                                  |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Link Distance (ft)                | 317                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 225                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Travel Time (s)                   | 8.6                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 6.1                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Peak Hour Factor                  | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                               | 0.82                                                                                | 0.82                                                                                | 0.82                                                                                | 0.82                                                                                | 0.82                                                                                |
| Adj. Flow (vph)                   | 0                                                                                 | 72                                                                                | 70                                                                                | 35                                                                                | 56                                                                                | 0                                                                                 | 49                                                                                 | 0                                                                                   | 21                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)             | 0                                                                                 | 142                                                                               | 0                                                                                 | 0                                                                                 | 91                                                                                | 0                                                                                 | 0                                                                                  | 70                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment                    | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)                  | 12                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 12                                                                                  |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Link Offset(ft)                   | 0                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Crosswalk Width(ft)               | 12                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 12                                                                                  |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Two way Left Turn Lane            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor                    | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                               | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                |
| Sign Control                      | Free                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | Free                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization | 21.2%                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | ICU Level of Service A                                                              |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |







# 2020 PM DESIGN HOUR CONDITIONS

HCM 2010 TWSC

2: REDWOOD ST/Site & 35th Street

06/15/2020










| Intersection             |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
|--------------------------|--------|-----------------------------------------------------------------------------------|------|--------|-----------------------------------------------------------------------------------|------|--------|-----------------------------------------------------------------------------------|------|--------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 3.2    |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
| Movement                 | EBL    | EBT                                                                               | EBR  | WBL    | WBT                                                                               | WBR  | NBL    | NBT                                                                               | NBR  | SBL    | SBT                                                                                 | SBR  |
| Lane Configurations      |        |  |      |        |  |      |        |  |      |        |  |      |
| Traffic Vol, veh/h       | 0      | 59                                                                                | 57   | 29     | 46                                                                                | 0    | 40     | 0                                                                                 | 17   | 0      | 0                                                                                   | 0    |
| Future Vol, veh/h        | 0      | 59                                                                                | 57   | 29     | 46                                                                                | 0    | 40     | 0                                                                                 | 17   | 0      | 0                                                                                   | 0    |
| Conflicting Peds, #/hr   | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0    | 0      | 0                                                                                   | 0    |
| Sign Control             | Free   | Free                                                                              | Free | Free   | Free                                                                              | Free | Stop   | Stop                                                                              | Stop | Stop   | Stop                                                                                | Stop |
| RT Channelized           | -      | -                                                                                 | None | -      | -                                                                                 | None | -      | -                                                                                 | None | -      | -                                                                                   | None |
| Storage Length           | -      | -                                                                                 | -    | -      | -                                                                                 | -    | -      | -                                                                                 | -    | -      | -                                                                                   | -    |
| Veh in Median Storage, # | -      | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | 0                                                                                   | -    |
| Grade, %                 | -      | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | 0                                                                                   | -    |
| Peak Hour Factor         | 82     | 82                                                                                | 82   | 82     | 82                                                                                | 82   | 82     | 82                                                                                | 82   | 82     | 82                                                                                  | 82   |
| Heavy Vehicles, %        | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0    | 0      | 0                                                                                   | 0    |
| Mvmt Flow                | 0      | 72                                                                                | 70   | 35     | 56                                                                                | 0    | 49     | 0                                                                                 | 21   | 0      | 0                                                                                   | 0    |
|                          |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
| Major/Minor              | Major1 |                                                                                   |      | Major2 |                                                                                   |      | Minor1 |                                                                                   |      | Minor2 |                                                                                     |      |
| Conflicting Flow All     | 56     | 0                                                                                 | 0    | 142    | 0                                                                                 | 0    | 233    | 233                                                                               | 107  | 244    | 268                                                                                 | 56   |
| Stage 1                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 107    | 107                                                                               | -    | 126    | 126                                                                                 | -    |
| Stage 2                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 126    | 126                                                                               | -    | 118    | 142                                                                                 | -    |
| Critical Hdwy            | 4.1    | -                                                                                 | -    | 4.1    | -                                                                                 | -    | 7.1    | 6.5                                                                               | 6.2  | 7.1    | 6.5                                                                                 | 6.2  |
| Critical Hdwy Stg 1      | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 6.1    | 5.5                                                                               | -    | 6.1    | 5.5                                                                                 | -    |
| Critical Hdwy Stg 2      | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 6.1    | 5.5                                                                               | -    | 6.1    | 5.5                                                                                 | -    |
| Follow-up Hdwy           | 2.2    | -                                                                                 | -    | 2.2    | -                                                                                 | -    | 3.5    | 4                                                                                 | 3.3  | 3.5    | 4                                                                                   | 3.3  |
| Pot Cap-1 Maneuver       | 1562   | -                                                                                 | -    | 1453   | -                                                                                 | -    | 726    | 671                                                                               | 953  | 714    | 641                                                                                 | 1016 |
| Stage 1                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 903    | 811                                                                               | -    | 883    | 796                                                                                 | -    |
| Stage 2                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 883    | 796                                                                               | -    | 891    | 783                                                                                 | -    |
| Platoon blocked, %       |        | -                                                                                 | -    |        | -                                                                                 | -    |        |                                                                                   |      |        |                                                                                     |      |
| Mov Cap-1 Maneuver       | 1562   | -                                                                                 | -    | 1453   | -                                                                                 | -    | 712    | 654                                                                               | 953  | 685    | 625                                                                                 | 1016 |
| Mov Cap-2 Maneuver       | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 712    | 654                                                                               | -    | 685    | 625                                                                                 | -    |
| Stage 1                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 903    | 811                                                                               | -    | 883    | 776                                                                                 | -    |
| Stage 2                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 861    | 776                                                                               | -    | 872    | 783                                                                                 | -    |
|                          |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
| Approach                 | EB     |                                                                                   |      | WB     |                                                                                   |      | NB     |                                                                                   |      | SB     |                                                                                     |      |
| HCM Control Delay, s     | 0      |                                                                                   |      | 2.9    |                                                                                   |      | 10.1   |                                                                                   |      | 0      |                                                                                     |      |
| HCM LOS                  |        |                                                                                   |      |        |                                                                                   |      | B      |                                                                                   |      | A      |                                                                                     |      |
|                          |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
| Minor Lane/Major Mvmt    | NBLn1  | EBL                                                                               | EBT  | EBR    | WBL                                                                               | WBT  | WBR    | SBLn1                                                                             |      |        |                                                                                     |      |
| Capacity (veh/h)         | 770    | 1562                                                                              | -    | -      | 1453                                                                              | -    | -      | -                                                                                 |      |        |                                                                                     |      |
| HCM Lane V/C Ratio       | 0.09   | -                                                                                 | -    | -      | 0.024                                                                             | -    | -      | -                                                                                 |      |        |                                                                                     |      |
| HCM Control Delay (s)    | 10.1   | 0                                                                                 | -    | -      | 7.5                                                                               | 0    | -      | 0                                                                                 |      |        |                                                                                     |      |
| HCM Lane LOS             | B      | A                                                                                 | -    | -      | A                                                                                 | A    | -      | A                                                                                 |      |        |                                                                                     |      |
| HCM 95th %tile Q(veh)    | 0.3    | 0                                                                                 | -    | -      | 0.1                                                                               | -    | -      | -                                                                                 |      |        |                                                                                     |      |

# 2020 PM DESIGN HOUR CONDITIONS

## Lanes, Volumes, Timings

### 3: HWY 101 & RIRO SITE ACCESS

06/15/2020




|                                   |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                        | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations               |                                                                                   |  |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)              | 0                                                                                 | 0                                                                                 | 817                                                                               | 0                                                                                 | 0                                                                                 | 769                                                                               |
| Future Volume (vph)               | 0                                                                                 | 0                                                                                 | 817                                                                               | 0                                                                                 | 0                                                                                 | 769                                                                               |
| Ideal Flow (vphpl)                | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              |
| Frt                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Flt Protected                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (prot)                 | 0                                                                                 | 1750                                                                              | 3325                                                                              | 0                                                                                 | 0                                                                                 | 3325                                                                              |
| Flt Permitted                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (perm)                 | 0                                                                                 | 1750                                                                              | 3325                                                                              | 0                                                                                 | 0                                                                                 | 3325                                                                              |
| Link Speed (mph)                  | 30                                                                                |                                                                                   | 40                                                                                |                                                                                   |                                                                                   | 40                                                                                |
| Link Distance (ft)                | 243                                                                               |                                                                                   | 716                                                                               |                                                                                   |                                                                                   | 923                                                                               |
| Travel Time (s)                   | 5.5                                                                               |                                                                                   | 12.2                                                                              |                                                                                   |                                                                                   | 15.7                                                                              |
| Peak Hour Factor                  | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              |
| Adj. Flow (vph)                   | 0                                                                                 | 0                                                                                 | 869                                                                               | 0                                                                                 | 0                                                                                 | 818                                                                               |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)             | 0                                                                                 | 0                                                                                 | 869                                                                               | 0                                                                                 | 0                                                                                 | 818                                                                               |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment                    | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              |
| Median Width(ft)                  | 0                                                                                 |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |
| Link Offset(ft)                   | 0                                                                                 |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |
| Crosswalk Width(ft)               | 12                                                                                |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |
| Two way Left Turn Lane            |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |
| Headway Factor                    | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              |
| Sign Control                      | Stop                                                                              |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Intersection Capacity Utilization | 27.9%                                                                             |                                                                                   |                                                                                   | ICU Level of Service A                                                            |                                                                                   |                                                                                   |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

# 2020 PM DESIGN HOUR CONDITIONS

HCM 2010 TWSC

3: HWY 101 & RIRO SITE ACCESS






















06/15/2020

| Intersection             |        |                                                                                   |                                                                                   |      |      |                                                                                   |
|--------------------------|--------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 0      |                                                                                   |                                                                                   |      |      |                                                                                   |
| Movement                 | WBL    | WBR                                                                               | NBT                                                                               | NBR  | SBL  | SBT                                                                               |
| Lane Configurations      |        |  |  |      |      |  |
| Traffic Vol, veh/h       | 0      | 0                                                                                 | 817                                                                               | 0    | 0    | 769                                                                               |
| Future Vol, veh/h        | 0      | 0                                                                                 | 817                                                                               | 0    | 0    | 769                                                                               |
| Conflicting Peds, #/hr   | 0      | 0                                                                                 | 0                                                                                 | 0    | 0    | 0                                                                                 |
| Sign Control             | Stop   | Stop                                                                              | Free                                                                              | Free | Free | Free                                                                              |
| RT Channelized           | -      | None                                                                              | -                                                                                 | None | -    | None                                                                              |
| Storage Length           | -      | 0                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Veh in Median Storage, # | 0      | -                                                                                 | 0                                                                                 | -    | -    | 0                                                                                 |
| Grade, %                 | 0      | -                                                                                 | 0                                                                                 | -    | -    | 0                                                                                 |
| Peak Hour Factor         | 94     | 94                                                                                | 94                                                                                | 94   | 94   | 94                                                                                |
| Heavy Vehicles, %        | 0      | 0                                                                                 | 0                                                                                 | 0    | 0    | 0                                                                                 |
| Mvmt Flow                | 0      | 0                                                                                 | 869                                                                               | 0    | 0    | 818                                                                               |
| Major/Minor              | Minor1 | Major1                                                                            | Major2                                                                            |      |      |                                                                                   |
| Conflicting Flow All     | -      | 435                                                                               | 0                                                                                 | 0    | -    | -                                                                                 |
| Stage 1                  | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Stage 2                  | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Critical Hdwy            | -      | 6.9                                                                               | -                                                                                 | -    | -    | -                                                                                 |
| Critical Hdwy Stg 1      | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Critical Hdwy Stg 2      | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Follow-up Hdwy           | -      | 3.3                                                                               | -                                                                                 | -    | -    | -                                                                                 |
| Pot Cap-1 Maneuver       | 0      | 575                                                                               | -                                                                                 | -    | 0    | -                                                                                 |
| Stage 1                  | 0      | -                                                                                 | -                                                                                 | -    | 0    | -                                                                                 |
| Stage 2                  | 0      | -                                                                                 | -                                                                                 | -    | 0    | -                                                                                 |
| Platoon blocked, %       |        |                                                                                   | -                                                                                 | -    |      | -                                                                                 |
| Mov Cap-1 Maneuver       | -      | 575                                                                               | -                                                                                 | -    | -    | -                                                                                 |
| Mov Cap-2 Maneuver       | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Stage 1                  | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Stage 2                  | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Approach                 | WB     | NB                                                                                | SB                                                                                |      |      |                                                                                   |
| HCM Control Delay, s     | 0      | 0                                                                                 | 0                                                                                 |      |      |                                                                                   |
| HCM LOS                  | A      |                                                                                   |                                                                                   |      |      |                                                                                   |
| Minor Lane/Major Mvmt    | NBT    | NBRWBLn1                                                                          | SBT                                                                               |      |      |                                                                                   |
| Capacity (veh/h)         | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| HCM Lane V/C Ratio       | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| HCM Control Delay (s)    | -      | -                                                                                 | 0                                                                                 | -    | -    | -                                                                                 |
| HCM Lane LOS             | -      | -                                                                                 | A                                                                                 | -    | -    | -                                                                                 |
| HCM 95th %tile Q(veh)    | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |

# 2021 AM DESIGN HOUR NO-BUILD CONDITIONS

Lanes, Volumes, Timings  
1: HWY 101 & 35th Street













06/15/2020

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Traffic Volume (vph)       | 73                                                                                | 12                                                                                | 102                                                                               | 28                                                                                | 26                                                                                | 31                                                                                | 43                                                                                  | 346                                                                                 | 5                                                                                   | 22                                                                                  | 372                                                                                 | 45                                                                                  |
| Future Volume (vph)        | 73                                                                                | 12                                                                                | 102                                                                               | 28                                                                                | 26                                                                                | 31                                                                                | 43                                                                                  | 346                                                                                 | 5                                                                                   | 22                                                                                  | 372                                                                                 | 45                                                                                  |
| Ideal Flow (vphpl)         | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Storage Length (ft)        | 110                                                                               |                                                                                   | 0                                                                                 | 141                                                                               |                                                                                   | 0                                                                                 | 146                                                                                 |                                                                                     | 0                                                                                   | 91                                                                                  |                                                                                     | 0                                                                                   |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)          | 100                                                                               |                                                                                   |                                                                                   | 55                                                                                |                                                                                   |                                                                                   | 66                                                                                  |                                                                                     |                                                                                     | 54                                                                                  |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                |
| Frt                        |                                                                                   | 0.865                                                                             |                                                                                   |                                                                                   | 0.918                                                                             |                                                                                   |                                                                                     | 0.998                                                                               |                                                                                     |                                                                                     | 0.984                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1662                                                                              | 1500                                                                              | 0                                                                                 | 1662                                                                              | 1606                                                                              | 0                                                                                 | 1662                                                                                | 3223                                                                                | 0                                                                                   | 1662                                                                                | 3208                                                                                | 0                                                                                   |
| Flt Permitted              | 0.709                                                                             |                                                                                   |                                                                                   | 0.664                                                                             |                                                                                   |                                                                                   | 0.419                                                                               |                                                                                     |                                                                                     | 0.492                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 1241                                                                              | 1500                                                                              | 0                                                                                 | 1162                                                                              | 1606                                                                              | 0                                                                                 | 733                                                                                 | 3223                                                                                | 0                                                                                   | 861                                                                                 | 3208                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 131                                                                               |                                                                                   |                                                                                   | 40                                                                                |                                                                                   |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 17                                                                                  |                                                                                     |
| Link Speed (mph)           |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                     | 40                                                                                  |                                                                                     |                                                                                     | 40                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 499                                                                               |                                                                                   |                                                                                   | 317                                                                               |                                                                                   |                                                                                     | 925                                                                                 |                                                                                     |                                                                                     | 716                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 13.6                                                                              |                                                                                   |                                                                                   | 8.6                                                                               |                                                                                   |                                                                                     | 15.8                                                                                |                                                                                     |                                                                                     | 12.2                                                                                |                                                                                     |
| Peak Hour Factor           | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                |
| Heavy Vehicles (%)         | 0%                                                                                | 0%                                                                                | 1%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                  | 3%                                                                                  | 0%                                                                                  | 0%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 94                                                                                | 15                                                                                | 131                                                                               | 36                                                                                | 33                                                                                | 40                                                                                | 55                                                                                  | 444                                                                                 | 6                                                                                   | 28                                                                                  | 477                                                                                 | 58                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 94                                                                                | 146                                                                               | 0                                                                                 | 36                                                                                | 73                                                                                | 0                                                                                 | 55                                                                                  | 450                                                                                 | 0                                                                                   | 28                                                                                  | 535                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |
| Headway Factor             | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                |
| Number of Detectors        | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 2                                                                                   |                                                                                     | 2                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Side St                                                                           | Side St                                                                           |                                                                                   | Side St                                                                           | Side St                                                                           |                                                                                   | Left                                                                                |                                                                                     |                                                                                     | Left                                                                                |                                                                                     |                                                                                     |
| Leading Detector (ft)      | 78                                                                                | 78                                                                                |                                                                                   | 78                                                                                | 78                                                                                |                                                                                   | 78                                                                                  | 223                                                                                 |                                                                                     | 78                                                                                  | 223                                                                                 |                                                                                     |
| Trailing Detector (ft)     | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 157                                                                                 |                                                                                     | 2                                                                                   | 157                                                                                 |                                                                                     |
| Detector 1 Position(ft)    | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 157                                                                                 |                                                                                     | 2                                                                                   | 157                                                                                 |                                                                                     |
| Detector 1 Size(ft)        | 16                                                                                | 16                                                                                |                                                                                   | 16                                                                                | 16                                                                                |                                                                                   | 16                                                                                  | 6                                                                                   |                                                                                     | 16                                                                                  | 6                                                                                   |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(ft)    | 72                                                                                | 72                                                                                |                                                                                   | 72                                                                                | 72                                                                                |                                                                                   | 72                                                                                  | 217                                                                                 |                                                                                     | 72                                                                                  | 217                                                                                 |                                                                                     |
| Detector 2 Size(ft)        | 6                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                   | 6                                                                                   |                                                                                     | 6                                                                                   | 6                                                                                   |                                                                                     |
| Detector 2 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | pm+pt                                                                               | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases           |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Permitted Phases           | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 6                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     |

# 2021 AM DESIGN HOUR NO-BUILD CONDITIONS

Lanes, Volumes, Timings  
1: HWY 101 & 35th Street

06/15/2020

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Detector Phase          | 8                                                                                 | 8                                                                                 |                                                                                   | 4                                                                                 | 4                                                                                 |                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                                 | 4.0                                                                                 |                                                                                     | 4.0                                                                                 | 4.0                                                                                 |                                                                                     |
| Minimum Split (s)       | 28.0                                                                              | 28.0                                                                              |                                                                                   | 28.0                                                                              | 28.0                                                                              |                                                                                   | 13.0                                                                                | 22.8                                                                                |                                                                                     | 13.0                                                                                | 22.8                                                                                |                                                                                     |
| Total Split (s)         | 34.0                                                                              | 34.0                                                                              |                                                                                   | 34.0                                                                              | 34.0                                                                              |                                                                                   | 17.0                                                                                | 41.0                                                                                |                                                                                     | 15.0                                                                                | 39.0                                                                                |                                                                                     |
| Total Split (%)         | 37.8%                                                                             | 37.8%                                                                             |                                                                                   | 37.8%                                                                             | 37.8%                                                                             |                                                                                   | 18.9%                                                                               | 45.6%                                                                               |                                                                                     | 16.7%                                                                               | 43.3%                                                                               |                                                                                     |
| Maximum Green (s)       | 30.0                                                                              | 30.0                                                                              |                                                                                   | 30.0                                                                              | 30.0                                                                              |                                                                                   | 12.2                                                                                | 36.2                                                                                |                                                                                     | 10.2                                                                                | 34.2                                                                                |                                                                                     |
| Yellow Time (s)         | 3.5                                                                               | 3.5                                                                               |                                                                                   | 3.5                                                                               | 3.5                                                                               |                                                                                   | 4.3                                                                                 | 4.3                                                                                 |                                                                                     | 4.3                                                                                 | 4.3                                                                                 |                                                                                     |
| All-Red Time (s)        | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                                 | 0.5                                                                                 |                                                                                     | 0.5                                                                                 | 0.5                                                                                 |                                                                                     |
| Lost Time Adjust (s)    | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                                 | 0.5                                                                                 |                                                                                     | 0.5                                                                                 | 0.5                                                                                 |                                                                                     |
| Total Lost Time (s)     | 4.5                                                                               | 4.5                                                                               |                                                                                   | 4.5                                                                               | 4.5                                                                               |                                                                                   | 5.3                                                                                 | 5.3                                                                                 |                                                                                     | 5.3                                                                                 | 5.3                                                                                 |                                                                                     |
| Lead/Lag                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Lead                                                                                | Lag                                                                                 |                                                                                     | Lead                                                                                | Lag                                                                                 |                                                                                     |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Yes                                                                                 | Yes                                                                                 |                                                                                     | Yes                                                                                 | Yes                                                                                 |                                                                                     |
| Vehicle Extension (s)   | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                                 | 2.5                                                                                 |                                                                                     | 2.5                                                                                 | 2.5                                                                                 |                                                                                     |
| Minimum Gap (s)         | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                                 | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Time Before Reduce (s)  | 8.0                                                                               | 8.0                                                                               |                                                                                   | 8.0                                                                               | 8.0                                                                               |                                                                                   | 8.0                                                                                 | 8.0                                                                                 |                                                                                     | 8.0                                                                                 | 8.0                                                                                 |                                                                                     |
| Time To Reduce (s)      | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                                 | 4.0                                                                                 |                                                                                     | 4.0                                                                                 | 4.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | None                                                                              |                                                                                   | None                                                                              | None                                                                              |                                                                                   | None                                                                                | Min                                                                                 |                                                                                     | None                                                                                | Min                                                                                 |                                                                                     |
| Walk Time (s)           | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   |                                                                                     | 7.0                                                                                 |                                                                                     |                                                                                     | 7.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     | 17.0                                                                              | 17.0                                                                              |                                                                                   | 17.0                                                                              | 17.0                                                                              |                                                                                   |                                                                                     | 11.0                                                                                |                                                                                     |                                                                                     | 11.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Act Effect Green (s)    | 7.7                                                                               | 7.7                                                                               |                                                                                   | 7.6                                                                               | 7.6                                                                               |                                                                                   | 14.3                                                                                | 14.8                                                                                |                                                                                     | 13.3                                                                                | 13.0                                                                                |                                                                                     |
| Actuated g/C Ratio      | 0.25                                                                              | 0.25                                                                              |                                                                                   | 0.25                                                                              | 0.25                                                                              |                                                                                   | 0.46                                                                                | 0.48                                                                                |                                                                                     | 0.43                                                                                | 0.42                                                                                |                                                                                     |
| v/c Ratio               | 0.30                                                                              | 0.31                                                                              |                                                                                   | 0.13                                                                              | 0.17                                                                              |                                                                                   | 0.11                                                                                | 0.29                                                                                |                                                                                     | 0.06                                                                                | 0.39                                                                                |                                                                                     |
| Control Delay           | 14.8                                                                              | 6.2                                                                               |                                                                                   | 13.0                                                                              | 8.6                                                                               |                                                                                   | 5.9                                                                                 | 8.6                                                                                 |                                                                                     | 5.6                                                                                 | 11.1                                                                                |                                                                                     |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             | 14.8                                                                              | 6.2                                                                               |                                                                                   | 13.0                                                                              | 8.6                                                                               |                                                                                   | 5.9                                                                                 | 8.6                                                                                 |                                                                                     | 5.6                                                                                 | 11.1                                                                                |                                                                                     |
| LOS                     | B                                                                                 | A                                                                                 |                                                                                   | B                                                                                 | A                                                                                 |                                                                                   | A                                                                                   | A                                                                                   |                                                                                     | A                                                                                   | B                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 9.5                                                                               |                                                                                   |                                                                                   | 10.0                                                                              |                                                                                   |                                                                                     | 8.3                                                                                 |                                                                                     |                                                                                     | 10.8                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | A                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                     | A                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |

## Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 31

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.39

Intersection Signal Delay: 9.6

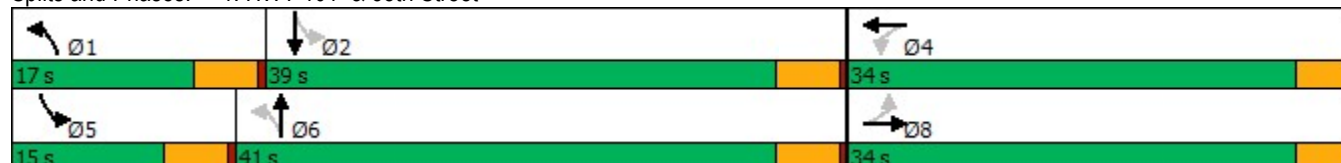
Intersection LOS: A

Intersection Capacity Utilization 39.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: HWY 101 & 35th Street
























# 2021 AM DESIGN HOUR NO-BUILD CONDITIONS

## HCM Signalized Intersection Capacity Analysis

1: HWY 101 & 35th Street

06/15/2020

















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|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                          | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Traffic Volume (vph)              | 73                                                                                | 12                                                                                | 102                                                                               | 28                                                                                | 26                                                                                | 31                                                                                | 43                                                                                  | 346                                                                                 | 5                                                                                   | 22                                                                                  | 372                                                                                 | 45                                                                                  |
| Future Volume (vph)               | 73                                                                                | 12                                                                                | 102                                                                               | 28                                                                                | 26                                                                                | 31                                                                                | 43                                                                                  | 346                                                                                 | 5                                                                                   | 22                                                                                  | 372                                                                                 | 45                                                                                  |
| Ideal Flow (vphpl)                | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Total Lost time (s)               | 4.5                                                                               | 4.5                                                                               |                                                                                   | 4.5                                                                               | 4.5                                                                               |                                                                                   | 5.3                                                                                 | 5.3                                                                                 |                                                                                     | 5.3                                                                                 | 5.3                                                                                 |                                                                                     |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 0.95                                                                                |                                                                                     | 1.00                                                                                | 0.95                                                                                |                                                                                     |
| Frt                               | 1.00                                                                              | 0.87                                                                              |                                                                                   | 1.00                                                                              | 0.92                                                                              |                                                                                   | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 0.98                                                                                |                                                                                     |
| Flt Protected                     | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                                | 1.00                                                                                |                                                                                     | 0.95                                                                                | 1.00                                                                                |                                                                                     |
| Satd. Flow (prot)                 | 1662                                                                              | 1501                                                                              |                                                                                   | 1662                                                                              | 1606                                                                              |                                                                                   | 1662                                                                                | 3223                                                                                |                                                                                     | 1662                                                                                | 3207                                                                                |                                                                                     |
| Flt Permitted                     | 0.71                                                                              | 1.00                                                                              |                                                                                   | 0.66                                                                              | 1.00                                                                              |                                                                                   | 0.42                                                                                | 1.00                                                                                |                                                                                     | 0.49                                                                                | 1.00                                                                                |                                                                                     |
| Satd. Flow (perm)                 | 1242                                                                              | 1501                                                                              |                                                                                   | 1162                                                                              | 1606                                                                              |                                                                                   | 734                                                                                 | 3223                                                                                |                                                                                     | 861                                                                                 | 3207                                                                                |                                                                                     |
| Peak-hour factor, PHF             | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                |
| Adj. Flow (vph)                   | 94                                                                                | 15                                                                                | 131                                                                               | 36                                                                                | 33                                                                                | 40                                                                                | 55                                                                                  | 444                                                                                 | 6                                                                                   | 28                                                                                  | 477                                                                                 | 58                                                                                  |
| RTOR Reduction (vph)              | 0                                                                                 | 107                                                                               | 0                                                                                 | 0                                                                                 | 33                                                                                | 0                                                                                 | 0                                                                                   | 1                                                                                   | 0                                                                                   | 0                                                                                   | 11                                                                                  | 0                                                                                   |
| Lane Group Flow (vph)             | 94                                                                                | 39                                                                                | 0                                                                                 | 36                                                                                | 40                                                                                | 0                                                                                 | 55                                                                                  | 449                                                                                 | 0                                                                                   | 28                                                                                  | 524                                                                                 | 0                                                                                   |
| Heavy Vehicles (%)                | 0%                                                                                | 0%                                                                                | 1%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                  | 3%                                                                                  | 0%                                                                                  | 0%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Turn Type                         | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | pm+pt                                                                               | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases                  |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Permitted Phases                  | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 6                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     |
| Actuated Green, G (s)             | 6.9                                                                               | 6.9                                                                               |                                                                                   | 6.9                                                                               | 6.9                                                                               |                                                                                   | 15.9                                                                                | 14.0                                                                                |                                                                                     | 13.9                                                                                | 13.0                                                                                |                                                                                     |
| Effective Green, g (s)            | 6.4                                                                               | 6.4                                                                               |                                                                                   | 6.4                                                                               | 6.4                                                                               |                                                                                   | 14.9                                                                                | 13.5                                                                                |                                                                                     | 12.9                                                                                | 12.5                                                                                |                                                                                     |
| Actuated g/C Ratio                | 0.18                                                                              | 0.18                                                                              |                                                                                   | 0.18                                                                              | 0.18                                                                              |                                                                                   | 0.42                                                                                | 0.38                                                                                |                                                                                     | 0.36                                                                                | 0.35                                                                                |                                                                                     |
| Clearance Time (s)                | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.8                                                                                 | 4.8                                                                                 |                                                                                     | 4.8                                                                                 | 4.8                                                                                 |                                                                                     |
| Vehicle Extension (s)             | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                                 | 2.5                                                                                 |                                                                                     | 2.5                                                                                 | 2.5                                                                                 |                                                                                     |
| Lane Grp Cap (vph)                | 224                                                                               | 271                                                                               |                                                                                   | 210                                                                               | 290                                                                               |                                                                                   | 345                                                                                 | 1229                                                                                |                                                                                     | 322                                                                                 | 1132                                                                                |                                                                                     |
| v/s Ratio Prot                    |                                                                                   | 0.03                                                                              |                                                                                   |                                                                                   | 0.03                                                                              |                                                                                   | c0.01                                                                               | 0.14                                                                                |                                                                                     | 0.00                                                                                | c0.16                                                                               |                                                                                     |
| v/s Ratio Perm                    | c0.08                                                                             |                                                                                   |                                                                                   | 0.03                                                                              |                                                                                   |                                                                                   | 0.06                                                                                |                                                                                     |                                                                                     | 0.03                                                                                |                                                                                     |                                                                                     |
| v/c Ratio                         | 0.42                                                                              | 0.14                                                                              |                                                                                   | 0.17                                                                              | 0.14                                                                              |                                                                                   | 0.16                                                                                | 0.37                                                                                |                                                                                     | 0.09                                                                                | 0.46                                                                                |                                                                                     |
| Uniform Delay, d1                 | 12.9                                                                              | 12.2                                                                              |                                                                                   | 12.3                                                                              | 12.2                                                                              |                                                                                   | 6.2                                                                                 | 7.9                                                                                 |                                                                                     | 7.3                                                                                 | 8.9                                                                                 |                                                                                     |
| Progression Factor                | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     |
| Incremental Delay, d2             | 0.9                                                                               | 0.2                                                                               |                                                                                   | 0.3                                                                               | 0.2                                                                               |                                                                                   | 0.2                                                                                 | 0.1                                                                                 |                                                                                     | 0.1                                                                                 | 0.2                                                                                 |                                                                                     |
| Delay (s)                         | 13.8                                                                              | 12.4                                                                              |                                                                                   | 12.5                                                                              | 12.3                                                                              |                                                                                   | 6.3                                                                                 | 8.0                                                                                 |                                                                                     | 7.4                                                                                 | 9.1                                                                                 |                                                                                     |
| Level of Service                  | B                                                                                 | B                                                                                 |                                                                                   | B                                                                                 | B                                                                                 |                                                                                   | A                                                                                   | A                                                                                   |                                                                                     | A                                                                                   | A                                                                                   |                                                                                     |
| Approach Delay (s)                |                                                                                   | 12.9                                                                              |                                                                                   |                                                                                   | 12.4                                                                              |                                                                                   |                                                                                     | 7.8                                                                                 |                                                                                     |                                                                                     | 9.0                                                                                 |                                                                                     |
| Approach LOS                      |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                     | A                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| <b>Intersection Summary</b>       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2000 Control Delay            |                                                                                   |                                                                                   | 9.5                                                                               |                                                                                   |                                                                                   | HCM 2000 Level of Service                                                         |                                                                                     |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |                                                                                     |
| HCM 2000 Volume to Capacity ratio |                                                                                   |                                                                                   | 0.43                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Actuated Cycle Length (s)         |                                                                                   |                                                                                   | 35.4                                                                              |                                                                                   |                                                                                   | Sum of lost time (s)                                                              |                                                                                     |                                                                                     | 15.1                                                                                |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization |                                                                                   |                                                                                   | 39.7%                                                                             |                                                                                   |                                                                                   | ICU Level of Service                                                              |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min)             |                                                                                   |                                                                                   | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| c Critical Lane Group             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# 2021 AM DESIGN HOUR NO-BUILD CONDITIONS

Lanes, Volumes, Timings

2: REDWOOD ST/Site & 35th Street

06/15/2020





|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                        | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)              | 0                                                                                 | 20                                                                                | 19                                                                                | 15                                                                                | 48                                                                                | 0                                                                                 | 37                                                                                 | 0                                                                                   | 9                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Future Volume (vph)               | 0                                                                                 | 20                                                                                | 19                                                                                | 15                                                                                | 48                                                                                | 0                                                                                 | 37                                                                                 | 0                                                                                   | 9                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ideal Flow (vphpl)                | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                               | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Frt                               |                                                                                   | 0.934                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.973                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Flt Protected                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.988                                                                             |                                                                                   |                                                                                    | 0.962                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)                 | 0                                                                                 | 1634                                                                              | 0                                                                                 | 0                                                                                 | 1729                                                                              | 0                                                                                 | 0                                                                                  | 1638                                                                                | 0                                                                                   | 0                                                                                   | 1750                                                                                | 0                                                                                   |
| Flt Permitted                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.988                                                                             |                                                                                   |                                                                                    | 0.962                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)                 | 0                                                                                 | 1634                                                                              | 0                                                                                 | 0                                                                                 | 1729                                                                              | 0                                                                                 | 0                                                                                  | 1638                                                                                | 0                                                                                   | 0                                                                                   | 1750                                                                                | 0                                                                                   |
| Link Speed (mph)                  |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                    | 25                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)                |                                                                                   | 317                                                                               |                                                                                   |                                                                                   | 493                                                                               |                                                                                   |                                                                                    | 457                                                                                 |                                                                                     |                                                                                     | 274                                                                                 |                                                                                     |
| Travel Time (s)                   |                                                                                   | 8.6                                                                               |                                                                                   |                                                                                   | 13.4                                                                              |                                                                                   |                                                                                    | 12.5                                                                                |                                                                                     |                                                                                     | 6.2                                                                                 |                                                                                     |
| Peak Hour Factor                  | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                               | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                |
| Adj. Flow (vph)                   | 0                                                                                 | 26                                                                                | 25                                                                                | 19                                                                                | 62                                                                                | 0                                                                                 | 48                                                                                 | 0                                                                                   | 12                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)             | 0                                                                                 | 51                                                                                | 0                                                                                 | 0                                                                                 | 81                                                                                | 0                                                                                 | 0                                                                                  | 60                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment                    | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)                  |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 35                                                                                  |                                                                                     |
| Crosswalk Width(ft)               |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                    | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Two way Left Turn Lane            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor                    | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                               | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                |
| Sign Control                      |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |                                                                                   |                                                                                    | Stop                                                                                |                                                                                     |                                                                                     | Stop                                                                                |                                                                                     |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization | 20.3%                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|                                   | ICU Level of Service A                                                            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# 2021 AM DESIGN HOUR NO-BUILD CONDITIONS

HCM 2010 TWSC

2: REDWOOD ST/Site & 35th Street

06/15/2020

| Intersection             |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
|--------------------------|--------|-----------------------------------------------------------------------------------|------|--------|-----------------------------------------------------------------------------------|------|--------|-----------------------------------------------------------------------------------|------|--------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 3.7    |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
| Movement                 | EBL    | EBT                                                                               | EBR  | WBL    | WBT                                                                               | WBR  | NBL    | NBT                                                                               | NBR  | SBL    | SBT                                                                                 | SBR  |
| Lane Configurations      |        |  |      |        |  |      |        |  |      |        |  |      |
| Traffic Vol, veh/h       | 0      | 20                                                                                | 19   | 15     | 48                                                                                | 0    | 37     | 0                                                                                 | 9    | 0      | 0                                                                                   | 0    |
| Future Vol, veh/h        | 0      | 20                                                                                | 19   | 15     | 48                                                                                | 0    | 37     | 0                                                                                 | 9    | 0      | 0                                                                                   | 0    |
| Conflicting Peds, #/hr   | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0    | 0      | 0                                                                                   | 0    |
| Sign Control             | Free   | Free                                                                              | Free | Free   | Free                                                                              | Free | Stop   | Stop                                                                              | Stop | Stop   | Stop                                                                                | Stop |
| RT Channelized           | -      | -                                                                                 | None | -      | -                                                                                 | None | -      | -                                                                                 | None | -      | -                                                                                   | None |
| Storage Length           | -      | -                                                                                 | -    | -      | -                                                                                 | -    | -      | -                                                                                 | -    | -      | -                                                                                   | -    |
| Veh in Median Storage, # | -      | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | 0                                                                                   | -    |
| Grade, %                 | -      | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | 0                                                                                   | -    |
| Peak Hour Factor         | 77     | 77                                                                                | 77   | 77     | 77                                                                                | 77   | 77     | 77                                                                                | 77   | 77     | 77                                                                                  | 77   |
| Heavy Vehicles, %        | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0    | 0      | 0                                                                                   | 0    |
| Mvmt Flow                | 0      | 26                                                                                | 25   | 19     | 62                                                                                | 0    | 48     | 0                                                                                 | 12   | 0      | 0                                                                                   | 0    |
|                          |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
| Major/Minor              | Major1 |                                                                                   |      | Major2 |                                                                                   |      | Minor1 |                                                                                   |      | Minor2 |                                                                                     |      |
| Conflicting Flow All     | 62     | 0                                                                                 | 0    | 51     | 0                                                                                 | 0    | 139    | 139                                                                               | 39   | 145    | 151                                                                                 | 62   |
| Stage 1                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 39     | 39                                                                                | -    | 100    | 100                                                                                 | -    |
| Stage 2                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 100    | 100                                                                               | -    | 45     | 51                                                                                  | -    |
| Critical Hdwy            | 4.1    | -                                                                                 | -    | 4.1    | -                                                                                 | -    | 7.1    | 6.5                                                                               | 6.2  | 7.1    | 6.5                                                                                 | 6.2  |
| Critical Hdwy Stg 1      | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 6.1    | 5.5                                                                               | -    | 6.1    | 5.5                                                                                 | -    |
| Critical Hdwy Stg 2      | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 6.1    | 5.5                                                                               | -    | 6.1    | 5.5                                                                                 | -    |
| Follow-up Hdwy           | 2.2    | -                                                                                 | -    | 2.2    | -                                                                                 | -    | 3.5    | 4                                                                                 | 3.3  | 3.5    | 4                                                                                   | 3.3  |
| Pot Cap-1 Maneuver       | 1554   | -                                                                                 | -    | 1568   | -                                                                                 | -    | 836    | 756                                                                               | 1038 | 828    | 744                                                                                 | 1009 |
| Stage 1                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 981    | 866                                                                               | -    | 911    | 816                                                                                 | -    |
| Stage 2                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 911    | 816                                                                               | -    | 974    | 856                                                                                 | -    |
| Platoon blocked, %       |        | -                                                                                 | -    |        | -                                                                                 | -    |        |                                                                                   |      |        |                                                                                     |      |
| Mov Cap-1 Maneuver       | 1554   | -                                                                                 | -    | 1568   | -                                                                                 | -    | 828    | 746                                                                               | 1038 | 811    | 734                                                                                 | 1009 |
| Mov Cap-2 Maneuver       | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 828    | 746                                                                               | -    | 811    | 734                                                                                 | -    |
| Stage 1                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 981    | 866                                                                               | -    | 911    | 805                                                                                 | -    |
| Stage 2                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 899    | 805                                                                               | -    | 963    | 856                                                                                 | -    |
|                          |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
| Approach                 | EB     |                                                                                   |      | WB     |                                                                                   |      | NB     |                                                                                   |      | SB     |                                                                                     |      |
| HCM Control Delay, s     | 0      |                                                                                   |      | 1.7    |                                                                                   |      | 9.5    |                                                                                   |      | 0      |                                                                                     |      |
| HCM LOS                  |        |                                                                                   |      |        |                                                                                   |      | A      |                                                                                   |      | A      |                                                                                     |      |
|                          |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
| Minor Lane/Major Mvmt    | NBLn1  | EBL                                                                               | EBT  | EBR    | WBL                                                                               | WBT  | WBR    | SBLn1                                                                             |      |        |                                                                                     |      |
| Capacity (veh/h)         | 862    | 1554                                                                              | -    | -      | 1568                                                                              | -    | -      | -                                                                                 |      |        |                                                                                     |      |
| HCM Lane V/C Ratio       | 0.069  | -                                                                                 | -    | -      | 0.012                                                                             | -    | -      | -                                                                                 |      |        |                                                                                     |      |
| HCM Control Delay (s)    | 9.5    | 0                                                                                 | -    | -      | 7.3                                                                               | 0    | -      | 0                                                                                 |      |        |                                                                                     |      |
| HCM Lane LOS             | A      | A                                                                                 | -    | -      | A                                                                                 | A    | -      | A                                                                                 |      |        |                                                                                     |      |
| HCM 95th %tile Q(veh)    | 0.2    | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | -                                                                                 |      |        |                                                                                     |      |












# 2021 AM DESIGN HOUR NO-BUILD CONDITIONS

## Lanes, Volumes, Timings

### 3: HWY 101 & RIRO SITE ACCESS

06/15/2020




|                                   |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                        | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations               |                                                                                   |  |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)              | 0                                                                                 | 0                                                                                 | 450                                                                               | 0                                                                                 | 0                                                                                 | 439                                                                               |
| Future Volume (vph)               | 0                                                                                 | 0                                                                                 | 450                                                                               | 0                                                                                 | 0                                                                                 | 439                                                                               |
| Ideal Flow (vphpl)                | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              |
| Frt                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Flt Protected                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (prot)                 | 0                                                                                 | 1750                                                                              | 3260                                                                              | 0                                                                                 | 0                                                                                 | 3260                                                                              |
| Flt Permitted                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (perm)                 | 0                                                                                 | 1750                                                                              | 3260                                                                              | 0                                                                                 | 0                                                                                 | 3260                                                                              |
| Link Speed (mph)                  | 30                                                                                |                                                                                   | 40                                                                                |                                                                                   |                                                                                   | 40                                                                                |
| Link Distance (ft)                | 243                                                                               |                                                                                   | 716                                                                               |                                                                                   |                                                                                   | 923                                                                               |
| Travel Time (s)                   | 5.5                                                                               |                                                                                   | 12.2                                                                              |                                                                                   |                                                                                   | 15.7                                                                              |
| Peak Hour Factor                  | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              |
| Heavy Vehicles (%)                | 0%                                                                                | 0%                                                                                | 2%                                                                                | 0%                                                                                | 0%                                                                                | 2%                                                                                |
| Adj. Flow (vph)                   | 0                                                                                 | 0                                                                                 | 549                                                                               | 0                                                                                 | 0                                                                                 | 535                                                                               |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)             | 0                                                                                 | 0                                                                                 | 549                                                                               | 0                                                                                 | 0                                                                                 | 535                                                                               |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment                    | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              |
| Median Width(ft)                  | 0                                                                                 |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |
| Link Offset(ft)                   | 0                                                                                 |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |
| Crosswalk Width(ft)               | 12                                                                                |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |
| Two way Left Turn Lane            |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |
| Headway Factor                    | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              |
| Sign Control                      | Stop                                                                              |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Intersection Capacity Utilization | 16.8%                                                                             |                                                                                   |                                                                                   | ICU Level of Service A                                                            |                                                                                   |                                                                                   |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

