

Adrift Hotel

Transportation Impact Study

Astoria, Oregon

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Executive Summary

1. The proposed Adrift Hotel will include the construction of a 39-bedroom boutique hotel located near the intersection of 9th Street with the Astoria Riverwalk in Astoria, Oregon.
2. The trip generation calculations show that the proposed development is projected to generate 18 trips during the morning peak hour, 23 trips during the evening peak hour, and 326 average weekday trips.
3. The intersection of Commercial Street at 8th Street was calculated to have a crash rate in excess of the 90th-percentile rate per ODOT's APM. One mitigation which may potentially decrease future crashes at the intersection includes properly maintaining the southbound left-turn lane striping through the intersection.
4. No other significant trends and crash patterns were identified at any of the other study intersections that were indicative of safety concerns.
5. Upon completion of construction at the 9th Street intersection with the Astoria Riverwalk, adequate sight distances can be made available at the intersection as well as the proposed egress access to ensure safe and efficient operation along area roadways and intersections.
6. No issues were found with regard to ingress and egress to and from the proposed hotel parking lot. Regarding the loading/unloading valet parking stalls north of the Astoria Riverwalk, no significant safety issues or conflicts are expected to occur between egressing vehicles and the Astoria Riverfront Trolley.
7. Due to insufficient main and side-street traffic volumes, traffic signal warrants are not projected to be met at the unsignalized study intersections under any of the analysis scenarios.
8. All study intersections are currently operating acceptably per their respective jurisdictional standards and are projected to continue operating acceptably through the 2021 buildout year of the site.



Project Description

Introduction

The proposed Adrift Hotel will include the construction of a 39-bedroom boutique hotel located near the intersection of 9th Street with the Astoria Riverwalk in Astoria, Oregon. Based on correspondence with City of Astoria and Oregon Department of Transportation (ODOT) staff, the report conducts safety and capacity/level of service analyses at the following intersections:

1. Astor Street at Marine Drive;
2. Astor Street at 8th Street;
3. Astor Street at 9th Street;
4. Astor Street at 10th Street;
5. Marine Drive at 8th Street;
6. Marine Drive at 9th Street;
7. Marine Drive at 10th Street;
8. Commercial Street at 8th Street;
9. Commercial Street at 9th Street; and
10. Commercial Street at 10th Street.

The purpose of this study is to determine whether the transportation system within the vicinity of the site is capable of safely and efficiently supporting the existing and proposed uses and to determine any mitigation that may be necessary to do so. Detailed information on traffic counts, trip generation calculations, safety analyses, and level of service calculations is included in the appendix to this report.

Project and Location Description

The project site is located north of Astor Street, east of 8th Street, and along both sides of the Astoria Riverwalk in Astoria, Oregon. The subject site is located near the northern edge of the city limits, along the Columbia River, and is surrounded by a mix of commercial/industrial land-uses. However, inclusive of the site, the surrounding area has been redeveloping as more tourist-oriented land uses.

The project site includes two tax lots, lots 500 and 600, which encompass an approximate total of 1.63 acres (per www.ormap.net). Lot 600, which is bisected by the Astoria Riverwalk, is currently developed as two industrial structures which previously operated as fish packing plants (both of which had been vacated for over a year) while lot 500 is developed with a single structure that serves as an ice house. Vehicular access between the site and the greater transportation system will be provided via an ingress driveway onto 8th Street and an egress driveway onto 9th Street. In addition, four loading/unloading valet parking stalls are also proposed along 9th Street north of the Riverwalk.

Vicinity Streets

The proposed development is expected to primarily impact eight nearby vicinity roadways. Table 1 on the following page provides a description of each of the vicinity roadways.



Table 1: Vicinity Roadway Descriptions

| Roadway | Jurisdiction | Functional Classification | Cross-Section | Speed | On-street Parking | Bicycle Lanes | Curbs | Sidewalks |
|-------------------|--------------------------|---|---------------|--------------------------------|----------------------|--------------------|--------------------|--------------------|
| Astor Street | City of Astoria | Local Street | 2 Lanes | 20 mph Statutory | Partially Permitted | None | Both Sides | Both Sides |
| Marine Drive | ODOT | Principal Arterial/ Statewide Hwy | 2 to 4 Lanes | 20/25/30 mph Posted | Partially Permitted | Partial Both Sides | Both Sides | Both Sides |
| Bond Street | City of Astoria | Collector | 2 Lanes | 20/25 mph Statutory | Partially Permitted | None | Partial Both Sides | Partial Both Sides |
| Commercial Street | City of Astoria/ ODOT | Principal Arterial/Local Street/ Statewide Hwy | 2 Lanes | 20/25 mph Posted/ Statutory | Permitted Both Sides | Partial South Side | Both Sides | Both Sides |
| 7th Street | City of Astoria | Local Street | 2 Lanes | 20 mph Statutory | Partially Permitted | None | Both Sides | Both Sides |
| 8th Street | City of Astoria/ ODOT | Principal Arterial/ Collector/Local Street/ Statewide Hwy | 2 Lanes | 20/25 mph Statutory | Partially Permitted | Partial West Side | Both Sides | Both Sides |
| 9th Street | City of Astoria | Local Street/ Major Local Street | 2 Lanes | 20/25 mph Statutory | Partially Permitted | None | Both Sides | Both Sides |
| 10th Street | City of Astoria | Local Street/ Major Local Street | 2 Lanes | 20/25 mph Statutory | Permitted Both Sides | None | Both Sides | Both Sides |

Note: Functional Classification and Jurisdiction based on *City of Astoria TSP* and *ODOT OHP*.

Study Intersections

A majority of site trips generated by the proposed development are expected to impact ten nearby intersections of significance. A summarized description of these intersections is provided in Table 2 on the following page.



Table 2: Study Intersection Descriptions

| Number | Name | Geometry | Traffic Control | Phasing/Stopped Approaches |
|--------|----------------------------------|--------------|-------------------|---|
| 1 | Astor Street at Marine Drive | Five-Legged | Stop Controlled | NB/SB/WB Approaches Stop-Controlled, NWB/SEB Approaches Free-Flow |
| 2 | Astor Street at 8th Street | Four-Legged | Stop Controlled | NB/SB Approaches Stop-Controlled |
| 3 | Astor Street at 9th Street | Four-Legged | Stop Controlled | NB Approach Stop-Controlled |
| 4 | Astor Street at 10th Street | Three-Legged | No Control | No Control |
| 5 | Marine Drive at 8th Street | Five-Legged | Stop Controlled | SB/WB Approaches Stop-Controlled, NWB/SEB Approaches Free-Flow |
| 6 | Marine Drive at 9th Street | Four-Legged | Signal Controlled | Permitted NB/SB/WB Approaches |
| 7 | Marine Drive at 10th Street | Four-Legged | Stop Controlled | SB Approach Stop-Controlled |
| 8 | Commercial Street at 8th Street | Four-Legged | Stop Controlled | NB/EB Approaches Stop-Controlled |
| 9 | Commercial Street at 9th Street | Four-Legged | Signal Controlled | Permitted NB/EB Approaches |
| 10 | Commercial Street at 10th Street | Four-Legged | Stop Controlled | SB Approach Stop-Controlled |

A vicinity map displaying the project site, vicinity streets, and the study intersections with their associated lane configurations is shown in Figure 1 on page 8.

Multi-Modal Facilities

The site is located within a multi-modal area of Astoria, where easy access to a variety of pedestrian, bicycling, and transit opportunities are currently available.



Pedestrian/Bicycle Facilities

The project site is located within/near downtown Astoria, where sidewalks are generally complete along both sides of nearby area roadways. In addition, adequate crossing measures, such as marked crossings at the nearby study intersections (excluding Astor Street at Marine Drive and Astor Street at 8th Street), are available.

Bicycle lanes are generally striped along ODOT facilities east of 6th Street. For nearby local streets, such as Astor Street, traffic volumes are generally low with posted and statutory speeds of 20 mph to 25 mph, allowing bicyclists the ability to safely and comfortably share the roadway with motor vehicle traffic.

Additionally, the site is located adjacent to the Astoria Riverwalk multi-use path. Located north of Astor Street, the 6.4-mile multi-use asphalt/boardwalk path serves both pedestrian and bicycle traffic between Pier 3 of the Port of Astoria, downtown Astoria, and east Astoria.

Transit Facilities

The site is also located near two major transit services: the Astoria Riverfront Trolley and the Astoria Transit Center. Both transit services have stops located within 200 to 300 feet of the site.

The Astoria Riverfront Trolley provides service between Pier 3 of the Port of Astoria, downtown Astoria, and east Astoria over a distance of approximately three miles. The nearest stop to the site is located within the southeastern quadrant of the intersection between 9th Street and the Astoria Riverwalk multi-use path. The trolley (a single vehicle) operates daily between 12:00 PM to 6:00 PM with an average round trip of approximately one hour.