# 2021 AM DESIGN HOUR NO-BUILD CONDITIONS

HCM 2010 TWSC

3: HWY 101 & RIRO SITE ACCESS






















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| Intersection             |        |                                                                                   |                                                                                   |      |      |                                                                                   |
|--------------------------|--------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 0      |                                                                                   |                                                                                   |      |      |                                                                                   |
| Movement                 | WBL    | WBR                                                                               | NBT                                                                               | NBR  | SBL  | SBT                                                                               |
| Lane Configurations      |        |  |  |      |      |  |
| Traffic Vol, veh/h       | 0      | 0                                                                                 | 450                                                                               | 0    | 0    | 439                                                                               |
| Future Vol, veh/h        | 0      | 0                                                                                 | 450                                                                               | 0    | 0    | 439                                                                               |
| Conflicting Peds, #/hr   | 0      | 0                                                                                 | 0                                                                                 | 0    | 0    | 0                                                                                 |
| Sign Control             | Stop   | Stop                                                                              | Free                                                                              | Free | Free | Free                                                                              |
| RT Channelized           | -      | None                                                                              | -                                                                                 | None | -    | None                                                                              |
| Storage Length           | -      | 0                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Veh in Median Storage, # | 0      | -                                                                                 | 0                                                                                 | -    | -    | 0                                                                                 |
| Grade, %                 | 0      | -                                                                                 | 0                                                                                 | -    | -    | 0                                                                                 |
| Peak Hour Factor         | 82     | 82                                                                                | 82                                                                                | 82   | 82   | 82                                                                                |
| Heavy Vehicles, %        | 0      | 0                                                                                 | 2                                                                                 | 0    | 0    | 2                                                                                 |
| Mvmt Flow                | 0      | 0                                                                                 | 549                                                                               | 0    | 0    | 535                                                                               |
| Major/Minor              | Minor1 | Major1                                                                            | Major2                                                                            |      |      |                                                                                   |
| Conflicting Flow All     | -      | 275                                                                               | 0                                                                                 | 0    | -    | -                                                                                 |
| Stage 1                  | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Stage 2                  | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Critical Hdwy            | -      | 6.9                                                                               | -                                                                                 | -    | -    | -                                                                                 |
| Critical Hdwy Stg 1      | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Critical Hdwy Stg 2      | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Follow-up Hdwy           | -      | 3.3                                                                               | -                                                                                 | -    | -    | -                                                                                 |
| Pot Cap-1 Maneuver       | 0      | 729                                                                               | -                                                                                 | -    | 0    | -                                                                                 |
| Stage 1                  | 0      | -                                                                                 | -                                                                                 | -    | 0    | -                                                                                 |
| Stage 2                  | 0      | -                                                                                 | -                                                                                 | -    | 0    | -                                                                                 |
| Platoon blocked, %       |        |                                                                                   | -                                                                                 | -    |      | -                                                                                 |
| Mov Cap-1 Maneuver       | -      | 729                                                                               | -                                                                                 | -    | -    | -                                                                                 |
| Mov Cap-2 Maneuver       | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Stage 1                  | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Stage 2                  | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Approach                 | WB     | NB                                                                                | SB                                                                                |      |      |                                                                                   |
| HCM Control Delay, s     | 0      | 0                                                                                 | 0                                                                                 |      |      |                                                                                   |
| HCM LOS                  | A      |                                                                                   |                                                                                   |      |      |                                                                                   |
| Minor Lane/Major Mvmt    | NBT    | NBRWBLn1                                                                          | SBT                                                                               |      |      |                                                                                   |
| Capacity (veh/h)         | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| HCM Lane V/C Ratio       | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| HCM Control Delay (s)    | -      | -                                                                                 | 0                                                                                 | -    | -    | -                                                                                 |
| HCM Lane LOS             | -      | -                                                                                 | A                                                                                 | -    | -    | -                                                                                 |
| HCM 95th %tile Q(veh)    | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |

# 2021 PM DESIGN HOUR NO-BUILD CONDITIONS

Lanes, Volumes, Timings  
1: HWY 101 & 35th Street













06/15/2020

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Traffic Volume (vph)       | 89                                                                                | 31                                                                                | 120                                                                               | 28                                                                                | 15                                                                                | 43                                                                                | 126                                                                                 | 689                                                                                 | 44                                                                                  | 41                                                                                  | 666                                                                                 | 68                                                                                  |
| Future Volume (vph)        | 89                                                                                | 31                                                                                | 120                                                                               | 28                                                                                | 15                                                                                | 43                                                                                | 126                                                                                 | 689                                                                                 | 44                                                                                  | 41                                                                                  | 666                                                                                 | 68                                                                                  |
| Ideal Flow (vphpl)         | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Storage Length (ft)        | 110                                                                               |                                                                                   | 0                                                                                 | 141                                                                               |                                                                                   | 0                                                                                 | 146                                                                                 |                                                                                     | 0                                                                                   | 91                                                                                  |                                                                                     | 0                                                                                   |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)          | 100                                                                               |                                                                                   |                                                                                   | 55                                                                                |                                                                                   |                                                                                   | 66                                                                                  |                                                                                     |                                                                                     | 54                                                                                  |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                |
| Frt                        |                                                                                   | 0.881                                                                             |                                                                                   |                                                                                   | 0.889                                                                             |                                                                                   |                                                                                     | 0.991                                                                               |                                                                                     |                                                                                     | 0.986                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1662                                                                              | 1530                                                                              | 0                                                                                 | 1662                                                                              | 1556                                                                              | 0                                                                                 | 1662                                                                                | 3291                                                                                | 0                                                                                   | 1662                                                                                | 3278                                                                                | 0                                                                                   |
| Flt Permitted              | 0.717                                                                             |                                                                                   |                                                                                   | 0.655                                                                             |                                                                                   |                                                                                   | 0.249                                                                               |                                                                                     |                                                                                     | 0.356                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 1255                                                                              | 1530                                                                              | 0                                                                                 | 1146                                                                              | 1556                                                                              | 0                                                                                 | 436                                                                                 | 3291                                                                                | 0                                                                                   | 623                                                                                 | 3278                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 128                                                                               |                                                                                   |                                                                                   | 46                                                                                |                                                                                   |                                                                                     | 10                                                                                  |                                                                                     |                                                                                     | 15                                                                                  |                                                                                     |
| Link Speed (mph)           |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                     | 40                                                                                  |                                                                                     |                                                                                     | 40                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 499                                                                               |                                                                                   |                                                                                   | 317                                                                               |                                                                                   |                                                                                     | 925                                                                                 |                                                                                     |                                                                                     | 716                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 13.6                                                                              |                                                                                   |                                                                                   | 8.6                                                                               |                                                                                   |                                                                                     | 15.8                                                                                |                                                                                     |                                                                                     | 12.2                                                                                |                                                                                     |
| Peak Hour Factor           | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Heavy Vehicles (%)         | 0%                                                                                | 0%                                                                                | 1%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                  | 0%                                                                                  | 2%                                                                                  | 0%                                                                                  | 0%                                                                                  | 0%                                                                                  |
| Adj. Flow (vph)            | 95                                                                                | 33                                                                                | 128                                                                               | 30                                                                                | 16                                                                                | 46                                                                                | 134                                                                                 | 733                                                                                 | 47                                                                                  | 44                                                                                  | 709                                                                                 | 72                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 95                                                                                | 161                                                                               | 0                                                                                 | 30                                                                                | 62                                                                                | 0                                                                                 | 134                                                                                 | 780                                                                                 | 0                                                                                   | 44                                                                                  | 781                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |
| Headway Factor             | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                |
| Number of Detectors        | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 2                                                                                   |                                                                                     | 2                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Side St                                                                           | Side St                                                                           |                                                                                   | Side St                                                                           | Side St                                                                           |                                                                                   | Left                                                                                |                                                                                     |                                                                                     | Left                                                                                |                                                                                     |                                                                                     |
| Leading Detector (ft)      | 78                                                                                | 78                                                                                |                                                                                   | 78                                                                                | 78                                                                                |                                                                                   | 78                                                                                  | 223                                                                                 |                                                                                     | 78                                                                                  | 223                                                                                 |                                                                                     |
| Trailing Detector (ft)     | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 157                                                                                 |                                                                                     | 2                                                                                   | 157                                                                                 |                                                                                     |
| Detector 1 Position(ft)    | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 157                                                                                 |                                                                                     | 2                                                                                   | 157                                                                                 |                                                                                     |
| Detector 1 Size(ft)        | 16                                                                                | 16                                                                                |                                                                                   | 16                                                                                | 16                                                                                |                                                                                   | 16                                                                                  | 6                                                                                   |                                                                                     | 16                                                                                  | 6                                                                                   |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(ft)    | 72                                                                                | 72                                                                                |                                                                                   | 72                                                                                | 72                                                                                |                                                                                   | 72                                                                                  | 217                                                                                 |                                                                                     | 72                                                                                  | 217                                                                                 |                                                                                     |
| Detector 2 Size(ft)        | 6                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                   | 6                                                                                   |                                                                                     | 6                                                                                   | 6                                                                                   |                                                                                     |
| Detector 2 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | pm+pt                                                                               | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases           |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Permitted Phases           | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 6                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     |

# 2021 PM DESIGN HOUR NO-BUILD CONDITIONS

Lanes, Volumes, Timings  
1: HWY 101 & 35th Street

06/15/2020

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Detector Phase          | 8                                                                                 | 8                                                                                 |                                                                                   | 4                                                                                 | 4                                                                                 |                                                                                   | 1                                                                                  | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                                | 4.0                                                                                 |                                                                                     | 4.0                                                                                 | 4.0                                                                                 |                                                                                     |
| Minimum Split (s)       | 22.0                                                                              | 22.0                                                                              |                                                                                   | 28.0                                                                              | 28.0                                                                              |                                                                                   | 13.0                                                                               | 28.8                                                                                |                                                                                     | 13.0                                                                                | 22.8                                                                                |                                                                                     |
| Total Split (s)         | 29.0                                                                              | 29.0                                                                              |                                                                                   | 29.0                                                                              | 29.0                                                                              |                                                                                   | 18.0                                                                               | 47.0                                                                                |                                                                                     | 14.0                                                                                | 43.0                                                                                |                                                                                     |
| Total Split (%)         | 32.2%                                                                             | 32.2%                                                                             |                                                                                   | 32.2%                                                                             | 32.2%                                                                             |                                                                                   | 20.0%                                                                              | 52.2%                                                                               |                                                                                     | 15.6%                                                                               | 47.8%                                                                               |                                                                                     |
| Maximum Green (s)       | 25.0                                                                              | 25.0                                                                              |                                                                                   | 25.0                                                                              | 25.0                                                                              |                                                                                   | 13.2                                                                               | 42.2                                                                                |                                                                                     | 9.2                                                                                 | 38.2                                                                                |                                                                                     |
| Yellow Time (s)         | 3.5                                                                               | 3.5                                                                               |                                                                                   | 3.5                                                                               | 3.5                                                                               |                                                                                   | 4.3                                                                                | 4.3                                                                                 |                                                                                     | 4.3                                                                                 | 4.3                                                                                 |                                                                                     |
| All-Red Time (s)        | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                                | 0.5                                                                                 |                                                                                     | 0.5                                                                                 | 0.5                                                                                 |                                                                                     |
| Lost Time Adjust (s)    | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                                | 0.5                                                                                 |                                                                                     | 0.5                                                                                 | 0.5                                                                                 |                                                                                     |
| Total Lost Time (s)     | 4.5                                                                               | 4.5                                                                               |                                                                                   | 4.5                                                                               | 4.5                                                                               |                                                                                   | 5.3                                                                                | 5.3                                                                                 |                                                                                     | 5.3                                                                                 | 5.3                                                                                 |                                                                                     |
| Lead/Lag                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Lead                                                                               | Lag                                                                                 |                                                                                     | Lead                                                                                | Lag                                                                                 |                                                                                     |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Yes                                                                                | Yes                                                                                 |                                                                                     | Yes                                                                                 | Yes                                                                                 |                                                                                     |
| Vehicle Extension (s)   | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                                | 2.5                                                                                 |                                                                                     | 2.5                                                                                 | 2.5                                                                                 |                                                                                     |
| Minimum Gap (s)         | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                                | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Time Before Reduce (s)  | 8.0                                                                               | 8.0                                                                               |                                                                                   | 8.0                                                                               | 8.0                                                                               |                                                                                   | 8.0                                                                                | 8.0                                                                                 |                                                                                     | 8.0                                                                                 | 8.0                                                                                 |                                                                                     |
| Time To Reduce (s)      | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                                | 4.0                                                                                 |                                                                                     | 4.0                                                                                 | 4.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | None                                                                              |                                                                                   | None                                                                              | None                                                                              |                                                                                   | None                                                                               | Min                                                                                 |                                                                                     | None                                                                                | Min                                                                                 |                                                                                     |
| Walk Time (s)           | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   |                                                                                    | 7.0                                                                                 |                                                                                     |                                                                                     | 7.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     | 11.0                                                                              | 11.0                                                                              |                                                                                   | 17.0                                                                              | 17.0                                                                              |                                                                                   |                                                                                    | 17.0                                                                                |                                                                                     |                                                                                     | 11.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) | 1                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 1                                                                                   |                                                                                     |
| Act Effect Green (s)    | 8.9                                                                               | 8.9                                                                               |                                                                                   | 8.9                                                                               | 8.9                                                                               |                                                                                   | 24.9                                                                               | 22.3                                                                                |                                                                                     | 20.9                                                                                | 16.6                                                                                |                                                                                     |
| Actuated g/C Ratio      | 0.20                                                                              | 0.20                                                                              |                                                                                   | 0.20                                                                              | 0.20                                                                              |                                                                                   | 0.55                                                                               | 0.49                                                                                |                                                                                     | 0.46                                                                                | 0.37                                                                                |                                                                                     |
| v/c Ratio               | 0.38                                                                              | 0.40                                                                              |                                                                                   | 0.13                                                                              | 0.18                                                                              |                                                                                   | 0.32                                                                               | 0.48                                                                                |                                                                                     | 0.11                                                                                | 0.64                                                                                |                                                                                     |
| Control Delay           | 21.8                                                                              | 9.3                                                                               |                                                                                   | 17.8                                                                              | 9.5                                                                               |                                                                                   | 7.4                                                                                | 11.1                                                                                |                                                                                     | 6.1                                                                                 | 16.4                                                                                |                                                                                     |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             | 21.8                                                                              | 9.3                                                                               |                                                                                   | 17.8                                                                              | 9.5                                                                               |                                                                                   | 7.4                                                                                | 11.1                                                                                |                                                                                     | 6.1                                                                                 | 16.4                                                                                |                                                                                     |
| LOS                     | C                                                                                 | A                                                                                 |                                                                                   | B                                                                                 | A                                                                                 |                                                                                   | A                                                                                  | B                                                                                   |                                                                                     | A                                                                                   | B                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 13.9                                                                              |                                                                                   |                                                                                   | 12.2                                                                              |                                                                                   |                                                                                    | 10.5                                                                                |                                                                                     |                                                                                     | 15.9                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | B                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |

## Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 45.2

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 13.1







Intersection LOS: B

Intersection Capacity Utilization 59.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: HWY 101 & 35th Street






















|                                                                                        |                                                                                        |                                                                                          |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
|  Ø1 |  Ø2 |  Ø4 |
| 18 s                                                                                   | 43 s                                                                                   | 29 s                                                                                     |
|  Ø5 |  Ø6 |  Ø8 |
| 14 s                                                                                   | 47 s                                                                                   | 29 s                                                                                     |

# 2021 PM DESIGN HOUR NO-BUILD CONDITIONS

## HCM Signalized Intersection Capacity Analysis

1: HWY 101 & 35th Street

06/15/2020

















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|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                          | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Traffic Volume (vph)              | 89                                                                                | 31                                                                                | 120                                                                               | 28                                                                                | 15                                                                                | 43                                                                                | 126                                                                                 | 689                                                                                 | 44                                                                                  | 41                                                                                  | 666                                                                                 | 68                                                                                  |
| Future Volume (vph)               | 89                                                                                | 31                                                                                | 120                                                                               | 28                                                                                | 15                                                                                | 43                                                                                | 126                                                                                 | 689                                                                                 | 44                                                                                  | 41                                                                                  | 666                                                                                 | 68                                                                                  |
| Ideal Flow (vphpl)                | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Total Lost time (s)               | 4.5                                                                               | 4.5                                                                               |                                                                                   | 4.5                                                                               | 4.5                                                                               |                                                                                   | 5.3                                                                                 | 5.3                                                                                 |                                                                                     | 5.3                                                                                 | 5.3                                                                                 |                                                                                     |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 0.95                                                                                |                                                                                     | 1.00                                                                                | 0.95                                                                                |                                                                                     |
| Frt                               | 1.00                                                                              | 0.88                                                                              |                                                                                   | 1.00                                                                              | 0.89                                                                              |                                                                                   | 1.00                                                                                | 0.99                                                                                |                                                                                     | 1.00                                                                                | 0.99                                                                                |                                                                                     |
| Flt Protected                     | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                                | 1.00                                                                                |                                                                                     | 0.95                                                                                | 1.00                                                                                |                                                                                     |
| Satd. Flow (prot)                 | 1662                                                                              | 1529                                                                              |                                                                                   | 1662                                                                              | 1555                                                                              |                                                                                   | 1662                                                                                | 3291                                                                                |                                                                                     | 1662                                                                                | 3279                                                                                |                                                                                     |
| Flt Permitted                     | 0.72                                                                              | 1.00                                                                              |                                                                                   | 0.66                                                                              | 1.00                                                                              |                                                                                   | 0.25                                                                                | 1.00                                                                                |                                                                                     | 0.36                                                                                | 1.00                                                                                |                                                                                     |
| Satd. Flow (perm)                 | 1254                                                                              | 1529                                                                              |                                                                                   | 1146                                                                              | 1555                                                                              |                                                                                   | 436                                                                                 | 3291                                                                                |                                                                                     | 624                                                                                 | 3279                                                                                |                                                                                     |
| Peak-hour factor, PHF             | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Adj. Flow (vph)                   | 95                                                                                | 33                                                                                | 128                                                                               | 30                                                                                | 16                                                                                | 46                                                                                | 134                                                                                 | 733                                                                                 | 47                                                                                  | 44                                                                                  | 709                                                                                 | 72                                                                                  |
| RTOR Reduction (vph)              | 0                                                                                 | 104                                                                               | 0                                                                                 | 0                                                                                 | 37                                                                                | 0                                                                                 | 0                                                                                   | 5                                                                                   | 0                                                                                   | 0                                                                                   | 9                                                                                   | 0                                                                                   |
| Lane Group Flow (vph)             | 95                                                                                | 57                                                                                | 0                                                                                 | 30                                                                                | 25                                                                                | 0                                                                                 | 134                                                                                 | 775                                                                                 | 0                                                                                   | 44                                                                                  | 772                                                                                 | 0                                                                                   |
| Heavy Vehicles (%)                | 0%                                                                                | 0%                                                                                | 1%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                  | 0%                                                                                  | 2%                                                                                  | 0%                                                                                  | 0%                                                                                  | 0%                                                                                  |
| Turn Type                         | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | pm+pt                                                                               | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases                  |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Permitted Phases                  | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 6                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     |
| Actuated Green, G (s)             | 9.4                                                                               | 9.4                                                                               |                                                                                   | 9.4                                                                               | 9.4                                                                               |                                                                                   | 28.5                                                                                | 22.9                                                                                |                                                                                     | 21.7                                                                                | 19.5                                                                                |                                                                                     |
| Effective Green, g (s)            | 8.9                                                                               | 8.9                                                                               |                                                                                   | 8.9                                                                               | 8.9                                                                               |                                                                                   | 27.5                                                                                | 22.4                                                                                |                                                                                     | 20.7                                                                                | 19.0                                                                                |                                                                                     |
| Actuated g/C Ratio                | 0.19                                                                              | 0.19                                                                              |                                                                                   | 0.19                                                                              | 0.19                                                                              |                                                                                   | 0.57                                                                                | 0.47                                                                                |                                                                                     | 0.43                                                                                | 0.40                                                                                |                                                                                     |
| Clearance Time (s)                | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.8                                                                                 | 4.8                                                                                 |                                                                                     | 4.8                                                                                 | 4.8                                                                                 |                                                                                     |
| Vehicle Extension (s)             | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                                 | 2.5                                                                                 |                                                                                     | 2.5                                                                                 | 2.5                                                                                 |                                                                                     |
| Lane Grp Cap (vph)                | 232                                                                               | 282                                                                               |                                                                                   | 212                                                                               | 287                                                                               |                                                                                   | 379                                                                                 | 1532                                                                                |                                                                                     | 305                                                                                 | 1295                                                                                |                                                                                     |
| v/s Ratio Prot                    |                                                                                   | 0.04                                                                              |                                                                                   |                                                                                   | 0.02                                                                              |                                                                                   | c0.04                                                                               | c0.24                                                                               |                                                                                     | 0.01                                                                                | c0.24                                                                               |                                                                                     |
| v/s Ratio Perm                    | c0.08                                                                             |                                                                                   |                                                                                   | 0.03                                                                              |                                                                                   |                                                                                   | 0.16                                                                                |                                                                                     |                                                                                     | 0.06                                                                                |                                                                                     |                                                                                     |
| v/c Ratio                         | 0.41                                                                              | 0.20                                                                              |                                                                                   | 0.14                                                                              | 0.09                                                                              |                                                                                   | 0.35                                                                                | 0.51                                                                                |                                                                                     | 0.14                                                                                | 0.60                                                                                |                                                                                     |
| Uniform Delay, d1                 | 17.3                                                                              | 16.6                                                                              |                                                                                   | 16.4                                                                              | 16.2                                                                              |                                                                                   | 5.4                                                                                 | 9.0                                                                                 |                                                                                     | 8.0                                                                                 | 11.5                                                                                |                                                                                     |
| Progression Factor                | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     |
| Incremental Delay, d2             | 0.9                                                                               | 0.3                                                                               |                                                                                   | 0.2                                                                               | 0.1                                                                               |                                                                                   | 0.4                                                                                 | 0.2                                                                                 |                                                                                     | 0.2                                                                                 | 0.6                                                                                 |                                                                                     |
| Delay (s)                         | 18.1                                                                              | 16.8                                                                              |                                                                                   | 16.6                                                                              | 16.3                                                                              |                                                                                   | 5.8                                                                                 | 9.2                                                                                 |                                                                                     | 8.2                                                                                 | 12.1                                                                                |                                                                                     |
| Level of Service                  | B                                                                                 | B                                                                                 |                                                                                   | B                                                                                 | B                                                                                 |                                                                                   | A                                                                                   | A                                                                                   |                                                                                     | A                                                                                   | B                                                                                   |                                                                                     |
| Approach Delay (s)                |                                                                                   | 17.3                                                                              |                                                                                   |                                                                                   | 16.4                                                                              |                                                                                   |                                                                                     | 8.7                                                                                 |                                                                                     |                                                                                     | 11.9                                                                                |                                                                                     |
| Approach LOS                      |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                     | A                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |
| <b>Intersection Summary</b>       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2000 Control Delay            |                                                                                   |                                                                                   | 11.4                                                                              |                                                                                   |                                                                                   |                                                                                   | HCM 2000 Level of Service                                                           |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |
| HCM 2000 Volume to Capacity ratio |                                                                                   |                                                                                   | 0.52                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Actuated Cycle Length (s)         |                                                                                   |                                                                                   | 48.1                                                                              |                                                                                   |                                                                                   |                                                                                   | Sum of lost time (s)                                                                |                                                                                     |                                                                                     | 15.1                                                                                |                                                                                     |                                                                                     |
| Intersection Capacity Utilization |                                                                                   |                                                                                   | 59.4%                                                                             |                                                                                   |                                                                                   |                                                                                   | ICU Level of Service                                                                |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |
| Analysis Period (min)             |                                                                                   |                                                                                   | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| c Critical Lane Group             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# 2021 PM DESIGN HOUR NO- BUILD CONDITIONS

Lanes, Volumes, Timings

2: REDWOOD ST/Site & 35th Street

06/15/2020





|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                        | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)              | 0                                                                                 | 59                                                                                | 57                                                                                | 29                                                                                | 46                                                                                | 0                                                                                 | 40                                                                                 | 0                                                                                   | 17                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Future Volume (vph)               | 0                                                                                 | 59                                                                                | 57                                                                                | 29                                                                                | 46                                                                                | 0                                                                                 | 40                                                                                 | 0                                                                                   | 17                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ideal Flow (vphpl)                | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                               | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Frt                               |                                                                                   | 0.933                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.959                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Flt Protected                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.981                                                                             |                                                                                   |                                                                                    | 0.966                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)                 | 0                                                                                 | 1633                                                                              | 0                                                                                 | 0                                                                                 | 1717                                                                              | 0                                                                                 | 0                                                                                  | 1621                                                                                | 0                                                                                   | 0                                                                                   | 1750                                                                                | 0                                                                                   |
| Flt Permitted                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.981                                                                             |                                                                                   |                                                                                    | 0.966                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)                 | 0                                                                                 | 1633                                                                              | 0                                                                                 | 0                                                                                 | 1717                                                                              | 0                                                                                 | 0                                                                                  | 1621                                                                                | 0                                                                                   | 0                                                                                   | 1750                                                                                | 0                                                                                   |
| Link Speed (mph)                  |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                    | 25                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)                |                                                                                   | 317                                                                               |                                                                                   |                                                                                   | 225                                                                               |                                                                                   |                                                                                    | 457                                                                                 |                                                                                     |                                                                                     | 251                                                                                 |                                                                                     |
| Travel Time (s)                   |                                                                                   | 8.6                                                                               |                                                                                   |                                                                                   | 6.1                                                                               |                                                                                   |                                                                                    | 12.5                                                                                |                                                                                     |                                                                                     | 5.7                                                                                 |                                                                                     |
| Peak Hour Factor                  | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                               | 0.82                                                                                | 0.82                                                                                | 0.82                                                                                | 0.82                                                                                | 0.82                                                                                |
| Adj. Flow (vph)                   | 0                                                                                 | 72                                                                                | 70                                                                                | 35                                                                                | 56                                                                                | 0                                                                                 | 49                                                                                 | 0                                                                                   | 21                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)             | 0                                                                                 | 142                                                                               | 0                                                                                 | 0                                                                                 | 91                                                                                | 0                                                                                 | 0                                                                                  | 70                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment                    | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)                  |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 35                                                                                  |                                                                                     |
| Crosswalk Width(ft)               |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                    | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Two way Left Turn Lane            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor                    | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                               | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                |
| Sign Control                      |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |                                                                                   |                                                                                    | Stop                                                                                |                                                                                     |                                                                                     | Stop                                                                                |                                                                                     |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization | 21.2%                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|                                   | ICU Level of Service A                                                            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# 2021 PM DESIGN HOUR NO- BUILD CONDITIONS

HCM 2010 TWSC

2: REDWOOD ST/Site & 35th Street

06/15/2020










| Intersection             |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
|--------------------------|--------|-----------------------------------------------------------------------------------|------|--------|-----------------------------------------------------------------------------------|------|--------|-----------------------------------------------------------------------------------|------|--------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 3.2    |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
| Movement                 | EBL    | EBT                                                                               | EBR  | WBL    | WBT                                                                               | WBR  | NBL    | NBT                                                                               | NBR  | SBL    | SBT                                                                                 | SBR  |
| Lane Configurations      |        |  |      |        |  |      |        |  |      |        |  |      |
| Traffic Vol, veh/h       | 0      | 59                                                                                | 57   | 29     | 46                                                                                | 0    | 40     | 0                                                                                 | 17   | 0      | 0                                                                                   | 0    |
| Future Vol, veh/h        | 0      | 59                                                                                | 57   | 29     | 46                                                                                | 0    | 40     | 0                                                                                 | 17   | 0      | 0                                                                                   | 0    |
| Conflicting Peds, #/hr   | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0    | 0      | 0                                                                                   | 0    |
| Sign Control             | Free   | Free                                                                              | Free | Free   | Free                                                                              | Free | Stop   | Stop                                                                              | Stop | Stop   | Stop                                                                                | Stop |
| RT Channelized           | -      | -                                                                                 | None | -      | -                                                                                 | None | -      | -                                                                                 | None | -      | -                                                                                   | None |
| Storage Length           | -      | -                                                                                 | -    | -      | -                                                                                 | -    | -      | -                                                                                 | -    | -      | -                                                                                   | -    |
| Veh in Median Storage, # | -      | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | 0                                                                                   | -    |
| Grade, %                 | -      | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | 0                                                                                   | -    |
| Peak Hour Factor         | 82     | 82                                                                                | 82   | 82     | 82                                                                                | 82   | 82     | 82                                                                                | 82   | 82     | 82                                                                                  | 82   |
| Heavy Vehicles, %        | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0    | 0      | 0                                                                                   | 0    |
| Mvmt Flow                | 0      | 72                                                                                | 70   | 35     | 56                                                                                | 0    | 49     | 0                                                                                 | 21   | 0      | 0                                                                                   | 0    |
|                          |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
| Major/Minor              | Major1 |                                                                                   |      | Major2 |                                                                                   |      | Minor1 |                                                                                   |      | Minor2 |                                                                                     |      |
| Conflicting Flow All     | 56     | 0                                                                                 | 0    | 142    | 0                                                                                 | 0    | 233    | 233                                                                               | 107  | 244    | 268                                                                                 | 56   |
| Stage 1                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 107    | 107                                                                               | -    | 126    | 126                                                                                 | -    |
| Stage 2                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 126    | 126                                                                               | -    | 118    | 142                                                                                 | -    |
| Critical Hdwy            | 4.1    | -                                                                                 | -    | 4.1    | -                                                                                 | -    | 7.1    | 6.5                                                                               | 6.2  | 7.1    | 6.5                                                                                 | 6.2  |
| Critical Hdwy Stg 1      | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 6.1    | 5.5                                                                               | -    | 6.1    | 5.5                                                                                 | -    |
| Critical Hdwy Stg 2      | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 6.1    | 5.5                                                                               | -    | 6.1    | 5.5                                                                                 | -    |
| Follow-up Hdwy           | 2.2    | -                                                                                 | -    | 2.2    | -                                                                                 | -    | 3.5    | 4                                                                                 | 3.3  | 3.5    | 4                                                                                   | 3.3  |
| Pot Cap-1 Maneuver       | 1562   | -                                                                                 | -    | 1453   | -                                                                                 | -    | 726    | 671                                                                               | 953  | 714    | 641                                                                                 | 1016 |
| Stage 1                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 903    | 811                                                                               | -    | 883    | 796                                                                                 | -    |
| Stage 2                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 883    | 796                                                                               | -    | 891    | 783                                                                                 | -    |
| Platoon blocked, %       |        | -                                                                                 | -    |        | -                                                                                 | -    |        |                                                                                   |      |        |                                                                                     |      |
| Mov Cap-1 Maneuver       | 1562   | -                                                                                 | -    | 1453   | -                                                                                 | -    | 712    | 654                                                                               | 953  | 685    | 625                                                                                 | 1016 |
| Mov Cap-2 Maneuver       | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 712    | 654                                                                               | -    | 685    | 625                                                                                 | -    |
| Stage 1                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 903    | 811                                                                               | -    | 883    | 776                                                                                 | -    |
| Stage 2                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 861    | 776                                                                               | -    | 872    | 783                                                                                 | -    |
|                          |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
| Approach                 | EB     |                                                                                   |      | WB     |                                                                                   |      | NB     |                                                                                   |      | SB     |                                                                                     |      |
| HCM Control Delay, s     | 0      |                                                                                   |      | 2.9    |                                                                                   |      | 10.1   |                                                                                   |      | 0      |                                                                                     |      |
| HCM LOS                  |        |                                                                                   |      |        |                                                                                   |      | B      |                                                                                   |      | A      |                                                                                     |      |
|                          |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
| Minor Lane/Major Mvmt    | NBLn1  | EBL                                                                               | EBT  | EBR    | WBL                                                                               | WBT  | WBR    | SBLn1                                                                             |      |        |                                                                                     |      |
| Capacity (veh/h)         | 770    | 1562                                                                              | -    | -      | 1453                                                                              | -    | -      | -                                                                                 |      |        |                                                                                     |      |
| HCM Lane V/C Ratio       | 0.09   | -                                                                                 | -    | -      | 0.024                                                                             | -    | -      | -                                                                                 |      |        |                                                                                     |      |
| HCM Control Delay (s)    | 10.1   | 0                                                                                 | -    | -      | 7.5                                                                               | 0    | -      | 0                                                                                 |      |        |                                                                                     |      |
| HCM Lane LOS             | B      | A                                                                                 | -    | -      | A                                                                                 | A    | -      | A                                                                                 |      |        |                                                                                     |      |
| HCM 95th %tile Q(veh)    | 0.3    | 0                                                                                 | -    | -      | 0.1                                                                               | -    | -      | -                                                                                 |      |        |                                                                                     |      |

# 2021 PM DESIGN HOUR NO-BUILD CONDITIONS

## Lanes, Volumes, Timings

### 3: HWY 101 & RIRO SITE ACCESS

06/15/2020

|                                   |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                        | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations               |                                                                                   |  |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)              | 0                                                                                 | 0                                                                                 | 821                                                                               | 0                                                                                 | 0                                                                                 | 775                                                                               |
| Future Volume (vph)               | 0                                                                                 | 0                                                                                 | 821                                                                               | 0                                                                                 | 0                                                                                 | 775                                                                               |
| Ideal Flow (vphpl)                | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              |
| Frt                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Flt Protected                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (prot)                 | 0                                                                                 | 1750                                                                              | 3325                                                                              | 0                                                                                 | 0                                                                                 | 3325                                                                              |
| Flt Permitted                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (perm)                 | 0                                                                                 | 1750                                                                              | 3325                                                                              | 0                                                                                 | 0                                                                                 | 3325                                                                              |
| Link Speed (mph)                  | 30                                                                                |                                                                                   | 40                                                                                |                                                                                   |                                                                                   | 40                                                                                |
| Link Distance (ft)                | 243                                                                               |                                                                                   | 716                                                                               |                                                                                   |                                                                                   | 923                                                                               |
| Travel Time (s)                   | 5.5                                                                               |                                                                                   | 12.2                                                                              |                                                                                   |                                                                                   | 15.7                                                                              |
| Peak Hour Factor                  | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              |
| Adj. Flow (vph)                   | 0                                                                                 | 0                                                                                 | 873                                                                               | 0                                                                                 | 0                                                                                 | 824                                                                               |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)             | 0                                                                                 | 0                                                                                 | 873                                                                               | 0                                                                                 | 0                                                                                 | 824                                                                               |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment                    | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              |
| Median Width(ft)                  | 0                                                                                 |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |
| Link Offset(ft)                   | 0                                                                                 |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |
| Crosswalk Width(ft)               | 12                                                                                |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |
| Two way Left Turn Lane            |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |
| Headway Factor                    | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              |
| Sign Control                      | Stop                                                                              |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Intersection Capacity Utilization | 28.0%                                                                             |                                                                                   |                                                                                   | ICU Level of Service A                                                            |                                                                                   |                                                                                   |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |



# 2021 PM DESIGN HOUR NO- BUILD CONDITIONS




HCM 2010 TWSC

3: HWY 101 & RIRO SITE ACCESS

06/15/2020

## Intersection

Int Delay, s/veh 0

| Movement                 | WBL  | WBR                                                                               | NBT                                                                               | NBR  | SBL  | SBT                                                                               |
|--------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|
| Lane Configurations      |      |  |  |      |      |  |
| Traffic Vol, veh/h       | 0    | 0                                                                                 | 821                                                                               | 0    | 0    | 775                                                                               |
| Future Vol, veh/h        | 0    | 0                                                                                 | 821                                                                               | 0    | 0    | 775                                                                               |
| Conflicting Peds, #/hr   | 0    | 0                                                                                 | 0                                                                                 | 0    | 0    | 0                                                                                 |
| Sign Control             | Stop | Stop                                                                              | Free                                                                              | Free | Free | Free                                                                              |
| RT Channelized           | -    | None                                                                              | -                                                                                 | None | -    | None                                                                              |
| Storage Length           | -    | 0                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Veh in Median Storage, # | 0    | -                                                                                 | 0                                                                                 | -    | -    | 0                                                                                 |
| Grade, %                 | 0    | -                                                                                 | 0                                                                                 | -    | -    | 0                                                                                 |
| Peak Hour Factor         | 94   | 94                                                                                | 94                                                                                | 94   | 94   | 94                                                                                |
| Heavy Vehicles, %        | 0    | 0                                                                                 | 0                                                                                 | 0    | 0    | 0                                                                                 |
| Mvmt Flow                | 0    | 0                                                                                 | 873                                                                               | 0    | 0    | 824                                                                               |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 437    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.9    | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.3    | -      |
| Pot Cap-1 Maneuver   | 0      | 573    | -      |
| Stage 1              | 0      | -      | -      |
| Stage 2              | 0      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | -      | 573    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |






















| Approach             | WB | NB | SB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0  | 0  | 0  |
| HCM LOS              | A  |    |    |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT |
|-----------------------|-----|----------|-----|
| Capacity (veh/h)      | -   | -        | -   |
| HCM Lane V/C Ratio    | -   | -        | -   |
| HCM Control Delay (s) | -   | 0        | -   |
| HCM Lane LOS          | -   | A        | -   |
| HCM 95th %tile Q(veh) | -   | -        | -   |

# 2026 AM DESIGN HOUR NO-BUILD CONDITIONS

Lanes, Volumes, Timings  
1: HWY 101 & 35th Street


06/15/2020

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Traffic Volume (vph)       | 73                                                                                | 12                                                                                | 102                                                                               | 28                                                                                | 26                                                                                | 31                                                                                | 43                                                                                  | 347                                                                                 | 5                                                                                   | 22                                                                                  | 373                                                                                 | 45                                                                                  |
| Future Volume (vph)        | 73                                                                                | 12                                                                                | 102                                                                               | 28                                                                                | 26                                                                                | 31                                                                                | 43                                                                                  | 347                                                                                 | 5                                                                                   | 22                                                                                  | 373                                                                                 | 45                                                                                  |
| Ideal Flow (vphpl)         | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Storage Length (ft)        | 110                                                                               |                                                                                   | 0                                                                                 | 141                                                                               |                                                                                   | 0                                                                                 | 146                                                                                 |                                                                                     | 0                                                                                   | 91                                                                                  |                                                                                     | 0                                                                                   |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)          | 100                                                                               |                                                                                   |                                                                                   | 55                                                                                |                                                                                   |                                                                                   | 66                                                                                  |                                                                                     |                                                                                     | 54                                                                                  |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                |
| Frt                        |                                                                                   | 0.865                                                                             |                                                                                   |                                                                                   | 0.918                                                                             |                                                                                   |                                                                                     | 0.998                                                                               |                                                                                     |                                                                                     | 0.984                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1662                                                                              | 1500                                                                              | 0                                                                                 | 1662                                                                              | 1606                                                                              | 0                                                                                 | 1662                                                                                | 3223                                                                                | 0                                                                                   | 1662                                                                                | 3208                                                                                | 0                                                                                   |
| Flt Permitted              | 0.709                                                                             |                                                                                   |                                                                                   | 0.664                                                                             |                                                                                   |                                                                                   | 0.419                                                                               |                                                                                     |                                                                                     | 0.491                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 1241                                                                              | 1500                                                                              | 0                                                                                 | 1162                                                                              | 1606                                                                              | 0                                                                                 | 733                                                                                 | 3223                                                                                | 0                                                                                   | 859                                                                                 | 3208                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 131                                                                               |                                                                                   |                                                                                   | 40                                                                                |                                                                                   |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     | 17                                                                                  |                                                                                     |
| Link Speed (mph)           |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                     | 40                                                                                  |                                                                                     |                                                                                     | 40                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 499                                                                               |                                                                                   |                                                                                   | 317                                                                               |                                                                                   |                                                                                     | 925                                                                                 |                                                                                     |                                                                                     | 716                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 13.6                                                                              |                                                                                   |                                                                                   | 8.6                                                                               |                                                                                   |                                                                                     | 15.8                                                                                |                                                                                     |                                                                                     | 12.2                                                                                |                                                                                     |
| Peak Hour Factor           | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                |
| Heavy Vehicles (%)         | 0%                                                                                | 0%                                                                                | 1%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                  | 3%                                                                                  | 0%                                                                                  | 0%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 94                                                                                | 15                                                                                | 131                                                                               | 36                                                                                | 33                                                                                | 40                                                                                | 55                                                                                  | 445                                                                                 | 6                                                                                   | 28                                                                                  | 478                                                                                 | 58                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 94                                                                                | 146                                                                               | 0                                                                                 | 36                                                                                | 73                                                                                | 0                                                                                 | 55                                                                                  | 451                                                                                 | 0                                                                                   | 28                                                                                  | 536                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |
| Headway Factor             | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                |
| Number of Detectors        | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 2                                                                                   |                                                                                     | 2                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Side St                                                                           | Side St                                                                           |                                                                                   | Side St                                                                           | Side St                                                                           |                                                                                   | Left                                                                                |                                                                                     |                                                                                     | Left                                                                                |                                                                                     |                                                                                     |
| Leading Detector (ft)      | 78                                                                                | 78                                                                                |                                                                                   | 78                                                                                | 78                                                                                |                                                                                   | 78                                                                                  | 223                                                                                 |                                                                                     | 78                                                                                  | 223                                                                                 |                                                                                     |
| Trailing Detector (ft)     | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 157                                                                                 |                                                                                     | 2                                                                                   | 157                                                                                 |                                                                                     |
| Detector 1 Position(ft)    | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 157                                                                                 |                                                                                     | 2                                                                                   | 157                                                                                 |                                                                                     |
| Detector 1 Size(ft)        | 16                                                                                | 16                                                                                |                                                                                   | 16                                                                                | 16                                                                                |                                                                                   | 16                                                                                  | 6                                                                                   |                                                                                     | 16                                                                                  | 6                                                                                   |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(ft)    | 72                                                                                | 72                                                                                |                                                                                   | 72                                                                                | 72                                                                                |                                                                                   | 72                                                                                  | 217                                                                                 |                                                                                     | 72                                                                                  | 217                                                                                 |                                                                                     |
| Detector 2 Size(ft)        | 6                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                   | 6                                                                                   |                                                                                     | 6                                                                                   | 6                                                                                   |                                                                                     |
| Detector 2 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | pm+pt                                                                               | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases           |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Permitted Phases           | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 6                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     |

# 2026 AM DESIGN HOUR NO-BUILD CONDITIONS

Lanes, Volumes, Timings  
1: HWY 101 & 35th Street

06/15/2020

|                         |  |       |     |       |       |     |       |       |     |       |       |     |
|-------------------------|------------------------------------------------------------------------------------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Lane Group              | EBL                                                                                | EBT   | EBR | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
| Detector Phase          | 8                                                                                  | 8     |     | 4     | 4     |     | 1     | 6     |     | 5     | 2     |     |
| Switch Phase            |                                                                                    |       |     |       |       |     |       |       |     |       |       |     |
| Minimum Initial (s)     | 4.0                                                                                | 4.0   |     | 4.0   | 4.0   |     | 4.0   | 4.0   |     | 4.0   | 4.0   |     |
| Minimum Split (s)       | 28.0                                                                               | 28.0  |     | 28.0  | 28.0  |     | 13.0  | 22.8  |     | 13.0  | 22.8  |     |
| Total Split (s)         | 34.0                                                                               | 34.0  |     | 34.0  | 34.0  |     | 17.0  | 41.0  |     | 15.0  | 39.0  |     |
| Total Split (%)         | 37.8%                                                                              | 37.8% |     | 37.8% | 37.8% |     | 18.9% | 45.6% |     | 16.7% | 43.3% |     |
| Maximum Green (s)       | 30.0                                                                               | 30.0  |     | 30.0  | 30.0  |     | 12.2  | 36.2  |     | 10.2  | 34.2  |     |
| Yellow Time (s)         | 3.5                                                                                | 3.5   |     | 3.5   | 3.5   |     | 4.3   | 4.3   |     | 4.3   | 4.3   |     |
| All-Red Time (s)        | 0.5                                                                                | 0.5   |     | 0.5   | 0.5   |     | 0.5   | 0.5   |     | 0.5   | 0.5   |     |
| Lost Time Adjust (s)    | 0.5                                                                                | 0.5   |     | 0.5   | 0.5   |     | 0.5   | 0.5   |     | 0.5   | 0.5   |     |
| Total Lost Time (s)     | 4.5                                                                                | 4.5   |     | 4.5   | 4.5   |     | 5.3   | 5.3   |     | 5.3   | 5.3   |     |
| Lead/Lag                |                                                                                    |       |     |       |       |     | Lead  | Lag   |     | Lead  | Lag   |     |
| Lead-Lag Optimize?      |                                                                                    |       |     |       |       |     | Yes   | Yes   |     | Yes   | Yes   |     |
| Vehicle Extension (s)   | 2.5                                                                                | 2.5   |     | 2.5   | 2.5   |     | 2.5   | 2.5   |     | 2.5   | 2.5   |     |
| Minimum Gap (s)         | 2.0                                                                                | 2.0   |     | 2.0   | 2.0   |     | 2.0   | 2.0   |     | 2.0   | 2.0   |     |
| Time Before Reduce (s)  | 8.0                                                                                | 8.0   |     | 8.0   | 8.0   |     | 8.0   | 8.0   |     | 8.0   | 8.0   |     |
| Time To Reduce (s)      | 4.0                                                                                | 4.0   |     | 4.0   | 4.0   |     | 4.0   | 4.0   |     | 4.0   | 4.0   |     |
| Recall Mode             | None                                                                               | None  |     | None  | None  |     | None  | Min   |     | None  | Min   |     |
| Walk Time (s)           | 7.0                                                                                | 7.0   |     | 7.0   | 7.0   |     |       | 7.0   |     |       | 7.0   |     |
| Flash Dont Walk (s)     | 17.0                                                                               | 17.0  |     | 17.0  | 17.0  |     |       | 11.0  |     |       | 11.0  |     |
| Pedestrian Calls (#/hr) | 0                                                                                  | 0     |     | 0     | 0     |     |       | 0     |     |       | 0     |     |
| Act Effect Green (s)    | 7.7                                                                                | 7.7   |     | 7.6   | 7.6   |     | 14.3  | 14.8  |     | 13.3  | 13.0  |     |
| Actuated g/C Ratio      | 0.25                                                                               | 0.25  |     | 0.25  | 0.25  |     | 0.46  | 0.48  |     | 0.43  | 0.42  |     |
| v/c Ratio               | 0.30                                                                               | 0.31  |     | 0.13  | 0.17  |     | 0.11  | 0.29  |     | 0.06  | 0.39  |     |
| Control Delay           | 14.8                                                                               | 6.2   |     | 13.0  | 8.6   |     | 5.9   | 8.6   |     | 5.6   | 11.1  |     |
| Queue Delay             | 0.0                                                                                | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Delay             | 14.8                                                                               | 6.2   |     | 13.0  | 8.6   |     | 5.9   | 8.6   |     | 5.6   | 11.1  |     |
| LOS                     | B                                                                                  | A     |     | B     | A     |     | A     | A     |     | A     | B     |     |
| Approach Delay          |                                                                                    | 9.6   |     |       | 10.0  |     |       | 8.3   |     |       | 10.8  |     |
| Approach LOS            |                                                                                    | A     |     |       | B     |     |       | A     |     |       | B     |     |

## Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 31

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.39

Intersection Signal Delay: 9.6

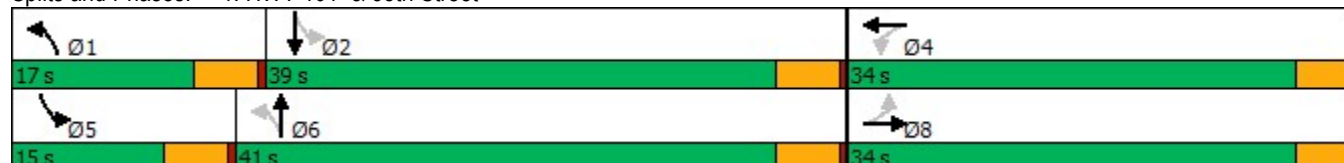
Intersection LOS: A

Intersection Capacity Utilization 39.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: HWY 101 & 35th Street
























# 2026 AM DESIGN HOUR NO-BUILD CONDITIONS

## HCM Signalized Intersection Capacity Analysis

1: HWY 101 & 35th Street

06/15/2020

















|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                          | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Traffic Volume (vph)              | 73                                                                                | 12                                                                                | 102                                                                               | 28                                                                                | 26                                                                                | 31                                                                                | 43                                                                                  | 347                                                                                 | 5                                                                                   | 22                                                                                  | 373                                                                                 | 45                                                                                  |
| Future Volume (vph)               | 73                                                                                | 12                                                                                | 102                                                                               | 28                                                                                | 26                                                                                | 31                                                                                | 43                                                                                  | 347                                                                                 | 5                                                                                   | 22                                                                                  | 373                                                                                 | 45                                                                                  |
| Ideal Flow (vphpl)                | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Total Lost time (s)               | 4.5                                                                               | 4.5                                                                               |                                                                                   | 4.5                                                                               | 4.5                                                                               |                                                                                   | 5.3                                                                                 | 5.3                                                                                 |                                                                                     | 5.3                                                                                 | 5.3                                                                                 |                                                                                     |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 0.95                                                                                |                                                                                     | 1.00                                                                                | 0.95                                                                                |                                                                                     |
| Frt                               | 1.00                                                                              | 0.87                                                                              |                                                                                   | 1.00                                                                              | 0.92                                                                              |                                                                                   | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 0.98                                                                                |                                                                                     |
| Flt Protected                     | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                                | 1.00                                                                                |                                                                                     | 0.95                                                                                | 1.00                                                                                |                                                                                     |
| Satd. Flow (prot)                 | 1662                                                                              | 1501                                                                              |                                                                                   | 1662                                                                              | 1606                                                                              |                                                                                   | 1662                                                                                | 3223                                                                                |                                                                                     | 1662                                                                                | 3207                                                                                |                                                                                     |
| Flt Permitted                     | 0.71                                                                              | 1.00                                                                              |                                                                                   | 0.66                                                                              | 1.00                                                                              |                                                                                   | 0.42                                                                                | 1.00                                                                                |                                                                                     | 0.49                                                                                | 1.00                                                                                |                                                                                     |
| Satd. Flow (perm)                 | 1242                                                                              | 1501                                                                              |                                                                                   | 1162                                                                              | 1606                                                                              |                                                                                   | 733                                                                                 | 3223                                                                                |                                                                                     | 860                                                                                 | 3207                                                                                |                                                                                     |
| Peak-hour factor, PHF             | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                |
| Adj. Flow (vph)                   | 94                                                                                | 15                                                                                | 131                                                                               | 36                                                                                | 33                                                                                | 40                                                                                | 55                                                                                  | 445                                                                                 | 6                                                                                   | 28                                                                                  | 478                                                                                 | 58                                                                                  |
| RTOR Reduction (vph)              | 0                                                                                 | 107                                                                               | 0                                                                                 | 0                                                                                 | 33                                                                                | 0                                                                                 | 0                                                                                   | 1                                                                                   | 0                                                                                   | 0                                                                                   | 11                                                                                  | 0                                                                                   |
| Lane Group Flow (vph)             | 94                                                                                | 39                                                                                | 0                                                                                 | 36                                                                                | 40                                                                                | 0                                                                                 | 55                                                                                  | 450                                                                                 | 0                                                                                   | 28                                                                                  | 525                                                                                 | 0                                                                                   |
| Heavy Vehicles (%)                | 0%                                                                                | 0%                                                                                | 1%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                  | 3%                                                                                  | 0%                                                                                  | 0%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Turn Type                         | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | pm+pt                                                                               | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases                  |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Permitted Phases                  | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 6                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     |
| Actuated Green, G (s)             | 6.9                                                                               | 6.9                                                                               |                                                                                   | 6.9                                                                               | 6.9                                                                               |                                                                                   | 15.9                                                                                | 14.0                                                                                |                                                                                     | 13.9                                                                                | 13.0                                                                                |                                                                                     |
| Effective Green, g (s)            | 6.4                                                                               | 6.4                                                                               |                                                                                   | 6.4                                                                               | 6.4                                                                               |                                                                                   | 14.9                                                                                | 13.5                                                                                |                                                                                     | 12.9                                                                                | 12.5                                                                                |                                                                                     |
| Actuated g/C Ratio                | 0.18                                                                              | 0.18                                                                              |                                                                                   | 0.18                                                                              | 0.18                                                                              |                                                                                   | 0.42                                                                                | 0.38                                                                                |                                                                                     | 0.36                                                                                | 0.35                                                                                |                                                                                     |
| Clearance Time (s)                | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.8                                                                                 | 4.8                                                                                 |                                                                                     | 4.8                                                                                 | 4.8                                                                                 |                                                                                     |
| Vehicle Extension (s)             | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                                 | 2.5                                                                                 |                                                                                     | 2.5                                                                                 | 2.5                                                                                 |                                                                                     |
| Lane Grp Cap (vph)                | 224                                                                               | 271                                                                               |                                                                                   | 210                                                                               | 290                                                                               |                                                                                   | 345                                                                                 | 1229                                                                                |                                                                                     | 322                                                                                 | 1132                                                                                |                                                                                     |
| v/s Ratio Prot                    |                                                                                   | 0.03                                                                              |                                                                                   |                                                                                   | 0.03                                                                              |                                                                                   | c0.01                                                                               | 0.14                                                                                |                                                                                     | 0.00                                                                                | c0.16                                                                               |                                                                                     |
| v/s Ratio Perm                    | c0.08                                                                             |                                                                                   |                                                                                   | 0.03                                                                              |                                                                                   |                                                                                   | 0.06                                                                                |                                                                                     |                                                                                     | 0.03                                                                                |                                                                                     |                                                                                     |
| v/c Ratio                         | 0.42                                                                              | 0.14                                                                              |                                                                                   | 0.17                                                                              | 0.14                                                                              |                                                                                   | 0.16                                                                                | 0.37                                                                                |                                                                                     | 0.09                                                                                | 0.46                                                                                |                                                                                     |
| Uniform Delay, d1                 | 12.9                                                                              | 12.2                                                                              |                                                                                   | 12.3                                                                              | 12.2                                                                              |                                                                                   | 6.2                                                                                 | 7.9                                                                                 |                                                                                     | 7.3                                                                                 | 8.9                                                                                 |                                                                                     |
| Progression Factor                | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     |
| Incremental Delay, d2             | 0.9                                                                               | 0.2                                                                               |                                                                                   | 0.3                                                                               | 0.2                                                                               |                                                                                   | 0.2                                                                                 | 0.1                                                                                 |                                                                                     | 0.1                                                                                 | 0.2                                                                                 |                                                                                     |
| Delay (s)                         | 13.8                                                                              | 12.4                                                                              |                                                                                   | 12.5                                                                              | 12.3                                                                              |                                                                                   | 6.3                                                                                 | 8.0                                                                                 |                                                                                     | 7.4                                                                                 | 9.1                                                                                 |                                                                                     |
| Level of Service                  | B                                                                                 | B                                                                                 |                                                                                   | B                                                                                 | B                                                                                 |                                                                                   | A                                                                                   | A                                                                                   |                                                                                     | A                                                                                   | A                                                                                   |                                                                                     |
| Approach Delay (s)                |                                                                                   | 12.9                                                                              |                                                                                   |                                                                                   | 12.4                                                                              |                                                                                   |                                                                                     | 7.8                                                                                 |                                                                                     |                                                                                     | 9.0                                                                                 |                                                                                     |
| Approach LOS                      |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                     | A                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| <b>Intersection Summary</b>       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2000 Control Delay            |                                                                                   |                                                                                   | 9.5                                                                               |                                                                                   |                                                                                   |                                                                                   | HCM 2000 Level of Service                                                           |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |                                                                                     |
| HCM 2000 Volume to Capacity ratio |                                                                                   |                                                                                   | 0.43                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Actuated Cycle Length (s)         |                                                                                   |                                                                                   | 35.4                                                                              |                                                                                   |                                                                                   |                                                                                   | Sum of lost time (s)                                                                |                                                                                     |                                                                                     | 15.1                                                                                |                                                                                     |                                                                                     |
| Intersection Capacity Utilization |                                                                                   |                                                                                   | 39.7%                                                                             |                                                                                   |                                                                                   |                                                                                   | ICU Level of Service                                                                |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |                                                                                     |
| Analysis Period (min)             |                                                                                   |                                                                                   | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| c Critical Lane Group             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# 2026 AM DESIGN HOUR NO-BUILD CONDITIONS

Lanes, Volumes, Timings

2: REDWOOD ST/Site & 35th Street

06/15/2020

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                        | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)              | 0                                                                                 | 20                                                                                | 19                                                                                | 15                                                                                | 48                                                                                | 0                                                                                 | 37                                                                                 | 0                                                                                   | 9                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Future Volume (vph)               | 0                                                                                 | 20                                                                                | 19                                                                                | 15                                                                                | 48                                                                                | 0                                                                                 | 37                                                                                 | 0                                                                                   | 9                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ideal Flow (vphpl)                | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                               | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Frt                               |                                                                                   | 0.934                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.973                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Flt Protected                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.988                                                                             |                                                                                   |                                                                                    | 0.962                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)                 | 0                                                                                 | 1634                                                                              | 0                                                                                 | 0                                                                                 | 1729                                                                              | 0                                                                                 | 0                                                                                  | 1638                                                                                | 0                                                                                   | 0                                                                                   | 1750                                                                                | 0                                                                                   |
| Flt Permitted                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.988                                                                             |                                                                                   |                                                                                    | 0.962                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)                 | 0                                                                                 | 1634                                                                              | 0                                                                                 | 0                                                                                 | 1729                                                                              | 0                                                                                 | 0                                                                                  | 1638                                                                                | 0                                                                                   | 0                                                                                   | 1750                                                                                | 0                                                                                   |
| Link Speed (mph)                  |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                    | 25                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)                |                                                                                   | 317                                                                               |                                                                                   |                                                                                   | 493                                                                               |                                                                                   |                                                                                    | 457                                                                                 |                                                                                     |                                                                                     | 274                                                                                 |                                                                                     |
| Travel Time (s)                   |                                                                                   | 8.6                                                                               |                                                                                   |                                                                                   | 13.4                                                                              |                                                                                   |                                                                                    | 12.5                                                                                |                                                                                     |                                                                                     | 6.2                                                                                 |                                                                                     |
| Peak Hour Factor                  | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                               | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                |
| Adj. Flow (vph)                   | 0                                                                                 | 26                                                                                | 25                                                                                | 19                                                                                | 62                                                                                | 0                                                                                 | 48                                                                                 | 0                                                                                   | 12                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)             | 0                                                                                 | 51                                                                                | 0                                                                                 | 0                                                                                 | 81                                                                                | 0                                                                                 | 0                                                                                  | 60                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment                    | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)                  |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 35                                                                                  |                                                                                     |
| Crosswalk Width(ft)               |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                    | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Two way Left Turn Lane            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor                    | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                               | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                |
| Sign Control                      |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |                                                                                   |                                                                                    | Stop                                                                                |                                                                                     |                                                                                     | Stop                                                                                |                                                                                     |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization | 20.3%                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | ICU Level of Service A                                                             |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# 2026 AM DESIGN HOUR NO-BUILD CONDITIONS

HCM 2010 TWSC

2: REDWOOD ST/Site & 35th Street

06/15/2020










| Intersection             |        |      |      |        |       |      |        |       |      |        |      |      |
|--------------------------|--------|------|------|--------|-------|------|--------|-------|------|--------|------|------|
| Int Delay, s/veh         | 3.7    |      |      |        |       |      |        |       |      |        |      |      |
| Movement                 | EBL    | EBT  | EBR  | WBL    | WBT   | WBR  | NBL    | NBT   | NBR  | SBL    | SBT  | SBR  |
| Lane Configurations      |        | ↕    |      |        | ↕     |      |        | ↕     |      |        | ↕    |      |
| Traffic Vol, veh/h       | 0      | 20   | 19   | 15     | 48    | 0    | 37     | 0     | 9    | 0      | 0    | 0    |
| Future Vol, veh/h        | 0      | 20   | 19   | 15     | 48    | 0    | 37     | 0     | 9    | 0      | 0    | 0    |
| Conflicting Peds, #/hr   | 0      | 0    | 0    | 0      | 0     | 0    | 0      | 0     | 0    | 0      | 0    | 0    |
| Sign Control             | Free   | Free | Free | Free   | Free  | Free | Stop   | Stop  | Stop | Stop   | Stop | Stop |
| RT Channelized           | -      | -    | None | -      | -     | None | -      | -     | None | -      | -    | None |
| Storage Length           | -      | -    | -    | -      | -     | -    | -      | -     | -    | -      | -    | -    |
| Veh in Median Storage, # | -      | 0    | -    | -      | 0     | -    | -      | 0     | -    | -      | 0    | -    |
| Grade, %                 | -      | 0    | -    | -      | 0     | -    | -      | 0     | -    | -      | 0    | -    |
| Peak Hour Factor         | 77     | 77   | 77   | 77     | 77    | 77   | 77     | 77    | 77   | 77     | 77   | 77   |
| Heavy Vehicles, %        | 0      | 0    | 0    | 0      | 0     | 0    | 0      | 0     | 0    | 0      | 0    | 0    |
| Mvmt Flow                | 0      | 26   | 25   | 19     | 62    | 0    | 48     | 0     | 12   | 0      | 0    | 0    |
|                          |        |      |      |        |       |      |        |       |      |        |      |      |
| Major/Minor              | Major1 |      |      | Major2 |       |      | Minor1 |       |      | Minor2 |      |      |
| Conflicting Flow All     | 62     | 0    | 0    | 51     | 0     | 0    | 139    | 139   | 39   | 145    | 151  | 62   |
| Stage 1                  | -      | -    | -    | -      | -     | -    | 39     | 39    | -    | 100    | 100  | -    |
| Stage 2                  | -      | -    | -    | -      | -     | -    | 100    | 100   | -    | 45     | 51   | -    |
| Critical Hdwy            | 4.1    | -    | -    | 4.1    | -     | -    | 7.1    | 6.5   | 6.2  | 7.1    | 6.5  | 6.2  |
| Critical Hdwy Stg 1      | -      | -    | -    | -      | -     | -    | 6.1    | 5.5   | -    | 6.1    | 5.5  | -    |
| Critical Hdwy Stg 2      | -      | -    | -    | -      | -     | -    | 6.1    | 5.5   | -    | 6.1    | 5.5  | -    |
| Follow-up Hdwy           | 2.2    | -    | -    | 2.2    | -     | -    | 3.5    | 4     | 3.3  | 3.5    | 4    | 3.3  |
| Pot Cap-1 Maneuver       | 1554   | -    | -    | 1568   | -     | -    | 836    | 756   | 1038 | 828    | 744  | 1009 |
| Stage 1                  | -      | -    | -    | -      | -     | -    | 981    | 866   | -    | 911    | 816  | -    |
| Stage 2                  | -      | -    | -    | -      | -     | -    | 911    | 816   | -    | 974    | 856  | -    |
| Platoon blocked, %       |        | -    | -    |        | -     | -    |        |       |      |        |      |      |
| Mov Cap-1 Maneuver       | 1554   | -    | -    | 1568   | -     | -    | 828    | 746   | 1038 | 811    | 734  | 1009 |
| Mov Cap-2 Maneuver       | -      | -    | -    | -      | -     | -    | 828    | 746   | -    | 811    | 734  | -    |
| Stage 1                  | -      | -    | -    | -      | -     | -    | 981    | 866   | -    | 911    | 805  | -    |
| Stage 2                  | -      | -    | -    | -      | -     | -    | 899    | 805   | -    | 963    | 856  | -    |
|                          |        |      |      |        |       |      |        |       |      |        |      |      |
|                          |        |      |      |        |       |      |        |       |      |        |      |      |
| Approach                 | EB     |      |      | WB     |       |      | NB     |       |      | SB     |      |      |
| HCM Control Delay, s     | 0      |      |      | 1.7    |       |      | 9.5    |       |      | 0      |      |      |
| HCM LOS                  |        |      |      |        |       |      | A      |       |      | A      |      |      |
|                          |        |      |      |        |       |      |        |       |      |        |      |      |
| Minor Lane/Major Mvmt    | NBLn1  | EBL  | EBT  | EBR    | WBL   | WBT  | WBR    | SBLn1 |      |        |      |      |
| Capacity (veh/h)         | 862    | 1554 | -    | -      | 1568  | -    | -      | -     |      |        |      |      |
| HCM Lane V/C Ratio       | 0.069  | -    | -    | -      | 0.012 | -    | -      | -     |      |        |      |      |
| HCM Control Delay (s)    | 9.5    | 0    | -    | -      | 7.3   | 0    | -      | 0     |      |        |      |      |
| HCM Lane LOS             | A      | A    | -    | -      | A     | A    | -      | A     |      |        |      |      |
| HCM 95th %tile Q(veh)    | 0.2    | 0    | -    | -      | 0     | -    | -      | -     |      |        |      |      |

# 2026 AM DESIGN HOUR NO-BUILD CONDITIONS

## Lanes, Volumes, Timings

### 3: HWY 101 & RIRO SITE ACCESS

06/15/2020

|                                         |  |  |  |  |  |  |
|-----------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                              | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations                     |                                                                                   |  |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)                    | 0                                                                                 | 0                                                                                 | 451                                                                               | 0                                                                                 | 0                                                                                 | 440                                                                               |
| Future Volume (vph)                     | 0                                                                                 | 0                                                                                 | 451                                                                               | 0                                                                                 | 0                                                                                 | 440                                                                               |
| Ideal Flow (vphpl)                      | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              |
| Lane Util. Factor                       | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              |
| Frt                                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Flt Protected                           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (prot)                       | 0                                                                                 | 1750                                                                              | 3260                                                                              | 0                                                                                 | 0                                                                                 | 3260                                                                              |
| Flt Permitted                           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (perm)                       | 0                                                                                 | 1750                                                                              | 3260                                                                              | 0                                                                                 | 0                                                                                 | 3260                                                                              |
| Link Speed (mph)                        | 30                                                                                |                                                                                   | 40                                                                                |                                                                                   |                                                                                   | 40                                                                                |
| Link Distance (ft)                      | 243                                                                               |                                                                                   | 716                                                                               |                                                                                   |                                                                                   | 923                                                                               |
| Travel Time (s)                         | 5.5                                                                               |                                                                                   | 12.2                                                                              |                                                                                   |                                                                                   | 15.7                                                                              |
| Peak Hour Factor                        | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              |
| Heavy Vehicles (%)                      | 0%                                                                                | 0%                                                                                | 2%                                                                                | 0%                                                                                | 0%                                                                                | 2%                                                                                |
| Adj. Flow (vph)                         | 0                                                                                 | 0                                                                                 | 550                                                                               | 0                                                                                 | 0                                                                                 | 537                                                                               |
| Shared Lane Traffic (%)                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)                   | 0                                                                                 | 0                                                                                 | 550                                                                               | 0                                                                                 | 0                                                                                 | 537                                                                               |
| Enter Blocked Intersection              | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment                          | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              |
| Median Width(ft)                        | 0                                                                                 |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |
| Link Offset(ft)                         | 0                                                                                 |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |
| Crosswalk Width(ft)                     | 12                                                                                |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |
| Two way Left Turn Lane                  |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |
| Headway Factor                          | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              |
| Sign Control                            | Stop                                                                              |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |
| Intersection Summary                    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                              | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type: Unsignalized              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Intersection Capacity Utilization 16.9% |                                                                                   |                                                                                   |                                                                                   | ICU Level of Service A                                                            |                                                                                   |                                                                                   |
| Analysis Period (min) 15                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

# 2026 AM DESIGN HOUR NO-BUILD CONDITIONS

HCM 2010 TWSC

3: HWY 101 & RIRO SITE ACCESS

06/15/2020






















| Intersection             |        |          |        |      |      |      |
|--------------------------|--------|----------|--------|------|------|------|
| Int Delay, s/veh         | 0      |          |        |      |      |      |
| Movement                 | WBL    | WBR      | NBT    | NBR  | SBL  | SBT  |
| Lane Configurations      |        | ↗        | ↕      |      |      | ↕    |
| Traffic Vol, veh/h       | 0      | 0        | 451    | 0    | 0    | 440  |
| Future Vol, veh/h        | 0      | 0        | 451    | 0    | 0    | 440  |
| Conflicting Peds, #/hr   | 0      | 0        | 0      | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop     | Free   | Free | Free | Free |
| RT Channelized           | -      | None     | -      | None | -    | None |
| Storage Length           | -      | 0        | -      | -    | -    | -    |
| Veh in Median Storage, # | 0      | -        | 0      | -    | -    | 0    |
| Grade, %                 | 0      | -        | 0      | -    | -    | 0    |
| Peak Hour Factor         | 82     | 82       | 82     | 82   | 82   | 82   |
| Heavy Vehicles, %        | 0      | 0        | 2      | 0    | 0    | 2    |
| Mvmt Flow                | 0      | 0        | 550    | 0    | 0    | 537  |
| Major/Minor              | Minor1 | Major1   | Major2 |      |      |      |
| Conflicting Flow All     | -      | 275      | 0      | 0    | -    | -    |
| Stage 1                  | -      | -        | -      | -    | -    | -    |
| Stage 2                  | -      | -        | -      | -    | -    | -    |
| Critical Hdwy            | -      | 6.9      | -      | -    | -    | -    |
| Critical Hdwy Stg 1      | -      | -        | -      | -    | -    | -    |
| Critical Hdwy Stg 2      | -      | -        | -      | -    | -    | -    |
| Follow-up Hdwy           | -      | 3.3      | -      | -    | -    | -    |
| Pot Cap-1 Maneuver       | 0      | 729      | -      | -    | 0    | -    |
| Stage 1                  | 0      | -        | -      | -    | 0    | -    |
| Stage 2                  | 0      | -        | -      | -    | 0    | -    |
| Platoon blocked, %       |        |          | -      | -    |      | -    |
| Mov Cap-1 Maneuver       | -      | 729      | -      | -    | -    | -    |
| Mov Cap-2 Maneuver       | -      | -        | -      | -    | -    | -    |
| Stage 1                  | -      | -        | -      | -    | -    | -    |
| Stage 2                  | -      | -        | -      | -    | -    | -    |
| Approach                 | WB     | NB       | SB     |      |      |      |
| HCM Control Delay, s     | 0      | 0        | 0      |      |      |      |
| HCM LOS                  | A      |          |        |      |      |      |
| Minor Lane/Major Mvmt    | NBT    | NBRWBLn1 | SBT    |      |      |      |
| Capacity (veh/h)         | -      | -        | -      | -    | -    | -    |
| HCM Lane V/C Ratio       | -      | -        | -      | -    | -    | -    |
| HCM Control Delay (s)    | -      | -        | 0      | -    | -    | -    |
| HCM Lane LOS             | -      | -        | A      | -    | -    | -    |
| HCM 95th %tile Q(veh)    | -      | -        | -      | -    | -    | -    |



# 2026 PM DESIGN HOUR NO-BUILD CONDITIONS

Lanes, Volumes, Timings  
1: HWY 101 & 35th Street













06/15/2020

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Traffic Volume (vph)       | 89                                                                                | 31                                                                                | 120                                                                               | 28                                                                                | 15                                                                                | 43                                                                                | 126                                                                                 | 690                                                                                 | 44                                                                                  | 41                                                                                  | 667                                                                                 | 68                                                                                  |
| Future Volume (vph)        | 89                                                                                | 31                                                                                | 120                                                                               | 28                                                                                | 15                                                                                | 43                                                                                | 126                                                                                 | 690                                                                                 | 44                                                                                  | 41                                                                                  | 667                                                                                 | 68                                                                                  |
| Ideal Flow (vphpl)         | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Storage Length (ft)        | 110                                                                               |                                                                                   | 0                                                                                 | 141                                                                               |                                                                                   | 0                                                                                 | 146                                                                                 |                                                                                     | 0                                                                                   | 91                                                                                  |                                                                                     | 0                                                                                   |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)          | 100                                                                               |                                                                                   |                                                                                   | 55                                                                                |                                                                                   |                                                                                   | 66                                                                                  |                                                                                     |                                                                                     | 54                                                                                  |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                |
| Frt                        |                                                                                   | 0.881                                                                             |                                                                                   |                                                                                   | 0.889                                                                             |                                                                                   |                                                                                     | 0.991                                                                               |                                                                                     |                                                                                     | 0.986                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1662                                                                              | 1530                                                                              | 0                                                                                 | 1662                                                                              | 1556                                                                              | 0                                                                                 | 1662                                                                                | 3291                                                                                | 0                                                                                   | 1662                                                                                | 3278                                                                                | 0                                                                                   |
| Flt Permitted              | 0.717                                                                             |                                                                                   |                                                                                   | 0.655                                                                             |                                                                                   |                                                                                   | 0.249                                                                               |                                                                                     |                                                                                     | 0.356                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 1255                                                                              | 1530                                                                              | 0                                                                                 | 1146                                                                              | 1556                                                                              | 0                                                                                 | 436                                                                                 | 3291                                                                                | 0                                                                                   | 623                                                                                 | 3278                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 128                                                                               |                                                                                   |                                                                                   | 46                                                                                |                                                                                   |                                                                                     | 10                                                                                  |                                                                                     |                                                                                     | 15                                                                                  |                                                                                     |
| Link Speed (mph)           |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                     | 40                                                                                  |                                                                                     |                                                                                     | 40                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 499                                                                               |                                                                                   |                                                                                   | 317                                                                               |                                                                                   |                                                                                     | 925                                                                                 |                                                                                     |                                                                                     | 716                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 13.6                                                                              |                                                                                   |                                                                                   | 8.6                                                                               |                                                                                   |                                                                                     | 15.8                                                                                |                                                                                     |                                                                                     | 12.2                                                                                |                                                                                     |
| Peak Hour Factor           | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Heavy Vehicles (%)         | 0%                                                                                | 0%                                                                                | 1%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                  | 0%                                                                                  | 2%                                                                                  | 0%                                                                                  | 0%                                                                                  | 0%                                                                                  |
| Adj. Flow (vph)            | 95                                                                                | 33                                                                                | 128                                                                               | 30                                                                                | 16                                                                                | 46                                                                                | 134                                                                                 | 734                                                                                 | 47                                                                                  | 44                                                                                  | 710                                                                                 | 72                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 95                                                                                | 161                                                                               | 0                                                                                 | 30                                                                                | 62                                                                                | 0                                                                                 | 134                                                                                 | 781                                                                                 | 0                                                                                   | 44                                                                                  | 782                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |
| Headway Factor             | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                |
| Number of Detectors        | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 2                                                                                   |                                                                                     | 2                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Side St                                                                           | Side St                                                                           |                                                                                   | Side St                                                                           | Side St                                                                           |                                                                                   | Left                                                                                |                                                                                     |                                                                                     | Left                                                                                |                                                                                     |                                                                                     |
| Leading Detector (ft)      | 78                                                                                | 78                                                                                |                                                                                   | 78                                                                                | 78                                                                                |                                                                                   | 78                                                                                  | 223                                                                                 |                                                                                     | 78                                                                                  | 223                                                                                 |                                                                                     |
| Trailing Detector (ft)     | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 157                                                                                 |                                                                                     | 2                                                                                   | 157                                                                                 |                                                                                     |
| Detector 1 Position(ft)    | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 157                                                                                 |                                                                                     | 2                                                                                   | 157                                                                                 |                                                                                     |
| Detector 1 Size(ft)        | 16                                                                                | 16                                                                                |                                                                                   | 16                                                                                | 16                                                                                |                                                                                   | 16                                                                                  | 6                                                                                   |                                                                                     | 16                                                                                  | 6                                                                                   |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(ft)    | 72                                                                                | 72                                                                                |                                                                                   | 72                                                                                | 72                                                                                |                                                                                   | 72                                                                                  | 217                                                                                 |                                                                                     | 72                                                                                  | 217                                                                                 |                                                                                     |
| Detector 2 Size(ft)        | 6                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                   | 6                                                                                   |                                                                                     | 6                                                                                   | 6                                                                                   |                                                                                     |
| Detector 2 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | pm+pt                                                                               | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases           |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Permitted Phases           | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 6                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     |

# 2026 PM DESIGN HOUR NO-BUILD CONDITIONS

Lanes, Volumes, Timings  
1: HWY 101 & 35th Street

06/15/2020

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Detector Phase          | 8                                                                                 | 8                                                                                 |                                                                                   | 4                                                                                 | 4                                                                                 |                                                                                   | 1                                                                                  | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                                | 4.0                                                                                 |                                                                                     | 4.0                                                                                 | 4.0                                                                                 |                                                                                     |
| Minimum Split (s)       | 22.0                                                                              | 22.0                                                                              |                                                                                   | 28.0                                                                              | 28.0                                                                              |                                                                                   | 13.0                                                                               | 28.8                                                                                |                                                                                     | 13.0                                                                                | 22.8                                                                                |                                                                                     |
| Total Split (s)         | 29.0                                                                              | 29.0                                                                              |                                                                                   | 29.0                                                                              | 29.0                                                                              |                                                                                   | 18.0                                                                               | 47.0                                                                                |                                                                                     | 14.0                                                                                | 43.0                                                                                |                                                                                     |
| Total Split (%)         | 32.2%                                                                             | 32.2%                                                                             |                                                                                   | 32.2%                                                                             | 32.2%                                                                             |                                                                                   | 20.0%                                                                              | 52.2%                                                                               |                                                                                     | 15.6%                                                                               | 47.8%                                                                               |                                                                                     |
| Maximum Green (s)       | 25.0                                                                              | 25.0                                                                              |                                                                                   | 25.0                                                                              | 25.0                                                                              |                                                                                   | 13.2                                                                               | 42.2                                                                                |                                                                                     | 9.2                                                                                 | 38.2                                                                                |                                                                                     |
| Yellow Time (s)         | 3.5                                                                               | 3.5                                                                               |                                                                                   | 3.5                                                                               | 3.5                                                                               |                                                                                   | 4.3                                                                                | 4.3                                                                                 |                                                                                     | 4.3                                                                                 | 4.3                                                                                 |                                                                                     |
| All-Red Time (s)        | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                                | 0.5                                                                                 |                                                                                     | 0.5                                                                                 | 0.5                                                                                 |                                                                                     |
| Lost Time Adjust (s)    | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                                | 0.5                                                                                 |                                                                                     | 0.5                                                                                 | 0.5                                                                                 |                                                                                     |
| Total Lost Time (s)     | 4.5                                                                               | 4.5                                                                               |                                                                                   | 4.5                                                                               | 4.5                                                                               |                                                                                   | 5.3                                                                                | 5.3                                                                                 |                                                                                     | 5.3                                                                                 | 5.3                                                                                 |                                                                                     |
| Lead/Lag                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Lead                                                                               | Lag                                                                                 |                                                                                     | Lead                                                                                | Lag                                                                                 |                                                                                     |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Yes                                                                                | Yes                                                                                 |                                                                                     | Yes                                                                                 | Yes                                                                                 |                                                                                     |
| Vehicle Extension (s)   | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                                | 2.5                                                                                 |                                                                                     | 2.5                                                                                 | 2.5                                                                                 |                                                                                     |
| Minimum Gap (s)         | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                                | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Time Before Reduce (s)  | 8.0                                                                               | 8.0                                                                               |                                                                                   | 8.0                                                                               | 8.0                                                                               |                                                                                   | 8.0                                                                                | 8.0                                                                                 |                                                                                     | 8.0                                                                                 | 8.0                                                                                 |                                                                                     |
| Time To Reduce (s)      | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                                | 4.0                                                                                 |                                                                                     | 4.0                                                                                 | 4.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | None                                                                              |                                                                                   | None                                                                              | None                                                                              |                                                                                   | None                                                                               | Min                                                                                 |                                                                                     | None                                                                                | Min                                                                                 |                                                                                     |
| Walk Time (s)           | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   |                                                                                    | 7.0                                                                                 |                                                                                     |                                                                                     | 7.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     | 11.0                                                                              | 11.0                                                                              |                                                                                   | 17.0                                                                              | 17.0                                                                              |                                                                                   |                                                                                    | 17.0                                                                                |                                                                                     |                                                                                     | 11.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) | 1                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 1                                                                                   |                                                                                     |
| Act Effect Green (s)    | 8.9                                                                               | 8.9                                                                               |                                                                                   | 8.9                                                                               | 8.9                                                                               |                                                                                   | 24.9                                                                               | 22.4                                                                                |                                                                                     | 21.0                                                                                | 16.7                                                                                |                                                                                     |
| Actuated g/C Ratio      | 0.20                                                                              | 0.20                                                                              |                                                                                   | 0.20                                                                              | 0.20                                                                              |                                                                                   | 0.55                                                                               | 0.49                                                                                |                                                                                     | 0.46                                                                                | 0.37                                                                                |                                                                                     |
| v/c Ratio               | 0.38                                                                              | 0.40                                                                              |                                                                                   | 0.13                                                                              | 0.18                                                                              |                                                                                   | 0.32                                                                               | 0.48                                                                                |                                                                                     | 0.11                                                                                | 0.64                                                                                |                                                                                     |
| Control Delay           | 21.8                                                                              | 9.3                                                                               |                                                                                   | 17.8                                                                              | 9.5                                                                               |                                                                                   | 7.4                                                                                | 11.1                                                                                |                                                                                     | 6.1                                                                                 | 16.4                                                                                |                                                                                     |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             | 21.8                                                                              | 9.3                                                                               |                                                                                   | 17.8                                                                              | 9.5                                                                               |                                                                                   | 7.4                                                                                | 11.1                                                                                |                                                                                     | 6.1                                                                                 | 16.4                                                                                |                                                                                     |
| LOS                     | C                                                                                 | A                                                                                 |                                                                                   | B                                                                                 | A                                                                                 |                                                                                   | A                                                                                  | B                                                                                   |                                                                                     | A                                                                                   | B                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 13.9                                                                              |                                                                                   |                                                                                   | 12.2                                                                              |                                                                                   |                                                                                    | 10.5                                                                                |                                                                                     |                                                                                     | 15.9                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | B                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |

## Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 45.3

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 13.1

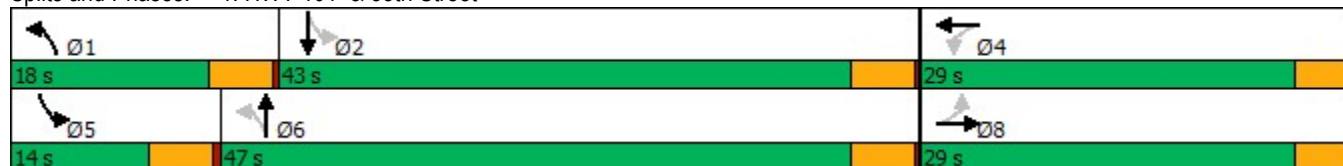
Intersection LOS: B

Intersection Capacity Utilization 59.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: HWY 101 & 35th Street
