The Astoria Transit Center, bounded by the adjacent roadways of Marine Drive, Astor Street, 9th Street, and 10th Street, serves five bus lines. The bus lines includes the following:

- *Route 10 – Astoria-Hammond-Warrenton;*
- *Route 15 – Warrenton-Hammond-Astoria;*
- *Route 101 – Astoria-Warrenton-Gearhart-Seaside;*
- *Lower Columbia Connector;* and
- *Pacific Connector.*

Bus line *Route 10 – Astoria-Hammond-Warrenton* provides service between the aforementioned cities, with notable stops near Astoria Transit Center, Columbia Hospital, and Clatsop college. Weekday service is scheduled from approximately 5:45 AM to 9:15 PM, and has headways of approximately 60 minutes most of the day.

Bus line *Route 15 – Warrenton-Hammond-Astoria* provides service between the aforementioned cities, with a notable stop near Astoria Transit Center. Weekly service is scheduled from approximately 6:10 AM to 6:15 PM, with limited service to/from Astoria Transit Center. Arrivals to the transit center occur at approximately 6:45 AM and 2:45 PM while departures occur at approximately 9:40 AM and 5:40 PM.



Bus line *Route 101 – Astoria-Warrenton-Gearhart-Seaside* provides service between the aforementioned cities, with notable stops near Astoria Transit Center, Astoria High School, and Clatsop college. Weekday service is scheduled from approximately 6:00 AM to 9:50 PM, and has headways of approximately one to two hours.

The *Lower Columbia Connector* provides limited service between the Cities of Astoria and Rainier, with stops near Svensen, Knappa, Westport, and Clatskanie. Weekly service is scheduled from approximately 6:45 AM to 5:40 PM, with limited service to/from Astoria Transit Center. Departures from the transit center occur at approximately 6:45 AM and 2:45 PM while arrivals occur at approximately 9:40 AM and 5:40 PM.

The Pacific Connector provides limited service between the Cities of Astoria and Cannon Beach, with stops near Warrenton, Gearhart, Seaside, and Cannon Beach. Weekend service is scheduled from approximately 8:30 AM to 8:30 PM and has headways of approximately two to three hours.

Based on an assessment of nearby transportation options, the site is well served by other modes of travel not requiring use of a personal motor vehicle.

Traffic Counts

Traffic counts were conducted at the study intersections on the following dates:

- Thursday, November 1st, 2018, from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM;
- Tuesday, November 13th, 2018, from 4:00 PM to 6:00 PM; and
- Wednesday, November 14th, 2018, from 7:00 AM to 9:00 AM.

Data was used from each intersection's respective morning and evening peak hours.

Although the intersection of Astor Street at Marine Drive is a five-legged intersection, for the purposes of this analysis the southbound and westbound approaches of 7th Street and Astor Street were consolidated into a single southbound intersection leg. Given the geometry of the roadway, it is reasonable to assume traffic from both approaches would merge together and stop prior to entering the Marine Drive traffic stream or crossing to the southern intersection leg of 7th Street.

In addition, the intersection of Marine Drive at 8th Street is a five-legged intersection. For the purposes of this analysis, the intersection was analyzed as two separate intersections: one three-legged intersection, north of a center intersection island, and one four-legged intersection, south of the island.



Per the requirements established in ODOT's *Analysis Procedures Manual* (APM), seasonal adjustment factors of 1.4721 and 1.5486 were calculated for the early November counts and the mid-November counts, respectively, utilizing the *Automatic Traffic Recorder (ATR) Characteristic Table Method*. This method averages data from multiple ATRs with similar characteristics to the nearby ODOT roadways of Marine Drive and Commercial Street. According to ODOT's APM the method yields "a more appropriate factor than if only one ATR is used". Therefore, data was averaged between the following ATRs:










- Station 04-004;
- Station 21-008;
- Station 21-010; and
- Station 21-011.

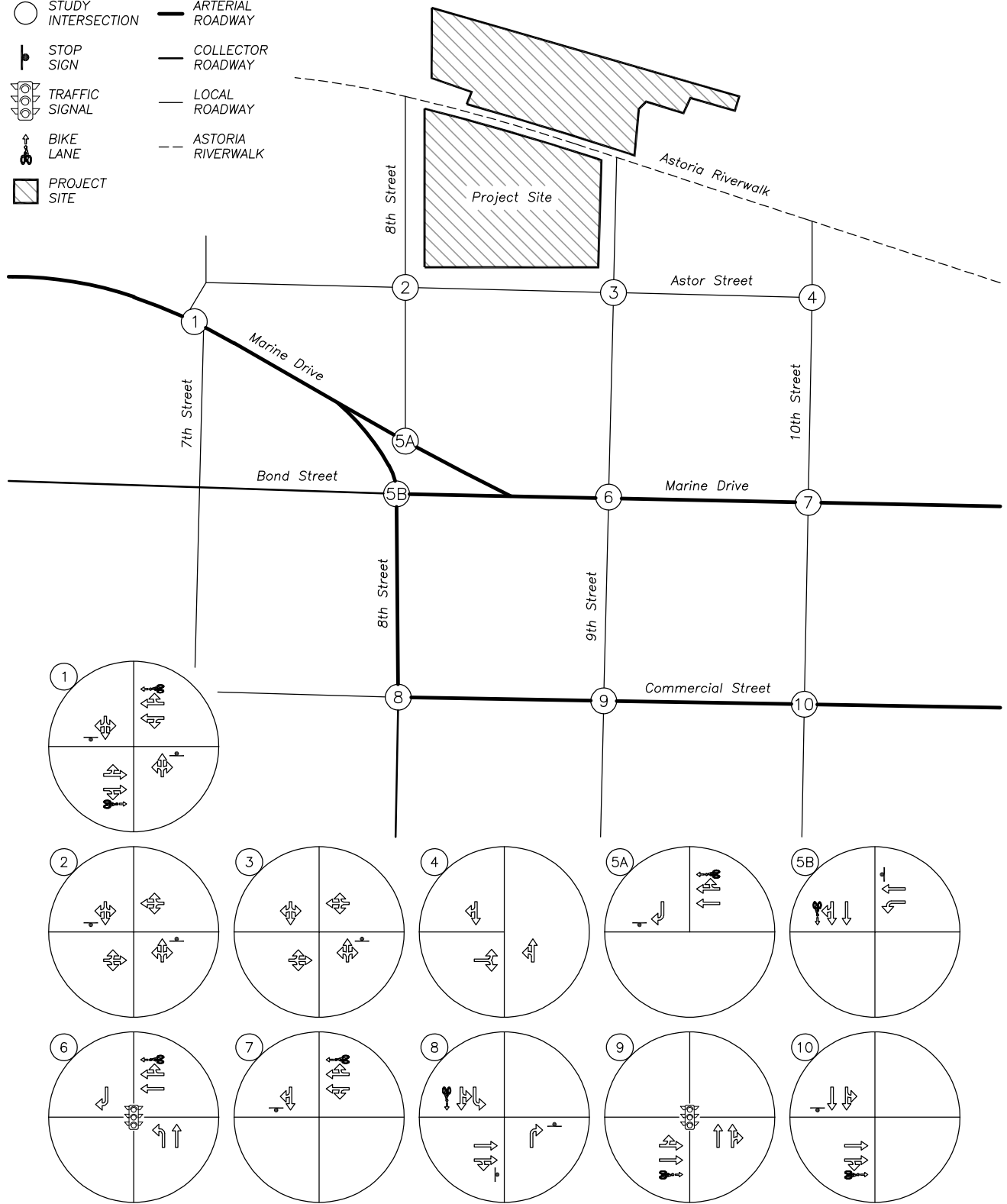
The *On-Site ATR Method* (utilizing data from the single ATR) was considered for determining a seasonal adjustment factor by utilizing data specific to the nearby ATR station 04-004. However, this ATR station measures volume data for Oregon Coast Highway (US-101) at a location just north of the intersection of US-101 at Marine Drive, rather than volume data along Marine Drive. In addition, the ATR station is located approximately one mile west of the site with multiple, intermittent intersections between the site and station. For these reasons utilizing the *On-Site ATR Method* for station 04-004 alone was determined as less appropriate than the *Automatic Traffic Recorder (ATR) Characteristic Table Method*.

For comparative purposes to validate the *Automatic Traffic Recorder (ATR) Characteristic Table Method*, ODOT's 2017 Seasonal Trend Table was also referenced per the APM's *Seasonal Trend Method*. Based on *Seasonal Trend Method*, seasonal adjustment factors of approximately 1.3314 (November 1st counts) and 1.4130 (November 13th/14th counts) were calculated using the *Coastal Destination* seasonal trend. Given the *Automatic Traffic Recorder (ATR) Characteristic Table Method* produces larger seasonal adjustment factors, the following analysis within this study may be considered conservative.

Figure 2 on page 9 and Figure 3 on page 10 show the existing morning and evening peak hour traffic volumes at the study intersections, respectively.

LEGEND

-  STUDY INTERSECTION
-  ARTERIAL ROADWAY
-  COLLECTOR ROADWAY
-  LOCAL ROADWAY
-  ASTORIA RIVERWALK
-  STOP SIGN
-  TRAFFIC SIGNAL
-  BIKE LANE
-  PROJECT SITE



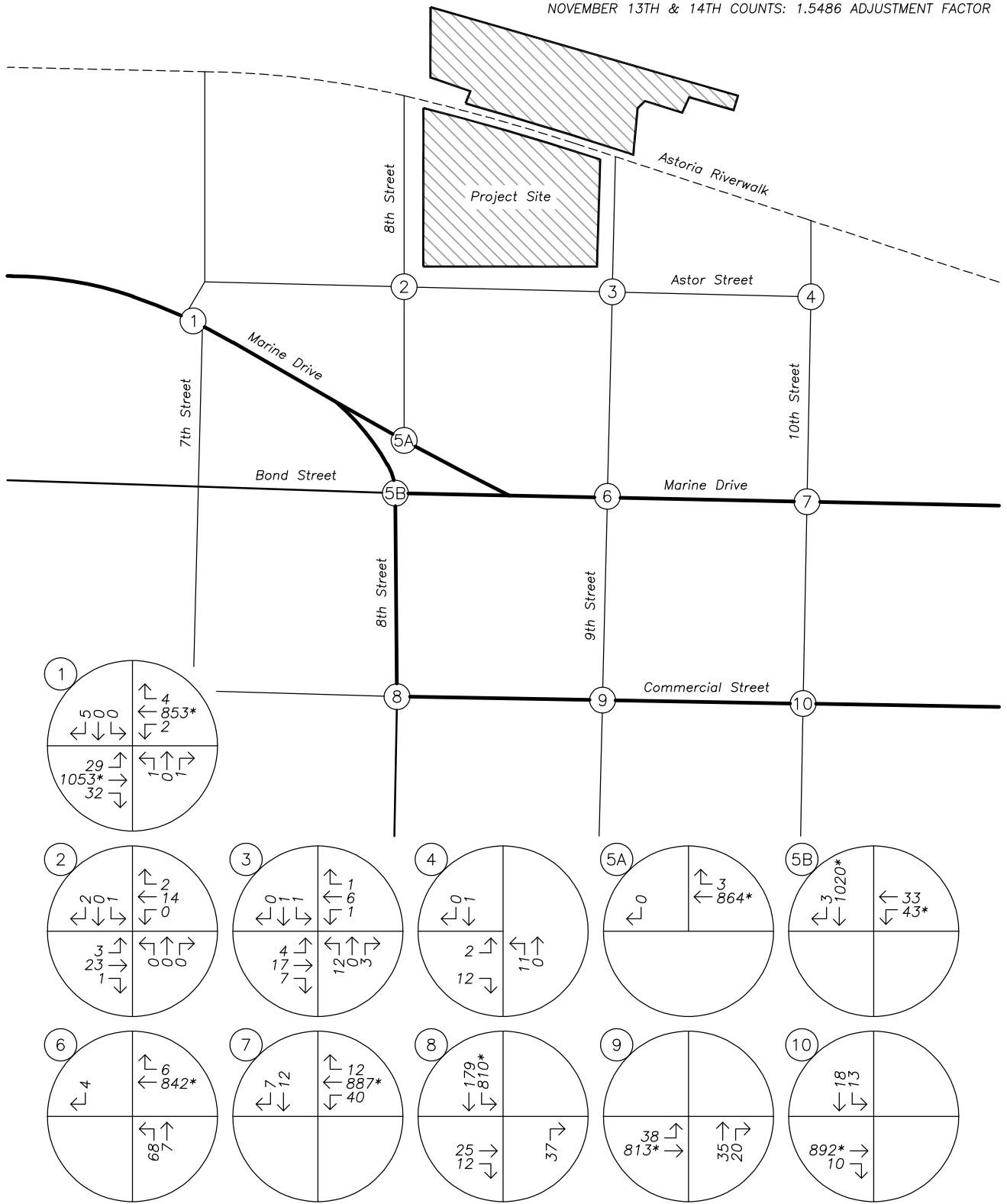
VICINITY MAP



FIGURE 1

PAGE 8

SEASONAL ADJUSTMENT FACTOR APPLIED TO * VOLUMES
 NOVEMBER 1ST COUNTS: 1.4721 ADJUSTMENT FACTOR
 NOVEMBER 13TH & 14TH COUNTS: 1.5486 ADJUSTMENT FACTOR



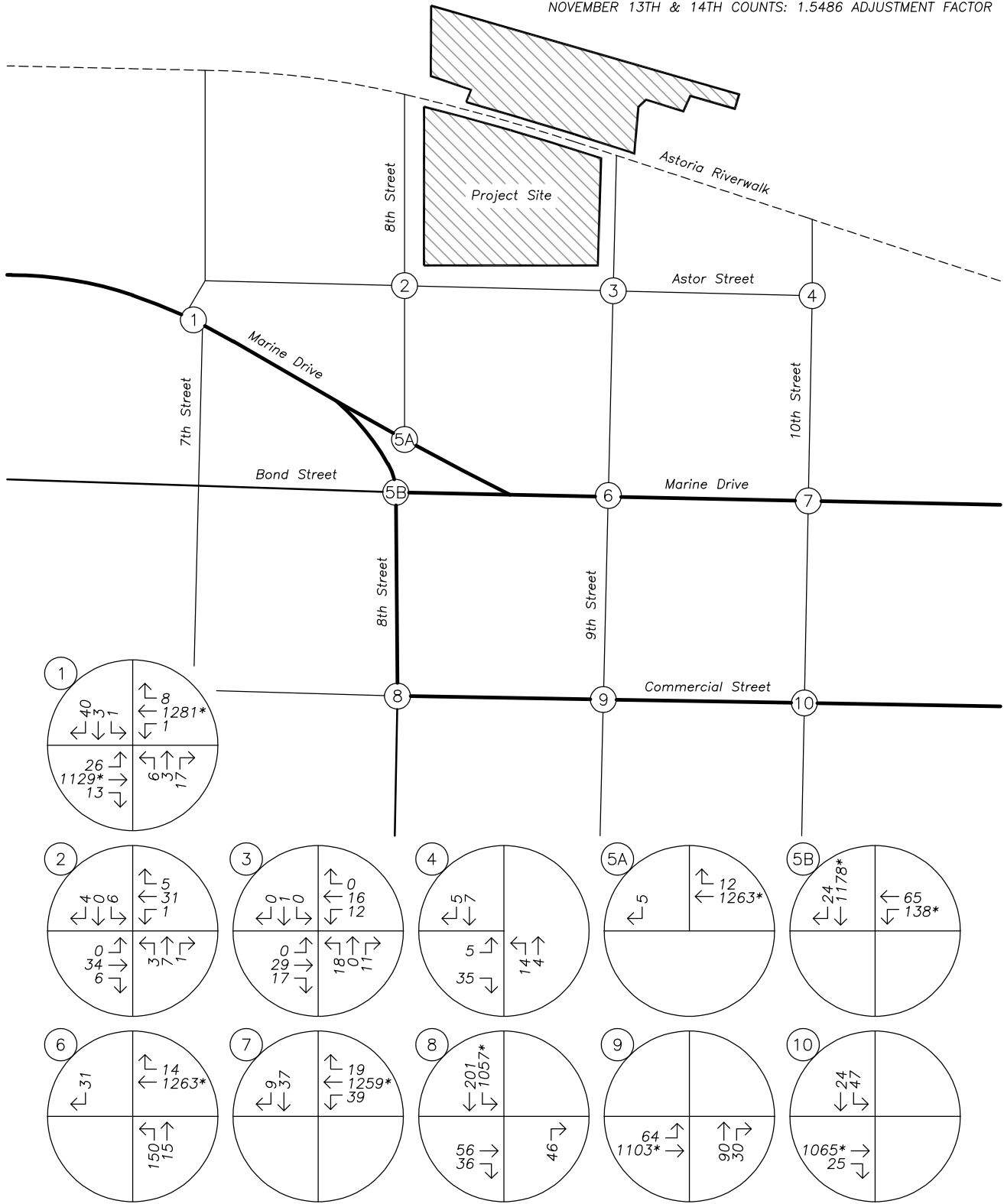
TRAFFIC VOLUMES
 Existing Conditions
 AM Peak Hour



FIGURE
 2

PAGE
 9

SEASONAL ADJUSTMENT FACTOR APPLIED TO * VOLUMES
 NOVEMBER 1ST COUNTS: 1.4721 ADJUSTMENT FACTOR
 NOVEMBER 13TH & 14TH COUNTS: 1.5486 ADJUSTMENT FACTOR



TRAFFIC VOLUMES
 Existing Conditions
 PM Peak Hour



FIGURE
 3

PAGE
 10



Site Trips

Trip Generation

The proposed Adrift Hotel will include the construction of a 39-room hotel, repurposing two existing industrial buildings and an ice house. To estimate the number of trips generated by the proposed development, trip rates from the *Trip Generation Manual*¹ were used. Data from land-use code 310, *Hotel*, was used to estimate the proposed development's trip generation based on the number of bedrooms. Since the two existing industrial buildings have been vacated approximately one to two years ago, no trip reductions related to the existing uses were taken.