# 2026 PM DESIGN HOUR NO-BUILD CONDITIONS

## HCM Signalized Intersection Capacity Analysis

1: HWY 101 & 35th Street

06/15/2020

















|                                   |  |  |  |  |  |  |   |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                          | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Traffic Volume (vph)              | 89                                                                                | 31                                                                                | 120                                                                               | 28                                                                                | 15                                                                                | 43                                                                                | 126                                                                                 | 690                                                                                 | 44                                                                                  | 41                                                                                  | 667                                                                                 | 68                                                                                  |
| Future Volume (vph)               | 89                                                                                | 31                                                                                | 120                                                                               | 28                                                                                | 15                                                                                | 43                                                                                | 126                                                                                 | 690                                                                                 | 44                                                                                  | 41                                                                                  | 667                                                                                 | 68                                                                                  |
| Ideal Flow (vphpl)                | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Total Lost time (s)               | 4.5                                                                               | 4.5                                                                               |                                                                                   | 4.5                                                                               | 4.5                                                                               |                                                                                   | 5.3                                                                                 | 5.3                                                                                 |                                                                                     | 5.3                                                                                 | 5.3                                                                                 |                                                                                     |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 0.95                                                                                |                                                                                     | 1.00                                                                                | 0.95                                                                                |                                                                                     |
| Frt                               | 1.00                                                                              | 0.88                                                                              |                                                                                   | 1.00                                                                              | 0.89                                                                              |                                                                                   | 1.00                                                                                | 0.99                                                                                |                                                                                     | 1.00                                                                                | 0.99                                                                                |                                                                                     |
| Flt Protected                     | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                                | 1.00                                                                                |                                                                                     | 0.95                                                                                | 1.00                                                                                |                                                                                     |
| Satd. Flow (prot)                 | 1662                                                                              | 1529                                                                              |                                                                                   | 1662                                                                              | 1555                                                                              |                                                                                   | 1662                                                                                | 3291                                                                                |                                                                                     | 1662                                                                                | 3279                                                                                |                                                                                     |
| Flt Permitted                     | 0.72                                                                              | 1.00                                                                              |                                                                                   | 0.66                                                                              | 1.00                                                                              |                                                                                   | 0.25                                                                                | 1.00                                                                                |                                                                                     | 0.36                                                                                | 1.00                                                                                |                                                                                     |
| Satd. Flow (perm)                 | 1254                                                                              | 1529                                                                              |                                                                                   | 1146                                                                              | 1555                                                                              |                                                                                   | 435                                                                                 | 3291                                                                                |                                                                                     | 623                                                                                 | 3279                                                                                |                                                                                     |
| Peak-hour factor, PHF             | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Adj. Flow (vph)                   | 95                                                                                | 33                                                                                | 128                                                                               | 30                                                                                | 16                                                                                | 46                                                                                | 134                                                                                 | 734                                                                                 | 47                                                                                  | 44                                                                                  | 710                                                                                 | 72                                                                                  |
| RTOR Reduction (vph)              | 0                                                                                 | 104                                                                               | 0                                                                                 | 0                                                                                 | 37                                                                                | 0                                                                                 | 0                                                                                   | 5                                                                                   | 0                                                                                   | 0                                                                                   | 9                                                                                   | 0                                                                                   |
| Lane Group Flow (vph)             | 95                                                                                | 57                                                                                | 0                                                                                 | 30                                                                                | 25                                                                                | 0                                                                                 | 134                                                                                 | 776                                                                                 | 0                                                                                   | 44                                                                                  | 773                                                                                 | 0                                                                                   |
| Heavy Vehicles (%)                | 0%                                                                                | 0%                                                                                | 1%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                  | 0%                                                                                  | 2%                                                                                  | 0%                                                                                  | 0%                                                                                  | 0%                                                                                  |
| Turn Type                         | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | pm+pt                                                                               | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases                  |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Permitted Phases                  | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 6                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     |
| Actuated Green, G (s)             | 9.4                                                                               | 9.4                                                                               |                                                                                   | 9.4                                                                               | 9.4                                                                               |                                                                                   | 28.5                                                                                | 22.9                                                                                |                                                                                     | 21.7                                                                                | 19.5                                                                                |                                                                                     |
| Effective Green, g (s)            | 8.9                                                                               | 8.9                                                                               |                                                                                   | 8.9                                                                               | 8.9                                                                               |                                                                                   | 27.5                                                                                | 22.4                                                                                |                                                                                     | 20.7                                                                                | 19.0                                                                                |                                                                                     |
| Actuated g/C Ratio                | 0.19                                                                              | 0.19                                                                              |                                                                                   | 0.19                                                                              | 0.19                                                                              |                                                                                   | 0.57                                                                                | 0.47                                                                                |                                                                                     | 0.43                                                                                | 0.40                                                                                |                                                                                     |
| Clearance Time (s)                | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.8                                                                                 | 4.8                                                                                 |                                                                                     | 4.8                                                                                 | 4.8                                                                                 |                                                                                     |
| Vehicle Extension (s)             | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                                 | 2.5                                                                                 |                                                                                     | 2.5                                                                                 | 2.5                                                                                 |                                                                                     |
| Lane Grp Cap (vph)                | 232                                                                               | 282                                                                               |                                                                                   | 212                                                                               | 287                                                                               |                                                                                   | 378                                                                                 | 1532                                                                                |                                                                                     | 304                                                                                 | 1295                                                                                |                                                                                     |
| v/s Ratio Prot                    |                                                                                   | 0.04                                                                              |                                                                                   |                                                                                   | 0.02                                                                              |                                                                                   | c0.04                                                                               | c0.24                                                                               |                                                                                     | 0.01                                                                                | c0.24                                                                               |                                                                                     |
| v/s Ratio Perm                    | c0.08                                                                             |                                                                                   |                                                                                   | 0.03                                                                              |                                                                                   |                                                                                   | 0.16                                                                                |                                                                                     |                                                                                     | 0.06                                                                                |                                                                                     |                                                                                     |
| v/c Ratio                         | 0.41                                                                              | 0.20                                                                              |                                                                                   | 0.14                                                                              | 0.09                                                                              |                                                                                   | 0.35                                                                                | 0.51                                                                                |                                                                                     | 0.14                                                                                | 0.60                                                                                |                                                                                     |
| Uniform Delay, d1                 | 17.3                                                                              | 16.6                                                                              |                                                                                   | 16.4                                                                              | 16.2                                                                              |                                                                                   | 5.4                                                                                 | 9.0                                                                                 |                                                                                     | 8.0                                                                                 | 11.5                                                                                |                                                                                     |
| Progression Factor                | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     |
| Incremental Delay, d2             | 0.9                                                                               | 0.3                                                                               |                                                                                   | 0.2                                                                               | 0.1                                                                               |                                                                                   | 0.4                                                                                 | 0.2                                                                                 |                                                                                     | 0.2                                                                                 | 0.6                                                                                 |                                                                                     |
| Delay (s)                         | 18.1                                                                              | 16.8                                                                              |                                                                                   | 16.6                                                                              | 16.3                                                                              |                                                                                   | 5.8                                                                                 | 9.2                                                                                 |                                                                                     | 8.2                                                                                 | 12.1                                                                                |                                                                                     |
| Level of Service                  | B                                                                                 | B                                                                                 |                                                                                   | B                                                                                 | B                                                                                 |                                                                                   | A                                                                                   | A                                                                                   |                                                                                     | A                                                                                   | B                                                                                   |                                                                                     |
| Approach Delay (s)                |                                                                                   | 17.3                                                                              |                                                                                   |                                                                                   | 16.4                                                                              |                                                                                   |                                                                                     | 8.7                                                                                 |                                                                                     |                                                                                     | 11.9                                                                                |                                                                                     |
| Approach LOS                      |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                     | A                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |
| <b>Intersection Summary</b>       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2000 Control Delay            |                                                                                   |                                                                                   | 11.4                                                                              |                                                                                   |                                                                                   | HCM 2000 Level of Service                                                         |                                                                                     |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |
| HCM 2000 Volume to Capacity ratio |                                                                                   |                                                                                   | 0.52                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Actuated Cycle Length (s)         |                                                                                   |                                                                                   | 48.1                                                                              |                                                                                   |                                                                                   | Sum of lost time (s)                                                              |                                                                                     |                                                                                     | 15.1                                                                                |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization |                                                                                   |                                                                                   | 59.4%                                                                             |                                                                                   |                                                                                   | ICU Level of Service                                                              |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min)             |                                                                                   |                                                                                   | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| c Critical Lane Group             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# 2026 PM DESIGN HOUR NO-BUILD CONDITIONS

## Lanes, Volumes, Timings

### 2: REDWOOD ST/Site & 35th Street

06/15/2020

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)       | 0                                                                                 | 59                                                                                | 57                                                                                | 29                                                                                | 46                                                                                | 0                                                                                 | 40                                                                                 | 0                                                                                   | 17                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Future Volume (vph)        | 0                                                                                 | 59                                                                                | 57                                                                                | 29                                                                                | 46                                                                                | 0                                                                                 | 40                                                                                 | 0                                                                                   | 17                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Ideal Flow (vphpl)         | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                               | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Frt                        |                                                                                   | 0.933                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.959                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Flt Protected              |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.981                                                                             |                                                                                   |                                                                                    | 0.966                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 0                                                                                 | 1633                                                                              | 0                                                                                 | 0                                                                                 | 1717                                                                              | 0                                                                                 | 0                                                                                  | 1621                                                                                | 0                                                                                   | 0                                                                                   | 1750                                                                                | 0                                                                                   |
| Flt Permitted              |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.981                                                                             |                                                                                   |                                                                                    | 0.966                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 0                                                                                 | 1633                                                                              | 0                                                                                 | 0                                                                                 | 1717                                                                              | 0                                                                                 | 0                                                                                  | 1621                                                                                | 0                                                                                   | 0                                                                                   | 1750                                                                                | 0                                                                                   |
| Link Speed (mph)           |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                    | 25                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 317                                                                               |                                                                                   |                                                                                   | 225                                                                               |                                                                                   |                                                                                    | 457                                                                                 |                                                                                     |                                                                                     | 251                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 8.6                                                                               |                                                                                   |                                                                                   | 6.1                                                                               |                                                                                   |                                                                                    | 12.5                                                                                |                                                                                     |                                                                                     | 5.7                                                                                 |                                                                                     |
| Peak Hour Factor           | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                               | 0.82                                                                                | 0.82                                                                                | 0.82                                                                                | 0.82                                                                                | 0.82                                                                                |
| Adj. Flow (vph)            | 0                                                                                 | 72                                                                                | 70                                                                                | 35                                                                                | 56                                                                                | 0                                                                                 | 49                                                                                 | 0                                                                                   | 21                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 0                                                                                 | 142                                                                               | 0                                                                                 | 0                                                                                 | 91                                                                                | 0                                                                                 | 0                                                                                  | 70                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 35                                                                                  |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                    | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                               | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                |
| Sign Control               |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |                                                                                   |                                                                                    | Stop                                                                                |                                                                                     |                                                                                     | Stop                                                                                |                                                                                     |

#### Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 21.2% ICU Level of Service A





Analysis Period (min) 15

# 2026 PM DESIGN HOUR NO-BUILD CONDITIONS

HCM 2010 TWSC

2: REDWOOD ST/Site & 35th Street

06/15/2020










| Intersection             |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
|--------------------------|--------|-----------------------------------------------------------------------------------|------|--------|-----------------------------------------------------------------------------------|------|--------|-----------------------------------------------------------------------------------|------|--------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 3.2    |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
| Movement                 | EBL    | EBT                                                                               | EBR  | WBL    | WBT                                                                               | WBR  | NBL    | NBT                                                                               | NBR  | SBL    | SBT                                                                                 | SBR  |
| Lane Configurations      |        |  |      |        |  |      |        |  |      |        |  |      |
| Traffic Vol, veh/h       | 0      | 59                                                                                | 57   | 29     | 46                                                                                | 0    | 40     | 0                                                                                 | 17   | 0      | 0                                                                                   | 0    |
| Future Vol, veh/h        | 0      | 59                                                                                | 57   | 29     | 46                                                                                | 0    | 40     | 0                                                                                 | 17   | 0      | 0                                                                                   | 0    |
| Conflicting Peds, #/hr   | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0    | 0      | 0                                                                                   | 0    |
| Sign Control             | Free   | Free                                                                              | Free | Free   | Free                                                                              | Free | Stop   | Stop                                                                              | Stop | Stop   | Stop                                                                                | Stop |
| RT Channelized           | -      | -                                                                                 | None | -      | -                                                                                 | None | -      | -                                                                                 | None | -      | -                                                                                   | None |
| Storage Length           | -      | -                                                                                 | -    | -      | -                                                                                 | -    | -      | -                                                                                 | -    | -      | -                                                                                   | -    |
| Veh in Median Storage, # | -      | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | 0                                                                                   | -    |
| Grade, %                 | -      | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | 0                                                                                   | -    |
| Peak Hour Factor         | 82     | 82                                                                                | 82   | 82     | 82                                                                                | 82   | 82     | 82                                                                                | 82   | 82     | 82                                                                                  | 82   |
| Heavy Vehicles, %        | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0    | 0      | 0                                                                                   | 0    |
| Mvmt Flow                | 0      | 72                                                                                | 70   | 35     | 56                                                                                | 0    | 49     | 0                                                                                 | 21   | 0      | 0                                                                                   | 0    |
|                          |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
| Major/Minor              | Major1 |                                                                                   |      | Major2 |                                                                                   |      | Minor1 |                                                                                   |      | Minor2 |                                                                                     |      |
| Conflicting Flow All     | 56     | 0                                                                                 | 0    | 142    | 0                                                                                 | 0    | 233    | 233                                                                               | 107  | 244    | 268                                                                                 | 56   |
| Stage 1                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 107    | 107                                                                               | -    | 126    | 126                                                                                 | -    |
| Stage 2                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 126    | 126                                                                               | -    | 118    | 142                                                                                 | -    |
| Critical Hdwy            | 4.1    | -                                                                                 | -    | 4.1    | -                                                                                 | -    | 7.1    | 6.5                                                                               | 6.2  | 7.1    | 6.5                                                                                 | 6.2  |
| Critical Hdwy Stg 1      | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 6.1    | 5.5                                                                               | -    | 6.1    | 5.5                                                                                 | -    |
| Critical Hdwy Stg 2      | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 6.1    | 5.5                                                                               | -    | 6.1    | 5.5                                                                                 | -    |
| Follow-up Hdwy           | 2.2    | -                                                                                 | -    | 2.2    | -                                                                                 | -    | 3.5    | 4                                                                                 | 3.3  | 3.5    | 4                                                                                   | 3.3  |
| Pot Cap-1 Maneuver       | 1562   | -                                                                                 | -    | 1453   | -                                                                                 | -    | 726    | 671                                                                               | 953  | 714    | 641                                                                                 | 1016 |
| Stage 1                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 903    | 811                                                                               | -    | 883    | 796                                                                                 | -    |
| Stage 2                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 883    | 796                                                                               | -    | 891    | 783                                                                                 | -    |
| Platoon blocked, %       |        | -                                                                                 | -    |        | -                                                                                 | -    |        |                                                                                   |      |        |                                                                                     |      |
| Mov Cap-1 Maneuver       | 1562   | -                                                                                 | -    | 1453   | -                                                                                 | -    | 712    | 654                                                                               | 953  | 685    | 625                                                                                 | 1016 |
| Mov Cap-2 Maneuver       | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 712    | 654                                                                               | -    | 685    | 625                                                                                 | -    |
| Stage 1                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 903    | 811                                                                               | -    | 883    | 776                                                                                 | -    |
| Stage 2                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 861    | 776                                                                               | -    | 872    | 783                                                                                 | -    |
|                          |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
| Approach                 | EB     |                                                                                   |      | WB     |                                                                                   |      | NB     |                                                                                   |      | SB     |                                                                                     |      |
| HCM Control Delay, s     | 0      |                                                                                   |      | 2.9    |                                                                                   |      | 10.1   |                                                                                   |      | 0      |                                                                                     |      |
| HCM LOS                  |        |                                                                                   |      |        |                                                                                   |      | B      |                                                                                   |      | A      |                                                                                     |      |
|                          |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
| Minor Lane/Major Mvmt    | NBLn1  | EBL                                                                               | EBT  | EBR    | WBL                                                                               | WBT  | WBR    | SBLn1                                                                             |      |        |                                                                                     |      |
| Capacity (veh/h)         | 770    | 1562                                                                              | -    | -      | 1453                                                                              | -    | -      | -                                                                                 |      |        |                                                                                     |      |
| HCM Lane V/C Ratio       | 0.09   | -                                                                                 | -    | -      | 0.024                                                                             | -    | -      | -                                                                                 |      |        |                                                                                     |      |
| HCM Control Delay (s)    | 10.1   | 0                                                                                 | -    | -      | 7.5                                                                               | 0    | -      | 0                                                                                 |      |        |                                                                                     |      |
| HCM Lane LOS             | B      | A                                                                                 | -    | -      | A                                                                                 | A    | -      | A                                                                                 |      |        |                                                                                     |      |
| HCM 95th %tile Q(veh)    | 0.3    | 0                                                                                 | -    | -      | 0.1                                                                               | -    | -      | -                                                                                 |      |        |                                                                                     |      |

# 2026 PM DESIGN HOUR NO-BUILD CONDITIONS

## Lanes, Volumes, Timings

### 3: HWY 101 & RIRO SITE ACCESS

06/15/2020




|                                   |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                        | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations               |                                                                                   |  |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)              | 0                                                                                 | 0                                                                                 | 822                                                                               | 0                                                                                 | 0                                                                                 | 776                                                                               |
| Future Volume (vph)               | 0                                                                                 | 0                                                                                 | 822                                                                               | 0                                                                                 | 0                                                                                 | 776                                                                               |
| Ideal Flow (vphpl)                | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              |
| Frt                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Flt Protected                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (prot)                 | 0                                                                                 | 1750                                                                              | 3325                                                                              | 0                                                                                 | 0                                                                                 | 3325                                                                              |
| Flt Permitted                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (perm)                 | 0                                                                                 | 1750                                                                              | 3325                                                                              | 0                                                                                 | 0                                                                                 | 3325                                                                              |
| Link Speed (mph)                  | 30                                                                                |                                                                                   | 40                                                                                |                                                                                   |                                                                                   | 40                                                                                |
| Link Distance (ft)                | 243                                                                               |                                                                                   | 716                                                                               |                                                                                   |                                                                                   | 923                                                                               |
| Travel Time (s)                   | 5.5                                                                               |                                                                                   | 12.2                                                                              |                                                                                   |                                                                                   | 15.7                                                                              |
| Peak Hour Factor                  | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              |
| Adj. Flow (vph)                   | 0                                                                                 | 0                                                                                 | 874                                                                               | 0                                                                                 | 0                                                                                 | 826                                                                               |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)             | 0                                                                                 | 0                                                                                 | 874                                                                               | 0                                                                                 | 0                                                                                 | 826                                                                               |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment                    | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              |
| Median Width(ft)                  | 0                                                                                 |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |
| Link Offset(ft)                   | 0                                                                                 |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |
| Crosswalk Width(ft)               | 12                                                                                |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |
| Two way Left Turn Lane            |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |
| Headway Factor                    | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              |
| Sign Control                      | Stop                                                                              |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Intersection Capacity Utilization | 28.0%                                                                             |                                                                                   |                                                                                   | ICU Level of Service A                                                            |                                                                                   |                                                                                   |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

# 2026 PM DESIGN HOUR NO- BUILD CONDITIONS

HCM 2010 TWSC

3: HWY 101 & RIRO SITE ACCESS

06/15/2020

| Intersection             |        |                                                                                   |                                                                                   |      |      |                                                                                   |
|--------------------------|--------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 0      |                                                                                   |                                                                                   |      |      |                                                                                   |
| Movement                 | WBL    | WBR                                                                               | NBT                                                                               | NBR  | SBL  | SBT                                                                               |
| Lane Configurations      |        |  |  |      |      |  |
| Traffic Vol, veh/h       | 0      | 0                                                                                 | 822                                                                               | 0    | 0    | 776                                                                               |
| Future Vol, veh/h        | 0      | 0                                                                                 | 822                                                                               | 0    | 0    | 776                                                                               |
| Conflicting Peds, #/hr   | 0      | 0                                                                                 | 0                                                                                 | 0    | 0    | 0                                                                                 |
| Sign Control             | Stop   | Stop                                                                              | Free                                                                              | Free | Free | Free                                                                              |
| RT Channelized           | -      | None                                                                              | -                                                                                 | None | -    | None                                                                              |
| Storage Length           | -      | 0                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Veh in Median Storage, # | 0      | -                                                                                 | 0                                                                                 | -    | -    | 0                                                                                 |
| Grade, %                 | 0      | -                                                                                 | 0                                                                                 | -    | -    | 0                                                                                 |
| Peak Hour Factor         | 94     | 94                                                                                | 94                                                                                | 94   | 94   | 94                                                                                |
| Heavy Vehicles, %        | 0      | 0                                                                                 | 0                                                                                 | 0    | 0    | 0                                                                                 |
| Mvmt Flow                | 0      | 0                                                                                 | 874                                                                               | 0    | 0    | 826                                                                               |
| Major/Minor              | Minor1 | Major1                                                                            | Major2                                                                            |      |      |                                                                                   |
| Conflicting Flow All     | -      | 437                                                                               | 0                                                                                 | 0    | -    | -                                                                                 |
| Stage 1                  | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Stage 2                  | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Critical Hdwy            | -      | 6.9                                                                               | -                                                                                 | -    | -    | -                                                                                 |
| Critical Hdwy Stg 1      | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Critical Hdwy Stg 2      | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Follow-up Hdwy           | -      | 3.3                                                                               | -                                                                                 | -    | -    | -                                                                                 |
| Pot Cap-1 Maneuver       | 0      | 573                                                                               | -                                                                                 | -    | 0    | -                                                                                 |
| Stage 1                  | 0      | -                                                                                 | -                                                                                 | -    | 0    | -                                                                                 |
| Stage 2                  | 0      | -                                                                                 | -                                                                                 | -    | 0    | -                                                                                 |
| Platoon blocked, %       |        |                                                                                   | -                                                                                 | -    |      | -                                                                                 |
| Mov Cap-1 Maneuver       | -      | 573                                                                               | -                                                                                 | -    | -    | -                                                                                 |
| Mov Cap-2 Maneuver       | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Stage 1                  | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Stage 2                  | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Approach                 | WB     | NB                                                                                | SB                                                                                |      |      |                                                                                   |
| HCM Control Delay, s     | 0      | 0                                                                                 | 0                                                                                 |      |      |                                                                                   |
| HCM LOS                  | A      |                                                                                   |                                                                                   |      |      |                                                                                   |
| Minor Lane/Major Mvmt    | NBT    | NBRWBLn1                                                                          | SBT                                                                               |      |      |                                                                                   |
| Capacity (veh/h)         | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| HCM Lane V/C Ratio       | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| HCM Control Delay (s)    | -      | -                                                                                 | 0                                                                                 | -    | -    | -                                                                                 |
| HCM Lane LOS             | -      | -                                                                                 | A                                                                                 | -    | -    | -                                                                                 |
| HCM 95th %tile Q(veh)    | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |

# **APPENDIX H**






















## **Build SYNCHRO Performance Calculations**



# 2021 AM DESIGN HOUR BUILD CONDITIONS

Lanes, Volumes, Timings  
1: HWY 101 & 35th Street

06/18/2020

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Traffic Volume (vph)       | 73                                                                                | 17                                                                                | 102                                                                               | 56                                                                                | 31                                                                                | 31                                                                                | 43                                                                                  | 340                                                                                 | 26                                                                                  | 48                                                                                  | 358                                                                                 | 45                                                                                  |
| Future Volume (vph)        | 73                                                                                | 17                                                                                | 102                                                                               | 56                                                                                | 31                                                                                | 31                                                                                | 43                                                                                  | 340                                                                                 | 26                                                                                  | 48                                                                                  | 358                                                                                 | 45                                                                                  |
| Ideal Flow (vphpl)         | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Storage Length (ft)        | 110                                                                               |                                                                                   | 0                                                                                 | 141                                                                               |                                                                                   | 0                                                                                 | 146                                                                                 |                                                                                     | 0                                                                                   | 91                                                                                  |                                                                                     | 0                                                                                   |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)          | 100                                                                               |                                                                                   |                                                                                   | 55                                                                                |                                                                                   |                                                                                   | 66                                                                                  |                                                                                     |                                                                                     | 54                                                                                  |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                |
| Frt                        |                                                                                   | 0.872                                                                             |                                                                                   |                                                                                   | 0.925                                                                             |                                                                                   |                                                                                     | 0.989                                                                               |                                                                                     |                                                                                     | 0.983                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1662                                                                              | 1513                                                                              | 0                                                                                 | 1662                                                                              | 1619                                                                              | 0                                                                                 | 1662                                                                                | 3199                                                                                | 0                                                                                   | 1662                                                                                | 3204                                                                                | 0                                                                                   |
| Flt Permitted              | 0.705                                                                             |                                                                                   |                                                                                   | 0.660                                                                             |                                                                                   |                                                                                   | 0.461                                                                               |                                                                                     |                                                                                     | 0.475                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 1234                                                                              | 1513                                                                              | 0                                                                                 | 1155                                                                              | 1619                                                                              | 0                                                                                 | 807                                                                                 | 3199                                                                                | 0                                                                                   | 831                                                                                 | 3204                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 131                                                                               |                                                                                   |                                                                                   | 40                                                                                |                                                                                   |                                                                                     | 10                                                                                  |                                                                                     |                                                                                     | 17                                                                                  |                                                                                     |
| Link Speed (mph)           |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                     | 40                                                                                  |                                                                                     |                                                                                     | 40                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 499                                                                               |                                                                                   |                                                                                   | 317                                                                               |                                                                                   |                                                                                     | 925                                                                                 |                                                                                     |                                                                                     | 716                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 13.6                                                                              |                                                                                   |                                                                                   | 8.6                                                                               |                                                                                   |                                                                                     | 15.8                                                                                |                                                                                     |                                                                                     | 12.2                                                                                |                                                                                     |
| Peak Hour Factor           | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                |
| Heavy Vehicles (%)         | 0%                                                                                | 0%                                                                                | 1%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                  | 3%                                                                                  | 0%                                                                                  | 0%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 94                                                                                | 22                                                                                | 131                                                                               | 72                                                                                | 40                                                                                | 40                                                                                | 55                                                                                  | 436                                                                                 | 33                                                                                  | 62                                                                                  | 459                                                                                 | 58                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 94                                                                                | 153                                                                               | 0                                                                                 | 72                                                                                | 80                                                                                | 0                                                                                 | 55                                                                                  | 469                                                                                 | 0                                                                                   | 62                                                                                  | 517                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |
| Headway Factor             | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                |
| Number of Detectors        | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 2                                                                                   |                                                                                     | 2                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Side St                                                                           | Side St                                                                           |                                                                                   | Side St                                                                           | Side St                                                                           |                                                                                   | Left                                                                                |                                                                                     |                                                                                     | Left                                                                                |                                                                                     |                                                                                     |
| Leading Detector (ft)      | 78                                                                                | 78                                                                                |                                                                                   | 78                                                                                | 78                                                                                |                                                                                   | 78                                                                                  | 223                                                                                 |                                                                                     | 78                                                                                  | 223                                                                                 |                                                                                     |
| Trailing Detector (ft)     | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 157                                                                                 |                                                                                     | 2                                                                                   | 157                                                                                 |                                                                                     |
| Detector 1 Position(ft)    | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 157                                                                                 |                                                                                     | 2                                                                                   | 157                                                                                 |                                                                                     |
| Detector 1 Size(ft)        | 16                                                                                | 16                                                                                |                                                                                   | 16                                                                                | 16                                                                                |                                                                                   | 16                                                                                  | 6                                                                                   |                                                                                     | 16                                                                                  | 6                                                                                   |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(ft)    | 72                                                                                | 72                                                                                |                                                                                   | 72                                                                                | 72                                                                                |                                                                                   | 72                                                                                  | 217                                                                                 |                                                                                     | 72                                                                                  | 217                                                                                 |                                                                                     |
| Detector 2 Size(ft)        | 6                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                   | 6                                                                                   |                                                                                     | 6                                                                                   | 6                                                                                   |                                                                                     |
| Detector 2 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | pm+pt                                                                               | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases           |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Permitted Phases           | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 6                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     |

# 2021 AM DESIGN HOUR BUILD CONDITIONS

Lanes, Volumes, Timings  
1: HWY 101 & 35th Street

06/18/2020

| Lane Group              | EBL   | EBT   | EBR | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Detector Phase          | 8     | 8     |     | 4     | 4     |     | 1     | 6     |     | 5     | 2     |     |
| Switch Phase            |       |       |     |       |       |     |       |       |     |       |       |     |
| Minimum Initial (s)     | 4.0   | 4.0   |     | 4.0   | 4.0   |     | 4.0   | 4.0   |     | 4.0   | 4.0   |     |
| Minimum Split (s)       | 28.0  | 28.0  |     | 28.0  | 28.0  |     | 13.0  | 22.8  |     | 13.0  | 22.8  |     |
| Total Split (s)         | 34.0  | 34.0  |     | 34.0  | 34.0  |     | 17.0  | 41.0  |     | 15.0  | 39.0  |     |
| Total Split (%)         | 37.8% | 37.8% |     | 37.8% | 37.8% |     | 18.9% | 45.6% |     | 16.7% | 43.3% |     |
| Maximum Green (s)       | 30.0  | 30.0  |     | 30.0  | 30.0  |     | 12.2  | 36.2  |     | 10.2  | 34.2  |     |
| Yellow Time (s)         | 3.5   | 3.5   |     | 3.5   | 3.5   |     | 4.3   | 4.3   |     | 4.3   | 4.3   |     |
| All-Red Time (s)        | 0.5   | 0.5   |     | 0.5   | 0.5   |     | 0.5   | 0.5   |     | 0.5   | 0.5   |     |
| Lost Time Adjust (s)    | 0.5   | 0.5   |     | 0.5   | 0.5   |     | 0.5   | 0.5   |     | 0.5   | 0.5   |     |
| Total Lost Time (s)     | 4.5   | 4.5   |     | 4.5   | 4.5   |     | 5.3   | 5.3   |     | 5.3   | 5.3   |     |
| Lead/Lag                |       |       |     |       |       |     | Lead  | Lag   |     | Lead  | Lag   |     |
| Lead-Lag Optimize?      |       |       |     |       |       |     | Yes   | Yes   |     | Yes   | Yes   |     |
| Vehicle Extension (s)   | 2.5   | 2.5   |     | 2.5   | 2.5   |     | 2.5   | 2.5   |     | 2.5   | 2.5   |     |
| Minimum Gap (s)         | 2.0   | 2.0   |     | 2.0   | 2.0   |     | 2.0   | 2.0   |     | 2.0   | 2.0   |     |
| Time Before Reduce (s)  | 8.0   | 8.0   |     | 8.0   | 8.0   |     | 8.0   | 8.0   |     | 8.0   | 8.0   |     |
| Time To Reduce (s)      | 4.0   | 4.0   |     | 4.0   | 4.0   |     | 4.0   | 4.0   |     | 4.0   | 4.0   |     |
| Recall Mode             | None  | None  |     | None  | None  |     | None  | Min   |     | None  | Min   |     |
| Walk Time (s)           | 7.0   | 7.0   |     | 7.0   | 7.0   |     |       | 7.0   |     |       | 7.0   |     |
| Flash Dont Walk (s)     | 17.0  | 17.0  |     | 17.0  | 17.0  |     |       | 11.0  |     |       | 11.0  |     |
| Pedestrian Calls (#/hr) | 0     | 0     |     | 0     | 0     |     |       | 0     |     |       | 0     |     |
| Act Effect Green (s)    | 7.8   | 7.8   |     | 7.7   | 7.7   |     | 13.3  | 12.9  |     | 13.6  | 13.1  |     |
| Actuated g/C Ratio      | 0.25  | 0.25  |     | 0.25  | 0.25  |     | 0.43  | 0.42  |     | 0.44  | 0.42  |     |
| v/c Ratio               | 0.30  | 0.32  |     | 0.25  | 0.19  |     | 0.11  | 0.35  |     | 0.12  | 0.38  |     |
| Control Delay           | 14.7  | 6.5   |     | 14.2  | 8.7   |     | 6.1   | 11.2  |     | 6.0   | 11.0  |     |
| Queue Delay             | 0.0   | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Delay             | 14.7  | 6.5   |     | 14.2  | 8.7   |     | 6.1   | 11.2  |     | 6.0   | 11.0  |     |
| LOS                     | B     | A     |     | B     | A     |     | A     | B     |     | A     | B     |     |
| Approach Delay          |       | 9.6   |     |       | 11.3  |     |       | 10.7  |     |       | 10.5  |     |
| Approach LOS            |       | A     |     |       | B     |     |       | B     |     |       | B     |     |

## Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 31

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.38

Intersection Signal Delay: 10.5

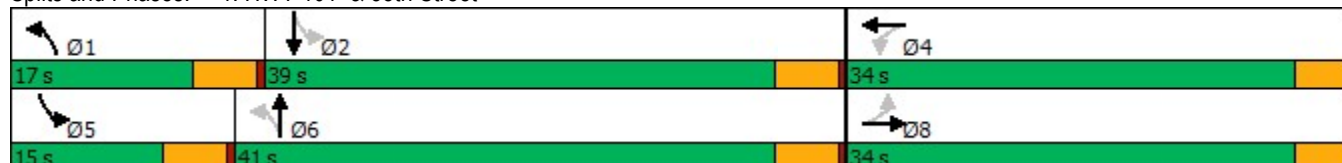
Intersection LOS: B

Intersection Capacity Utilization 39.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: HWY 101 & 35th Street
























# 2021 AM DESIGN HOUR BUILD CONDITIONS

## HCM Signalized Intersection Capacity Analysis

1: HWY 101 & 35th Street

06/18/2020

















|                                   |  |  |  |  |  |  |   |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                          | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Traffic Volume (vph)              | 73                                                                                | 17                                                                                | 102                                                                               | 56                                                                                | 31                                                                                | 31                                                                                | 43                                                                                  | 340                                                                                 | 26                                                                                  | 48                                                                                  | 358                                                                                 | 45                                                                                  |
| Future Volume (vph)               | 73                                                                                | 17                                                                                | 102                                                                               | 56                                                                                | 31                                                                                | 31                                                                                | 43                                                                                  | 340                                                                                 | 26                                                                                  | 48                                                                                  | 358                                                                                 | 45                                                                                  |
| Ideal Flow (vphpl)                | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Total Lost time (s)               | 4.5                                                                               | 4.5                                                                               |                                                                                   | 4.5                                                                               | 4.5                                                                               |                                                                                   | 5.3                                                                                 | 5.3                                                                                 |                                                                                     | 5.3                                                                                 | 5.3                                                                                 |                                                                                     |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 0.95                                                                                |                                                                                     | 1.00                                                                                | 0.95                                                                                |                                                                                     |
| Frt                               | 1.00                                                                              | 0.87                                                                              |                                                                                   | 1.00                                                                              | 0.93                                                                              |                                                                                   | 1.00                                                                                | 0.99                                                                                |                                                                                     | 1.00                                                                                | 0.98                                                                                |                                                                                     |
| Flt Protected                     | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                                | 1.00                                                                                |                                                                                     | 0.95                                                                                | 1.00                                                                                |                                                                                     |
| Satd. Flow (prot)                 | 1662                                                                              | 1512                                                                              |                                                                                   | 1662                                                                              | 1619                                                                              |                                                                                   | 1662                                                                                | 3201                                                                                |                                                                                     | 1662                                                                                | 3205                                                                                |                                                                                     |
| Flt Permitted                     | 0.70                                                                              | 1.00                                                                              |                                                                                   | 0.66                                                                              | 1.00                                                                              |                                                                                   | 0.46                                                                                | 1.00                                                                                |                                                                                     | 0.47                                                                                | 1.00                                                                                |                                                                                     |
| Satd. Flow (perm)                 | 1234                                                                              | 1512                                                                              |                                                                                   | 1155                                                                              | 1619                                                                              |                                                                                   | 807                                                                                 | 3201                                                                                |                                                                                     | 831                                                                                 | 3205                                                                                |                                                                                     |
| Peak-hour factor, PHF             | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                |
| Adj. Flow (vph)                   | 94                                                                                | 22                                                                                | 131                                                                               | 72                                                                                | 40                                                                                | 40                                                                                | 55                                                                                  | 436                                                                                 | 33                                                                                  | 62                                                                                  | 459                                                                                 | 58                                                                                  |
| RTOR Reduction (vph)              | 0                                                                                 | 107                                                                               | 0                                                                                 | 0                                                                                 | 33                                                                                | 0                                                                                 | 0                                                                                   | 7                                                                                   | 0                                                                                   | 0                                                                                   | 11                                                                                  | 0                                                                                   |
| Lane Group Flow (vph)             | 94                                                                                | 46                                                                                | 0                                                                                 | 72                                                                                | 47                                                                                | 0                                                                                 | 55                                                                                  | 462                                                                                 | 0                                                                                   | 62                                                                                  | 506                                                                                 | 0                                                                                   |
| Heavy Vehicles (%)                | 0%                                                                                | 0%                                                                                | 1%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                  | 3%                                                                                  | 0%                                                                                  | 0%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Turn Type                         | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | pm+pt                                                                               | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases                  |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Permitted Phases                  | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 6                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     |
| Actuated Green, G (s)             | 6.9                                                                               | 6.9                                                                               |                                                                                   | 6.9                                                                               | 6.9                                                                               |                                                                                   | 14.0                                                                                | 12.1                                                                                |                                                                                     | 14.4                                                                                | 12.3                                                                                |                                                                                     |
| Effective Green, g (s)            | 6.4                                                                               | 6.4                                                                               |                                                                                   | 6.4                                                                               | 6.4                                                                               |                                                                                   | 13.0                                                                                | 11.6                                                                                |                                                                                     | 13.4                                                                                | 11.8                                                                                |                                                                                     |
| Actuated g/C Ratio                | 0.18                                                                              | 0.18                                                                              |                                                                                   | 0.18                                                                              | 0.18                                                                              |                                                                                   | 0.37                                                                                | 0.33                                                                                |                                                                                     | 0.39                                                                                | 0.34                                                                                |                                                                                     |
| Clearance Time (s)                | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.8                                                                                 | 4.8                                                                                 |                                                                                     | 4.8                                                                                 | 4.8                                                                                 |                                                                                     |
| Vehicle Extension (s)             | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                                 | 2.5                                                                                 |                                                                                     | 2.5                                                                                 | 2.5                                                                                 |                                                                                     |
| Lane Grp Cap (vph)                | 227                                                                               | 278                                                                               |                                                                                   | 213                                                                               | 298                                                                               |                                                                                   | 336                                                                                 | 1070                                                                                |                                                                                     | 359                                                                                 | 1089                                                                                |                                                                                     |
| v/s Ratio Prot                    |                                                                                   | 0.03                                                                              |                                                                                   |                                                                                   | 0.03                                                                              |                                                                                   | 0.01                                                                                | 0.14                                                                                |                                                                                     | c0.01                                                                               | c0.16                                                                               |                                                                                     |
| v/s Ratio Perm                    | c0.08                                                                             |                                                                                   |                                                                                   | 0.06                                                                              |                                                                                   |                                                                                   | 0.05                                                                                |                                                                                     |                                                                                     | 0.06                                                                                |                                                                                     |                                                                                     |
| v/c Ratio                         | 0.41                                                                              | 0.17                                                                              |                                                                                   | 0.34                                                                              | 0.16                                                                              |                                                                                   | 0.16                                                                                | 0.43                                                                                |                                                                                     | 0.17                                                                                | 0.46                                                                                |                                                                                     |
| Uniform Delay, d1                 | 12.5                                                                              | 11.9                                                                              |                                                                                   | 12.3                                                                              | 11.9                                                                              |                                                                                   | 7.0                                                                                 | 9.0                                                                                 |                                                                                     | 6.8                                                                                 | 9.0                                                                                 |                                                                                     |
| Progression Factor                | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     |
| Incremental Delay, d2             | 0.9                                                                               | 0.2                                                                               |                                                                                   | 0.7                                                                               | 0.2                                                                               |                                                                                   | 0.2                                                                                 | 0.2                                                                                 |                                                                                     | 0.2                                                                                 | 0.2                                                                                 |                                                                                     |
| Delay (s)                         | 13.4                                                                              | 12.1                                                                              |                                                                                   | 13.0                                                                              | 12.1                                                                              |                                                                                   | 7.2                                                                                 | 9.2                                                                                 |                                                                                     | 7.0                                                                                 | 9.2                                                                                 |                                                                                     |
| Level of Service                  | B                                                                                 | B                                                                                 |                                                                                   | B                                                                                 | B                                                                                 |                                                                                   | A                                                                                   | A                                                                                   |                                                                                     | A                                                                                   | A                                                                                   |                                                                                     |
| Approach Delay (s)                |                                                                                   | 12.6                                                                              |                                                                                   |                                                                                   | 12.5                                                                              |                                                                                   |                                                                                     | 9.0                                                                                 |                                                                                     |                                                                                     | 9.0                                                                                 |                                                                                     |
| Approach LOS                      |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                     | A                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| <b>Intersection Summary</b>       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2000 Control Delay            |                                                                                   |                                                                                   | 9.9                                                                               |                                                                                   |                                                                                   |                                                                                   | HCM 2000 Level of Service                                                           |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |                                                                                     |
| HCM 2000 Volume to Capacity ratio |                                                                                   |                                                                                   | 0.43                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Actuated Cycle Length (s)         |                                                                                   |                                                                                   | 34.7                                                                              |                                                                                   |                                                                                   |                                                                                   | Sum of lost time (s)                                                                |                                                                                     |                                                                                     | 15.1                                                                                |                                                                                     |                                                                                     |
| Intersection Capacity Utilization |                                                                                   |                                                                                   | 39.3%                                                                             |                                                                                   |                                                                                   |                                                                                   | ICU Level of Service                                                                |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |                                                                                     |
| Analysis Period (min)             |                                                                                   |                                                                                   | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| c Critical Lane Group             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# 2021 AM DESIGN HOUR BUILD CONDITIONS

Lanes, Volumes, Timings

2: REDWOOD ST/Site & 35th Street

06/18/2020

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                        | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)              | 52                                                                                | 20                                                                                | 19                                                                                | 15                                                                                | 48                                                                                | 0                                                                                 | 37                                                                                 | 2                                                                                   | 9                                                                                   | 0                                                                                   | 2                                                                                   | 33                                                                                  |
| Future Volume (vph)               | 52                                                                                | 20                                                                                | 19                                                                                | 15                                                                                | 48                                                                                | 0                                                                                 | 37                                                                                 | 2                                                                                   | 9                                                                                   | 0                                                                                   | 2                                                                                   | 33                                                                                  |
| Ideal Flow (vphpl)                | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                               | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Frt                               |                                                                                   | 0.972                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.974                                                                               |                                                                                     |                                                                                     | 0.874                                                                               |                                                                                     |
| Flt Protected                     |                                                                                   | 0.972                                                                             |                                                                                   |                                                                                   | 0.988                                                                             |                                                                                   |                                                                                    | 0.963                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)                 | 0                                                                                 | 1653                                                                              | 0                                                                                 | 0                                                                                 | 1729                                                                              | 0                                                                                 | 0                                                                                  | 1641                                                                                | 0                                                                                   | 0                                                                                   | 1530                                                                                | 0                                                                                   |
| Flt Permitted                     |                                                                                   | 0.972                                                                             |                                                                                   |                                                                                   | 0.988                                                                             |                                                                                   |                                                                                    | 0.963                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)                 | 0                                                                                 | 1653                                                                              | 0                                                                                 | 0                                                                                 | 1729                                                                              | 0                                                                                 | 0                                                                                  | 1641                                                                                | 0                                                                                   | 0                                                                                   | 1530                                                                                | 0                                                                                   |
| Link Speed (mph)                  |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                    | 25                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)                |                                                                                   | 317                                                                               |                                                                                   |                                                                                   | 493                                                                               |                                                                                   |                                                                                    | 457                                                                                 |                                                                                     |                                                                                     | 274                                                                                 |                                                                                     |
| Travel Time (s)                   |                                                                                   | 8.6                                                                               |                                                                                   |                                                                                   | 13.4                                                                              |                                                                                   |                                                                                    | 12.5                                                                                |                                                                                     |                                                                                     | 6.2                                                                                 |                                                                                     |
| Peak Hour Factor                  | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                               | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                |
| Adj. Flow (vph)                   | 68                                                                                | 26                                                                                | 25                                                                                | 19                                                                                | 62                                                                                | 0                                                                                 | 48                                                                                 | 3                                                                                   | 12                                                                                  | 0                                                                                   | 3                                                                                   | 43                                                                                  |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)             | 0                                                                                 | 119                                                                               | 0                                                                                 | 0                                                                                 | 81                                                                                | 0                                                                                 | 0                                                                                  | 63                                                                                  | 0                                                                                   | 0                                                                                   | 46                                                                                  | 0                                                                                   |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment                    | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)                  |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 35                                                                                  |                                                                                     |
| Crosswalk Width(ft)               |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                    | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Two way Left Turn Lane            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor                    | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                               | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                |
| Sign Control                      |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |                                                                                   |                                                                                    | Stop                                                                                |                                                                                     |                                                                                     | Stop                                                                                |                                                                                     |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization | 28.0%                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   | ICU Level of Service A                                                            |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# 2021 AM DESIGN HOUR BUILD CONDITIONS