The trip generation calculations show that the proposed development is projected to generate 18 trips during the morning peak hour, 23 trips during the evening peak hour, and 326 average weekday trips. The trip generation estimates are summarized in Table 3. Detailed trip generation calculations are included in the technical appendix to this report.

Table 3: Trip Generation Summary

| | ITE Code | Size | Morning Peak Hour | | | Evening Peak Hour | | | Weekday Total |
|----------------|----------|----------|-------------------|------|-------|-------------------|------|-------|---------------|
| | | | Enter | Exit | Total | Enter | Exit | Total | |
| Proposed Hotel | 310 | 39 Rooms | 11 | 7 | 18 | 12 | 11 | 23 | 326 |

Trip Distribution

The directional distribution of site trips to/from the project site was estimated based on locations of likely trip destinations, locations of major transportation facilities in the site vicinity, and existing travel patterns at the study intersections.

¹ Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 10th Edition, 2017.



The following trip distribution was estimated and used for analysis:

- Approximately 40 percent of site trips will travel to/from the east along Marine Drive/Commercial Street;
- Approximately 40 percent of site trips will travel to/from the west along Marine Drive;
- Approximately 10 percent of site trips will travel to/from the south along 9th Street/10th Street; and
- Approximately 10 percent of site trips will travel to/from the south along 8th Street.

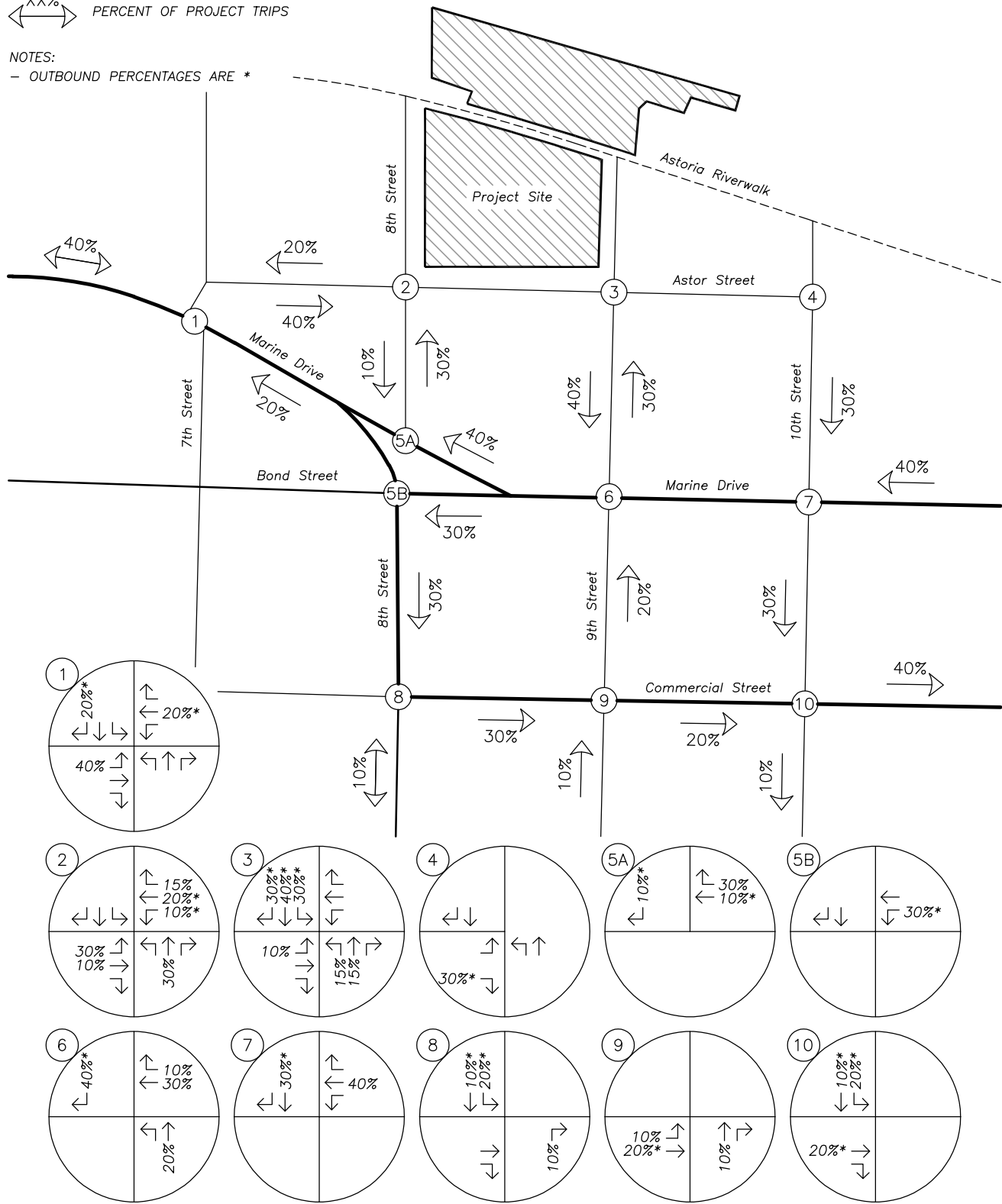
The trip distribution utilized for the site trips generated by the subject site are shown in Figure 4 on page 13. Figure 5 on page 14 and Figure 6 on page 15 show the trip assignment for site trips generated during the morning and evening peak hours, respectively.

LEGEND

XX% PERCENT OF PROJECT TRIPS

NOTES:

- OUTBOUND PERCENTAGES ARE *



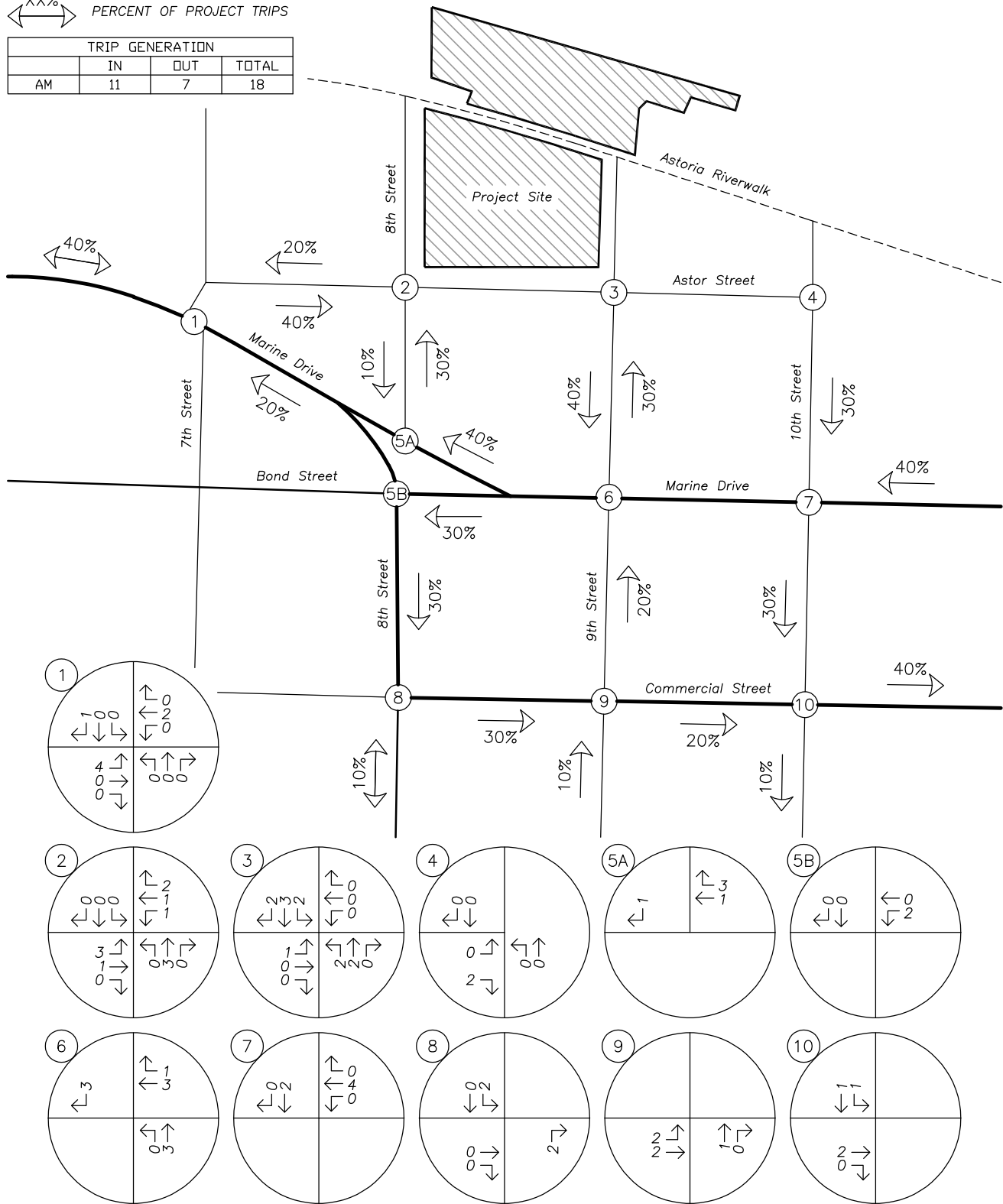
SITE TRIP DISTRIBUTION
 Inbound & Outbound Percentages
 AM & PM Peak Hours



LEGEND

XX% PERCENT OF PROJECT TRIPS

| TRIP GENERATION | | | |
|-----------------|----|-----|-------|
| | IN | OUT | TOTAL |
| AM | 11 | 7 | 18 |



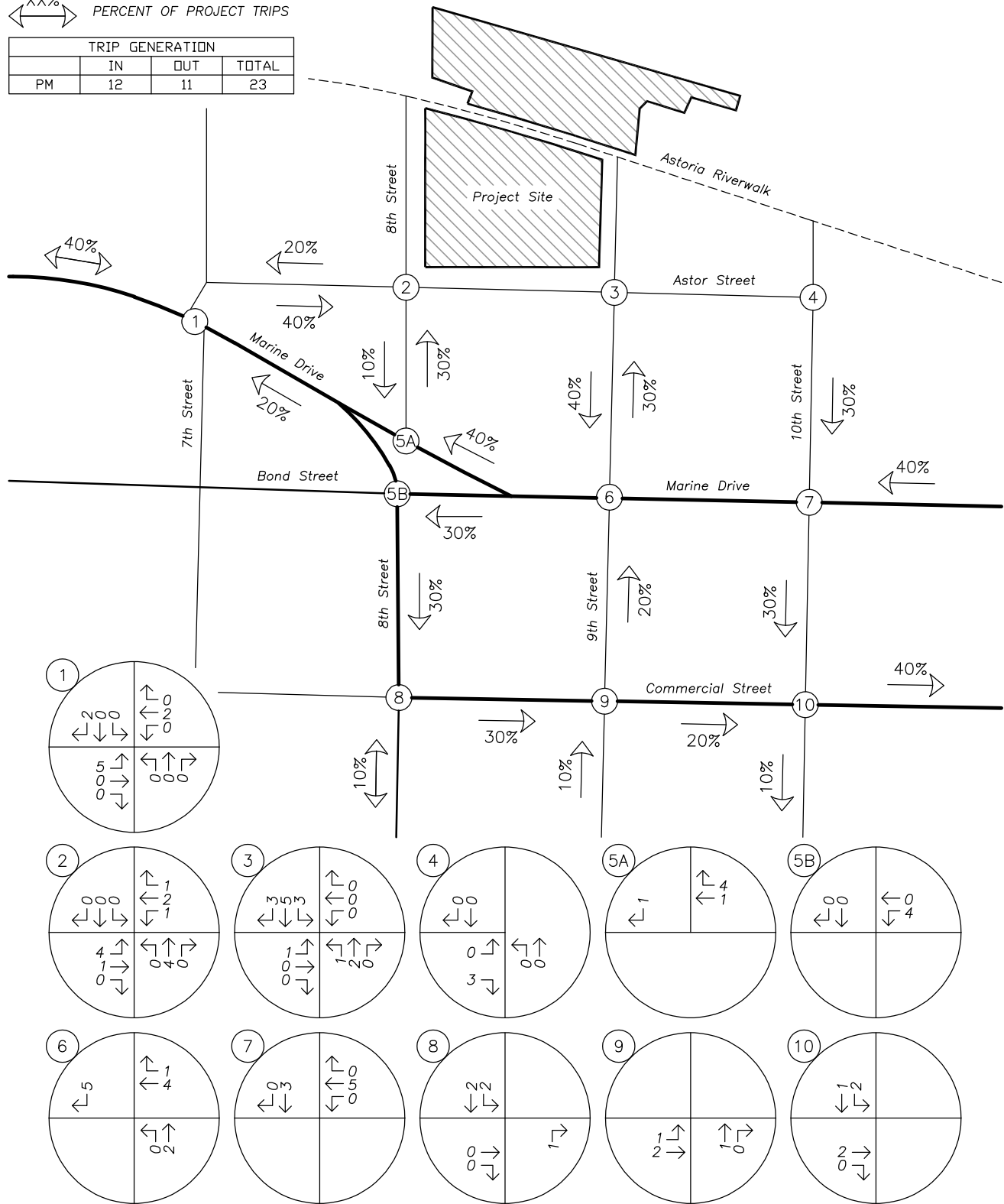
SITE TRIP ASSIGNMENT
 Proposed Development Plan – Site Trips
 AM Peak Hour



LEGEND

XX% PERCENT OF PROJECT TRIPS

| TRIP GENERATION | | | |
|-----------------|----|-----|-------|
| | IN | OUT | TOTAL |
| PM | 12 | 11 | 23 |



SITE TRIP ASSIGNMENT
 Proposed Development Plan – Site Trips
 PM Peak Hour



FIGURE
 6
 PAGE
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Future Traffic Volumes

Background Volumes

To provide analysis of the impact of the proposed development on the nearby transportation facilities, an estimate of future traffic volumes is required. In order to calculate the future traffic volumes for non-ODOT facilities, a compounded growth rate of two percent per year for an assumed buildout condition of three years was applied to the measured existing traffic volumes to approximate year 2021 background conditions.

To estimate the future traffic volumes for ODOT facilities, a linear growth rate was calculated for the traffic volumes along Marine Drive and Commercial Street using data from ODOT's 2036 Future Volume Tables. A growth rate of 0.53 percent per year was calculated for the ODOT facilities by averaging projected volume growth at the following locations:

- Approximately 0.02 miles east of 8th Street (along both Marine Drive and Commercial Street); and
- Approximately 0.02 miles south of Bond Street.

The ODOT growth rate was applied to the measured existing traffic volumes over a three-year period to determine year 2021 background volumes for the through traffic traveling along each of the ODOT facilities (or for any turning movement which involved volumes turning from one ODOT roadway to another ODOT roadway). For all other turning movements at these ODOT intersections, a compounded growth rate of two percent per year was applied over a three-year period.

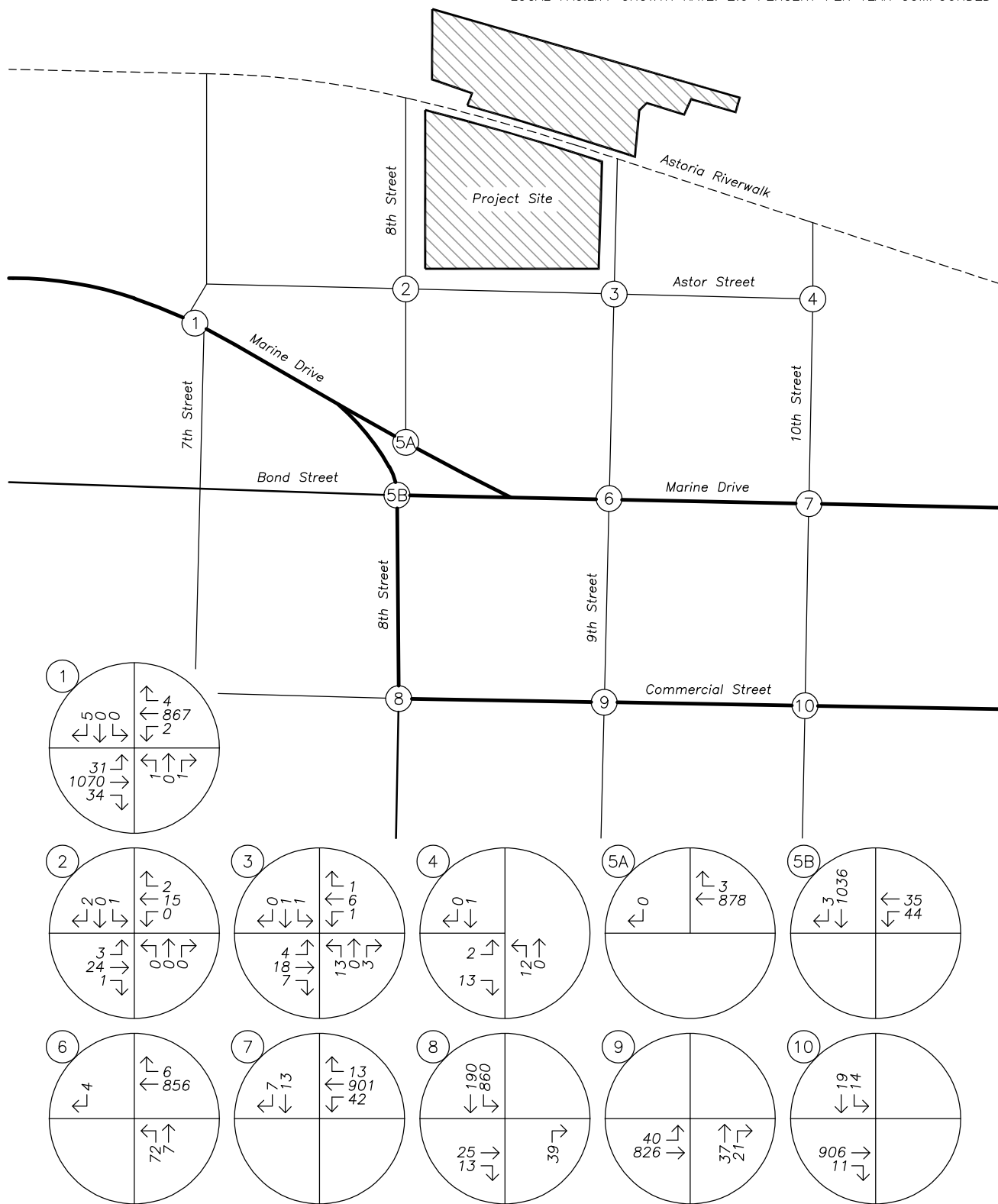
Figure 7 on page 17 and Figure 8 on page 18 show the projected year 2021 background traffic volumes at the study intersections during the morning and evening peak hours, respectively.