HCM 2010 TWSC

2: REDWOOD ST/Site & 35th Street

06/18/2020










| Intersection             |        |       |      |        |       |      |        |       |      |        |      |      |
|--------------------------|--------|-------|------|--------|-------|------|--------|-------|------|--------|------|------|
| Int Delay, s/veh         | 5.6    |       |      |        |       |      |        |       |      |        |      |      |
| Movement                 | EBL    | EBT   | EBR  | WBL    | WBT   | WBR  | NBL    | NBT   | NBR  | SBL    | SBT  | SBR  |
| Lane Configurations      |        | ↕     |      |        | ↕     |      |        | ↕     |      |        | ↕    |      |
| Traffic Vol, veh/h       | 52     | 20    | 19   | 15     | 48    | 0    | 37     | 2     | 9    | 0      | 2    | 33   |
| Future Vol, veh/h        | 52     | 20    | 19   | 15     | 48    | 0    | 37     | 2     | 9    | 0      | 2    | 33   |
| Conflicting Peds, #/hr   | 0      | 0     | 0    | 0      | 0     | 0    | 0      | 0     | 0    | 0      | 0    | 0    |
| Sign Control             | Free   | Free  | Free | Free   | Free  | Free | Stop   | Stop  | Stop | Stop   | Stop | Stop |
| RT Channelized           | -      | -     | None | -      | -     | None | -      | -     | None | -      | -    | None |
| Storage Length           | -      | -     | -    | -      | -     | -    | -      | -     | -    | -      | -    | -    |
| Veh in Median Storage, # | -      | 0     | -    | -      | 0     | -    | -      | 0     | -    | -      | 0    | -    |
| Grade, %                 | -      | 0     | -    | -      | 0     | -    | -      | 0     | -    | -      | 0    | -    |
| Peak Hour Factor         | 77     | 77    | 77   | 77     | 77    | 77   | 77     | 77    | 77   | 77     | 77   | 77   |
| Heavy Vehicles, %        | 0      | 0     | 0    | 0      | 0     | 0    | 0      | 0     | 0    | 0      | 0    | 0    |
| Mvmt Flow                | 68     | 26    | 25   | 19     | 62    | 0    | 48     | 3     | 12   | 0      | 3    | 43   |
|                          |        |       |      |        |       |      |        |       |      |        |      |      |
| Major/Minor              | Major1 |       |      | Major2 |       |      | Minor1 |       |      | Minor2 |      |      |
| Conflicting Flow All     | 62     | 0     | 0    | 51     | 0     | 0    | 298    | 275   | 39   | 282    | 287  | 62   |
| Stage 1                  | -      | -     | -    | -      | -     | -    | 175    | 175   | -    | 100    | 100  | -    |
| Stage 2                  | -      | -     | -    | -      | -     | -    | 123    | 100   | -    | 182    | 187  | -    |
| Critical Hdwy            | 4.1    | -     | -    | 4.1    | -     | -    | 7.1    | 6.5   | 6.2  | 7.1    | 6.5  | 6.2  |
| Critical Hdwy Stg 1      | -      | -     | -    | -      | -     | -    | 6.1    | 5.5   | -    | 6.1    | 5.5  | -    |
| Critical Hdwy Stg 2      | -      | -     | -    | -      | -     | -    | 6.1    | 5.5   | -    | 6.1    | 5.5  | -    |
| Follow-up Hdwy           | 2.2    | -     | -    | 2.2    | -     | -    | 3.5    | 4     | 3.3  | 3.5    | 4    | 3.3  |
| Pot Cap-1 Maneuver       | 1554   | -     | -    | 1568   | -     | -    | 658    | 636   | 1038 | 674    | 626  | 1009 |
| Stage 1                  | -      | -     | -    | -      | -     | -    | 832    | 758   | -    | 911    | 816  | -    |
| Stage 2                  | -      | -     | -    | -      | -     | -    | 886    | 816   | -    | 824    | 749  | -    |
| Platoon blocked, %       |        | -     | -    |        | -     | -    |        |       |      |        |      |      |
| Mov Cap-1 Maneuver       | 1554   | -     | -    | 1568   | -     | -    | 600    | 600   | 1038 | 635    | 590  | 1009 |
| Mov Cap-2 Maneuver       | -      | -     | -    | -      | -     | -    | 600    | 600   | -    | 635    | 590  | -    |
| Stage 1                  | -      | -     | -    | -      | -     | -    | 795    | 724   | -    | 870    | 805  | -    |
| Stage 2                  | -      | -     | -    | -      | -     | -    | 835    | 805   | -    | 775    | 715  | -    |
|                          |        |       |      |        |       |      |        |       |      |        |      |      |
| Approach                 | EB     |       |      | WB     |       |      | NB     |       |      | SB     |      |      |
| HCM Control Delay, s     | 4.2    |       |      | 1.7    |       |      | 11.1   |       |      | 8.9    |      |      |
| HCM LOS                  |        |       |      |        |       |      | B      |       |      | A      |      |      |
|                          |        |       |      |        |       |      |        |       |      |        |      |      |
| Minor Lane/Major Mvmt    | NBLn1  | EBL   | EBT  | EBR    | WBL   | WBT  | WBR    | SBLn1 |      |        |      |      |
| Capacity (veh/h)         | 652    | 1554  | -    | -      | 1568  | -    | -      | 970   |      |        |      |      |
| HCM Lane V/C Ratio       | 0.096  | 0.043 | -    | -      | 0.012 | -    | -      | 0.047 |      |        |      |      |
| HCM Control Delay (s)    | 11.1   | 7.4   | 0    | -      | 7.3   | 0    | -      | 8.9   |      |        |      |      |
| HCM Lane LOS             | B      | A     | A    | -      | A     | A    | -      | A     |      |        |      |      |
| HCM 95th %tile Q(veh)    | 0.3    | 0.1   | -    | -      | 0     | -    | -      | 0.1   |      |        |      |      |

# 2021 AM DESIGN HOUR BUILD CONDITIONS

## Lanes, Volumes, Timings

### 3: HWY 101 & RIRO SITE ACCESS

06/18/2020




|                                   |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                        | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations               |                                                                                   |  |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)              | 0                                                                                 | 24                                                                                | 437                                                                               | 7                                                                                 | 0                                                                                 | 451                                                                               |
| Future Volume (vph)               | 0                                                                                 | 24                                                                                | 437                                                                               | 7                                                                                 | 0                                                                                 | 451                                                                               |
| Ideal Flow (vphpl)                | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              |
| Frt                               |                                                                                   | 0.865                                                                             | 0.998                                                                             |                                                                                   |                                                                                   |                                                                                   |
| Flt Protected                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (prot)                 | 0                                                                                 | 1514                                                                              | 3254                                                                              | 0                                                                                 | 0                                                                                 | 3260                                                                              |
| Flt Permitted                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (perm)                 | 0                                                                                 | 1514                                                                              | 3254                                                                              | 0                                                                                 | 0                                                                                 | 3260                                                                              |
| Link Speed (mph)                  | 30                                                                                |                                                                                   | 40                                                                                |                                                                                   |                                                                                   | 40                                                                                |
| Link Distance (ft)                | 243                                                                               |                                                                                   | 716                                                                               |                                                                                   |                                                                                   | 923                                                                               |
| Travel Time (s)                   | 5.5                                                                               |                                                                                   | 12.2                                                                              |                                                                                   |                                                                                   | 15.7                                                                              |
| Peak Hour Factor                  | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              |
| Heavy Vehicles (%)                | 0%                                                                                | 0%                                                                                | 2%                                                                                | 0%                                                                                | 0%                                                                                | 2%                                                                                |
| Adj. Flow (vph)                   | 0                                                                                 | 29                                                                                | 533                                                                               | 9                                                                                 | 0                                                                                 | 550                                                                               |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)             | 0                                                                                 | 29                                                                                | 542                                                                               | 0                                                                                 | 0                                                                                 | 550                                                                               |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment                    | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              |
| Median Width(ft)                  | 0                                                                                 |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |
| Link Offset(ft)                   | 0                                                                                 |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |
| Crosswalk Width(ft)               | 12                                                                                |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |
| Two way Left Turn Lane            |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |
| Headway Factor                    | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              |
| Sign Control                      | Stop                                                                              |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Intersection Capacity Utilization | 23.4%                                                                             |                                                                                   |                                                                                   | ICU Level of Service A                                                            |                                                                                   |                                                                                   |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

# 2021 AM DESIGN HOUR BUILD CONDITIONS

HCM 2010 TWSC

3: HWY 101 & RIRO SITE ACCESS






















06/18/2020

| Intersection             |        |                                                                                   |                                                                                   |      |      |                                                                                   |
|--------------------------|--------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 0.3    |                                                                                   |                                                                                   |      |      |                                                                                   |
| Movement                 | WBL    | WBR                                                                               | NBT                                                                               | NBR  | SBL  | SBT                                                                               |
| Lane Configurations      |        |  |  |      |      |  |
| Traffic Vol, veh/h       | 0      | 24                                                                                | 437                                                                               | 7    | 0    | 451                                                                               |
| Future Vol, veh/h        | 0      | 24                                                                                | 437                                                                               | 7    | 0    | 451                                                                               |
| Conflicting Peds, #/hr   | 0      | 0                                                                                 | 0                                                                                 | 0    | 0    | 0                                                                                 |
| Sign Control             | Stop   | Stop                                                                              | Free                                                                              | Free | Free | Free                                                                              |
| RT Channelized           | -      | None                                                                              | -                                                                                 | None | -    | None                                                                              |
| Storage Length           | -      | 0                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Veh in Median Storage, # | 0      | -                                                                                 | 0                                                                                 | -    | -    | 0                                                                                 |
| Grade, %                 | 0      | -                                                                                 | 0                                                                                 | -    | -    | 0                                                                                 |
| Peak Hour Factor         | 82     | 82                                                                                | 82                                                                                | 82   | 82   | 82                                                                                |
| Heavy Vehicles, %        | 0      | 0                                                                                 | 2                                                                                 | 0    | 0    | 2                                                                                 |
| Mvmt Flow                | 0      | 29                                                                                | 533                                                                               | 9    | 0    | 550                                                                               |
| Major/Minor              | Minor1 | Major1                                                                            | Major2                                                                            |      |      |                                                                                   |
| Conflicting Flow All     | -      | 271                                                                               | 0                                                                                 | 0    | -    | -                                                                                 |
| Stage 1                  | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Stage 2                  | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Critical Hdwy            | -      | 6.9                                                                               | -                                                                                 | -    | -    | -                                                                                 |
| Critical Hdwy Stg 1      | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Critical Hdwy Stg 2      | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Follow-up Hdwy           | -      | 3.3                                                                               | -                                                                                 | -    | -    | -                                                                                 |
| Pot Cap-1 Maneuver       | 0      | 733                                                                               | -                                                                                 | -    | 0    | -                                                                                 |
| Stage 1                  | 0      | -                                                                                 | -                                                                                 | -    | 0    | -                                                                                 |
| Stage 2                  | 0      | -                                                                                 | -                                                                                 | -    | 0    | -                                                                                 |
| Platoon blocked, %       |        |                                                                                   | -                                                                                 | -    |      | -                                                                                 |
| Mov Cap-1 Maneuver       | -      | 733                                                                               | -                                                                                 | -    | -    | -                                                                                 |
| Mov Cap-2 Maneuver       | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Stage 1                  | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Stage 2                  | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Approach                 | WB     | NB                                                                                | SB                                                                                |      |      |                                                                                   |
| HCM Control Delay, s     | 10.1   | 0                                                                                 | 0                                                                                 |      |      |                                                                                   |
| HCM LOS                  | B      |                                                                                   |                                                                                   |      |      |                                                                                   |
| Minor Lane/Major Mvmt    | NBT    | NBRWBLn1                                                                          | SBT                                                                               |      |      |                                                                                   |
| Capacity (veh/h)         | -      | -                                                                                 | 733                                                                               | -    |      |                                                                                   |
| HCM Lane V/C Ratio       | -      | -                                                                                 | 0.04                                                                              | -    |      |                                                                                   |
| HCM Control Delay (s)    | -      | -                                                                                 | 10.1                                                                              | -    |      |                                                                                   |
| HCM Lane LOS             | -      | -                                                                                 | B                                                                                 | -    |      |                                                                                   |
| HCM 95th %tile Q(veh)    | -      | -                                                                                 | 0.1                                                                               | -    |      |                                                                                   |

# 2021 PM DESIGN HOUR BUILD CONDITIONS

Lanes, Volumes, Timings  
1: HWY 101 & 35th Street

06/18/2020













|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Traffic Volume (vph)       | 89                                                                                | 35                                                                                | 120                                                                               | 50                                                                                | 19                                                                                | 43                                                                                | 126                                                                                 | 683                                                                                 | 62                                                                                  | 62                                                                                  | 654                                                                                 | 68                                                                                  |
| Future Volume (vph)        | 89                                                                                | 35                                                                                | 120                                                                               | 50                                                                                | 19                                                                                | 43                                                                                | 126                                                                                 | 683                                                                                 | 62                                                                                  | 62                                                                                  | 654                                                                                 | 68                                                                                  |
| Ideal Flow (vphpl)         | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Storage Length (ft)        | 110                                                                               |                                                                                   | 0                                                                                 | 141                                                                               |                                                                                   | 0                                                                                 | 146                                                                                 |                                                                                     | 0                                                                                   | 91                                                                                  |                                                                                     | 0                                                                                   |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)          | 100                                                                               |                                                                                   |                                                                                   | 55                                                                                |                                                                                   |                                                                                   | 66                                                                                  |                                                                                     |                                                                                     | 54                                                                                  |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                |
| Frt                        |                                                                                   | 0.884                                                                             |                                                                                   |                                                                                   | 0.895                                                                             |                                                                                   |                                                                                     | 0.988                                                                               |                                                                                     |                                                                                     | 0.986                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1662                                                                              | 1535                                                                              | 0                                                                                 | 1662                                                                              | 1566                                                                              | 0                                                                                 | 1662                                                                                | 3280                                                                                | 0                                                                                   | 1662                                                                                | 3278                                                                                | 0                                                                                   |
| Flt Permitted              | 0.714                                                                             |                                                                                   |                                                                                   | 0.653                                                                             |                                                                                   |                                                                                   | 0.267                                                                               |                                                                                     |                                                                                     | 0.331                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 1250                                                                              | 1535                                                                              | 0                                                                                 | 1143                                                                              | 1566                                                                              | 0                                                                                 | 467                                                                                 | 3280                                                                                | 0                                                                                   | 579                                                                                 | 3278                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 128                                                                               |                                                                                   |                                                                                   | 46                                                                                |                                                                                   |                                                                                     | 14                                                                                  |                                                                                     |                                                                                     | 15                                                                                  |                                                                                     |
| Link Speed (mph)           |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                     | 40                                                                                  |                                                                                     |                                                                                     | 40                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 499                                                                               |                                                                                   |                                                                                   | 317                                                                               |                                                                                   |                                                                                     | 925                                                                                 |                                                                                     |                                                                                     | 716                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 13.6                                                                              |                                                                                   |                                                                                   | 8.6                                                                               |                                                                                   |                                                                                     | 15.8                                                                                |                                                                                     |                                                                                     | 12.2                                                                                |                                                                                     |
| Peak Hour Factor           | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Heavy Vehicles (%)         | 0%                                                                                | 0%                                                                                | 1%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                  | 0%                                                                                  | 2%                                                                                  | 0%                                                                                  | 0%                                                                                  | 0%                                                                                  |
| Adj. Flow (vph)            | 95                                                                                | 37                                                                                | 128                                                                               | 53                                                                                | 20                                                                                | 46                                                                                | 134                                                                                 | 727                                                                                 | 66                                                                                  | 66                                                                                  | 696                                                                                 | 72                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 95                                                                                | 165                                                                               | 0                                                                                 | 53                                                                                | 66                                                                                | 0                                                                                 | 134                                                                                 | 793                                                                                 | 0                                                                                   | 66                                                                                  | 768                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |
| Headway Factor             | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                |
| Number of Detectors        | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 2                                                                                   |                                                                                     | 2                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Side St                                                                           | Side St                                                                           |                                                                                   | Side St                                                                           | Side St                                                                           |                                                                                   | Left                                                                                |                                                                                     |                                                                                     | Left                                                                                |                                                                                     |                                                                                     |
| Leading Detector (ft)      | 78                                                                                | 78                                                                                |                                                                                   | 78                                                                                | 78                                                                                |                                                                                   | 78                                                                                  | 223                                                                                 |                                                                                     | 78                                                                                  | 223                                                                                 |                                                                                     |
| Trailing Detector (ft)     | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 157                                                                                 |                                                                                     | 2                                                                                   | 157                                                                                 |                                                                                     |
| Detector 1 Position(ft)    | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 157                                                                                 |                                                                                     | 2                                                                                   | 157                                                                                 |                                                                                     |
| Detector 1 Size(ft)        | 16                                                                                | 16                                                                                |                                                                                   | 16                                                                                | 16                                                                                |                                                                                   | 16                                                                                  | 6                                                                                   |                                                                                     | 16                                                                                  | 6                                                                                   |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(ft)    | 72                                                                                | 72                                                                                |                                                                                   | 72                                                                                | 72                                                                                |                                                                                   | 72                                                                                  | 217                                                                                 |                                                                                     | 72                                                                                  | 217                                                                                 |                                                                                     |
| Detector 2 Size(ft)        | 6                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                   | 6                                                                                   |                                                                                     | 6                                                                                   | 6                                                                                   |                                                                                     |
| Detector 2 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | pm+pt                                                                               | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases           |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Permitted Phases           | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 6                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     |



# 2021 PM DESIGN HOUR BUILD CONDITIONS

Lanes, Volumes, Timings  
1: HWY 101 & 35th Street

06/18/2020

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Detector Phase          | 8                                                                                 | 8                                                                                 |                                                                                   | 4                                                                                 | 4                                                                                 |                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                                 | 4.0                                                                                 |                                                                                     | 4.0                                                                                 | 4.0                                                                                 |                                                                                     |
| Minimum Split (s)       | 22.0                                                                              | 22.0                                                                              |                                                                                   | 28.0                                                                              | 28.0                                                                              |                                                                                   | 13.0                                                                                | 28.8                                                                                |                                                                                     | 13.0                                                                                | 22.8                                                                                |                                                                                     |
| Total Split (s)         | 29.0                                                                              | 29.0                                                                              |                                                                                   | 29.0                                                                              | 29.0                                                                              |                                                                                   | 18.0                                                                                | 47.0                                                                                |                                                                                     | 14.0                                                                                | 43.0                                                                                |                                                                                     |
| Total Split (%)         | 32.2%                                                                             | 32.2%                                                                             |                                                                                   | 32.2%                                                                             | 32.2%                                                                             |                                                                                   | 20.0%                                                                               | 52.2%                                                                               |                                                                                     | 15.6%                                                                               | 47.8%                                                                               |                                                                                     |
| Maximum Green (s)       | 25.0                                                                              | 25.0                                                                              |                                                                                   | 25.0                                                                              | 25.0                                                                              |                                                                                   | 13.2                                                                                | 42.2                                                                                |                                                                                     | 9.2                                                                                 | 38.2                                                                                |                                                                                     |
| Yellow Time (s)         | 3.5                                                                               | 3.5                                                                               |                                                                                   | 3.5                                                                               | 3.5                                                                               |                                                                                   | 4.3                                                                                 | 4.3                                                                                 |                                                                                     | 4.3                                                                                 | 4.3                                                                                 |                                                                                     |
| All-Red Time (s)        | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                                 | 0.5                                                                                 |                                                                                     | 0.5                                                                                 | 0.5                                                                                 |                                                                                     |
| Lost Time Adjust (s)    | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                                 | 0.5                                                                                 |                                                                                     | 0.5                                                                                 | 0.5                                                                                 |                                                                                     |
| Total Lost Time (s)     | 4.5                                                                               | 4.5                                                                               |                                                                                   | 4.5                                                                               | 4.5                                                                               |                                                                                   | 5.3                                                                                 | 5.3                                                                                 |                                                                                     | 5.3                                                                                 | 5.3                                                                                 |                                                                                     |
| Lead/Lag                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Lead                                                                                | Lag                                                                                 |                                                                                     | Lead                                                                                | Lag                                                                                 |                                                                                     |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Yes                                                                                 | Yes                                                                                 |                                                                                     | Yes                                                                                 | Yes                                                                                 |                                                                                     |
| Vehicle Extension (s)   | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                                 | 2.5                                                                                 |                                                                                     | 2.5                                                                                 | 2.5                                                                                 |                                                                                     |
| Minimum Gap (s)         | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                                 | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Time Before Reduce (s)  | 8.0                                                                               | 8.0                                                                               |                                                                                   | 8.0                                                                               | 8.0                                                                               |                                                                                   | 8.0                                                                                 | 8.0                                                                                 |                                                                                     | 8.0                                                                                 | 8.0                                                                                 |                                                                                     |
| Time To Reduce (s)      | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                                 | 4.0                                                                                 |                                                                                     | 4.0                                                                                 | 4.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | None                                                                              |                                                                                   | None                                                                              | None                                                                              |                                                                                   | None                                                                                | Min                                                                                 |                                                                                     | None                                                                                | Min                                                                                 |                                                                                     |
| Walk Time (s)           | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   |                                                                                     | 7.0                                                                                 |                                                                                     |                                                                                     | 7.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     | 11.0                                                                              | 11.0                                                                              |                                                                                   | 17.0                                                                              | 17.0                                                                              |                                                                                   |                                                                                     | 17.0                                                                                |                                                                                     |                                                                                     | 11.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) | 1                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 1                                                                                   |                                                                                     |
| Act Effect Green (s)    | 8.9                                                                               | 8.9                                                                               |                                                                                   | 8.9                                                                               | 8.9                                                                               |                                                                                   | 23.3                                                                                | 19.4                                                                                |                                                                                     | 20.9                                                                                | 16.3                                                                                |                                                                                     |
| Actuated g/C Ratio      | 0.20                                                                              | 0.20                                                                              |                                                                                   | 0.20                                                                              | 0.20                                                                              |                                                                                   | 0.52                                                                                | 0.43                                                                                |                                                                                     | 0.47                                                                                | 0.36                                                                                |                                                                                     |
| v/c Ratio               | 0.38                                                                              | 0.41                                                                              |                                                                                   | 0.23                                                                              | 0.19                                                                              |                                                                                   | 0.32                                                                                | 0.56                                                                                |                                                                                     | 0.16                                                                                | 0.64                                                                                |                                                                                     |
| Control Delay           | 21.6                                                                              | 9.4                                                                               |                                                                                   | 19.1                                                                              | 9.8                                                                               |                                                                                   | 7.6                                                                                 | 13.6                                                                                |                                                                                     | 6.4                                                                                 | 16.5                                                                                |                                                                                     |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             | 21.6                                                                              | 9.4                                                                               |                                                                                   | 19.1                                                                              | 9.8                                                                               |                                                                                   | 7.6                                                                                 | 13.6                                                                                |                                                                                     | 6.4                                                                                 | 16.5                                                                                |                                                                                     |
| LOS                     | C                                                                                 | A                                                                                 |                                                                                   | B                                                                                 | A                                                                                 |                                                                                   | A                                                                                   | B                                                                                   |                                                                                     | A                                                                                   | B                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 13.9                                                                              |                                                                                   |                                                                                   | 13.9                                                                              |                                                                                   |                                                                                     | 12.7                                                                                |                                                                                     |                                                                                     | 15.7                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                     | B                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |

## Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 44.9

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 14.1

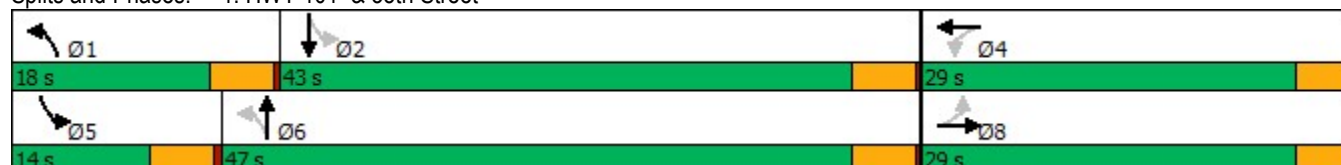
Intersection LOS: B

Intersection Capacity Utilization 59.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: HWY 101 & 35th Street
























# 2021 PM DESIGN HOUR BUILD CONDITIONS

## HCM Signalized Intersection Capacity Analysis

1: HWY 101 & 35th Street

06/18/2020

















|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                          | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Traffic Volume (vph)              | 89                                                                                | 35                                                                                | 120                                                                               | 50                                                                                | 19                                                                                | 43                                                                                | 126                                                                                 | 683                                                                                 | 62                                                                                  | 62                                                                                  | 654                                                                                 | 68                                                                                  |
| Future Volume (vph)               | 89                                                                                | 35                                                                                | 120                                                                               | 50                                                                                | 19                                                                                | 43                                                                                | 126                                                                                 | 683                                                                                 | 62                                                                                  | 62                                                                                  | 654                                                                                 | 68                                                                                  |
| Ideal Flow (vphpl)                | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Total Lost time (s)               | 4.5                                                                               | 4.5                                                                               |                                                                                   | 4.5                                                                               | 4.5                                                                               |                                                                                   | 5.3                                                                                 | 5.3                                                                                 |                                                                                     | 5.3                                                                                 | 5.3                                                                                 |                                                                                     |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 0.95                                                                                |                                                                                     | 1.00                                                                                | 0.95                                                                                |                                                                                     |
| Frt                               | 1.00                                                                              | 0.88                                                                              |                                                                                   | 1.00                                                                              | 0.90                                                                              |                                                                                   | 1.00                                                                                | 0.99                                                                                |                                                                                     | 1.00                                                                                | 0.99                                                                                |                                                                                     |
| Flt Protected                     | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                                | 1.00                                                                                |                                                                                     | 0.95                                                                                | 1.00                                                                                |                                                                                     |
| Satd. Flow (prot)                 | 1662                                                                              | 1534                                                                              |                                                                                   | 1662                                                                              | 1567                                                                              |                                                                                   | 1662                                                                                | 3278                                                                                |                                                                                     | 1662                                                                                | 3278                                                                                |                                                                                     |
| Flt Permitted                     | 0.71                                                                              | 1.00                                                                              |                                                                                   | 0.65                                                                              | 1.00                                                                              |                                                                                   | 0.27                                                                                | 1.00                                                                                |                                                                                     | 0.33                                                                                | 1.00                                                                                |                                                                                     |
| Satd. Flow (perm)                 | 1249                                                                              | 1534                                                                              |                                                                                   | 1142                                                                              | 1567                                                                              |                                                                                   | 467                                                                                 | 3278                                                                                |                                                                                     | 580                                                                                 | 3278                                                                                |                                                                                     |
| Peak-hour factor, PHF             | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Adj. Flow (vph)                   | 95                                                                                | 37                                                                                | 128                                                                               | 53                                                                                | 20                                                                                | 46                                                                                | 134                                                                                 | 727                                                                                 | 66                                                                                  | 66                                                                                  | 696                                                                                 | 72                                                                                  |
| RTOR Reduction (vph)              | 0                                                                                 | 104                                                                               | 0                                                                                 | 0                                                                                 | 37                                                                                | 0                                                                                 | 0                                                                                   | 8                                                                                   | 0                                                                                   | 0                                                                                   | 9                                                                                   | 0                                                                                   |
| Lane Group Flow (vph)             | 95                                                                                | 61                                                                                | 0                                                                                 | 53                                                                                | 29                                                                                | 0                                                                                 | 134                                                                                 | 785                                                                                 | 0                                                                                   | 66                                                                                  | 759                                                                                 | 0                                                                                   |
| Heavy Vehicles (%)                | 0%                                                                                | 0%                                                                                | 1%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                  | 0%                                                                                  | 2%                                                                                  | 0%                                                                                  | 0%                                                                                  | 0%                                                                                  |
| Turn Type                         | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | pm+pt                                                                               | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases                  |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Permitted Phases                  | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 6                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     |
| Actuated Green, G (s)             | 9.4                                                                               | 9.4                                                                               |                                                                                   | 9.4                                                                               | 9.4                                                                               |                                                                                   | 25.5                                                                                | 19.9                                                                                |                                                                                     | 21.7                                                                                | 18.0                                                                                |                                                                                     |
| Effective Green, g (s)            | 8.9                                                                               | 8.9                                                                               |                                                                                   | 8.9                                                                               | 8.9                                                                               |                                                                                   | 24.5                                                                                | 19.4                                                                                |                                                                                     | 20.7                                                                                | 17.5                                                                                |                                                                                     |
| Actuated g/C Ratio                | 0.19                                                                              | 0.19                                                                              |                                                                                   | 0.19                                                                              | 0.19                                                                              |                                                                                   | 0.53                                                                                | 0.42                                                                                |                                                                                     | 0.44                                                                                | 0.38                                                                                |                                                                                     |
| Clearance Time (s)                | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.8                                                                                 | 4.8                                                                                 |                                                                                     | 4.8                                                                                 | 4.8                                                                                 |                                                                                     |
| Vehicle Extension (s)             | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                                 | 2.5                                                                                 |                                                                                     | 2.5                                                                                 | 2.5                                                                                 |                                                                                     |
| Lane Grp Cap (vph)                | 238                                                                               | 292                                                                               |                                                                                   | 218                                                                               | 299                                                                               |                                                                                   | 376                                                                                 | 1364                                                                                |                                                                                     | 331                                                                                 | 1231                                                                                |                                                                                     |
| v/s Ratio Prot                    |                                                                                   | 0.04                                                                              |                                                                                   |                                                                                   | 0.02                                                                              |                                                                                   | c0.04                                                                               | c0.24                                                                               |                                                                                     | 0.01                                                                                | 0.23                                                                                |                                                                                     |
| v/s Ratio Perm                    | c0.08                                                                             |                                                                                   |                                                                                   | 0.05                                                                              |                                                                                   |                                                                                   | 0.15                                                                                |                                                                                     |                                                                                     | 0.07                                                                                |                                                                                     |                                                                                     |
| v/c Ratio                         | 0.40                                                                              | 0.21                                                                              |                                                                                   | 0.24                                                                              | 0.10                                                                              |                                                                                   | 0.36                                                                                | 0.58                                                                                |                                                                                     | 0.20                                                                                | 0.62                                                                                |                                                                                     |
| Uniform Delay, d1                 | 16.5                                                                              | 15.9                                                                              |                                                                                   | 16.0                                                                              | 15.5                                                                              |                                                                                   | 6.0                                                                                 | 10.4                                                                                |                                                                                     | 7.5                                                                                 | 11.8                                                                                |                                                                                     |
| Progression Factor                | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     |
| Incremental Delay, d2             | 0.8                                                                               | 0.3                                                                               |                                                                                   | 0.4                                                                               | 0.1                                                                               |                                                                                   | 0.4                                                                                 | 0.5                                                                                 |                                                                                     | 0.2                                                                                 | 0.8                                                                                 |                                                                                     |
| Delay (s)                         | 17.3                                                                              | 16.2                                                                              |                                                                                   | 16.4                                                                              | 15.6                                                                              |                                                                                   | 6.5                                                                                 | 10.9                                                                                |                                                                                     | 7.7                                                                                 | 12.6                                                                                |                                                                                     |
| Level of Service                  | B                                                                                 | B                                                                                 |                                                                                   | B                                                                                 | B                                                                                 |                                                                                   | A                                                                                   | B                                                                                   |                                                                                     | A                                                                                   | B                                                                                   |                                                                                     |
| Approach Delay (s)                |                                                                                   | 16.6                                                                              |                                                                                   |                                                                                   | 16.0                                                                              |                                                                                   |                                                                                     | 10.3                                                                                |                                                                                     |                                                                                     | 12.2                                                                                |                                                                                     |
| Approach LOS                      |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                     | B                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |
| <b>Intersection Summary</b>       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2000 Control Delay            |                                                                                   |                                                                                   | 12.1                                                                              |                                                                                   |                                                                                   | HCM 2000 Level of Service                                                         |                                                                                     |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |
| HCM 2000 Volume to Capacity ratio |                                                                                   |                                                                                   | 0.52                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Actuated Cycle Length (s)         |                                                                                   |                                                                                   | 46.6                                                                              |                                                                                   |                                                                                   | Sum of lost time (s)                                                              |                                                                                     |                                                                                     | 15.1                                                                                |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization |                                                                                   |                                                                                   | 59.2%                                                                             |                                                                                   |                                                                                   | ICU Level of Service                                                              |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min)             |                                                                                   |                                                                                   | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| c Critical Lane Group             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# 2021 PM DESIGN HOUR BUILD CONDITIONS

Lanes, Volumes, Timings

2: REDWOOD ST/Site & 35th Street

06/18/2020

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)       | 43                                                                                | 59                                                                                | 57                                                                                | 29                                                                                | 46                                                                                | 0                                                                                 | 40                                                                                 | 2                                                                                   | 17                                                                                  | 0                                                                                   | 1                                                                                   | 26                                                                                  |
| Future Volume (vph)        | 43                                                                                | 59                                                                                | 57                                                                                | 29                                                                                | 46                                                                                | 0                                                                                 | 40                                                                                 | 2                                                                                   | 17                                                                                  | 0                                                                                   | 1                                                                                   | 26                                                                                  |
| Ideal Flow (vphpl)         | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                               | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Frt                        |                                                                                   | 0.951                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.961                                                                               |                                                                                     |                                                                                     | 0.869                                                                               |                                                                                     |
| Flt Protected              |                                                                                   | 0.987                                                                             |                                                                                   |                                                                                   | 0.981                                                                             |                                                                                   |                                                                                    | 0.967                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 0                                                                                 | 1643                                                                              | 0                                                                                 | 0                                                                                 | 1717                                                                              | 0                                                                                 | 0                                                                                  | 1626                                                                                | 0                                                                                   | 0                                                                                   | 1521                                                                                | 0                                                                                   |
| Flt Permitted              |                                                                                   | 0.987                                                                             |                                                                                   |                                                                                   | 0.981                                                                             |                                                                                   |                                                                                    | 0.967                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 0                                                                                 | 1643                                                                              | 0                                                                                 | 0                                                                                 | 1717                                                                              | 0                                                                                 | 0                                                                                  | 1626                                                                                | 0                                                                                   | 0                                                                                   | 1521                                                                                | 0                                                                                   |
| Link Speed (mph)           |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                    | 25                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 317                                                                               |                                                                                   |                                                                                   | 225                                                                               |                                                                                   |                                                                                    | 457                                                                                 |                                                                                     |                                                                                     | 251                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 8.6                                                                               |                                                                                   |                                                                                   | 6.1                                                                               |                                                                                   |                                                                                    | 12.5                                                                                |                                                                                     |                                                                                     | 5.7                                                                                 |                                                                                     |
| Peak Hour Factor           | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                               | 0.82                                                                                | 0.82                                                                                | 0.82                                                                                | 0.82                                                                                | 0.82                                                                                |
| Adj. Flow (vph)            | 52                                                                                | 72                                                                                | 70                                                                                | 35                                                                                | 56                                                                                | 0                                                                                 | 49                                                                                 | 2                                                                                   | 21                                                                                  | 0                                                                                   | 1                                                                                   | 32                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 0                                                                                 | 194                                                                               | 0                                                                                 | 0                                                                                 | 91                                                                                | 0                                                                                 | 0                                                                                  | 72                                                                                  | 0                                                                                   | 0                                                                                   | 33                                                                                  | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 35                                                                                  |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                    | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                               | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                |
| Sign Control               |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |                                                                                   |                                                                                    | Stop                                                                                |                                                                                     |                                                                                     | Stop                                                                                |                                                                                     |

## Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 28.3% ICU Level of Service A

Analysis Period (min) 15

# 2021 PM DESIGN HOUR BUILD CONDITIONS

HCM 2010 TWSC

2: REDWOOD ST/Site & 35th Street

06/18/2020










| Intersection             |        |       |      |        |       |      |        |       |      |        |      |      |
|--------------------------|--------|-------|------|--------|-------|------|--------|-------|------|--------|------|------|
| Int Delay, s/veh         | 4.5    |       |      |        |       |      |        |       |      |        |      |      |
| Movement                 | EBL    | EBT   | EBR  | WBL    | WBT   | WBR  | NBL    | NBT   | NBR  | SBL    | SBT  | SBR  |
| Lane Configurations      |        | ↕     |      |        | ↕     |      |        | ↕     |      |        | ↕    |      |
| Traffic Vol, veh/h       | 43     | 59    | 57   | 29     | 46    | 0    | 40     | 2     | 17   | 0      | 1    | 26   |
| Future Vol, veh/h        | 43     | 59    | 57   | 29     | 46    | 0    | 40     | 2     | 17   | 0      | 1    | 26   |
| Conflicting Peds, #/hr   | 0      | 0     | 0    | 0      | 0     | 0    | 0      | 0     | 0    | 0      | 0    | 0    |
| Sign Control             | Free   | Free  | Free | Free   | Free  | Free | Stop   | Stop  | Stop | Stop   | Stop | Stop |
| RT Channelized           | -      | -     | None | -      | -     | None | -      | -     | None | -      | -    | None |
| Storage Length           | -      | -     | -    | -      | -     | -    | -      | -     | -    | -      | -    | -    |
| Veh in Median Storage, # | -      | 0     | -    | -      | 0     | -    | -      | 0     | -    | -      | 0    | -    |
| Grade, %                 | -      | 0     | -    | -      | 0     | -    | -      | 0     | -    | -      | 0    | -    |
| Peak Hour Factor         | 82     | 82    | 82   | 82     | 82    | 82   | 82     | 82    | 82   | 82     | 82   | 82   |
| Heavy Vehicles, %        | 0      | 0     | 0    | 0      | 0     | 0    | 0      | 0     | 0    | 0      | 0    | 0    |
| Mvmt Flow                | 52     | 72    | 70   | 35     | 56    | 0    | 49     | 2     | 21   | 0      | 1    | 32   |
|                          |        |       |      |        |       |      |        |       |      |        |      |      |
| Major/Minor              | Major1 |       |      | Major2 |       |      | Minor1 |       |      | Minor2 |      |      |
| Conflicting Flow All     | 56     | 0     | 0    | 142    | 0     | 0    | 354    | 337   | 107  | 349    | 372  | 56   |
| Stage 1                  | -      | -     | -    | -      | -     | -    | 211    | 211   | -    | 126    | 126  | -    |
| Stage 2                  | -      | -     | -    | -      | -     | -    | 143    | 126   | -    | 223    | 246  | -    |
| Critical Hdwy            | 4.1    | -     | -    | 4.1    | -     | -    | 7.1    | 6.5   | 6.2  | 7.1    | 6.5  | 6.2  |
| Critical Hdwy Stg 1      | -      | -     | -    | -      | -     | -    | 6.1    | 5.5   | -    | 6.1    | 5.5  | -    |
| Critical Hdwy Stg 2      | -      | -     | -    | -      | -     | -    | 6.1    | 5.5   | -    | 6.1    | 5.5  | -    |
| Follow-up Hdwy           | 2.2    | -     | -    | 2.2    | -     | -    | 3.5    | 4     | 3.3  | 3.5    | 4    | 3.3  |
| Pot Cap-1 Maneuver       | 1562   | -     | -    | 1453   | -     | -    | 605    | 587   | 953  | 609    | 561  | 1016 |
| Stage 1                  | -      | -     | -    | -      | -     | -    | 796    | 731   | -    | 883    | 796  | -    |
| Stage 2                  | -      | -     | -    | -      | -     | -    | 865    | 796   | -    | 784    | 706  | -    |
| Platoon blocked, %       |        | -     | -    |        | -     | -    |        |       |      |        |      |      |
| Mov Cap-1 Maneuver       | 1562   | -     | -    | 1453   | -     | -    | 558    | 552   | 953  | 566    | 527  | 1016 |
| Mov Cap-2 Maneuver       | -      | -     | -    | -      | -     | -    | 558    | 552   | -    | 566    | 527  | -    |
| Stage 1                  | -      | -     | -    | -      | -     | -    | 767    | 705   | -    | 851    | 776  | -    |
| Stage 2                  | -      | -     | -    | -      | -     | -    | 816    | 776   | -    | 737    | 681  | -    |
|                          |        |       |      |        |       |      |        |       |      |        |      |      |
|                          |        |       |      |        |       |      |        |       |      |        |      |      |
| Approach                 | EB     |       |      | WB     |       |      | NB     |       |      | SB     |      |      |
| HCM Control Delay, s     | 2      |       |      | 2.9    |       |      | 11.4   |       |      | 8.8    |      |      |
| HCM LOS                  |        |       |      |        |       |      | B      |       |      | A      |      |      |
|                          |        |       |      |        |       |      |        |       |      |        |      |      |
| Minor Lane/Major Mvmt    | NBLn1  | EBL   | EBT  | EBR    | WBL   | WBT  | WBR    | SBLn1 |      |        |      |      |
| Capacity (veh/h)         | 633    | 1562  | -    | -      | 1453  | -    | -      | 982   |      |        |      |      |
| HCM Lane V/C Ratio       | 0.114  | 0.034 | -    | -      | 0.024 | -    | -      | 0.034 |      |        |      |      |
| HCM Control Delay (s)    | 11.4   | 7.4   | 0    | -      | 7.5   | 0    | -      | 8.8   |      |        |      |      |
| HCM Lane LOS             | B      | A     | A    | -      | A     | A    | -      | A     |      |        |      |      |
| HCM 95th %tile Q(veh)    | 0.4    | 0.1   | -    | -      | 0.1   | -    | -      | 0.1   |      |        |      |      |

# 2021 PM DESIGN HOUR BUILD CONDITIONS

## Lanes, Volumes, Timings

### 3: HWY 101 & RIRO SITE ACCESS

06/18/2020

|                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
|                                   |  |  |  |  |  |  |
| Lane Group                        | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations               |                                                                                   |  |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)              | 0                                                                                 | 20                                                                                | 809                                                                               | 6                                                                                 | 0                                                                                 | 784                                                                               |
| Future Volume (vph)               | 0                                                                                 | 20                                                                                | 809                                                                               | 6                                                                                 | 0                                                                                 | 784                                                                               |
| Ideal Flow (vphpl)                | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              |
| Frt                               |                                                                                   | 0.865                                                                             | 0.999                                                                             |                                                                                   |                                                                                   |                                                                                   |
| Flt Protected                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (prot)                 | 0                                                                                 | 1514                                                                              | 3322                                                                              | 0                                                                                 | 0                                                                                 | 3325                                                                              |
| Flt Permitted                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (perm)                 | 0                                                                                 | 1514                                                                              | 3322                                                                              | 0                                                                                 | 0                                                                                 | 3325                                                                              |
| Link Speed (mph)                  | 30                                                                                |                                                                                   | 40                                                                                |                                                                                   |                                                                                   | 40                                                                                |
| Link Distance (ft)                | 243                                                                               |                                                                                   | 716                                                                               |                                                                                   |                                                                                   | 923                                                                               |
| Travel Time (s)                   | 5.5                                                                               |                                                                                   | 12.2                                                                              |                                                                                   |                                                                                   | 15.7                                                                              |
| Peak Hour Factor                  | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              |
| Adj. Flow (vph)                   | 0                                                                                 | 21                                                                                | 861                                                                               | 6                                                                                 | 0                                                                                 | 834                                                                               |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)             | 0                                                                                 | 21                                                                                | 867                                                                               | 0                                                                                 | 0                                                                                 | 834                                                                               |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment                    | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              |
| Median Width(ft)                  | 0                                                                                 |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |
| Link Offset(ft)                   | 0                                                                                 |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |
| Crosswalk Width(ft)               | 12                                                                                |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |
| Two way Left Turn Lane            |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |
| Headway Factor                    | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              |
| Sign Control                      | Stop                                                                              |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Intersection Capacity Utilization | 34.5%                                                                             |                                                                                   |                                                                                   | ICU Level of Service A                                                            |                                                                                   |                                                                                   |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

# 2021 PM DESIGN HOUR BUILD CONDITIONS




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## Intersection

Int Delay, s/veh 0.1

| Movement                 | WBL  | WBR                                                                               | NBT                                                                               | NBR  | SBL  | SBT                                                                               |
|--------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|
| Lane Configurations      |      |  |  |      |      |  |
| Traffic Vol, veh/h       | 0    | 20                                                                                | 809                                                                               | 6    | 0    | 784                                                                               |
| Future Vol, veh/h        | 0    | 20                                                                                | 809                                                                               | 6    | 0    | 784                                                                               |
| Conflicting Peds, #/hr   | 0    | 0                                                                                 | 0                                                                                 | 0    | 0    | 0                                                                                 |
| Sign Control             | Stop | Stop                                                                              | Free                                                                              | Free | Free | Free                                                                              |
| RT Channelized           | -    | None                                                                              | -                                                                                 | None | -    | None                                                                              |
| Storage Length           | -    | 0                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Veh in Median Storage, # | 0    | -                                                                                 | 0                                                                                 | -    | -    | 0                                                                                 |
| Grade, %                 | 0    | -                                                                                 | 0                                                                                 | -    | -    | 0                                                                                 |
| Peak Hour Factor         | 94   | 94                                                                                | 94                                                                                | 94   | 94   | 94                                                                                |
| Heavy Vehicles, %        | 0    | 0                                                                                 | 0                                                                                 | 0    | 0    | 0                                                                                 |
| Mvmt Flow                | 0    | 21                                                                                | 861                                                                               | 6    | 0    | 834                                                                               |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 434    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.9    | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.3    | -      |
| Pot Cap-1 Maneuver   | 0      | 576    | -      |
| Stage 1              | 0      | -      | -      |
| Stage 2              | 0      | -      | -      |
| Platoon blocked, %   |        | -      | -      |
| Mov Cap-1 Maneuver   | -      | 576    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |






















| Approach             | WB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 11.5 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT   |
|-----------------------|-----|----------|-------|
| Capacity (veh/h)      | -   | -        | 576   |
| HCM Lane V/C Ratio    | -   | -        | 0.037 |
| HCM Control Delay (s) | -   | -        | 11.5  |
| HCM Lane LOS          | -   | -        | B     |
| HCM 95th %tile Q(veh) | -   | -        | 0.1   |

# 2026 AM DESIGN HOUR BUILD CONDITIONS

Lanes, Volumes, Timings  
1: HWY 101 & 35th Street


06/18/2020

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Traffic Volume (vph)       | 73                                                                                | 17                                                                                | 102                                                                               | 56                                                                                | 31                                                                                | 31                                                                                | 43                                                                                  | 340                                                                                 | 26                                                                                  | 48                                                                                  | 358                                                                                 | 45                                                                                  |
| Future Volume (vph)        | 73                                                                                | 17                                                                                | 102                                                                               | 56                                                                                | 31                                                                                | 31                                                                                | 43                                                                                  | 340                                                                                 | 26                                                                                  | 48                                                                                  | 358                                                                                 | 45                                                                                  |
| Ideal Flow (vphpl)         | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Storage Length (ft)        | 110                                                                               |                                                                                   | 0                                                                                 | 141                                                                               |                                                                                   | 0                                                                                 | 146                                                                                 |                                                                                     | 0                                                                                   | 91                                                                                  |                                                                                     | 0                                                                                   |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)          | 100                                                                               |                                                                                   |                                                                                   | 55                                                                                |                                                                                   |                                                                                   | 66                                                                                  |                                                                                     |                                                                                     | 54                                                                                  |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                |
| Frt                        |                                                                                   | 0.872                                                                             |                                                                                   |                                                                                   | 0.925                                                                             |                                                                                   |                                                                                     | 0.989                                                                               |                                                                                     |                                                                                     | 0.983                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1662                                                                              | 1513                                                                              | 0                                                                                 | 1662                                                                              | 1619                                                                              | 0                                                                                 | 1662                                                                                | 3199                                                                                | 0                                                                                   | 1662                                                                                | 3204                                                                                | 0                                                                                   |
| Flt Permitted              | 0.705                                                                             |                                                                                   |                                                                                   | 0.660                                                                             |                                                                                   |                                                                                   | 0.461                                                                               |                                                                                     |                                                                                     | 0.475                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 1234                                                                              | 1513                                                                              | 0                                                                                 | 1155                                                                              | 1619                                                                              | 0                                                                                 | 807                                                                                 | 3199                                                                                | 0                                                                                   | 831                                                                                 | 3204                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 131                                                                               |                                                                                   |                                                                                   | 40                                                                                |                                                                                   |                                                                                     | 10                                                                                  |                                                                                     |                                                                                     | 17                                                                                  |                                                                                     |
| Link Speed (mph)           |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                     | 40                                                                                  |                                                                                     |                                                                                     | 40                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 499                                                                               |                                                                                   |                                                                                   | 317                                                                               |                                                                                   |                                                                                     | 925                                                                                 |                                                                                     |                                                                                     | 716                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 13.6                                                                              |                                                                                   |                                                                                   | 8.6                                                                               |                                                                                   |                                                                                     | 15.8                                                                                |                                                                                     |                                                                                     | 12.2                                                                                |                                                                                     |
| Peak Hour Factor           | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                |
| Heavy Vehicles (%)         | 0%                                                                                | 0%                                                                                | 1%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                  | 3%                                                                                  | 0%                                                                                  | 0%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Adj. Flow (vph)            | 94                                                                                | 22                                                                                | 131                                                                               | 72                                                                                | 40                                                                                | 40                                                                                | 55                                                                                  | 436                                                                                 | 33                                                                                  | 62                                                                                  | 459                                                                                 | 58                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 94                                                                                | 153                                                                               | 0                                                                                 | 72                                                                                | 80                                                                                | 0                                                                                 | 55                                                                                  | 469                                                                                 | 0                                                                                   | 62                                                                                  | 517                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |
| Headway Factor             | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                |
| Number of Detectors        | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 2                                                                                   |                                                                                     | 2                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Side St                                                                           | Side St                                                                           |                                                                                   | Side St                                                                           | Side St                                                                           |                                                                                   | Left                                                                                |                                                                                     |                                                                                     | Left                                                                                |                                                                                     |                                                                                     |
| Leading Detector (ft)      | 78                                                                                | 78                                                                                |                                                                                   | 78                                                                                | 78                                                                                |                                                                                   | 78                                                                                  | 223                                                                                 |                                                                                     | 78                                                                                  | 223                                                                                 |                                                                                     |
| Trailing Detector (ft)     | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 157                                                                                 |                                                                                     | 2                                                                                   | 157                                                                                 |                                                                                     |
| Detector 1 Position(ft)    | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 157                                                                                 |                                                                                     | 2                                                                                   | 157                                                                                 |                                                                                     |
| Detector 1 Size(ft)        | 16                                                                                | 16                                                                                |                                                                                   | 16                                                                                | 16                                                                                |                                                                                   | 16                                                                                  | 6                                                                                   |                                                                                     | 16                                                                                  | 6                                                                                   |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(ft)    | 72                                                                                | 72                                                                                |                                                                                   | 72                                                                                | 72                                                                                |                                                                                   | 72                                                                                  | 217                                                                                 |                                                                                     | 72                                                                                  | 217                                                                                 |                                                                                     |
| Detector 2 Size(ft)        | 6                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                   | 6                                                                                   |                                                                                     | 6                                                                                   | 6                                                                                   |                                                                                     |
| Detector 2 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | pm+pt                                                                               | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases           |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Permitted Phases           | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 6                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     |

# 2026 AM DESIGN HOUR BUILD CONDITIONS

Lanes, Volumes, Timings  
1: HWY 101 & 35th Street

06/18/2020

|                         |  |       |     |       |       |     |       |       |     |       |       |     |
|-------------------------|------------------------------------------------------------------------------------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Lane Group              | EBL                                                                                | EBT   | EBR | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
| Detector Phase          | 8                                                                                  | 8     |     | 4     | 4     |     | 1     | 6     |     | 5     | 2     |     |
| Switch Phase            |                                                                                    |       |     |       |       |     |       |       |     |       |       |     |
| Minimum Initial (s)     | 4.0                                                                                | 4.0   |     | 4.0   | 4.0   |     | 4.0   | 4.0   |     | 4.0   | 4.0   |     |
| Minimum Split (s)       | 28.0                                                                               | 28.0  |     | 28.0  | 28.0  |     | 13.0  | 22.8  |     | 13.0  | 22.8  |     |
| Total Split (s)         | 34.0                                                                               | 34.0  |     | 34.0  | 34.0  |     | 17.0  | 41.0  |     | 15.0  | 39.0  |     |
| Total Split (%)         | 37.8%                                                                              | 37.8% |     | 37.8% | 37.8% |     | 18.9% | 45.6% |     | 16.7% | 43.3% |     |
| Maximum Green (s)       | 30.0                                                                               | 30.0  |     | 30.0  | 30.0  |     | 12.2  | 36.2  |     | 10.2  | 34.2  |     |
| Yellow Time (s)         | 3.5                                                                                | 3.5   |     | 3.5   | 3.5   |     | 4.3   | 4.3   |     | 4.3   | 4.3   |     |
| All-Red Time (s)        | 0.5                                                                                | 0.5   |     | 0.5   | 0.5   |     | 0.5   | 0.5   |     | 0.5   | 0.5   |     |
| Lost Time Adjust (s)    | 0.5                                                                                | 0.5   |     | 0.5   | 0.5   |     | 0.5   | 0.5   |     | 0.5   | 0.5   |     |
| Total Lost Time (s)     | 4.5                                                                                | 4.5   |     | 4.5   | 4.5   |     | 5.3   | 5.3   |     | 5.3   | 5.3   |     |
| Lead/Lag                |                                                                                    |       |     |       |       |     | Lead  | Lag   |     | Lead  | Lag   |     |
| Lead-Lag Optimize?      |                                                                                    |       |     |       |       |     | Yes   | Yes   |     | Yes   | Yes   |     |
| Vehicle Extension (s)   | 2.5                                                                                | 2.5   |     | 2.5   | 2.5   |     | 2.5   | 2.5   |     | 2.5   | 2.5   |     |
| Minimum Gap (s)         | 2.0                                                                                | 2.0   |     | 2.0   | 2.0   |     | 2.0   | 2.0   |     | 2.0   | 2.0   |     |
| Time Before Reduce (s)  | 8.0                                                                                | 8.0   |     | 8.0   | 8.0   |     | 8.0   | 8.0   |     | 8.0   | 8.0   |     |
| Time To Reduce (s)      | 4.0                                                                                | 4.0   |     | 4.0   | 4.0   |     | 4.0   | 4.0   |     | 4.0   | 4.0   |     |
| Recall Mode             | None                                                                               | None  |     | None  | None  |     | None  | Min   |     | None  | Min   |     |
| Walk Time (s)           | 7.0                                                                                | 7.0   |     | 7.0   | 7.0   |     |       | 7.0   |     |       | 7.0   |     |
| Flash Dont Walk (s)     | 17.0                                                                               | 17.0  |     | 17.0  | 17.0  |     |       | 11.0  |     |       | 11.0  |     |
| Pedestrian Calls (#/hr) | 0                                                                                  | 0     |     | 0     | 0     |     |       | 0     |     |       | 0     |     |
| Act Effect Green (s)    | 7.8                                                                                | 7.8   |     | 7.7   | 7.7   |     | 13.3  | 12.9  |     | 13.6  | 13.1  |     |
| Actuated g/C Ratio      | 0.25                                                                               | 0.25  |     | 0.25  | 0.25  |     | 0.43  | 0.42  |     | 0.44  | 0.42  |     |
| v/c Ratio               | 0.30                                                                               | 0.32  |     | 0.25  | 0.19  |     | 0.11  | 0.35  |     | 0.12  | 0.38  |     |
| Control Delay           | 14.7                                                                               | 6.5   |     | 14.2  | 8.7   |     | 6.1   | 11.2  |     | 6.0   | 11.0  |     |
| Queue Delay             | 0.0                                                                                | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Delay             | 14.7                                                                               | 6.5   |     | 14.2  | 8.7   |     | 6.1   | 11.2  |     | 6.0   | 11.0  |     |
| LOS                     | B                                                                                  | A     |     | B     | A     |     | A     | B     |     | A     | B     |     |
| Approach Delay          |                                                                                    | 9.6   |     |       | 11.3  |     |       | 10.7  |     |       | 10.5  |     |
| Approach LOS            |                                                                                    | A     |     |       | B     |     |       | B     |     |       | B     |     |

## Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 31

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.38

Intersection Signal Delay: 10.5

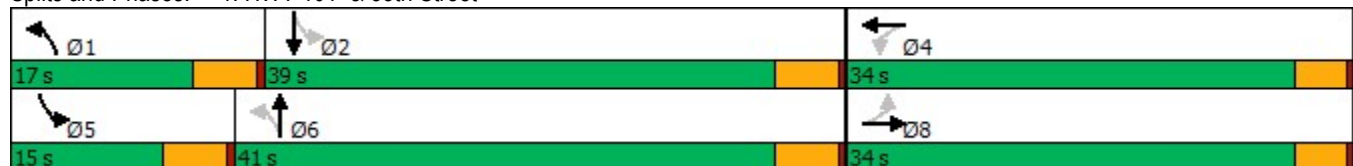
Intersection LOS: B

Intersection Capacity Utilization 39.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: HWY 101 & 35th Street


























# 2026 AM DESIGN HOUR BUILD CONDITIONS

## HCM Signalized Intersection Capacity Analysis

1: HWY 101 & 35th Street

06/18/2020

















|                                   |  |  |  |  |  |  |   |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                          | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Traffic Volume (vph)              | 73                                                                                | 17                                                                                | 102                                                                               | 56                                                                                | 31                                                                                | 31                                                                                | 43                                                                                  | 340                                                                                 | 26                                                                                  | 48                                                                                  | 358                                                                                 | 45                                                                                  |
| Future Volume (vph)               | 73                                                                                | 17                                                                                | 102                                                                               | 56                                                                                | 31                                                                                | 31                                                                                | 43                                                                                  | 340                                                                                 | 26                                                                                  | 48                                                                                  | 358                                                                                 | 45                                                                                  |
| Ideal Flow (vphpl)                | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Total Lost time (s)               | 4.5                                                                               | 4.5                                                                               |                                                                                   | 4.5                                                                               | 4.5                                                                               |                                                                                   | 5.3                                                                                 | 5.3                                                                                 |                                                                                     | 5.3                                                                                 | 5.3                                                                                 |                                                                                     |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 0.95                                                                                |                                                                                     | 1.00                                                                                | 0.95                                                                                |                                                                                     |
| Frt                               | 1.00                                                                              | 0.87                                                                              |                                                                                   | 1.00                                                                              | 0.93                                                                              |                                                                                   | 1.00                                                                                | 0.99                                                                                |                                                                                     | 1.00                                                                                | 0.98                                                                                |                                                                                     |
| Flt Protected                     | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                                | 1.00                                                                                |                                                                                     | 0.95                                                                                | 1.00                                                                                |                                                                                     |
| Satd. Flow (prot)                 | 1662                                                                              | 1512                                                                              |                                                                                   | 1662                                                                              | 1619                                                                              |                                                                                   | 1662                                                                                | 3201                                                                                |                                                                                     | 1662                                                                                | 3205                                                                                |                                                                                     |
| Flt Permitted                     | 0.70                                                                              | 1.00                                                                              |                                                                                   | 0.66                                                                              | 1.00                                                                              |                                                                                   | 0.46                                                                                | 1.00                                                                                |                                                                                     | 0.47                                                                                | 1.00                                                                                |                                                                                     |
| Satd. Flow (perm)                 | 1234                                                                              | 1512                                                                              |                                                                                   | 1155                                                                              | 1619                                                                              |                                                                                   | 807                                                                                 | 3201                                                                                |                                                                                     | 831                                                                                 | 3205                                                                                |                                                                                     |
| Peak-hour factor, PHF             | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                              | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                | 0.78                                                                                |
| Adj. Flow (vph)                   | 94                                                                                | 22                                                                                | 131                                                                               | 72                                                                                | 40                                                                                | 40                                                                                | 55                                                                                  | 436                                                                                 | 33                                                                                  | 62                                                                                  | 459                                                                                 | 58                                                                                  |
| RTOR Reduction (vph)              | 0                                                                                 | 107                                                                               | 0                                                                                 | 0                                                                                 | 33                                                                                | 0                                                                                 | 0                                                                                   | 7                                                                                   | 0                                                                                   | 0                                                                                   | 11                                                                                  | 0                                                                                   |
| Lane Group Flow (vph)             | 94                                                                                | 46                                                                                | 0                                                                                 | 72                                                                                | 47                                                                                | 0                                                                                 | 55                                                                                  | 462                                                                                 | 0                                                                                   | 62                                                                                  | 506                                                                                 | 0                                                                                   |
| Heavy Vehicles (%)                | 0%                                                                                | 0%                                                                                | 1%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                  | 3%                                                                                  | 0%                                                                                  | 0%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Turn Type                         | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | pm+pt                                                                               | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases                  |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Permitted Phases                  | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 6                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     |
| Actuated Green, G (s)             | 6.9                                                                               | 6.9                                                                               |                                                                                   | 6.9                                                                               | 6.9                                                                               |                                                                                   | 14.0                                                                                | 12.1                                                                                |                                                                                     | 14.4                                                                                | 12.3                                                                                |                                                                                     |
| Effective Green, g (s)            | 6.4                                                                               | 6.4                                                                               |                                                                                   | 6.4                                                                               | 6.4                                                                               |                                                                                   | 13.0                                                                                | 11.6                                                                                |                                                                                     | 13.4                                                                                | 11.8                                                                                |                                                                                     |
| Actuated g/C Ratio                | 0.18                                                                              | 0.18                                                                              |                                                                                   | 0.18                                                                              | 0.18                                                                              |                                                                                   | 0.37                                                                                | 0.33                                                                                |                                                                                     | 0.39                                                                                | 0.34                                                                                |                                                                                     |
| Clearance Time (s)                | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.8                                                                                 | 4.8                                                                                 |                                                                                     | 4.8                                                                                 | 4.8                                                                                 |                                                                                     |
| Vehicle Extension (s)             | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                                 | 2.5                                                                                 |                                                                                     | 2.5                                                                                 | 2.5                                                                                 |                                                                                     |
| Lane Grp Cap (vph)                | 227                                                                               | 278                                                                               |                                                                                   | 213                                                                               | 298                                                                               |                                                                                   | 336                                                                                 | 1070                                                                                |                                                                                     | 359                                                                                 | 1089                                                                                |                                                                                     |
| v/s Ratio Prot                    |                                                                                   | 0.03                                                                              |                                                                                   |                                                                                   | 0.03                                                                              |                                                                                   | 0.01                                                                                | 0.14                                                                                |                                                                                     | c0.01                                                                               | c0.16                                                                               |                                                                                     |
| v/s Ratio Perm                    | c0.08                                                                             |                                                                                   |                                                                                   | 0.06                                                                              |                                                                                   |                                                                                   | 0.05                                                                                |                                                                                     |                                                                                     | 0.06                                                                                |                                                                                     |                                                                                     |
| v/c Ratio                         | 0.41                                                                              | 0.17                                                                              |                                                                                   | 0.34                                                                              | 0.16                                                                              |                                                                                   | 0.16                                                                                | 0.43                                                                                |                                                                                     | 0.17                                                                                | 0.46                                                                                |                                                                                     |
| Uniform Delay, d1                 | 12.5                                                                              | 11.9                                                                              |                                                                                   | 12.3                                                                              | 11.9                                                                              |                                                                                   | 7.0                                                                                 | 9.0                                                                                 |                                                                                     | 6.8                                                                                 | 9.0                                                                                 |                                                                                     |
| Progression Factor                | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     |
| Incremental Delay, d2             | 0.9                                                                               | 0.2                                                                               |                                                                                   | 0.7                                                                               | 0.2                                                                               |                                                                                   | 0.2                                                                                 | 0.2                                                                                 |                                                                                     | 0.2                                                                                 | 0.2                                                                                 |                                                                                     |
| Delay (s)                         | 13.4                                                                              | 12.1                                                                              |                                                                                   | 13.0                                                                              | 12.1                                                                              |                                                                                   | 7.2                                                                                 | 9.2                                                                                 |                                                                                     | 7.0                                                                                 | 9.2                                                                                 |                                                                                     |
| Level of Service                  | B                                                                                 | B                                                                                 |                                                                                   | B                                                                                 | B                                                                                 |                                                                                   | A                                                                                   | A                                                                                   |                                                                                     | A                                                                                   | A                                                                                   |                                                                                     |
| Approach Delay (s)                |                                                                                   | 12.6                                                                              |                                                                                   |                                                                                   | 12.5                                                                              |                                                                                   |                                                                                     | 9.0                                                                                 |                                                                                     |                                                                                     | 9.0                                                                                 |                                                                                     |
| Approach LOS                      |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                     | A                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| <b>Intersection Summary</b>       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2000 Control Delay            |                                                                                   |                                                                                   | 9.9                                                                               |                                                                                   |                                                                                   |                                                                                   | HCM 2000 Level of Service                                                           |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |                                                                                     |
| HCM 2000 Volume to Capacity ratio |                                                                                   |                                                                                   | 0.43                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Actuated Cycle Length (s)         |                                                                                   |                                                                                   | 34.7                                                                              |                                                                                   |                                                                                   |                                                                                   | Sum of lost time (s)                                                                |                                                                                     |                                                                                     | 15.1                                                                                |                                                                                     |                                                                                     |
| Intersection Capacity Utilization |                                                                                   |                                                                                   | 39.3%                                                                             |                                                                                   |                                                                                   |                                                                                   | ICU Level of Service                                                                |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |                                                                                     |
| Analysis Period (min)             |                                                                                   |                                                                                   | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| c Critical Lane Group             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# 2026 AM DESIGN HOUR BUILD CONDITIONS

Lanes, Volumes, Timings

2: REDWOOD ST/Site & 35th Street

06/18/2020





|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                        | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)              | 52                                                                                | 20                                                                                | 19                                                                                | 15                                                                                | 48                                                                                | 0                                                                                 | 37                                                                                 | 2                                                                                   | 9                                                                                   | 0                                                                                   | 2                                                                                   | 33                                                                                  |
| Future Volume (vph)               | 52                                                                                | 20                                                                                | 19                                                                                | 15                                                                                | 48                                                                                | 0                                                                                 | 37                                                                                 | 2                                                                                   | 9                                                                                   | 0                                                                                   | 2                                                                                   | 33                                                                                  |
| Ideal Flow (vphpl)                | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                               | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Frt                               |                                                                                   | 0.972                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.974                                                                               |                                                                                     |                                                                                     | 0.874                                                                               |                                                                                     |
| Flt Protected                     |                                                                                   | 0.972                                                                             |                                                                                   |                                                                                   | 0.988                                                                             |                                                                                   |                                                                                    | 0.963                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)                 | 0                                                                                 | 1653                                                                              | 0                                                                                 | 0                                                                                 | 1729                                                                              | 0                                                                                 | 0                                                                                  | 1641                                                                                | 0                                                                                   | 0                                                                                   | 1530                                                                                | 0                                                                                   |
| Flt Permitted                     |                                                                                   | 0.972                                                                             |                                                                                   |                                                                                   | 0.988                                                                             |                                                                                   |                                                                                    | 0.963                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)                 | 0                                                                                 | 1653                                                                              | 0                                                                                 | 0                                                                                 | 1729                                                                              | 0                                                                                 | 0                                                                                  | 1641                                                                                | 0                                                                                   | 0                                                                                   | 1530                                                                                | 0                                                                                   |
| Link Speed (mph)                  |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                    | 25                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)                |                                                                                   | 317                                                                               |                                                                                   |                                                                                   | 493                                                                               |                                                                                   |                                                                                    | 457                                                                                 |                                                                                     |                                                                                     | 274                                                                                 |                                                                                     |
| Travel Time (s)                   |                                                                                   | 8.6                                                                               |                                                                                   |                                                                                   | 13.4                                                                              |                                                                                   |                                                                                    | 12.5                                                                                |                                                                                     |                                                                                     | 6.2                                                                                 |                                                                                     |
| Peak Hour Factor                  | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                               | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                |
| Adj. Flow (vph)                   | 68                                                                                | 26                                                                                | 25                                                                                | 19                                                                                | 62                                                                                | 0                                                                                 | 48                                                                                 | 3                                                                                   | 12                                                                                  | 0                                                                                   | 3                                                                                   | 43                                                                                  |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)             | 0                                                                                 | 119                                                                               | 0                                                                                 | 0                                                                                 | 81                                                                                | 0                                                                                 | 0                                                                                  | 63                                                                                  | 0                                                                                   | 0                                                                                   | 46                                                                                  | 0                                                                                   |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment                    | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)                  |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 35                                                                                  |                                                                                     |
| Crosswalk Width(ft)               |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                    | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Two way Left Turn Lane            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor                    | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                               | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                |
| Sign Control                      |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |                                                                                   |                                                                                    | Stop                                                                                |                                                                                     |                                                                                     | Stop                                                                                |                                                                                     |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization | 28.0%                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | ICU Level of Service A                                                             |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

# 2026 AM DESIGN HOUR BUILD CONDITIONS

HCM 2010 TWSC

2: REDWOOD ST/Site & 35th Street

06/18/2020










| Intersection             |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
|--------------------------|--------|-----------------------------------------------------------------------------------|------|--------|-----------------------------------------------------------------------------------|------|--------|-----------------------------------------------------------------------------------|------|--------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 5.6    |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
| Movement                 | EBL    | EBT                                                                               | EBR  | WBL    | WBT                                                                               | WBR  | NBL    | NBT                                                                               | NBR  | SBL    | SBT                                                                                 | SBR  |
| Lane Configurations      |        |  |      |        |  |      |        |  |      |        |  |      |
| Traffic Vol, veh/h       | 52     | 20                                                                                | 19   | 15     | 48                                                                                | 0    | 37     | 2                                                                                 | 9    | 0      | 2                                                                                   | 33   |
| Future Vol, veh/h        | 52     | 20                                                                                | 19   | 15     | 48                                                                                | 0    | 37     | 2                                                                                 | 9    | 0      | 2                                                                                   | 33   |
| Conflicting Peds, #/hr   | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0    | 0      | 0                                                                                   | 0    |
| Sign Control             | Free   | Free                                                                              | Free | Free   | Free                                                                              | Free | Stop   | Stop                                                                              | Stop | Stop   | Stop                                                                                | Stop |
| RT Channelized           | -      | -                                                                                 | None | -      | -                                                                                 | None | -      | -                                                                                 | None | -      | -                                                                                   | None |
| Storage Length           | -      | -                                                                                 | -    | -      | -                                                                                 | -    | -      | -                                                                                 | -    | -      | -                                                                                   | -    |
| Veh in Median Storage, # | -      | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | 0                                                                                   | -    |
| Grade, %                 | -      | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | 0                                                                                   | -    |
| Peak Hour Factor         | 77     | 77                                                                                | 77   | 77     | 77                                                                                | 77   | 77     | 77                                                                                | 77   | 77     | 77                                                                                  | 77   |
| Heavy Vehicles, %        | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0    | 0      | 0                                                                                   | 0    |
| Mvmt Flow                | 68     | 26                                                                                | 25   | 19     | 62                                                                                | 0    | 48     | 3                                                                                 | 12   | 0      | 3                                                                                   | 43   |
|                          |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
| Major/Minor              | Major1 |                                                                                   |      | Major2 |                                                                                   |      | Minor1 |                                                                                   |      | Minor2 |                                                                                     |      |
| Conflicting Flow All     | 62     | 0                                                                                 | 0    | 51     | 0                                                                                 | 0    | 298    | 275                                                                               | 39   | 282    | 287                                                                                 | 62   |
| Stage 1                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 175    | 175                                                                               | -    | 100    | 100                                                                                 | -    |
| Stage 2                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 123    | 100                                                                               | -    | 182    | 187                                                                                 | -    |
| Critical Hdwy            | 4.1    | -                                                                                 | -    | 4.1    | -                                                                                 | -    | 7.1    | 6.5                                                                               | 6.2  | 7.1    | 6.5                                                                                 | 6.2  |
| Critical Hdwy Stg 1      | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 6.1    | 5.5                                                                               | -    | 6.1    | 5.5                                                                                 | -    |
| Critical Hdwy Stg 2      | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 6.1    | 5.5                                                                               | -    | 6.1    | 5.5                                                                                 | -    |
| Follow-up Hdwy           | 2.2    | -                                                                                 | -    | 2.2    | -                                                                                 | -    | 3.5    | 4                                                                                 | 3.3  | 3.5    | 4                                                                                   | 3.3  |
| Pot Cap-1 Maneuver       | 1554   | -                                                                                 | -    | 1568   | -                                                                                 | -    | 658    | 636                                                                               | 1038 | 674    | 626                                                                                 | 1009 |
| Stage 1                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 832    | 758                                                                               | -    | 911    | 816                                                                                 | -    |
| Stage 2                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 886    | 816                                                                               | -    | 824    | 749                                                                                 | -    |
| Platoon blocked, %       |        | -                                                                                 | -    |        | -                                                                                 | -    |        |                                                                                   |      |        |                                                                                     |      |
| Mov Cap-1 Maneuver       | 1554   | -                                                                                 | -    | 1568   | -                                                                                 | -    | 600    | 600                                                                               | 1038 | 635    | 590                                                                                 | 1009 |
| Mov Cap-2 Maneuver       | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 600    | 600                                                                               | -    | 635    | 590                                                                                 | -    |
| Stage 1                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 795    | 724                                                                               | -    | 870    | 805                                                                                 | -    |
| Stage 2                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 835    | 805                                                                               | -    | 775    | 715                                                                                 | -    |
|                          |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
| Approach                 | EB     |                                                                                   |      | WB     |                                                                                   |      | NB     |                                                                                   |      | SB     |                                                                                     |      |
| HCM Control Delay, s     | 4.2    |                                                                                   |      | 1.7    |                                                                                   |      | 11.1   |                                                                                   |      | 8.9    |                                                                                     |      |
| HCM LOS                  |        |                                                                                   |      |        |                                                                                   |      | B      |                                                                                   |      | A      |                                                                                     |      |
|                          |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
| Minor Lane/Major Mvmt    | NBLn1  | EBL                                                                               | EBT  | EBR    | WBL                                                                               | WBT  | WBR    | SBLn1                                                                             |      |        |                                                                                     |      |
| Capacity (veh/h)         | 652    | 1554                                                                              | -    | -      | 1568                                                                              | -    | -      | 970                                                                               |      |        |                                                                                     |      |
| HCM Lane V/C Ratio       | 0.096  | 0.043                                                                             | -    | -      | 0.012                                                                             | -    | -      | 0.047                                                                             |      |        |                                                                                     |      |
| HCM Control Delay (s)    | 11.1   | 7.4                                                                               | 0    | -      | 7.3                                                                               | 0    | -      | 8.9                                                                               |      |        |                                                                                     |      |
| HCM Lane LOS             | B      | A                                                                                 | A    | -      | A                                                                                 | A    | -      | A                                                                                 |      |        |                                                                                     |      |
| HCM 95th %tile Q(veh)    | 0.3    | 0.1                                                                               | -    | -      | 0                                                                                 | -    | -      | 0.1                                                                               |      |        |                                                                                     |      |

# 2026 AM DESIGN HOUR BUILD CONDITIONS

## Lanes, Volumes, Timings

### 3: HWY 101 & RIRO SITE ACCESS

06/18/2020




|                                   |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                        | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations               |                                                                                   |  |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)              | 0                                                                                 | 24                                                                                | 437                                                                               | 7                                                                                 | 0                                                                                 | 451                                                                               |
| Future Volume (vph)               | 0                                                                                 | 24                                                                                | 437                                                                               | 7                                                                                 | 0                                                                                 | 451                                                                               |
| Ideal Flow (vphpl)                | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              |
| Frt                               |                                                                                   | 0.865                                                                             | 0.998                                                                             |                                                                                   |                                                                                   |                                                                                   |
| Flt Protected                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (prot)                 | 0                                                                                 | 1514                                                                              | 3254                                                                              | 0                                                                                 | 0                                                                                 | 3260                                                                              |
| Flt Permitted                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (perm)                 | 0                                                                                 | 1514                                                                              | 3254                                                                              | 0                                                                                 | 0                                                                                 | 3260                                                                              |
| Link Speed (mph)                  | 30                                                                                |                                                                                   | 40                                                                                |                                                                                   |                                                                                   | 40                                                                                |
| Link Distance (ft)                | 243                                                                               |                                                                                   | 716                                                                               |                                                                                   |                                                                                   | 923                                                                               |
| Travel Time (s)                   | 5.5                                                                               |                                                                                   | 12.2                                                                              |                                                                                   |                                                                                   | 15.7                                                                              |
| Peak Hour Factor                  | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              |
| Heavy Vehicles (%)                | 0%                                                                                | 0%                                                                                | 2%                                                                                | 0%                                                                                | 0%                                                                                | 2%                                                                                |
| Adj. Flow (vph)                   | 0                                                                                 | 29                                                                                | 533                                                                               | 9                                                                                 | 0                                                                                 | 550                                                                               |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)             | 0                                                                                 | 29                                                                                | 542                                                                               | 0                                                                                 | 0                                                                                 | 550                                                                               |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment                    | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              |
| Median Width(ft)                  | 0                                                                                 |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |
| Link Offset(ft)                   | 0                                                                                 |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |
| Crosswalk Width(ft)               | 12                                                                                |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |
| Two way Left Turn Lane            |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |
| Headway Factor                    | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              |
| Sign Control                      | Stop                                                                              |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Intersection Capacity Utilization | 23.4%                                                                             |                                                                                   |                                                                                   | ICU Level of Service A                                                            |                                                                                   |                                                                                   |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

# 2026 AM DESIGN HOUR BUILD CONDITIONS

HCM 2010 TWSC

3: HWY 101 & RIRO SITE ACCESS






















06/18/2020

| Intersection             |        |                                                                                   |                                                                                   |      |      |                                                                                   |
|--------------------------|--------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 0.3    |                                                                                   |                                                                                   |      |      |                                                                                   |
| Movement                 | WBL    | WBR                                                                               | NBT                                                                               | NBR  | SBL  | SBT                                                                               |
| Lane Configurations      |        |  |  |      |      |  |
| Traffic Vol, veh/h       | 0      | 24                                                                                | 437                                                                               | 7    | 0    | 451                                                                               |
| Future Vol, veh/h        | 0      | 24                                                                                | 437                                                                               | 7    | 0    | 451                                                                               |
| Conflicting Peds, #/hr   | 0      | 0                                                                                 | 0                                                                                 | 0    | 0    | 0                                                                                 |
| Sign Control             | Stop   | Stop                                                                              | Free                                                                              | Free | Free | Free                                                                              |
| RT Channelized           | -      | None                                                                              | -                                                                                 | None | -    | None                                                                              |
| Storage Length           | -      | 0                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Veh in Median Storage, # | 0      | -                                                                                 | 0                                                                                 | -    | -    | 0                                                                                 |
| Grade, %                 | 0      | -                                                                                 | 0                                                                                 | -    | -    | 0                                                                                 |
| Peak Hour Factor         | 82     | 82                                                                                | 82                                                                                | 82   | 82   | 82                                                                                |
| Heavy Vehicles, %        | 0      | 0                                                                                 | 2                                                                                 | 0    | 0    | 2                                                                                 |
| Mvmt Flow                | 0      | 29                                                                                | 533                                                                               | 9    | 0    | 550                                                                               |
| Major/Minor              | Minor1 | Major1                                                                            | Major2                                                                            |      |      |                                                                                   |
| Conflicting Flow All     | -      | 271                                                                               | 0                                                                                 | 0    | -    | -                                                                                 |
| Stage 1                  | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Stage 2                  | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Critical Hdwy            | -      | 6.9                                                                               | -                                                                                 | -    | -    | -                                                                                 |
| Critical Hdwy Stg 1      | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Critical Hdwy Stg 2      | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Follow-up Hdwy           | -      | 3.3                                                                               | -                                                                                 | -    | -    | -                                                                                 |
| Pot Cap-1 Maneuver       | 0      | 733                                                                               | -                                                                                 | -    | 0    | -                                                                                 |
| Stage 1                  | 0      | -                                                                                 | -                                                                                 | -    | 0    | -                                                                                 |
| Stage 2                  | 0      | -                                                                                 | -                                                                                 | -    | 0    | -                                                                                 |
| Platoon blocked, %       |        |                                                                                   | -                                                                                 | -    |      | -                                                                                 |
| Mov Cap-1 Maneuver       | -      | 733                                                                               | -                                                                                 | -    | -    | -                                                                                 |
| Mov Cap-2 Maneuver       | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Stage 1                  | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Stage 2                  | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Approach                 | WB     | NB                                                                                | SB                                                                                |      |      |                                                                                   |
| HCM Control Delay, s     | 10.1   | 0                                                                                 | 0                                                                                 |      |      |                                                                                   |
| HCM LOS                  | B      |                                                                                   |                                                                                   |      |      |                                                                                   |
| Minor Lane/Major Mvmt    | NBT    | NBRWBLn1                                                                          | SBT                                                                               |      |      |                                                                                   |
| Capacity (veh/h)         | -      | -                                                                                 | 733                                                                               | -    |      |                                                                                   |
| HCM Lane V/C Ratio       | -      | -                                                                                 | 0.04                                                                              | -    |      |                                                                                   |
| HCM Control Delay (s)    | -      | -                                                                                 | 10.1                                                                              | -    |      |                                                                                   |
| HCM Lane LOS             | -      | -                                                                                 | B                                                                                 | -    |      |                                                                                   |
| HCM 95th %tile Q(veh)    | -      | -                                                                                 | 0.1                                                                               | -    |      |                                                                                   |

# 2026 PM DESIGN HOUR BUILD CONDITIONS

Lanes, Volumes, Timings  
1: HWY 101 & 35th Street













06/18/2020

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Traffic Volume (vph)       | 89                                                                                | 35                                                                                | 120                                                                               | 50                                                                                | 19                                                                                | 43                                                                                | 126                                                                                 | 684                                                                                 | 62                                                                                  | 62                                                                                  | 655                                                                                 | 68                                                                                  |
| Future Volume (vph)        | 89                                                                                | 35                                                                                | 120                                                                               | 50                                                                                | 19                                                                                | 43                                                                                | 126                                                                                 | 684                                                                                 | 62                                                                                  | 62                                                                                  | 655                                                                                 | 68                                                                                  |
| Ideal Flow (vphpl)         | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Storage Length (ft)        | 110                                                                               |                                                                                   | 0                                                                                 | 141                                                                               |                                                                                   | 0                                                                                 | 146                                                                                 |                                                                                     | 0                                                                                   | 91                                                                                  |                                                                                     | 0                                                                                   |
| Storage Lanes              | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 1                                                                                   |                                                                                     | 0                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)          | 100                                                                               |                                                                                   |                                                                                   | 55                                                                                |                                                                                   |                                                                                   | 66                                                                                  |                                                                                     |                                                                                     | 54                                                                                  |                                                                                     |                                                                                     |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                | 1.00                                                                                | 0.95                                                                                | 0.95                                                                                |
| Frt                        |                                                                                   | 0.884                                                                             |                                                                                   |                                                                                   | 0.895                                                                             |                                                                                   |                                                                                     | 0.988                                                                               |                                                                                     |                                                                                     | 0.986                                                                               |                                                                                     |
| Flt Protected              | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                             |                                                                                   |                                                                                   | 0.950                                                                               |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 1662                                                                              | 1535                                                                              | 0                                                                                 | 1662                                                                              | 1566                                                                              | 0                                                                                 | 1662                                                                                | 3280                                                                                | 0                                                                                   | 1662                                                                                | 3278                                                                                | 0                                                                                   |
| Flt Permitted              | 0.714                                                                             |                                                                                   |                                                                                   | 0.653                                                                             |                                                                                   |                                                                                   | 0.267                                                                               |                                                                                     |                                                                                     | 0.331                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 1250                                                                              | 1535                                                                              | 0                                                                                 | 1143                                                                              | 1566                                                                              | 0                                                                                 | 467                                                                                 | 3280                                                                                | 0                                                                                   | 579                                                                                 | 3278                                                                                | 0                                                                                   |
| Right Turn on Red          |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)          |                                                                                   | 128                                                                               |                                                                                   |                                                                                   | 46                                                                                |                                                                                   |                                                                                     | 14                                                                                  |                                                                                     |                                                                                     | 15                                                                                  |                                                                                     |
| Link Speed (mph)           |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                     | 40                                                                                  |                                                                                     |                                                                                     | 40                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 499                                                                               |                                                                                   |                                                                                   | 317                                                                               |                                                                                   |                                                                                     | 925                                                                                 |                                                                                     |                                                                                     | 716                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 13.6                                                                              |                                                                                   |                                                                                   | 8.6                                                                               |                                                                                   |                                                                                     | 15.8                                                                                |                                                                                     |                                                                                     | 12.2                                                                                |                                                                                     |
| Peak Hour Factor           | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Heavy Vehicles (%)         | 0%                                                                                | 0%                                                                                | 1%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                  | 0%                                                                                  | 2%                                                                                  | 0%                                                                                  | 0%                                                                                  | 0%                                                                                  |
| Adj. Flow (vph)            | 95                                                                                | 37                                                                                | 128                                                                               | 53                                                                                | 20                                                                                | 46                                                                                | 134                                                                                 | 728                                                                                 | 66                                                                                  | 66                                                                                  | 697                                                                                 | 72                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 95                                                                                | 165                                                                               | 0                                                                                 | 53                                                                                | 66                                                                                | 0                                                                                 | 134                                                                                 | 794                                                                                 | 0                                                                                   | 66                                                                                  | 769                                                                                 | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                                | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                     | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |                                                                                     |
| Headway Factor             | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                |
| Number of Detectors        | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 2                                                                                   |                                                                                     | 2                                                                                   | 2                                                                                   |                                                                                     |
| Detector Template          | Side St                                                                           | Side St                                                                           |                                                                                   | Side St                                                                           | Side St                                                                           |                                                                                   | Left                                                                                |                                                                                     |                                                                                     | Left                                                                                |                                                                                     |                                                                                     |
| Leading Detector (ft)      | 78                                                                                | 78                                                                                |                                                                                   | 78                                                                                | 78                                                                                |                                                                                   | 78                                                                                  | 223                                                                                 |                                                                                     | 78                                                                                  | 223                                                                                 |                                                                                     |
| Trailing Detector (ft)     | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 157                                                                                 |                                                                                     | 2                                                                                   | 157                                                                                 |                                                                                     |
| Detector 1 Position(ft)    | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                 | 2                                                                                 |                                                                                   | 2                                                                                   | 157                                                                                 |                                                                                     | 2                                                                                   | 157                                                                                 |                                                                                     |
| Detector 1 Size(ft)        | 16                                                                                | 16                                                                                |                                                                                   | 16                                                                                | 16                                                                                |                                                                                   | 16                                                                                  | 6                                                                                   |                                                                                     | 16                                                                                  | 6                                                                                   |                                                                                     |
| Detector 1 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 1 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 1 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Queue (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 1 Delay (s)       | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Detector 2 Position(ft)    | 72                                                                                | 72                                                                                |                                                                                   | 72                                                                                | 72                                                                                |                                                                                   | 72                                                                                  | 217                                                                                 |                                                                                     | 72                                                                                  | 217                                                                                 |                                                                                     |
| Detector 2 Size(ft)        | 6                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                 | 6                                                                                 |                                                                                   | 6                                                                                   | 6                                                                                   |                                                                                     | 6                                                                                   | 6                                                                                   |                                                                                     |
| Detector 2 Type            | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                             | Cl+Ex                                                                             |                                                                                   | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     | Cl+Ex                                                                               | Cl+Ex                                                                               |                                                                                     |
| Detector 2 Channel         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Detector 2 Extend (s)      | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                 | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Turn Type                  | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | pm+pt                                                                               | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases           |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Permitted Phases           | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 6                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     |