Background Volumes plus Site Trips

Peak hour trips calculated to be generated by the proposed development, as described earlier within the *Site Trips* section, were added to the projected year 2021 background traffic volumes to obtain the expected year 2021 buildout volumes.

Figure 9 on page 19 and Figure 10 on page 20 show the projected 2021 site buildout year traffic volumes at the study intersections during the morning and evening peak hours, respectively.

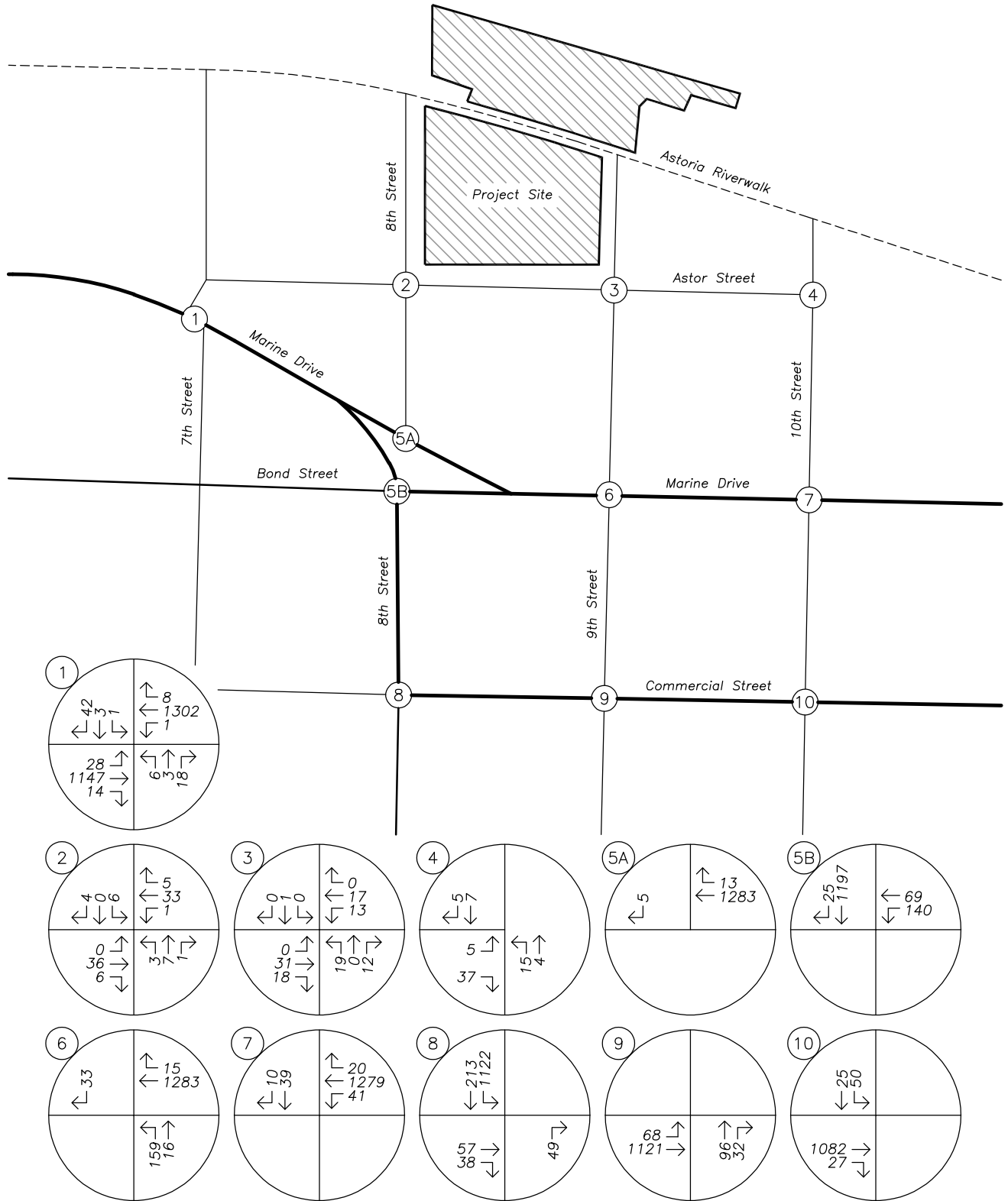
ODOT FACILITY GROWTH RATE: 0.53 PERCENT PER YEAR LINEAR
 LOCAL FACILITY GROWTH RATE: 2.0 PERCENT PER YEAR COMPOUNDED



TRAFFIC VOLUMES
 Year 2021 Background Conditions
 AM Peak Hour

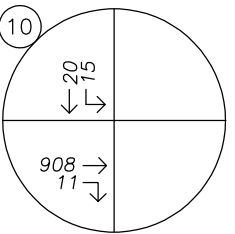
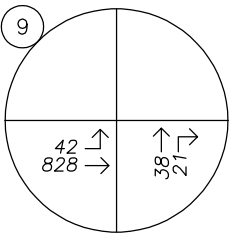
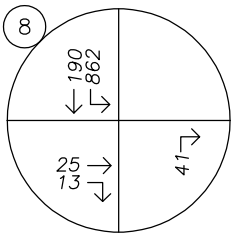
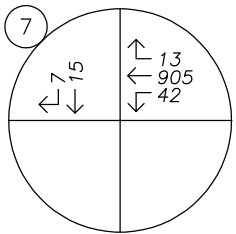
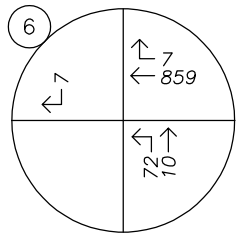
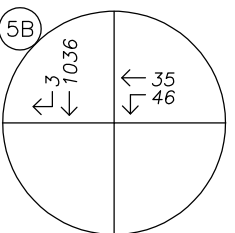
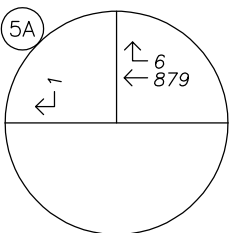
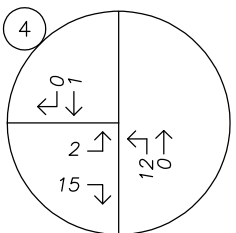
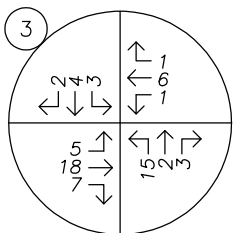
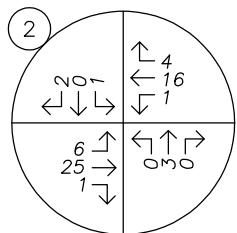
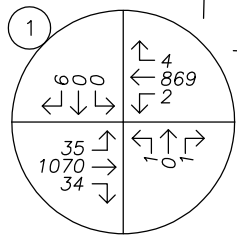
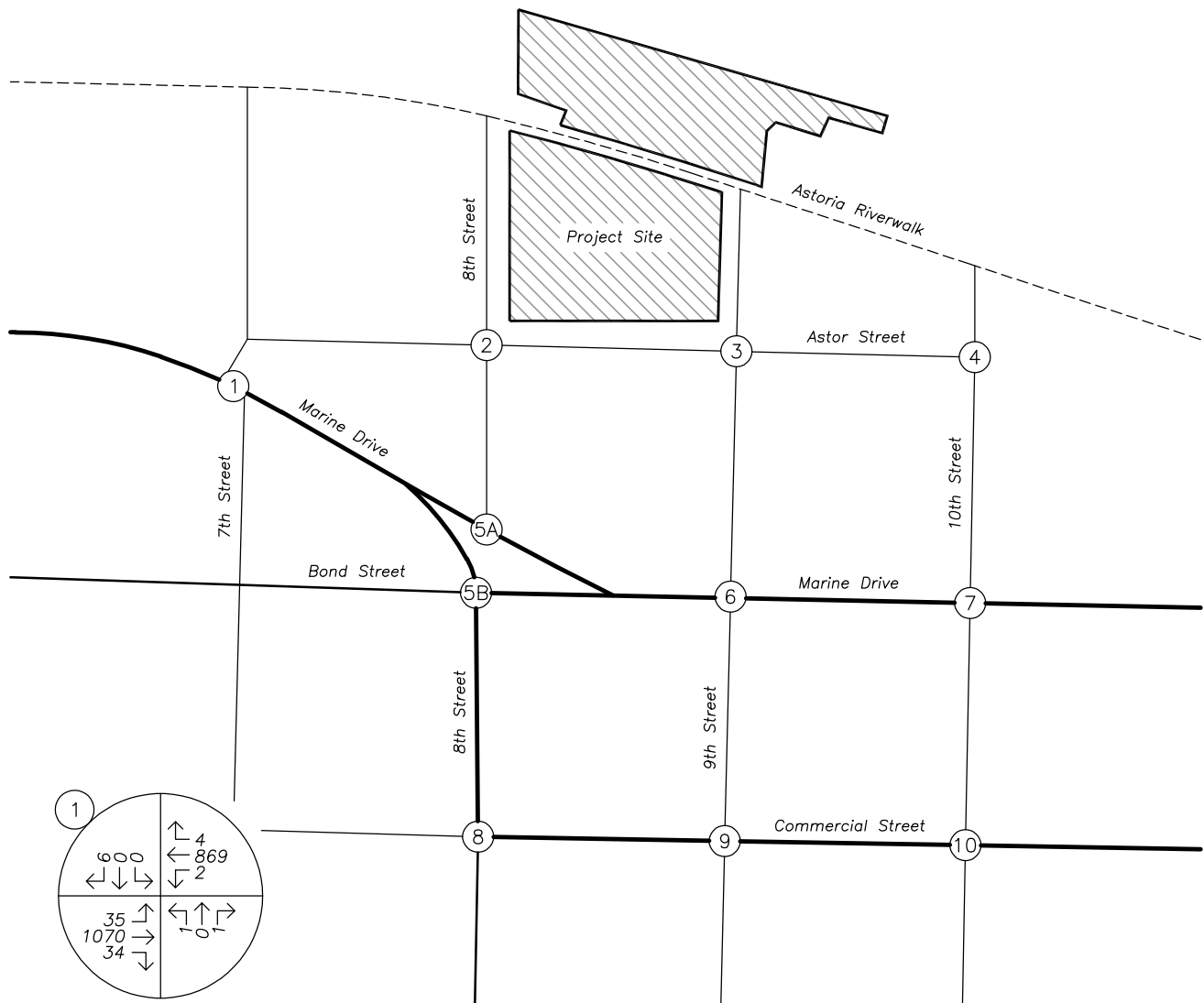