# 2026 PM DESIGN HOUR BUILD CONDITIONS

Lanes, Volumes, Timings  
1: HWY 101 & 35th Street

06/18/2020

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Detector Phase          | 8                                                                                 | 8                                                                                 |                                                                                   | 4                                                                                 | 4                                                                                 |                                                                                   | 1                                                                                  | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                                | 4.0                                                                                 |                                                                                     | 4.0                                                                                 | 4.0                                                                                 |                                                                                     |
| Minimum Split (s)       | 22.0                                                                              | 22.0                                                                              |                                                                                   | 28.0                                                                              | 28.0                                                                              |                                                                                   | 13.0                                                                               | 28.8                                                                                |                                                                                     | 13.0                                                                                | 22.8                                                                                |                                                                                     |
| Total Split (s)         | 29.0                                                                              | 29.0                                                                              |                                                                                   | 29.0                                                                              | 29.0                                                                              |                                                                                   | 18.0                                                                               | 47.0                                                                                |                                                                                     | 14.0                                                                                | 43.0                                                                                |                                                                                     |
| Total Split (%)         | 32.2%                                                                             | 32.2%                                                                             |                                                                                   | 32.2%                                                                             | 32.2%                                                                             |                                                                                   | 20.0%                                                                              | 52.2%                                                                               |                                                                                     | 15.6%                                                                               | 47.8%                                                                               |                                                                                     |
| Maximum Green (s)       | 25.0                                                                              | 25.0                                                                              |                                                                                   | 25.0                                                                              | 25.0                                                                              |                                                                                   | 13.2                                                                               | 42.2                                                                                |                                                                                     | 9.2                                                                                 | 38.2                                                                                |                                                                                     |
| Yellow Time (s)         | 3.5                                                                               | 3.5                                                                               |                                                                                   | 3.5                                                                               | 3.5                                                                               |                                                                                   | 4.3                                                                                | 4.3                                                                                 |                                                                                     | 4.3                                                                                 | 4.3                                                                                 |                                                                                     |
| All-Red Time (s)        | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                                | 0.5                                                                                 |                                                                                     | 0.5                                                                                 | 0.5                                                                                 |                                                                                     |
| Lost Time Adjust (s)    | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                               | 0.5                                                                               |                                                                                   | 0.5                                                                                | 0.5                                                                                 |                                                                                     | 0.5                                                                                 | 0.5                                                                                 |                                                                                     |
| Total Lost Time (s)     | 4.5                                                                               | 4.5                                                                               |                                                                                   | 4.5                                                                               | 4.5                                                                               |                                                                                   | 5.3                                                                                | 5.3                                                                                 |                                                                                     | 5.3                                                                                 | 5.3                                                                                 |                                                                                     |
| Lead/Lag                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Lead                                                                               | Lag                                                                                 |                                                                                     | Lead                                                                                | Lag                                                                                 |                                                                                     |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Yes                                                                                | Yes                                                                                 |                                                                                     | Yes                                                                                 | Yes                                                                                 |                                                                                     |
| Vehicle Extension (s)   | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                                | 2.5                                                                                 |                                                                                     | 2.5                                                                                 | 2.5                                                                                 |                                                                                     |
| Minimum Gap (s)         | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                               | 2.0                                                                               |                                                                                   | 2.0                                                                                | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Time Before Reduce (s)  | 8.0                                                                               | 8.0                                                                               |                                                                                   | 8.0                                                                               | 8.0                                                                               |                                                                                   | 8.0                                                                                | 8.0                                                                                 |                                                                                     | 8.0                                                                                 | 8.0                                                                                 |                                                                                     |
| Time To Reduce (s)      | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                                | 4.0                                                                                 |                                                                                     | 4.0                                                                                 | 4.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | None                                                                              |                                                                                   | None                                                                              | None                                                                              |                                                                                   | None                                                                               | Min                                                                                 |                                                                                     | None                                                                                | Min                                                                                 |                                                                                     |
| Walk Time (s)           | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   |                                                                                    | 7.0                                                                                 |                                                                                     |                                                                                     | 7.0                                                                                 |                                                                                     |
| Flash Dont Walk (s)     | 11.0                                                                              | 11.0                                                                              |                                                                                   | 17.0                                                                              | 17.0                                                                              |                                                                                   |                                                                                    | 17.0                                                                                |                                                                                     |                                                                                     | 11.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) | 1                                                                                 | 1                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 1                                                                                   |                                                                                     |
| Act Effect Green (s)    | 8.9                                                                               | 8.9                                                                               |                                                                                   | 8.9                                                                               | 8.9                                                                               |                                                                                   | 23.3                                                                               | 19.4                                                                                |                                                                                     | 20.9                                                                                | 16.3                                                                                |                                                                                     |
| Actuated g/C Ratio      | 0.20                                                                              | 0.20                                                                              |                                                                                   | 0.20                                                                              | 0.20                                                                              |                                                                                   | 0.52                                                                               | 0.43                                                                                |                                                                                     | 0.47                                                                                | 0.36                                                                                |                                                                                     |
| v/c Ratio               | 0.38                                                                              | 0.41                                                                              |                                                                                   | 0.23                                                                              | 0.19                                                                              |                                                                                   | 0.32                                                                               | 0.56                                                                                |                                                                                     | 0.16                                                                                | 0.64                                                                                |                                                                                     |
| Control Delay           | 21.6                                                                              | 9.4                                                                               |                                                                                   | 19.1                                                                              | 9.8                                                                               |                                                                                   | 7.6                                                                                | 13.6                                                                                |                                                                                     | 6.4                                                                                 | 16.5                                                                                |                                                                                     |
| Queue Delay             | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                               | 0.0                                                                               |                                                                                   | 0.0                                                                                | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             | 21.6                                                                              | 9.4                                                                               |                                                                                   | 19.1                                                                              | 9.8                                                                               |                                                                                   | 7.6                                                                                | 13.6                                                                                |                                                                                     | 6.4                                                                                 | 16.5                                                                                |                                                                                     |
| LOS                     | C                                                                                 | A                                                                                 |                                                                                   | B                                                                                 | A                                                                                 |                                                                                   | A                                                                                  | B                                                                                   |                                                                                     | A                                                                                   | B                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 13.9                                                                              |                                                                                   |                                                                                   | 13.9                                                                              |                                                                                   |                                                                                    | 12.7                                                                                |                                                                                     |                                                                                     | 15.7                                                                                |                                                                                     |
| Approach LOS            |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                    | B                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |

## Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 44.9

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 14.1

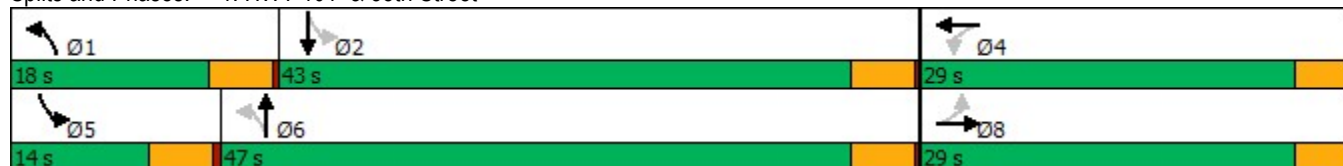
Intersection LOS: B

Intersection Capacity Utilization 59.3%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: HWY 101 & 35th Street
























# 2026 PM DESIGN HOUR BUILD CONDITIONS

## HCM Signalized Intersection Capacity Analysis

1: HWY 101 & 35th Street

06/18/2020

|                                   |  |  |  |  |  |  |   |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                          | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations               |  |  |                                                                                   |  |  |                                                                                   |  |  |                                                                                     |  |  |  |
| Traffic Volume (vph)              | 89                                                                                | 35                                                                                | 120                                                                               | 50                                                                                | 19                                                                                | 43                                                                                | 126                                                                                 | 684                                                                                 | 62                                                                                  | 62                                                                                  | 655                                                                                 | 68                                                                                  |
| Future Volume (vph)               | 89                                                                                | 35                                                                                | 120                                                                               | 50                                                                                | 19                                                                                | 43                                                                                | 126                                                                                 | 684                                                                                 | 62                                                                                  | 62                                                                                  | 655                                                                                 | 68                                                                                  |
| Ideal Flow (vphpl)                | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Total Lost time (s)               | 4.5                                                                               | 4.5                                                                               |                                                                                   | 4.5                                                                               | 4.5                                                                               |                                                                                   | 5.3                                                                                 | 5.3                                                                                 |                                                                                     | 5.3                                                                                 | 5.3                                                                                 |                                                                                     |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 0.95                                                                                |                                                                                     | 1.00                                                                                | 0.95                                                                                |                                                                                     |
| Frt                               | 1.00                                                                              | 0.88                                                                              |                                                                                   | 1.00                                                                              | 0.90                                                                              |                                                                                   | 1.00                                                                                | 0.99                                                                                |                                                                                     | 1.00                                                                                | 0.99                                                                                |                                                                                     |
| Flt Protected                     | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                              | 1.00                                                                              |                                                                                   | 0.95                                                                                | 1.00                                                                                |                                                                                     | 0.95                                                                                | 1.00                                                                                |                                                                                     |
| Satd. Flow (prot)                 | 1662                                                                              | 1534                                                                              |                                                                                   | 1662                                                                              | 1567                                                                              |                                                                                   | 1662                                                                                | 3278                                                                                |                                                                                     | 1662                                                                                | 3278                                                                                |                                                                                     |
| Flt Permitted                     | 0.71                                                                              | 1.00                                                                              |                                                                                   | 0.65                                                                              | 1.00                                                                              |                                                                                   | 0.27                                                                                | 1.00                                                                                |                                                                                     | 0.33                                                                                | 1.00                                                                                |                                                                                     |
| Satd. Flow (perm)                 | 1249                                                                              | 1534                                                                              |                                                                                   | 1142                                                                              | 1567                                                                              |                                                                                   | 467                                                                                 | 3278                                                                                |                                                                                     | 579                                                                                 | 3278                                                                                |                                                                                     |
| Peak-hour factor, PHF             | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Adj. Flow (vph)                   | 95                                                                                | 37                                                                                | 128                                                                               | 53                                                                                | 20                                                                                | 46                                                                                | 134                                                                                 | 728                                                                                 | 66                                                                                  | 66                                                                                  | 697                                                                                 | 72                                                                                  |
| RTOR Reduction (vph)              | 0                                                                                 | 104                                                                               | 0                                                                                 | 0                                                                                 | 37                                                                                | 0                                                                                 | 0                                                                                   | 8                                                                                   | 0                                                                                   | 0                                                                                   | 9                                                                                   | 0                                                                                   |
| Lane Group Flow (vph)             | 95                                                                                | 61                                                                                | 0                                                                                 | 53                                                                                | 29                                                                                | 0                                                                                 | 134                                                                                 | 786                                                                                 | 0                                                                                   | 66                                                                                  | 760                                                                                 | 0                                                                                   |
| Heavy Vehicles (%)                | 0%                                                                                | 0%                                                                                | 1%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                | 0%                                                                                  | 0%                                                                                  | 2%                                                                                  | 0%                                                                                  | 0%                                                                                  | 0%                                                                                  |
| Turn Type                         | Perm                                                                              | NA                                                                                |                                                                                   | Perm                                                                              | NA                                                                                |                                                                                   | pm+pt                                                                               | NA                                                                                  |                                                                                     | pm+pt                                                                               | NA                                                                                  |                                                                                     |
| Protected Phases                  |                                                                                   | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     | 5                                                                                   | 2                                                                                   |                                                                                     |
| Permitted Phases                  | 8                                                                                 |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 6                                                                                   |                                                                                     |                                                                                     | 2                                                                                   |                                                                                     |                                                                                     |
| Actuated Green, G (s)             | 9.4                                                                               | 9.4                                                                               |                                                                                   | 9.4                                                                               | 9.4                                                                               |                                                                                   | 25.5                                                                                | 19.9                                                                                |                                                                                     | 21.7                                                                                | 18.0                                                                                |                                                                                     |
| Effective Green, g (s)            | 8.9                                                                               | 8.9                                                                               |                                                                                   | 8.9                                                                               | 8.9                                                                               |                                                                                   | 24.5                                                                                | 19.4                                                                                |                                                                                     | 20.7                                                                                | 17.5                                                                                |                                                                                     |
| Actuated g/C Ratio                | 0.19                                                                              | 0.19                                                                              |                                                                                   | 0.19                                                                              | 0.19                                                                              |                                                                                   | 0.53                                                                                | 0.42                                                                                |                                                                                     | 0.44                                                                                | 0.38                                                                                |                                                                                     |
| Clearance Time (s)                | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.0                                                                               | 4.0                                                                               |                                                                                   | 4.8                                                                                 | 4.8                                                                                 |                                                                                     | 4.8                                                                                 | 4.8                                                                                 |                                                                                     |
| Vehicle Extension (s)             | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                               | 2.5                                                                               |                                                                                   | 2.5                                                                                 | 2.5                                                                                 |                                                                                     | 2.5                                                                                 | 2.5                                                                                 |                                                                                     |
| Lane Grp Cap (vph)                | 238                                                                               | 292                                                                               |                                                                                   | 218                                                                               | 299                                                                               |                                                                                   | 376                                                                                 | 1364                                                                                |                                                                                     | 331                                                                                 | 1231                                                                                |                                                                                     |
| v/s Ratio Prot                    |                                                                                   | 0.04                                                                              |                                                                                   |                                                                                   | 0.02                                                                              |                                                                                   | c0.04                                                                               | c0.24                                                                               |                                                                                     | 0.01                                                                                | 0.23                                                                                |                                                                                     |
| v/s Ratio Perm                    | c0.08                                                                             |                                                                                   |                                                                                   | 0.05                                                                              |                                                                                   |                                                                                   | 0.15                                                                                |                                                                                     |                                                                                     | 0.07                                                                                |                                                                                     |                                                                                     |
| v/c Ratio                         | 0.40                                                                              | 0.21                                                                              |                                                                                   | 0.24                                                                              | 0.10                                                                              |                                                                                   | 0.36                                                                                | 0.58                                                                                |                                                                                     | 0.20                                                                                | 0.62                                                                                |                                                                                     |
| Uniform Delay, d1                 | 16.5                                                                              | 15.9                                                                              |                                                                                   | 16.0                                                                              | 15.5                                                                              |                                                                                   | 6.0                                                                                 | 10.4                                                                                |                                                                                     | 7.5                                                                                 | 11.8                                                                                |                                                                                     |
| Progression Factor                | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                                | 1.00                                                                                |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     |
| Incremental Delay, d2             | 0.8                                                                               | 0.3                                                                               |                                                                                   | 0.4                                                                               | 0.1                                                                               |                                                                                   | 0.4                                                                                 | 0.5                                                                                 |                                                                                     | 0.2                                                                                 | 0.8                                                                                 |                                                                                     |
| Delay (s)                         | 17.3                                                                              | 16.2                                                                              |                                                                                   | 16.4                                                                              | 15.6                                                                              |                                                                                   | 6.5                                                                                 | 10.9                                                                                |                                                                                     | 7.7                                                                                 | 12.6                                                                                |                                                                                     |
| Level of Service                  | B                                                                                 | B                                                                                 |                                                                                   | B                                                                                 | B                                                                                 |                                                                                   | A                                                                                   | B                                                                                   |                                                                                     | A                                                                                   | B                                                                                   |                                                                                     |
| Approach Delay (s)                |                                                                                   | 16.6                                                                              |                                                                                   |                                                                                   | 16.0                                                                              |                                                                                   |                                                                                     | 10.3                                                                                |                                                                                     |                                                                                     | 12.2                                                                                |                                                                                     |
| Approach LOS                      |                                                                                   | B                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                   |                                                                                     | B                                                                                   |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |
| <b>Intersection Summary</b>       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 2000 Control Delay            |                                                                                   |                                                                                   | 12.1                                                                              |                                                                                   |                                                                                   | HCM 2000 Level of Service                                                         |                                                                                     |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |
| HCM 2000 Volume to Capacity ratio |                                                                                   |                                                                                   | 0.52                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Actuated Cycle Length (s)         |                                                                                   |                                                                                   | 46.6                                                                              |                                                                                   |                                                                                   | Sum of lost time (s)                                                              |                                                                                     |                                                                                     | 15.1                                                                                |                                                                                     |                                                                                     |                                                                                     |
| Intersection Capacity Utilization |                                                                                   |                                                                                   | 59.3%                                                                             |                                                                                   |                                                                                   | ICU Level of Service                                                              |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Analysis Period (min)             |                                                                                   |                                                                                   | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| c Critical Lane Group             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |



















# 2026 PM DESIGN HOUR BUILD CONDITIONS

Lanes, Volumes, Timings

2: REDWOOD ST/Site & 35th Street

06/18/2020

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations        |                                                                                   |  |                                                                                   |                                                                                   |  |                                                                                   |                                                                                    |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)       | 43                                                                                | 59                                                                                | 57                                                                                | 29                                                                                | 46                                                                                | 0                                                                                 | 40                                                                                 | 2                                                                                   | 17                                                                                  | 0                                                                                   | 1                                                                                   | 26                                                                                  |
| Future Volume (vph)        | 43                                                                                | 59                                                                                | 57                                                                                | 29                                                                                | 46                                                                                | 0                                                                                 | 40                                                                                 | 2                                                                                   | 17                                                                                  | 0                                                                                   | 1                                                                                   | 26                                                                                  |
| Ideal Flow (vphpl)         | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                               | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                | 1750                                                                                |
| Lane Util. Factor          | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Frt                        |                                                                                   | 0.951                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.961                                                                               |                                                                                     |                                                                                     | 0.869                                                                               |                                                                                     |
| Flt Protected              |                                                                                   | 0.987                                                                             |                                                                                   |                                                                                   | 0.981                                                                             |                                                                                   |                                                                                    | 0.967                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (prot)          | 0                                                                                 | 1643                                                                              | 0                                                                                 | 0                                                                                 | 1717                                                                              | 0                                                                                 | 0                                                                                  | 1626                                                                                | 0                                                                                   | 0                                                                                   | 1521                                                                                | 0                                                                                   |
| Flt Permitted              |                                                                                   | 0.987                                                                             |                                                                                   |                                                                                   | 0.981                                                                             |                                                                                   |                                                                                    | 0.967                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Satd. Flow (perm)          | 0                                                                                 | 1643                                                                              | 0                                                                                 | 0                                                                                 | 1717                                                                              | 0                                                                                 | 0                                                                                  | 1626                                                                                | 0                                                                                   | 0                                                                                   | 1521                                                                                | 0                                                                                   |
| Link Speed (mph)           |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                    | 25                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)         |                                                                                   | 317                                                                               |                                                                                   |                                                                                   | 225                                                                               |                                                                                   |                                                                                    | 457                                                                                 |                                                                                     |                                                                                     | 251                                                                                 |                                                                                     |
| Travel Time (s)            |                                                                                   | 8.6                                                                               |                                                                                   |                                                                                   | 6.1                                                                               |                                                                                   |                                                                                    | 12.5                                                                                |                                                                                     |                                                                                     | 5.7                                                                                 |                                                                                     |
| Peak Hour Factor           | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                              | 0.82                                                                               | 0.82                                                                                | 0.82                                                                                | 0.82                                                                                | 0.82                                                                                | 0.82                                                                                |
| Adj. Flow (vph)            | 52                                                                                | 72                                                                                | 70                                                                                | 35                                                                                | 56                                                                                | 0                                                                                 | 49                                                                                 | 2                                                                                   | 21                                                                                  | 0                                                                                   | 1                                                                                   | 32                                                                                  |
| Shared Lane Traffic (%)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)      | 0                                                                                 | 194                                                                               | 0                                                                                 | 0                                                                                 | 91                                                                                | 0                                                                                 | 0                                                                                  | 72                                                                                  | 0                                                                                   | 0                                                                                   | 33                                                                                  | 0                                                                                   |
| Enter Blocked Intersection | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                 | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  | No                                                                                  |
| Lane Alignment             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              | Right                                                                             | Left                                                                               | Left                                                                                | Right                                                                               | Left                                                                                | Left                                                                                | Right                                                                               |
| Median Width(ft)           |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 0                                                                                   |                                                                                     |
| Link Offset(ft)            |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     |                                                                                     | 35                                                                                  |                                                                                     |
| Crosswalk Width(ft)        |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |                                                                                   |                                                                                    | 12                                                                                  |                                                                                     |                                                                                     | 12                                                                                  |                                                                                     |
| Two way Left Turn Lane     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Headway Factor             | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                               | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                | 1.11                                                                                |
| Sign Control               |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |                                                                                   |                                                                                    | Stop                                                                                |                                                                                     |                                                                                     | Stop                                                                                |                                                                                     |

## Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 28.3% ICU Level of Service A

Analysis Period (min) 15

# 2026 PM DESIGN HOUR BUILD CONDITIONS

HCM 2010 TWSC

2: REDWOOD ST/Site & 35th Street

06/18/2020










| Intersection             |        |       |      |        |       |      |        |       |      |        |      |      |
|--------------------------|--------|-------|------|--------|-------|------|--------|-------|------|--------|------|------|
| Int Delay, s/veh         | 4.5    |       |      |        |       |      |        |       |      |        |      |      |
| Movement                 | EBL    | EBT   | EBR  | WBL    | WBT   | WBR  | NBL    | NBT   | NBR  | SBL    | SBT  | SBR  |
| Lane Configurations      |        | ↕     |      |        | ↕     |      |        | ↕     |      |        | ↕    |      |
| Traffic Vol, veh/h       | 43     | 59    | 57   | 29     | 46    | 0    | 40     | 2     | 17   | 0      | 1    | 26   |
| Future Vol, veh/h        | 43     | 59    | 57   | 29     | 46    | 0    | 40     | 2     | 17   | 0      | 1    | 26   |
| Conflicting Peds, #/hr   | 0      | 0     | 0    | 0      | 0     | 0    | 0      | 0     | 0    | 0      | 0    | 0    |
| Sign Control             | Free   | Free  | Free | Free   | Free  | Free | Stop   | Stop  | Stop | Stop   | Stop | Stop |
| RT Channelized           | -      | -     | None | -      | -     | None | -      | -     | None | -      | -    | None |
| Storage Length           | -      | -     | -    | -      | -     | -    | -      | -     | -    | -      | -    | -    |
| Veh in Median Storage, # | -      | 0     | -    | -      | 0     | -    | -      | 0     | -    | -      | 0    | -    |
| Grade, %                 | -      | 0     | -    | -      | 0     | -    | -      | 0     | -    | -      | 0    | -    |
| Peak Hour Factor         | 82     | 82    | 82   | 82     | 82    | 82   | 82     | 82    | 82   | 82     | 82   | 82   |
| Heavy Vehicles, %        | 0      | 0     | 0    | 0      | 0     | 0    | 0      | 0     | 0    | 0      | 0    | 0    |
| Mvmt Flow                | 52     | 72    | 70   | 35     | 56    | 0    | 49     | 2     | 21   | 0      | 1    | 32   |
|                          |        |       |      |        |       |      |        |       |      |        |      |      |
| Major/Minor              | Major1 |       |      | Major2 |       |      | Minor1 |       |      | Minor2 |      |      |
| Conflicting Flow All     | 56     | 0     | 0    | 142    | 0     | 0    | 354    | 337   | 107  | 349    | 372  | 56   |
| Stage 1                  | -      | -     | -    | -      | -     | -    | 211    | 211   | -    | 126    | 126  | -    |
| Stage 2                  | -      | -     | -    | -      | -     | -    | 143    | 126   | -    | 223    | 246  | -    |
| Critical Hdwy            | 4.1    | -     | -    | 4.1    | -     | -    | 7.1    | 6.5   | 6.2  | 7.1    | 6.5  | 6.2  |
| Critical Hdwy Stg 1      | -      | -     | -    | -      | -     | -    | 6.1    | 5.5   | -    | 6.1    | 5.5  | -    |
| Critical Hdwy Stg 2      | -      | -     | -    | -      | -     | -    | 6.1    | 5.5   | -    | 6.1    | 5.5  | -    |
| Follow-up Hdwy           | 2.2    | -     | -    | 2.2    | -     | -    | 3.5    | 4     | 3.3  | 3.5    | 4    | 3.3  |
| Pot Cap-1 Maneuver       | 1562   | -     | -    | 1453   | -     | -    | 605    | 587   | 953  | 609    | 561  | 1016 |
| Stage 1                  | -      | -     | -    | -      | -     | -    | 796    | 731   | -    | 883    | 796  | -    |
| Stage 2                  | -      | -     | -    | -      | -     | -    | 865    | 796   | -    | 784    | 706  | -    |
| Platoon blocked, %       |        | -     | -    |        | -     | -    |        |       |      |        |      |      |
| Mov Cap-1 Maneuver       | 1562   | -     | -    | 1453   | -     | -    | 558    | 552   | 953  | 566    | 527  | 1016 |
| Mov Cap-2 Maneuver       | -      | -     | -    | -      | -     | -    | 558    | 552   | -    | 566    | 527  | -    |
| Stage 1                  | -      | -     | -    | -      | -     | -    | 767    | 705   | -    | 851    | 776  | -    |
| Stage 2                  | -      | -     | -    | -      | -     | -    | 816    | 776   | -    | 737    | 681  | -    |
|                          |        |       |      |        |       |      |        |       |      |        |      |      |
| Approach                 | EB     |       |      | WB     |       |      | NB     |       |      | SB     |      |      |
| HCM Control Delay, s     | 2      |       |      | 2.9    |       |      | 11.4   |       |      | 8.8    |      |      |
| HCM LOS                  |        |       |      |        |       |      | B      |       |      | A      |      |      |
|                          |        |       |      |        |       |      |        |       |      |        |      |      |
| Minor Lane/Major Mvmt    | NBLn1  | EBL   | EBT  | EBR    | WBL   | WBT  | WBR    | SBLn1 |      |        |      |      |
| Capacity (veh/h)         | 633    | 1562  | -    | -      | 1453  | -    | -      | 982   |      |        |      |      |
| HCM Lane V/C Ratio       | 0.114  | 0.034 | -    | -      | 0.024 | -    | -      | 0.034 |      |        |      |      |
| HCM Control Delay (s)    | 11.4   | 7.4   | 0    | -      | 7.5   | 0    | -      | 8.8   |      |        |      |      |
| HCM Lane LOS             | B      | A     | A    | -      | A     | A    | -      | A     |      |        |      |      |
| HCM 95th %tile Q(veh)    | 0.4    | 0.1   | -    | -      | 0.1   | -    | -      | 0.1   |      |        |      |      |

# 2026 PM DESIGN HOUR BUILD CONDITIONS

## Lanes, Volumes, Timings

### 3: HWY 101 & RIRO SITE ACCESS

06/18/2020




|                                   |  |  |  |  |  |  |
|-----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                        | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations               |                                                                                   |  |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)              | 0                                                                                 | 20                                                                                | 810                                                                               | 6                                                                                 | 0                                                                                 | 785                                                                               |
| Future Volume (vph)               | 0                                                                                 | 20                                                                                | 810                                                                               | 6                                                                                 | 0                                                                                 | 785                                                                               |
| Ideal Flow (vphpl)                | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              | 1750                                                                              |
| Lane Util. Factor                 | 1.00                                                                              | 1.00                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 0.95                                                                              |
| Frt                               |                                                                                   | 0.865                                                                             | 0.999                                                                             |                                                                                   |                                                                                   |                                                                                   |
| Flt Protected                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (prot)                 | 0                                                                                 | 1514                                                                              | 3322                                                                              | 0                                                                                 | 0                                                                                 | 3325                                                                              |
| Flt Permitted                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Satd. Flow (perm)                 | 0                                                                                 | 1514                                                                              | 3322                                                                              | 0                                                                                 | 0                                                                                 | 3325                                                                              |
| Link Speed (mph)                  | 30                                                                                |                                                                                   | 40                                                                                |                                                                                   |                                                                                   | 40                                                                                |
| Link Distance (ft)                | 243                                                                               |                                                                                   | 716                                                                               |                                                                                   |                                                                                   | 923                                                                               |
| Travel Time (s)                   | 5.5                                                                               |                                                                                   | 12.2                                                                              |                                                                                   |                                                                                   | 15.7                                                                              |
| Peak Hour Factor                  | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              |
| Adj. Flow (vph)                   | 0                                                                                 | 21                                                                                | 862                                                                               | 6                                                                                 | 0                                                                                 | 835                                                                               |
| Shared Lane Traffic (%)           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Lane Group Flow (vph)             | 0                                                                                 | 21                                                                                | 868                                                                               | 0                                                                                 | 0                                                                                 | 835                                                                               |
| Enter Blocked Intersection        | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                | No                                                                                |
| Lane Alignment                    | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Left                                                                              |
| Median Width(ft)                  | 0                                                                                 |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |
| Link Offset(ft)                   | 0                                                                                 |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   | 0                                                                                 |
| Crosswalk Width(ft)               | 12                                                                                |                                                                                   | 12                                                                                |                                                                                   |                                                                                   | 12                                                                                |
| Two way Left Turn Lane            |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |
| Headway Factor                    | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              | 1.11                                                                              |
| Sign Control                      | Stop                                                                              |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |
| Intersection Summary              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                        | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:                     | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Intersection Capacity Utilization | 34.5%                                                                             |                                                                                   |                                                                                   | ICU Level of Service A                                                            |                                                                                   |                                                                                   |
| Analysis Period (min)             | 15                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

# 2026 PM DESIGN HOUR BUILD CONDITIONS

HCM 2010 TWSC

3: HWY 101 & RIRO SITE ACCESS

06/18/2020

| Intersection             |        |                                                                                   |                                                                                   |      |      |                                                                                   |
|--------------------------|--------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 0.1    |                                                                                   |                                                                                   |      |      |                                                                                   |
| Movement                 | WBL    | WBR                                                                               | NBT                                                                               | NBR  | SBL  | SBT                                                                               |
| Lane Configurations      |        |  |  |      |      |  |
| Traffic Vol, veh/h       | 0      | 20                                                                                | 810                                                                               | 6    | 0    | 785                                                                               |
| Future Vol, veh/h        | 0      | 20                                                                                | 810                                                                               | 6    | 0    | 785                                                                               |
| Conflicting Peds, #/hr   | 0      | 0                                                                                 | 0                                                                                 | 0    | 0    | 0                                                                                 |
| Sign Control             | Stop   | Stop                                                                              | Free                                                                              | Free | Free | Free                                                                              |
| RT Channelized           | -      | None                                                                              | -                                                                                 | None | -    | None                                                                              |
| Storage Length           | -      | 0                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Veh in Median Storage, # | 0      | -                                                                                 | 0                                                                                 | -    | -    | 0                                                                                 |
| Grade, %                 | 0      | -                                                                                 | 0                                                                                 | -    | -    | 0                                                                                 |
| Peak Hour Factor         | 94     | 94                                                                                | 94                                                                                | 94   | 94   | 94                                                                                |
| Heavy Vehicles, %        | 0      | 0                                                                                 | 0                                                                                 | 0    | 0    | 0                                                                                 |
| Mvmt Flow                | 0      | 21                                                                                | 862                                                                               | 6    | 0    | 835                                                                               |
| Major/Minor              | Minor1 | Major1                                                                            | Major2                                                                            |      |      |                                                                                   |
| Conflicting Flow All     | -      | 434                                                                               | 0                                                                                 | 0    | -    | -                                                                                 |
| Stage 1                  | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Stage 2                  | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Critical Hdwy            | -      | 6.9                                                                               | -                                                                                 | -    | -    | -                                                                                 |
| Critical Hdwy Stg 1      | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Critical Hdwy Stg 2      | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Follow-up Hdwy           | -      | 3.3                                                                               | -                                                                                 | -    | -    | -                                                                                 |
| Pot Cap-1 Maneuver       | 0      | 576                                                                               | -                                                                                 | -    | 0    | -                                                                                 |
| Stage 1                  | 0      | -                                                                                 | -                                                                                 | -    | 0    | -                                                                                 |
| Stage 2                  | 0      | -                                                                                 | -                                                                                 | -    | 0    | -                                                                                 |
| Platoon blocked, %       |        |                                                                                   | -                                                                                 | -    |      | -                                                                                 |
| Mov Cap-1 Maneuver       | -      | 576                                                                               | -                                                                                 | -    | -    | -                                                                                 |
| Mov Cap-2 Maneuver       | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Stage 1                  | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Stage 2                  | -      | -                                                                                 | -                                                                                 | -    | -    | -                                                                                 |
| Approach                 | WB     | NB                                                                                | SB                                                                                |      |      |                                                                                   |
| HCM Control Delay, s     | 11.5   | 0                                                                                 | 0                                                                                 |      |      |                                                                                   |
| HCM LOS                  | B      |                                                                                   |                                                                                   |      |      |                                                                                   |
| Minor Lane/Major Mvmt    | NBT    | NBRWBLn1                                                                          | SBT                                                                               |      |      |                                                                                   |
| Capacity (veh/h)         | -      | -                                                                                 | 576                                                                               |      |      |                                                                                   |
| HCM Lane V/C Ratio       | -      | -                                                                                 | 0.037                                                                             |      |      |                                                                                   |
| HCM Control Delay (s)    | -      | -                                                                                 | 11.5                                                                              |      |      |                                                                                   |
| HCM Lane LOS             | -      | -                                                                                 | B                                                                                 |      |      |                                                                                   |
| HCM 95th %tile Q(veh)    | -      | -                                                                                 | 0.1                                                                               |      |      |                                                                                   |

# **APPENDIX I**

## **Existing and No-Build SimTraffic Queue Length Calculations**

# Queuing and Blocking Report

## 2020 CONDITIONS

06/12/2020

### Intersection: 1: HWY 101 & 35th Street, Interval #1

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L  | T   | TR  |
| Maximum Queue (ft)    | 66  | 66  | 49  | 50  | 54  | 122 | 77  | 53 | 119 | 142 |
| Average Queue (ft)    | 40  | 44  | 24  | 31  | 26  | 71  | 33  | 21 | 74  | 76  |
| 95th Queue (ft)       | 73  | 67  | 57  | 58  | 58  | 121 | 81  | 62 | 125 | 143 |
| Link Distance (ft)    |     | 456 |     | 212 |     | 894 | 894 |    | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |    |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91 |     |     |
| Storage Blk Time (%)  |     |     |     |     |     | 0   |     |    | 4   |     |
| Queuing Penalty (veh) |     |     |     |     |     | 0   |     |    | 1   |     |

### Intersection: 1: HWY 101 & 35th Street, Interval #2

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L  | T   | TR  |
| Maximum Queue (ft)    | 79  | 64  | 40  | 64  | 39  | 107 | 59  | 44 | 101 | 75  |
| Average Queue (ft)    | 32  | 35  | 18  | 27  | 16  | 48  | 20  | 9  | 48  | 32  |
| 95th Queue (ft)       | 66  | 60  | 46  | 57  | 43  | 89  | 50  | 34 | 83  | 67  |
| Link Distance (ft)    |     | 456 |     | 212 |     | 894 | 894 |    | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |    |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91 |     |     |
| Storage Blk Time (%)  | 0   |     |     |     |     | 0   |     |    | 0   |     |
| Queuing Penalty (veh) | 0   |     |     |     |     | 0   |     |    | 0   |     |

### Intersection: 1: HWY 101 & 35th Street, All Intervals

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L  | T   | TR  |
| Maximum Queue (ft)    | 84  | 66  | 54  | 64  | 54  | 127 | 82  | 63 | 124 | 142 |
| Average Queue (ft)    | 34  | 37  | 19  | 28  | 18  | 53  | 23  | 12 | 54  | 42  |
| 95th Queue (ft)       | 68  | 62  | 49  | 58  | 48  | 100 | 59  | 43 | 98  | 97  |
| Link Distance (ft)    |     | 456 |     | 212 |     | 894 | 894 |    | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |    |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91 |     |     |
| Storage Blk Time (%)  | 0   |     |     |     |     | 0   |     |    | 1   |     |
| Queuing Penalty (veh) | 0   |     |     |     |     | 0   |     |    | 0   |     |

# Queuing and Blocking Report

## 2020 CONDITIONS

06/12/2020

### Intersection: 2: REDWOOD ST/Site & 35th Street, Interval #1

| Movement              | WB  | NB  |
|-----------------------|-----|-----|
| Directions Served     | LTR | LTR |
| Maximum Queue (ft)    | 16  | 41  |
| Average Queue (ft)    | 2   | 29  |
| 95th Queue (ft)       | 19  | 56  |
| Link Distance (ft)    | 468 | 427 |
| Upstream Blk Time (%) |     |     |
| Queuing Penalty (veh) |     |     |
| Storage Bay Dist (ft) |     |     |
| Storage Blk Time (%)  |     |     |
| Queuing Penalty (veh) |     |     |

### Intersection: 2: REDWOOD ST/Site & 35th Street, Interval #2

| Movement              | NB  |
|-----------------------|-----|
| Directions Served     | LTR |
| Maximum Queue (ft)    | 40  |
| Average Queue (ft)    | 28  |
| 95th Queue (ft)       | 52  |
| Link Distance (ft)    | 427 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

### Intersection: 2: REDWOOD ST/Site & 35th Street, All Intervals

| Movement              | WB  | NB  |
|-----------------------|-----|-----|
| Directions Served     | LTR | LTR |
| Maximum Queue (ft)    | 16  | 46  |
| Average Queue (ft)    | 1   | 28  |
| 95th Queue (ft)       | 9   | 53  |
| Link Distance (ft)    | 468 | 427 |
| Upstream Blk Time (%) |     |     |
| Queuing Penalty (veh) |     |     |
| Storage Bay Dist (ft) |     |     |
| Storage Blk Time (%)  |     |     |
| Queuing Penalty (veh) |     |     |

## Queuing and Blocking Report

### 2020 CONDITIONS

06/12/2020

#### Intersection: 3: HWY 101 & RIRO SITE ACCESS, Interval #1

##### Movement

Directions Served

Maximum Queue (ft)

Average Queue (ft)

95th Queue (ft)

Link Distance (ft)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

#### Intersection: 3: HWY 101 & RIRO SITE ACCESS, Interval #2

##### Movement

Directions Served

Maximum Queue (ft)

Average Queue (ft)

95th Queue (ft)

Link Distance (ft)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

#### Intersection: 3: HWY 101 & RIRO SITE ACCESS, All Intervals

##### Movement

Directions Served

Maximum Queue (ft)

Average Queue (ft)

95th Queue (ft)

Link Distance (ft)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

#### Network Summary

Network wide Queuing Penalty, Interval #1: 1

Network wide Queuing Penalty, Interval #2: 0

Network wide Queuing Penalty, All Intervals: 0



# Queuing and Blocking Report

## EXISTING

06/15/2020

### Intersection: 1: HWY 101 & 35th Street, Interval #1

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L  | T   | TR  |
| Maximum Queue (ft)    | 74  | 100 | 49  | 53  | 84  | 153 | 132 | 78 | 150 | 124 |
| Average Queue (ft)    | 43  | 59  | 25  | 27  | 50  | 89  | 73  | 35 | 97  | 82  |
| 95th Queue (ft)       | 78  | 105 | 59  | 59  | 87  | 152 | 134 | 84 | 160 | 134 |
| Link Distance (ft)    |     | 456 |     | 211 |     | 894 | 894 |    | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |    |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91 |     |     |
| Storage Blk Time (%)  |     | 1   |     |     |     | 1   |     |    | 10  |     |
| Queuing Penalty (veh) |     | 1   |     |     |     | 1   |     |    | 4   |     |

### Intersection: 1: HWY 101 & 35th Street, Interval #2

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L  | T   | TR  |
| Maximum Queue (ft)    | 91  | 117 | 69  | 69  | 92  | 138 | 126 | 70 | 175 | 158 |
| Average Queue (ft)    | 44  | 53  | 19  | 31  | 45  | 77  | 60  | 24 | 95  | 82  |
| 95th Queue (ft)       | 81  | 95  | 53  | 58  | 78  | 130 | 104 | 58 | 154 | 145 |
| Link Distance (ft)    |     | 456 |     | 211 |     | 894 | 894 |    | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |    |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91 |     |     |
| Storage Blk Time (%)  | 0   | 0   |     |     |     | 0   |     |    | 8   |     |
| Queuing Penalty (veh) | 0   | 0   |     |     |     | 0   |     |    | 3   |     |

### Intersection: 1: HWY 101 & 35th Street, All Intervals

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L   | T   | TR  |
| Maximum Queue (ft)    | 96  | 126 | 70  | 69  | 102 | 161 | 150 | 108 | 178 | 158 |
| Average Queue (ft)    | 44  | 54  | 21  | 30  | 46  | 80  | 63  | 27  | 96  | 82  |
| 95th Queue (ft)       | 80  | 97  | 55  | 59  | 80  | 136 | 113 | 65  | 155 | 142 |
| Link Distance (ft)    |     | 456 |     | 211 |     | 894 | 894 |     | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91  |     |     |
| Storage Blk Time (%)  | 0   | 0   |     |     |     | 0   |     |     | 9   |     |
| Queuing Penalty (veh) | 0   | 0   |     |     |     | 0   |     |     | 4   |     |

# Queuing and Blocking Report

## EXISTING

06/15/2020

### Intersection: 2: REDWOOD ST/Site & 35th Street, Interval #1

| Movement              | WB  | NB  |
|-----------------------|-----|-----|
| Directions Served     | LTR | LTR |
| Maximum Queue (ft)    | 26  | 55  |
| Average Queue (ft)    | 4   | 37  |
| 95th Queue (ft)       | 28  | 57  |
| Link Distance (ft)    | 201 | 427 |
| Upstream Blk Time (%) |     |     |
| Queuing Penalty (veh) |     |     |
| Storage Bay Dist (ft) |     |     |
| Storage Blk Time (%)  |     |     |
| Queuing Penalty (veh) |     |     |

### Intersection: 2: REDWOOD ST/Site & 35th Street, Interval #2

| Movement              | WB  | NB  |
|-----------------------|-----|-----|
| Directions Served     | LTR | LTR |
| Maximum Queue (ft)    | 21  | 52  |
| Average Queue (ft)    | 2   | 34  |
| 95th Queue (ft)       | 12  | 55  |
| Link Distance (ft)    | 201 | 427 |
| Upstream Blk Time (%) |     |     |
| Queuing Penalty (veh) |     |     |
| Storage Bay Dist (ft) |     |     |
| Storage Blk Time (%)  |     |     |
| Queuing Penalty (veh) |     |     |

### Intersection: 2: REDWOOD ST/Site & 35th Street, All Intervals

| Movement              | WB  | NB  |
|-----------------------|-----|-----|
| Directions Served     | LTR | LTR |
| Maximum Queue (ft)    | 37  | 61  |
| Average Queue (ft)    | 2   | 35  |
| 95th Queue (ft)       | 17  | 56  |
| Link Distance (ft)    | 201 | 427 |
| Upstream Blk Time (%) |     |     |
| Queuing Penalty (veh) |     |     |
| Storage Bay Dist (ft) |     |     |
| Storage Blk Time (%)  |     |     |
| Queuing Penalty (veh) |     |     |

## Queuing and Blocking Report

### EXISTING

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#### Intersection: 3: HWY 101 & RIRO SITE ACCESS, Interval #1

##### Movement

Directions Served

Maximum Queue (ft)

Average Queue (ft)

95th Queue (ft)

Link Distance (ft)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

#### Intersection: 3: HWY 101 & RIRO SITE ACCESS, Interval #2

##### Movement

Directions Served

Maximum Queue (ft)

Average Queue (ft)

95th Queue (ft)

Link Distance (ft)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

#### Intersection: 3: HWY 101 & RIRO SITE ACCESS, All Intervals

##### Movement

Directions Served

Maximum Queue (ft)

Average Queue (ft)

95th Queue (ft)

Link Distance (ft)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

#### Network Summary

Network wide Queuing Penalty, Interval #1: 6

Network wide Queuing Penalty, Interval #2: 4

Network wide Queuing Penalty, All Intervals: 4

Queuing and Blocking Report  
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## Intersection: 1: HWY 101 &amp; 35th Street, Interval #1

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L  | T   | TR  |
| Maximum Queue (ft)    | 101 | 76  | 35  | 54  | 54  | 110 | 105 | 49 | 121 | 119 |
| Average Queue (ft)    | 53  | 42  | 20  | 35  | 35  | 73  | 49  | 18 | 80  | 62  |
| 95th Queue (ft)       | 102 | 71  | 48  | 56  | 58  | 119 | 105 | 51 | 132 | 124 |
| Link Distance (ft)    |     | 456 |     | 212 |     | 894 | 894 |    | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |    |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91 |     |     |
| Storage Blk Time (%)  | 1   |     |     |     |     | 0   |     |    | 5   |     |
| Queuing Penalty (veh) | 1   |     |     |     |     | 0   |     |    | 1   |     |