ODOT FACILITY GROWTH RATE: 0.53 PERCENT PER YEAR LINEAR
 LOCAL FACILITY GROWTH RATE: 2.0 PERCENT PER YEAR COMPOUNDED



TRAFFIC VOLUMES
 Year 2021 Background Conditions
 PM Peak Hour



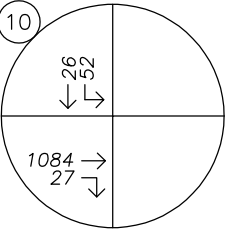
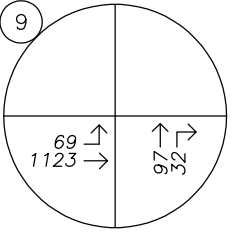
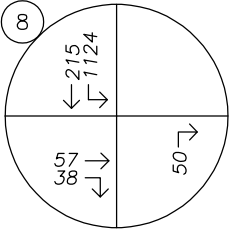
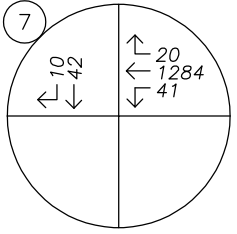
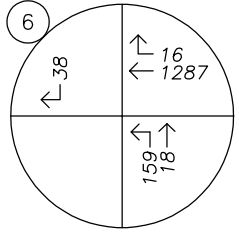
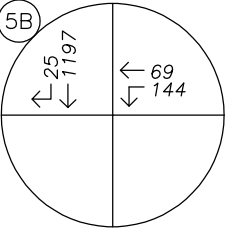
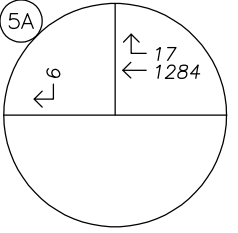
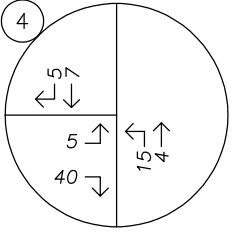
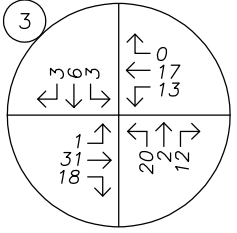
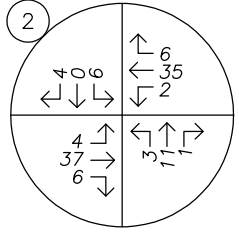
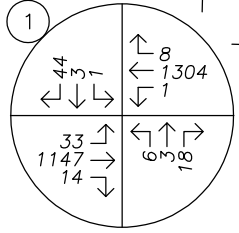
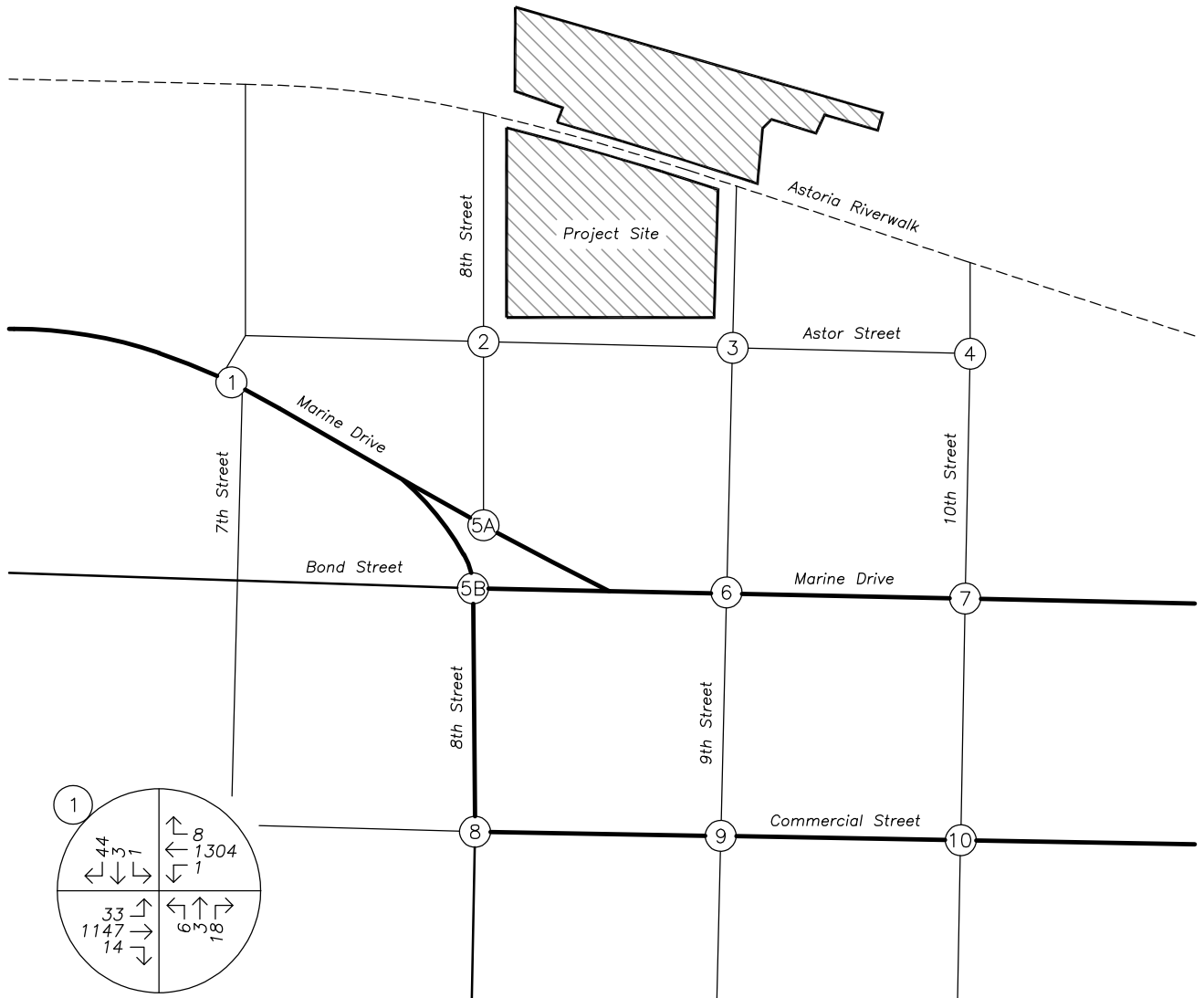


TRAFFIC VOLUMES
Year 2021 Buildout Conditions
AM Peak Hour



FIGURE
9

PAGE
19



TRAFFIC VOLUMES
 Year 2021 Buildout Conditions
 PM Peak Hour





Safety Analysis

Crash Data Analysis

Using data obtained from the ODOT's Crash Analysis and Reporting Unit, a review of the most recent available five years of crash history (January 2012 to December 2016) at the study intersections was performed. The crash data was evaluated based on the number of crashes, the type of collisions, the severity of the collisions, and the resulting crash rate for the intersection. Crash rates provide the ability to compare safety risks at different intersections by accounting for both the number of crashes that have occurred during the study period and the number of vehicles that typically travel through the intersection. Crash rates were calculated using the common assumption that traffic counted during the evening peak hour represents approximately 10 percent of the annual average daily traffic (AADT) at the intersection. Crash rates in excess of 1.0 crashes per million entering vehicles (CMEV) may be indicative of design deficiencies and therefore require a need for further investigation and possible mitigation.