## Intersection: 1: HWY 101 &amp; 35th Street, Interval #2

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L  | T   | TR  |
| Maximum Queue (ft)    | 81  | 64  | 45  | 59  | 54  | 84  | 66  | 39 | 119 | 117 |
| Average Queue (ft)    | 37  | 37  | 14  | 26  | 20  | 45  | 19  | 12 | 48  | 35  |
| 95th Queue (ft)       | 72  | 61  | 44  | 56  | 50  | 82  | 54  | 38 | 91  | 84  |
| Link Distance (ft)    |     | 456 |     | 212 |     | 894 | 894 |    | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |    |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91 |     |     |
| Storage Blk Time (%)  | 0   |     |     |     |     |     |     |    | 1   |     |
| Queuing Penalty (veh) | 0   |     |     |     |     |     |     |    | 0   |     |

## Intersection: 1: HWY 101 &amp; 35th Street, All Intervals

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L  | T   | TR  |
| Maximum Queue (ft)    | 117 | 76  | 45  | 65  | 65  | 110 | 105 | 54 | 143 | 137 |
| Average Queue (ft)    | 41  | 38  | 16  | 28  | 24  | 52  | 27  | 13 | 56  | 42  |
| 95th Queue (ft)       | 82  | 64  | 45  | 57  | 54  | 96  | 73  | 42 | 106 | 97  |
| Link Distance (ft)    |     | 456 |     | 212 |     | 894 | 894 |    | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |    |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91 |     |     |
| Storage Blk Time (%)  | 0   |     |     |     |     | 0   |     |    | 2   |     |
| Queuing Penalty (veh) | 0   |     |     |     |     | 0   |     |    | 0   |     |

Queuing and Blocking Report  
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Intersection: 2: REDWOOD ST/Site & 35th Street, Interval #1

| Movement              | NB  |
|-----------------------|-----|
| Directions Served     | LTR |
| Maximum Queue (ft)    | 56  |
| Average Queue (ft)    | 36  |
| 95th Queue (ft)       | 57  |
| Link Distance (ft)    | 427 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

Intersection: 2: REDWOOD ST/Site & 35th Street, Interval #2

| Movement              | WB  | NB  |
|-----------------------|-----|-----|
| Directions Served     | LTR | LTR |
| Maximum Queue (ft)    | 10  | 46  |
| Average Queue (ft)    | 0   | 25  |
| 95th Queue (ft)       | 6   | 52  |
| Link Distance (ft)    | 468 | 427 |
| Upstream Blk Time (%) |     |     |
| Queuing Penalty (veh) |     |     |
| Storage Bay Dist (ft) |     |     |
| Storage Blk Time (%)  |     |     |
| Queuing Penalty (veh) |     |     |

Intersection: 2: REDWOOD ST/Site & 35th Street, All Intervals

| Movement              | WB  | NB  |
|-----------------------|-----|-----|
| Directions Served     | LTR | LTR |
| Maximum Queue (ft)    | 10  | 56  |
| Average Queue (ft)    | 0   | 27  |
| 95th Queue (ft)       | 5   | 55  |
| Link Distance (ft)    | 468 | 427 |
| Upstream Blk Time (%) |     |     |
| Queuing Penalty (veh) |     |     |
| Storage Bay Dist (ft) |     |     |
| Storage Blk Time (%)  |     |     |
| Queuing Penalty (veh) |     |     |

## Queuing and Blocking Report

### 2021 AM No-Build Conditions

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#### Intersection: 3: HWY 101 & RIRO SITE ACCESS, Interval #1

##### Movement

Directions Served  
 Maximum Queue (ft)  
 Average Queue (ft)  
 95th Queue (ft)  
 Link Distance (ft)  
 Upstream Blk Time (%)  
 Queuing Penalty (veh)  
 Storage Bay Dist (ft)  
 Storage Blk Time (%)  
 Queuing Penalty (veh)

#### Intersection: 3: HWY 101 & RIRO SITE ACCESS, Interval #2

##### Movement

Directions Served  
 Maximum Queue (ft)  
 Average Queue (ft)  
 95th Queue (ft)  
 Link Distance (ft)  
 Upstream Blk Time (%)  
 Queuing Penalty (veh)  
 Storage Bay Dist (ft)  
 Storage Blk Time (%)  
 Queuing Penalty (veh)

#### Intersection: 3: HWY 101 & RIRO SITE ACCESS, All Intervals

##### Movement

Directions Served  
 Maximum Queue (ft)  
 Average Queue (ft)  
 95th Queue (ft)  
 Link Distance (ft)  
 Upstream Blk Time (%)  
 Queuing Penalty (veh)  
 Storage Bay Dist (ft)  
 Storage Blk Time (%)  
 Queuing Penalty (veh)

#### Network Summary

Network wide Queuing Penalty, Interval #1: 2  
 Network wide Queuing Penalty, Interval #2: 0  
 Network wide Queuing Penalty, All Intervals: 1

Queuing and Blocking Report  
2021 PM Background Conditions

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## Intersection: 1: HWY 101 &amp; 35th Street, Interval #1

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L  | T   | TR  |
| Maximum Queue (ft)    | 76  | 106 | 54  | 63  | 102 | 167 | 151 | 66 | 173 | 157 |
| Average Queue (ft)    | 41  | 60  | 22  | 32  | 63  | 94  | 74  | 29 | 108 | 92  |
| 95th Queue (ft)       | 81  | 116 | 56  | 68  | 102 | 160 | 149 | 73 | 175 | 163 |
| Link Distance (ft)    |     | 456 |     | 211 |     | 894 | 894 |    | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |    |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91 |     |     |
| Storage Blk Time (%)  | 0   | 1   |     |     |     | 1   |     |    | 11  |     |
| Queuing Penalty (veh) | 0   | 1   |     |     |     | 1   |     |    | 5   |     |

## Intersection: 1: HWY 101 &amp; 35th Street, Interval #2

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L  | T   | TR  |
| Maximum Queue (ft)    | 99  | 109 | 44  | 71  | 86  | 165 | 129 | 65 | 173 | 183 |
| Average Queue (ft)    | 47  | 49  | 16  | 29  | 47  | 77  | 59  | 24 | 88  | 81  |
| 95th Queue (ft)       | 79  | 90  | 46  | 62  | 84  | 136 | 112 | 56 | 146 | 149 |
| Link Distance (ft)    |     | 456 |     | 211 |     | 894 | 894 |    | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |    |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91 |     |     |
| Storage Blk Time (%)  | 0   | 0   |     | 0   |     | 1   |     | 0  | 7   |     |
| Queuing Penalty (veh) | 0   | 0   |     | 0   |     | 1   |     | 0  | 3   |     |

## Intersection: 1: HWY 101 &amp; 35th Street, All Intervals

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L  | T   | TR  |
| Maximum Queue (ft)    | 105 | 126 | 54  | 75  | 104 | 195 | 168 | 81 | 182 | 185 |
| Average Queue (ft)    | 46  | 52  | 18  | 29  | 51  | 81  | 63  | 25 | 93  | 84  |
| 95th Queue (ft)       | 80  | 97  | 48  | 64  | 90  | 143 | 123 | 60 | 155 | 152 |
| Link Distance (ft)    |     | 456 |     | 211 |     | 894 | 894 |    | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |    |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91 |     |     |
| Storage Blk Time (%)  | 0   | 0   |     | 0   |     | 1   |     | 0  | 8   |     |
| Queuing Penalty (veh) | 0   | 0   |     | 0   |     | 1   |     | 0  | 3   |     |

Queuing and Blocking Report  
2021 PM Background Conditions

06/15/2020

Intersection: 2: REDWOOD ST/Site & 35th Street, Interval #1

| Movement              | WB  | NB  |
|-----------------------|-----|-----|
| Directions Served     | LTR | LTR |
| Maximum Queue (ft)    | 36  | 55  |
| Average Queue (ft)    | 8   | 34  |
| 95th Queue (ft)       | 34  | 64  |
| Link Distance (ft)    | 201 | 427 |
| Upstream Blk Time (%) |     |     |
| Queuing Penalty (veh) |     |     |
| Storage Bay Dist (ft) |     |     |
| Storage Blk Time (%)  |     |     |
| Queuing Penalty (veh) |     |     |

Intersection: 2: REDWOOD ST/Site & 35th Street, Interval #2

| Movement              | WB  | NB  |
|-----------------------|-----|-----|
| Directions Served     | LTR | LTR |
| Maximum Queue (ft)    | 16  | 52  |
| Average Queue (ft)    | 1   | 28  |
| 95th Queue (ft)       | 10  | 54  |
| Link Distance (ft)    | 201 | 427 |
| Upstream Blk Time (%) |     |     |
| Queuing Penalty (veh) |     |     |
| Storage Bay Dist (ft) |     |     |
| Storage Blk Time (%)  |     |     |
| Queuing Penalty (veh) |     |     |

Intersection: 2: REDWOOD ST/Site & 35th Street, All Intervals

| Movement              | WB  | NB  |
|-----------------------|-----|-----|
| Directions Served     | LTR | LTR |
| Maximum Queue (ft)    | 36  | 65  |
| Average Queue (ft)    | 3   | 30  |
| 95th Queue (ft)       | 18  | 57  |
| Link Distance (ft)    | 201 | 427 |
| Upstream Blk Time (%) |     |     |
| Queuing Penalty (veh) |     |     |
| Storage Bay Dist (ft) |     |     |
| Storage Blk Time (%)  |     |     |
| Queuing Penalty (veh) |     |     |



## Queuing and Blocking Report

### 2021 PM Background Conditions

06/15/2020

#### Intersection: 3: HWY 101 & RIRO SITE ACCESS, Interval #1

##### Movement

Directions Served

Maximum Queue (ft)

Average Queue (ft)

95th Queue (ft)

Link Distance (ft)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

#### Intersection: 3: HWY 101 & RIRO SITE ACCESS, Interval #2

##### Movement

Directions Served

Maximum Queue (ft)

Average Queue (ft)

95th Queue (ft)

Link Distance (ft)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

#### Intersection: 3: HWY 101 & RIRO SITE ACCESS, All Intervals

##### Movement

Directions Served

Maximum Queue (ft)

Average Queue (ft)

95th Queue (ft)

Link Distance (ft)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (ft)

Storage Blk Time (%)

Queuing Penalty (veh)

#### Network Summary

Network wide Queuing Penalty, Interval #1: 7

Network wide Queuing Penalty, Interval #2: 4

Network wide Queuing Penalty, All Intervals: 5

Queuing and Blocking Report  
2026 AM No-Build Conditions

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## Intersection: 1: HWY 101 &amp; 35th Street, Interval #1

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L  | T   | TR  |
| Maximum Queue (ft)    | 68  | 64  | 35  | 54  | 52  | 134 | 74  | 34 | 100 | 105 |
| Average Queue (ft)    | 42  | 43  | 21  | 30  | 27  | 63  | 37  | 16 | 67  | 54  |
| 95th Queue (ft)       | 75  | 73  | 48  | 65  | 59  | 124 | 87  | 43 | 108 | 103 |
| Link Distance (ft)    |     | 456 |     | 212 |     | 894 | 894 |    | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |    |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91 |     |     |
| Storage Blk Time (%)  |     |     |     |     |     | 1   |     |    | 3   |     |
| Queuing Penalty (veh) |     |     |     |     |     | 0   |     |    | 1   |     |

## Intersection: 1: HWY 101 &amp; 35th Street, Interval #2

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L  | T   | TR  |
| Maximum Queue (ft)    | 70  | 64  | 45  | 55  | 50  | 105 | 66  | 39 | 99  | 81  |
| Average Queue (ft)    | 32  | 35  | 15  | 28  | 21  | 49  | 23  | 15 | 50  | 35  |
| 95th Queue (ft)       | 65  | 63  | 44  | 53  | 50  | 91  | 55  | 41 | 85  | 73  |
| Link Distance (ft)    |     | 456 |     | 212 |     | 894 | 894 |    | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |    |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91 |     |     |
| Storage Blk Time (%)  |     |     |     |     |     |     |     |    | 1   |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |    | 0   |     |

## Intersection: 1: HWY 101 &amp; 35th Street, All Intervals

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L  | T   | TR  |
| Maximum Queue (ft)    | 77  | 74  | 45  | 60  | 53  | 136 | 84  | 39 | 105 | 110 |
| Average Queue (ft)    | 35  | 37  | 17  | 28  | 22  | 53  | 26  | 15 | 54  | 39  |
| 95th Queue (ft)       | 69  | 66  | 46  | 56  | 52  | 101 | 65  | 42 | 93  | 83  |
| Link Distance (ft)    |     | 456 |     | 212 |     | 894 | 894 |    | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |    |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91 |     |     |
| Storage Blk Time (%)  |     |     |     |     |     | 0   |     |    | 1   |     |
| Queuing Penalty (veh) |     |     |     |     |     | 0   |     |    | 0   |     |

# Queuing and Blocking Report

## 2026 AM No-Build Conditions

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### Intersection: 2: REDWOOD ST/Site & 35th Street, Interval #1

| Movement              | NB  |
|-----------------------|-----|
| Directions Served     | LTR |
| Maximum Queue (ft)    | 35  |
| Average Queue (ft)    | 27  |
| 95th Queue (ft)       | 51  |
| Link Distance (ft)    | 427 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

### Intersection: 2: REDWOOD ST/Site & 35th Street, Interval #2

| Movement              | WB  | NB  |
|-----------------------|-----|-----|
| Directions Served     | LTR | LTR |
| Maximum Queue (ft)    | 10  | 61  |
| Average Queue (ft)    | 1   | 30  |
| 95th Queue (ft)       | 8   | 56  |
| Link Distance (ft)    | 468 | 427 |
| Upstream Blk Time (%) |     |     |
| Queuing Penalty (veh) |     |     |
| Storage Bay Dist (ft) |     |     |
| Storage Blk Time (%)  |     |     |
| Queuing Penalty (veh) |     |     |

### Intersection: 2: REDWOOD ST/Site & 35th Street, All Intervals

| Movement              | WB  | NB  |
|-----------------------|-----|-----|
| Directions Served     | LTR | LTR |
| Maximum Queue (ft)    | 10  | 61  |
| Average Queue (ft)    | 1   | 29  |
| 95th Queue (ft)       | 7   | 55  |
| Link Distance (ft)    | 468 | 427 |
| Upstream Blk Time (%) |     |     |
| Queuing Penalty (veh) |     |     |
| Storage Bay Dist (ft) |     |     |
| Storage Blk Time (%)  |     |     |
| Queuing Penalty (veh) |     |     |

## Queuing and Blocking Report

### 2026 AM No-Build Conditions

06/15/2020

#### Intersection: 3: HWY 101 & RIRO SITE ACCESS, Interval #1

##### Movement

Directions Served  
 Maximum Queue (ft)  
 Average Queue (ft)  
 95th Queue (ft)  
 Link Distance (ft)  
 Upstream Blk Time (%)  
 Queuing Penalty (veh)  
 Storage Bay Dist (ft)  
 Storage Blk Time (%)  
 Queuing Penalty (veh)

#### Intersection: 3: HWY 101 & RIRO SITE ACCESS, Interval #2

##### Movement

Directions Served  
 Maximum Queue (ft)  
 Average Queue (ft)  
 95th Queue (ft)  
 Link Distance (ft)  
 Upstream Blk Time (%)  
 Queuing Penalty (veh)  
 Storage Bay Dist (ft)  
 Storage Blk Time (%)  
 Queuing Penalty (veh)

#### Intersection: 3: HWY 101 & RIRO SITE ACCESS, All Intervals

##### Movement

Directions Served  
 Maximum Queue (ft)  
 Average Queue (ft)  
 95th Queue (ft)  
 Link Distance (ft)  
 Upstream Blk Time (%)  
 Queuing Penalty (veh)  
 Storage Bay Dist (ft)  
 Storage Blk Time (%)  
 Queuing Penalty (veh)

#### Network Summary

Network wide Queuing Penalty, Interval #1: 1  
 Network wide Queuing Penalty, Interval #2: 0  
 Network wide Queuing Penalty, All Intervals: 0

Queuing and Blocking Report  
2026 PM No-Build Conditions

06/15/2020

## Intersection: 1: HWY 101 &amp; 35th Street, Interval #1

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L  | T   | TR  |
| Maximum Queue (ft)    | 81  | 84  | 53  | 58  | 89  | 133 | 154 | 88 | 171 | 148 |
| Average Queue (ft)    | 42  | 51  | 20  | 32  | 52  | 88  | 66  | 36 | 110 | 100 |
| 95th Queue (ft)       | 86  | 83  | 55  | 65  | 93  | 153 | 140 | 88 | 179 | 163 |
| Link Distance (ft)    |     | 456 |     | 211 |     | 894 | 894 |    | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |    |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91 |     |     |
| Storage Blk Time (%)  | 0   | 0   |     |     |     | 1   |     |    | 10  |     |
| Queuing Penalty (veh) | 1   | 0   |     |     |     | 1   |     |    | 4   |     |

## Intersection: 1: HWY 101 &amp; 35th Street, Interval #2

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L  | T   | TR  |
| Maximum Queue (ft)    | 94  | 100 | 54  | 68  | 92  | 154 | 131 | 76 | 182 | 166 |
| Average Queue (ft)    | 47  | 50  | 21  | 30  | 46  | 77  | 60  | 24 | 94  | 83  |
| 95th Queue (ft)       | 82  | 86  | 52  | 60  | 77  | 133 | 108 | 61 | 159 | 148 |
| Link Distance (ft)    |     | 456 |     | 211 |     | 894 | 894 |    | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |    |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91 |     |     |
| Storage Blk Time (%)  | 0   | 0   |     |     |     | 0   |     | 0  | 8   |     |
| Queuing Penalty (veh) | 0   | 0   |     |     |     | 0   |     | 0  | 3   |     |

## Intersection: 1: HWY 101 &amp; 35th Street, All Intervals

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L   | T   | TR  |
| Maximum Queue (ft)    | 98  | 105 | 64  | 78  | 99  | 156 | 160 | 106 | 200 | 178 |
| Average Queue (ft)    | 45  | 50  | 21  | 30  | 47  | 80  | 61  | 27  | 97  | 87  |
| 95th Queue (ft)       | 83  | 85  | 53  | 61  | 81  | 139 | 117 | 69  | 165 | 153 |
| Link Distance (ft)    |     | 456 |     | 211 |     | 894 | 894 |     | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91  |     |     |
| Storage Blk Time (%)  | 0   | 0   |     |     |     | 0   |     | 0   | 8   |     |
| Queuing Penalty (veh) | 0   | 0   |     |     |     | 1   |     | 0   | 3   |     |

# Queuing and Blocking Report

## 2026 PM No-Build Conditions

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### Intersection: 2: REDWOOD ST/Site & 35th Street, Interval #1

| Movement              | WB  | NB  |
|-----------------------|-----|-----|
| Directions Served     | LTR | LTR |
| Maximum Queue (ft)    | 25  | 56  |
| Average Queue (ft)    | 6   | 35  |
| 95th Queue (ft)       | 26  | 59  |
| Link Distance (ft)    | 201 | 427 |
| Upstream Blk Time (%) |     |     |
| Queuing Penalty (veh) |     |     |
| Storage Bay Dist (ft) |     |     |
| Storage Blk Time (%)  |     |     |
| Queuing Penalty (veh) |     |     |

### Intersection: 2: REDWOOD ST/Site & 35th Street, Interval #2

| Movement              | WB  | NB  |
|-----------------------|-----|-----|
| Directions Served     | LTR | LTR |
| Maximum Queue (ft)    | 26  | 57  |
| Average Queue (ft)    | 3   | 32  |
| 95th Queue (ft)       | 17  | 54  |
| Link Distance (ft)    | 201 | 427 |
| Upstream Blk Time (%) |     |     |
| Queuing Penalty (veh) |     |     |
| Storage Bay Dist (ft) |     |     |
| Storage Blk Time (%)  |     |     |
| Queuing Penalty (veh) |     |     |

### Intersection: 2: REDWOOD ST/Site & 35th Street, All Intervals

| Movement              | WB  | NB  |
|-----------------------|-----|-----|
| Directions Served     | LTR | LTR |
| Maximum Queue (ft)    | 36  | 62  |
| Average Queue (ft)    | 3   | 32  |
| 95th Queue (ft)       | 19  | 56  |
| Link Distance (ft)    | 201 | 427 |
| Upstream Blk Time (%) |     |     |
| Queuing Penalty (veh) |     |     |
| Storage Bay Dist (ft) |     |     |
| Storage Blk Time (%)  |     |     |
| Queuing Penalty (veh) |     |     |

## Queuing and Blocking Report

### 2026 PM No-Build Conditions

06/15/2020

#### Intersection: 3: HWY 101 & RIRO SITE ACCESS, Interval #1

##### Movement

Directions Served  
 Maximum Queue (ft)  
 Average Queue (ft)  
 95th Queue (ft)  
 Link Distance (ft)  
 Upstream Blk Time (%)  
 Queuing Penalty (veh)  
 Storage Bay Dist (ft)  
 Storage Blk Time (%)  
 Queuing Penalty (veh)

#### Intersection: 3: HWY 101 & RIRO SITE ACCESS, Interval #2

##### Movement

Directions Served  
 Maximum Queue (ft)  
 Average Queue (ft)  
 95th Queue (ft)  
 Link Distance (ft)  
 Upstream Blk Time (%)  
 Queuing Penalty (veh)  
 Storage Bay Dist (ft)  
 Storage Blk Time (%)  
 Queuing Penalty (veh)

#### Intersection: 3: HWY 101 & RIRO SITE ACCESS, All Intervals

##### Movement

Directions Served  
 Maximum Queue (ft)  
 Average Queue (ft)  
 95th Queue (ft)  
 Link Distance (ft)  
 Upstream Blk Time (%)  
 Queuing Penalty (veh)  
 Storage Bay Dist (ft)  
 Storage Blk Time (%)  
 Queuing Penalty (veh)

#### Network Summary

Network wide Queuing Penalty, Interval #1: 6  
 Network wide Queuing Penalty, Interval #2: 4  
 Network wide Queuing Penalty, All Intervals: 5

# **APPENDIX J**

## **Build SimTraffic Queue Length Calculations**



Queuing and Blocking Report  
2021 AM Build Conditions

06/18/2020

## Intersection: 1: HWY 101 &amp; 35th Street, Interval #1

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L  | T   | TR  |
| Maximum Queue (ft)    | 83  | 55  | 64  | 60  | 59  | 122 | 93  | 60 | 94  | 105 |
| Average Queue (ft)    | 41  | 41  | 34  | 34  | 32  | 77  | 46  | 36 | 66  | 62  |
| 95th Queue (ft)       | 81  | 60  | 70  | 67  | 64  | 129 | 100 | 68 | 105 | 113 |
| Link Distance (ft)    |     | 456 |     | 212 |     | 894 | 894 |    | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |    |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91 |     |     |
| Storage Blk Time (%)  | 0   |     |     |     |     | 0   |     | 0  | 2   |     |
| Queuing Penalty (veh) | 0   |     |     |     |     | 0   |     | 0  | 1   |     |

## Intersection: 1: HWY 101 &amp; 35th Street, Interval #2

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L  | T   | TR  |
| Maximum Queue (ft)    | 65  | 69  | 60  | 54  | 54  | 125 | 96  | 60 | 96  | 89  |
| Average Queue (ft)    | 33  | 37  | 32  | 26  | 23  | 52  | 32  | 23 | 51  | 37  |
| 95th Queue (ft)       | 66  | 64  | 59  | 55  | 53  | 100 | 75  | 55 | 89  | 78  |
| Link Distance (ft)    |     | 456 |     | 212 |     | 894 | 894 |    | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |    |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91 |     |     |
| Storage Blk Time (%)  |     |     |     |     |     | 0   |     |    | 1   |     |
| Queuing Penalty (veh) |     |     |     |     |     | 0   |     |    | 0   |     |

## Intersection: 1: HWY 101 &amp; 35th Street, All Intervals

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L  | T   | TR  |
| Maximum Queue (ft)    | 85  | 69  | 65  | 65  | 60  | 143 | 120 | 65 | 105 | 106 |
| Average Queue (ft)    | 35  | 38  | 32  | 28  | 26  | 58  | 35  | 26 | 55  | 43  |
| 95th Queue (ft)       | 70  | 63  | 62  | 58  | 56  | 110 | 82  | 60 | 94  | 90  |
| Link Distance (ft)    |     | 456 |     | 212 |     | 894 | 894 |    | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |    |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91 |     |     |
| Storage Blk Time (%)  | 0   |     |     |     |     | 0   |     | 0  | 1   |     |
| Queuing Penalty (veh) | 0   |     |     |     |     | 0   |     | 0  | 0   |     |

# Queuing and Blocking Report

## 2021 AM Build Conditions

06/18/2020

### Intersection: 2: REDWOOD ST/Site & 35th Street, Interval #1

| Movement              | EB  | WB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | LTR | LTR | LTR | LTR |
| Maximum Queue (ft)    | 9   | 5   | 41  | 34  |
| Average Queue (ft)    | 1   | 1   | 28  | 26  |
| 95th Queue (ft)       | 10  | 8   | 53  | 48  |
| Link Distance (ft)    | 212 | 468 | 427 | 240 |
| Upstream Blk Time (%) |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |

### Intersection: 2: REDWOOD ST/Site & 35th Street, Interval #2

| Movement              | EB  | WB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | LTR | LTR | LTR | LTR |
| Maximum Queue (ft)    | 17  | 10  | 46  | 45  |
| Average Queue (ft)    | 1   | 0   | 29  | 21  |
| 95th Queue (ft)       | 11  | 6   | 55  | 50  |
| Link Distance (ft)    | 212 | 468 | 427 | 240 |
| Upstream Blk Time (%) |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |

### Intersection: 2: REDWOOD ST/Site & 35th Street, All Intervals

| Movement              | EB  | WB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | LTR | LTR | LTR | LTR |
| Maximum Queue (ft)    | 22  | 15  | 52  | 45  |
| Average Queue (ft)    | 1   | 1   | 29  | 23  |
| 95th Queue (ft)       | 11  | 6   | 54  | 50  |
| Link Distance (ft)    | 212 | 468 | 427 | 240 |
| Upstream Blk Time (%) |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |

# Queuing and Blocking Report

## 2021 AM Build Conditions

06/18/2020

### Intersection: 3: HWY 101 & RIRO SITE ACCESS, Interval #1

| Movement              | WB  |
|-----------------------|-----|
| Directions Served     | R   |
| Maximum Queue (ft)    | 43  |
| Average Queue (ft)    | 23  |
| 95th Queue (ft)       | 52  |
| Link Distance (ft)    | 201 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

### Intersection: 3: HWY 101 & RIRO SITE ACCESS, Interval #2

| Movement              | WB  |
|-----------------------|-----|
| Directions Served     | R   |
| Maximum Queue (ft)    | 40  |
| Average Queue (ft)    | 17  |
| 95th Queue (ft)       | 46  |
| Link Distance (ft)    | 201 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

### Intersection: 3: HWY 101 & RIRO SITE ACCESS, All Intervals

| Movement              | WB  |
|-----------------------|-----|
| Directions Served     | R   |
| Maximum Queue (ft)    | 43  |
| Average Queue (ft)    | 19  |
| 95th Queue (ft)       | 48  |
| Link Distance (ft)    | 201 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

### Network Summary

|                                                |
|------------------------------------------------|
| Network wide Queuing Penalty, Interval #1: 2   |
| Network wide Queuing Penalty, Interval #2: 0   |
| Network wide Queuing Penalty, All Intervals: 1 |

# 2021 PM DESIGN HOUR BUILD CONDITIONS

## Queuing and Blocking Report 2021 PM Build Conditions

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### Intersection: 1: HWY 101 & 35th Street, Interval #1

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L  | T   | TR  |
| Maximum Queue (ft)    | 93  | 80  | 53  | 54  | 83  | 161 | 161 | 81 | 172 | 167 |
| Average Queue (ft)    | 54  | 55  | 27  | 31  | 52  | 88  | 70  | 35 | 102 | 87  |
| 95th Queue (ft)       | 92  | 84  | 60  | 55  | 87  | 147 | 135 | 85 | 176 | 169 |
| Link Distance (ft)    |     | 456 |     | 211 |     | 894 | 894 |    | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |    |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91 |     |     |
| Storage Blk Time (%)  | 1   |     |     |     |     | 1   |     | 0  | 12  |     |
| Queuing Penalty (veh) | 1   |     |     |     |     | 2   |     | 1  | 8   |     |

### Intersection: 1: HWY 101 & 35th Street, Interval #2

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L   | T   | TR  |
| Maximum Queue (ft)    | 81  | 111 | 64  | 63  | 81  | 149 | 140 | 102 | 172 | 167 |
| Average Queue (ft)    | 44  | 53  | 33  | 30  | 46  | 82  | 68  | 37  | 93  | 85  |
| 95th Queue (ft)       | 74  | 90  | 63  | 62  | 75  | 134 | 124 | 78  | 151 | 150 |
| Link Distance (ft)    |     | 456 |     | 211 |     | 894 | 894 |     | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91  |     |     |
| Storage Blk Time (%)  |     | 0   |     |     |     | 0   |     | 0   | 7   |     |
| Queuing Penalty (veh) |     | 0   |     |     |     | 0   |     | 0   | 5   |     |

### Intersection: 1: HWY 101 & 35th Street, All Intervals

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L   | T   | TR  |
| Maximum Queue (ft)    | 94  | 112 | 64  | 64  | 95  | 170 | 167 | 119 | 199 | 190 |
| Average Queue (ft)    | 46  | 53  | 31  | 31  | 47  | 84  | 69  | 36  | 95  | 86  |
| 95th Queue (ft)       | 79  | 89  | 62  | 60  | 78  | 138 | 127 | 80  | 158 | 155 |
| Link Distance (ft)    |     | 456 |     | 211 |     | 894 | 894 |     | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91  |     |     |
| Storage Blk Time (%)  | 0   | 0   |     |     |     | 0   |     | 0   | 9   |     |
| Queuing Penalty (veh) | 0   | 0   |     |     |     | 1   |     | 0   | 5   |     |

Queuing and Blocking Report  
2021 PM Build Conditions

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Intersection: 2: REDWOOD ST/Site & 35th Street, Interval #1

| Movement              | EB  | WB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | LTR | LTR | LTR | LTR |
| Maximum Queue (ft)    | 2   | 15  | 65  | 35  |
| Average Queue (ft)    | 0   | 4   | 37  | 21  |
| 95th Queue (ft)       | 2   | 18  | 67  | 48  |
| Link Distance (ft)    | 211 | 201 | 427 | 216 |
| Upstream Blk Time (%) |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |

Intersection: 2: REDWOOD ST/Site & 35th Street, Interval #2

| Movement              | EB  | WB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | LTR | LTR | LTR | LTR |
| Maximum Queue (ft)    | 16  | 27  | 52  | 35  |
| Average Queue (ft)    | 1   | 3   | 32  | 20  |
| 95th Queue (ft)       | 8   | 20  | 54  | 47  |
| Link Distance (ft)    | 211 | 201 | 427 | 216 |
| Upstream Blk Time (%) |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |

Intersection: 2: REDWOOD ST/Site & 35th Street, All Intervals

| Movement              | EB  | WB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | LTR | LTR | LTR | LTR |
| Maximum Queue (ft)    | 16  | 27  | 71  | 35  |
| Average Queue (ft)    | 1   | 3   | 33  | 20  |
| 95th Queue (ft)       | 7   | 20  | 58  | 48  |
| Link Distance (ft)    | 211 | 201 | 427 | 216 |
| Upstream Blk Time (%) |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |

## Queuing and Blocking Report

## 2021 PM Build Conditions

06/18/2020

## Intersection: 3: HWY 101 &amp; RIRO SITE ACCESS, Interval #1

| Movement              | WB  |
|-----------------------|-----|
| Directions Served     | R   |
| Maximum Queue (ft)    | 35  |
| Average Queue (ft)    | 22  |
| 95th Queue (ft)       | 48  |
| Link Distance (ft)    | 201 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

## Intersection: 3: HWY 101 &amp; RIRO SITE ACCESS, Interval #2

| Movement              | WB  |
|-----------------------|-----|
| Directions Served     | R   |
| Maximum Queue (ft)    | 45  |
| Average Queue (ft)    | 21  |
| 95th Queue (ft)       | 49  |
| Link Distance (ft)    | 201 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

## Intersection: 3: HWY 101 &amp; RIRO SITE ACCESS, All Intervals

| Movement              | WB  |
|-----------------------|-----|
| Directions Served     | R   |
| Maximum Queue (ft)    | 45  |
| Average Queue (ft)    | 21  |
| 95th Queue (ft)       | 49  |
| Link Distance (ft)    | 201 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

## Network Summary

|                                                |
|------------------------------------------------|
| Network wide Queuing Penalty, Interval #1: 11  |
| Network wide Queuing Penalty, Interval #2: 5   |
| Network wide Queuing Penalty, All Intervals: 7 |

# Queuing and Blocking Report

## 2026 AM Build Conditions

06/18/2020

### Intersection: 1: HWY 101 & 35th Street, Interval #1

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L  | T   | TR  |
| Maximum Queue (ft)    | 74  | 93  | 64  | 53  | 54  | 131 | 90  | 44 | 101 | 109 |
| Average Queue (ft)    | 47  | 48  | 38  | 30  | 29  | 66  | 46  | 26 | 66  | 58  |
| 95th Queue (ft)       | 78  | 94  | 69  | 64  | 57  | 127 | 93  | 52 | 105 | 103 |
| Link Distance (ft)    |     | 456 |     | 212 |     | 894 | 894 |    | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |    |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91 |     |     |
| Storage Blk Time (%)  |     | 0   |     |     |     | 0   |     |    | 2   |     |
| Queuing Penalty (veh) |     | 0   |     |     |     | 0   |     |    | 1   |     |

### Intersection: 1: HWY 101 & 35th Street, Interval #2

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L  | T   | TR  |
| Maximum Queue (ft)    | 65  | 62  | 62  | 65  | 63  | 123 | 96  | 86 | 107 | 113 |
| Average Queue (ft)    | 32  | 35  | 30  | 25  | 23  | 54  | 26  | 25 | 49  | 36  |
| 95th Queue (ft)       | 57  | 59  | 58  | 55  | 54  | 104 | 71  | 63 | 86  | 76  |
| Link Distance (ft)    |     | 456 |     | 212 |     | 894 | 894 |    | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |    |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91 |     |     |
| Storage Blk Time (%)  |     |     |     |     |     | 0   |     | 0  | 1   |     |
| Queuing Penalty (veh) |     |     |     |     |     | 0   |     | 0  | 0   |     |

### Intersection: 1: HWY 101 & 35th Street, All Intervals

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L  | T   | TR  |
| Maximum Queue (ft)    | 79  | 93  | 66  | 73  | 64  | 136 | 101 | 86 | 125 | 127 |
| Average Queue (ft)    | 36  | 38  | 32  | 26  | 24  | 57  | 31  | 25 | 53  | 41  |
| 95th Queue (ft)       | 64  | 70  | 61  | 58  | 55  | 110 | 79  | 61 | 93  | 85  |
| Link Distance (ft)    |     | 456 |     | 212 |     | 894 | 894 |    | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |    |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91 |     |     |
| Storage Blk Time (%)  |     | 0   |     |     |     | 0   |     | 0  | 1   |     |
| Queuing Penalty (veh) |     | 0   |     |     |     | 0   |     | 0  | 0   |     |

# Queuing and Blocking Report

## 2026 AM Build Conditions

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### Intersection: 2: REDWOOD ST/Site & 35th Street, Interval #1

| Movement              | EB  | WB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | LTR | LTR | LTR | LTR |
| Maximum Queue (ft)    | 5   | 15  | 46  | 34  |
| Average Queue (ft)    | 1   | 2   | 31  | 28  |
| 95th Queue (ft)       | 5   | 14  | 61  | 48  |
| Link Distance (ft)    | 212 | 468 | 427 | 240 |
| Upstream Blk Time (%) |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |

### Intersection: 2: REDWOOD ST/Site & 35th Street, Interval #2

| Movement              | EB  | NB  | SB  |
|-----------------------|-----|-----|-----|
| Directions Served     | LTR | LTR | LTR |
| Maximum Queue (ft)    | 8   | 50  | 39  |
| Average Queue (ft)    | 1   | 24  | 23  |
| 95th Queue (ft)       | 5   | 52  | 49  |
| Link Distance (ft)    | 212 | 427 | 240 |
| Upstream Blk Time (%) |     |     |     |
| Queuing Penalty (veh) |     |     |     |
| Storage Bay Dist (ft) |     |     |     |
| Storage Blk Time (%)  |     |     |     |
| Queuing Penalty (veh) |     |     |     |

### Intersection: 2: REDWOOD ST/Site & 35th Street, All Intervals

| Movement              | EB  | WB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | LTR | LTR | LTR | LTR |
| Maximum Queue (ft)    | 10  | 15  | 52  | 39  |
| Average Queue (ft)    | 1   | 1   | 26  | 24  |
| 95th Queue (ft)       | 5   | 6   | 55  | 49  |
| Link Distance (ft)    | 212 | 468 | 427 | 240 |
| Upstream Blk Time (%) |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |



## Queuing and Blocking Report

### 2026 AM Build Conditions

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#### Intersection: 3: HWY 101 & RIRO SITE ACCESS, Interval #1

| Movement              | WB  |
|-----------------------|-----|
| Directions Served     | R   |
| Maximum Queue (ft)    | 39  |
| Average Queue (ft)    | 21  |
| 95th Queue (ft)       | 50  |
| Link Distance (ft)    | 201 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

#### Intersection: 3: HWY 101 & RIRO SITE ACCESS, Interval #2

| Movement              | WB  |
|-----------------------|-----|
| Directions Served     | R   |
| Maximum Queue (ft)    | 48  |
| Average Queue (ft)    | 19  |
| 95th Queue (ft)       | 49  |
| Link Distance (ft)    | 201 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

#### Intersection: 3: HWY 101 & RIRO SITE ACCESS, All Intervals

| Movement              | WB  |
|-----------------------|-----|
| Directions Served     | R   |
| Maximum Queue (ft)    | 48  |
| Average Queue (ft)    | 20  |
| 95th Queue (ft)       | 49  |
| Link Distance (ft)    | 201 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

#### Network Summary

|                                                |
|------------------------------------------------|
| Network wide Queuing Penalty, Interval #1: 1   |
| Network wide Queuing Penalty, Interval #2: 1   |
| Network wide Queuing Penalty, All Intervals: 1 |

# Queuing and Blocking Report

## 2021 PM Build Conditions

06/18/2020

### Intersection: 1: HWY 101 & 35th Street, Interval #1

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L  | T   | TR  |
| Maximum Queue (ft)    | 64  | 107 | 74  | 59  | 97  | 143 | 122 | 64 | 196 | 192 |
| Average Queue (ft)    | 42  | 59  | 44  | 30  | 60  | 94  | 74  | 34 | 124 | 116 |
| 95th Queue (ft)       | 79  | 104 | 80  | 63  | 102 | 159 | 130 | 64 | 202 | 201 |
| Link Distance (ft)    |     | 456 |     | 211 |     | 894 | 894 |    | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |    |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |    |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91 |     |     |
| Storage Blk Time (%)  |     | 1   |     |     |     | 1   |     | 0  | 15  |     |
| Queuing Penalty (veh) |     | 1   |     |     |     | 1   |     | 0  | 10  |     |

### Intersection: 1: HWY 101 & 35th Street, Interval #2

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L   | T   | TR  |
| Maximum Queue (ft)    | 110 | 115 | 79  | 74  | 129 | 177 | 189 | 113 | 191 | 199 |
| Average Queue (ft)    | 46  | 54  | 32  | 30  | 48  | 88  | 73  | 37  | 98  | 85  |
| 95th Queue (ft)       | 89  | 100 | 67  | 65  | 93  | 152 | 144 | 78  | 162 | 150 |
| Link Distance (ft)    |     | 456 |     | 211 |     | 894 | 894 |     | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91  |     |     |
| Storage Blk Time (%)  | 0   | 1   |     |     | 0   | 1   |     | 0   | 10  |     |
| Queuing Penalty (veh) | 1   | 1   |     |     | 0   | 1   |     | 0   | 6   |     |

### Intersection: 1: HWY 101 & 35th Street, All Intervals

| Movement              | EB  | EB  | WB  | WB  | NB  | NB  | NB  | SB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | TR  | L   | TR  | L   | T   | TR  | L   | T   | TR  |
| Maximum Queue (ft)    | 110 | 136 | 89  | 79  | 130 | 184 | 189 | 113 | 225 | 218 |
| Average Queue (ft)    | 45  | 55  | 35  | 30  | 51  | 90  | 73  | 36  | 104 | 92  |
| 95th Queue (ft)       | 87  | 101 | 71  | 65  | 96  | 154 | 141 | 75  | 174 | 166 |
| Link Distance (ft)    |     | 456 |     | 211 |     | 894 | 894 |     | 661 | 661 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) | 110 |     | 141 |     | 146 |     |     | 91  |     |     |
| Storage Blk Time (%)  | 0   | 1   |     |     | 0   | 1   |     | 0   | 11  |     |
| Queuing Penalty (veh) | 0   | 1   |     |     | 0   | 1   |     | 0   | 7   |     |

Queuing and Blocking Report  
2021 PM Build Conditions

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Intersection: 2: REDWOOD ST/Site & 35th Street, Interval #1

| Movement              | EB  | WB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | LTR | LTR | LTR | LTR |
| Maximum Queue (ft)    | 2   | 15  | 57  | 40  |
| Average Queue (ft)    | 0   | 4   | 37  | 27  |
| 95th Queue (ft)       | 0   | 20  | 61  | 52  |
| Link Distance (ft)    | 211 | 201 | 427 | 216 |
| Upstream Blk Time (%) |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |

Intersection: 2: REDWOOD ST/Site & 35th Street, Interval #2

| Movement              | EB  | WB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | LTR | LTR | LTR | LTR |
| Maximum Queue (ft)    | 4   | 25  | 59  | 41  |
| Average Queue (ft)    | 0   | 3   | 36  | 20  |
| 95th Queue (ft)       | 2   | 16  | 61  | 48  |
| Link Distance (ft)    | 211 | 201 | 427 | 216 |
| Upstream Blk Time (%) |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |

Intersection: 2: REDWOOD ST/Site & 35th Street, All Intervals

| Movement              | EB  | WB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | LTR | LTR | LTR | LTR |
| Maximum Queue (ft)    | 5   | 25  | 76  | 46  |
| Average Queue (ft)    | 0   | 3   | 36  | 21  |
| 95th Queue (ft)       | 2   | 17  | 61  | 49  |
| Link Distance (ft)    | 211 | 201 | 427 | 216 |
| Upstream Blk Time (%) |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |

# Queuing and Blocking Report

## 2021 PM Build Conditions

06/18/2020

### Intersection: 3: HWY 101 & RIRO SITE ACCESS, Interval #1

| Movement              | WB  |
|-----------------------|-----|
| Directions Served     | R   |
| Maximum Queue (ft)    | 35  |
| Average Queue (ft)    | 21  |
| 95th Queue (ft)       | 49  |
| Link Distance (ft)    | 201 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

### Intersection: 3: HWY 101 & RIRO SITE ACCESS, Interval #2

| Movement              | WB  |
|-----------------------|-----|
| Directions Served     | R   |
| Maximum Queue (ft)    | 50  |
| Average Queue (ft)    | 17  |
| 95th Queue (ft)       | 48  |
| Link Distance (ft)    | 201 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

### Intersection: 3: HWY 101 & RIRO SITE ACCESS, All Intervals

| Movement              | WB  |
|-----------------------|-----|
| Directions Served     | R   |
| Maximum Queue (ft)    | 50  |
| Average Queue (ft)    | 18  |
| 95th Queue (ft)       | 48  |
| Link Distance (ft)    | 201 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

### Network Summary

|                                                |
|------------------------------------------------|
| Network wide Queuing Penalty, Interval #1: 12  |
| Network wide Queuing Penalty, Interval #2: 8   |
| Network wide Queuing Penalty, All Intervals: 9 |