With regard to crash severity, ODOT classifies crashes in the following categories:

- Property Damage Only (*PDO*);
- Possible Injury – Complaint of Pain (*Injury C*);
- Non-Incapacitating Injury (*Injury B*);
- Incapacitating Injury – Bleeding, Broken Bones (*Injury A*); and
- Fatality or Fatal Injury.

Table 4 provides a summary of crash types while Table 5 summarizes crash severities and rates for each of the study intersections. Detailed ODOT crash reports are included in the technical appendix to this report.

In addition, the study intersections along Marine Drive and Commercial Street are ODOT facilities which adhere to the crash analysis methodologies within ODOT's APM. According to Exhibit 4-1 – *Intersection Crash Rates per MEV by Land Type and Traffic Control* of the APM, intersections which experience crash rates in excess of the 90th-percentile crash rates should be “flagged for further analysis”. For signalized intersections in urban settings (the study intersections are located within City limits), the 90th-percentile rate for four-legged intersections is 0.860 CMEV, while unsignalized three-legged and four-legged intersections have 90th-percentile rates of 0.293 and 0.408, respectively.



Table 4: Crash Type Summary

| | Intersection | Crash Type | | | | | | | Total Crashes | |
|----|----------------------------------|------------|------|-------|--------------|------------|---------|-----|---------------|------|
| | | Rear End | Turn | Angle | Fixed Object | Side swipe | Head On | Ped | | Bike |
| 1 | Astor Street at Marine Drive | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 6 |
| 2 | Astor Street at 8th Street | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | Astor Street at 9th Street | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | Astor Street at 10th Street | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | Marine Drive at 8th Street | 4 | 1 | 2 | 1 | 0 | 0 | 2 | 0 | 10 |
| 6 | Marine Drive at 9th Street | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | Marine Drive at 10th Street | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| 8 | Commercial Street at 8th Street | 2 | 10 | 0 | 2 | 0 | 0 | 0 | 0 | 14 |
| 9 | Commercial Street at 9th Street | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 5 |
| 10 | Commercial Street at 10th Street | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |



Table 5: Crash Severity and Rate Summary

| | Intersection | Crash Severity | | | | | Total Crashes | AADT | Crash Rate |
|----|----------------------------------|----------------|---|---|---|-------|---------------|--------|-------------|
| | | PDO | C | B | A | Fatal | | | |
| 1 | Astor Street at Marine Drive | 3 | 2 | 1 | 0 | 0 | 6 | 25,280 | 0.13 |
| 2 | Astor Street at 8th Street | 0 | 0 | 0 | 0 | 0 | 0 | 980 | 0.00 |
| 3 | Astor Street at 9th Street | 0 | 0 | 0 | 0 | 0 | 0 | 1,040 | 0.00 |
| 4 | Astor Street at 10th Street | 0 | 0 | 0 | 0 | 0 | 0 | 700 | 0.00 |
| 5 | Marine Drive at 8th Street | 6 | 1 | 2 | 1 | 0 | 10 | 26,850 | 0.20 |
| 6 | Marine Drive at 9th Street | 0 | 0 | 0 | 0 | 0 | 0 | 14,730 | 0.00 |
| 7 | Marine Drive at 10th Street | 0 | 1 | 1 | 0 | 0 | 2 | 13,630 | 0.08 |
| 8 | Commercial Street at 8th Street | 9 | 3 | 2 | 0 | 0 | 14 | 13,960 | 0.55 |
| 9 | Commercial Street at 9th Street | 2 | 1 | 2 | 0 | 0 | 5 | 12,870 | 0.21 |
| 10 | Commercial Street at 10th Street | 2 | 0 | 0 | 0 | 0 | 2 | 11,610 | 0.09 |

BOLDED text indicates a crash rate in excess of either 1.0 CMEV or the 90th-Percentile CMEV per ODOT's APM.

Based on a review of the crash data, there was one ODOT intersection with a crash rate in excess of the 90th-percentile rate per ODOT's APM. Furthermore, there were three crashes which involved a pedestrian/bicyclist or resulted in injuries consistent with *Injury A* classification. An in-depth analysis of these intersections and crashes is detailed in the following sections.

Marine Drive at 8th Street

The intersection of Marine Drive at 8th Street had two crashes which involved pedestrians, one of which was classified as an *Injury A* collision. The both collisions occurred when the driver of a northwest-bound through passenger car failed to yield right-of-way to a north/south traveling pedestrian who was utilizing and intersection crosswalk. The pedestrians in both collisions sustained injuries: one pedestrian sustained injuries consistent with *Injury B* classification while the other collision was classified as *Injury A*.



Marine Drive at 10th Street

The intersection of Marine Drive at 10th Street had one crash which involved a pedestrian. The crash occurred when the driver of a southbound passenger car failed to yield right-of-way to an east/west traveling pedestrian who was utilizing an intersection crosswalk. The pedestrian sustained injuries consistent with *Injury C* classification.

Commercial Street at 8th Street

The intersection of Commercial Street at 8th Street is an ODOT facility with a crash rate of 0.55 CMEV, which is in excess of the APM's 90th-percentile rate of 0.408 CMEV for four-legged, unsignalized intersections. Based on a closer review of the crash data, 6 of the 14 crashes, or approximately 42.9 percent of the collisions, involved a southbound left-turning vehicle that either failed to maintain their lane of travel or turned into the wrong lane. Upon inspecting historical street view images of the intersection between November 2007 and June 2018, the turn lanes through the intersection had been inconsistently maintained throughout the years. As of December 1st, 2018, the lane striping has been recently redone; however, per street view images, had mostly faded as of June 2018 since previously being restriped near October 2012. The reported crashes had occurred between 2013 and 2015, where the faded lane striping may have been a contributing factor to these recurring crashes. Potential improvements at this intersection may include consistently maintaining turn lane striping through the intersection. Assuming this suggested improvement mitigates future collisions of this type, the crash rate is projected to decrease to approximately 0.31 CMEV.

Although the crash rate currently exceeds ODOT's 90th-percentile rate, it should be noted that by standard transportation engineering convention, an intersection crash rate of 0.55 CMEV would not typically warrant further review. In addition, no severe injury collisions (*Injury A*) or fatalities were reported at the intersection during the analysis period.

Summary

Based on a review of the most recent five years of available crash data, it is suggested that the southbound left-turn lane striping through the intersection of Commercial Street at 8th Street be properly maintained to potentially reduce crashes at the intersection. No other significant trends and crash patterns were identified at any of the other study intersections that were indicative of safety concerns. Accordingly, no other safety mitigation is recommended per the crash data analysis.

Sight Distance Analysis

Intersection sight distance was measured for the proposed egress site access intersection along 9th Street as well as at the 9th Street intersection with the Astoria Riverwalk multi-use path. Sight distance was measured and evaluated in accordance with standards established in *A Policy on Geometric Design of Highways and Streets*². According to AASHTO, the driver's eye is assumed to be 15 feet from the near edge of the nearest travel lane

² American Association of State Highway and Transportation Officials (AASHTO), *A Policy on Geometric Design of Highways and Streets*, 6th Edition, 2011.



of the intersecting street and at a height of 3.5 feet above the minor-street approach pavement. The vehicle driver's eye-height along the major-street approach is assumed to be 3.5 feet above the cross-street pavement.

It should be noted that exact field measurements could not be conducted within the site vicinity due to ongoing construction occurring at the 9th Street intersection at the Astoria Riverwalk. Therefore, measured sight distances were determined based on field observations in conjunction with measurements conducted using Google Earth aerial images. Based on the field observations, no vertical obstructions with regard to the Riverwalk and roadway curvature were noted to obstruct sight lines. Any obstructions related to the ongoing construction, such as field equipment, are temporary and were disregarded when conducting this analysis.

Proposed Egress Access at 9th Street

Based on a statutory business district speed of 20 mph along 9th Street, the minimum recommended intersection sight distance to ensure safe and efficient operation of the proposed egress access intersection along 9th Street is 225 feet to the north and south along the major-street. Intersection sight distance to the north of the was measured to be in excess of 120 feet to location beyond the Astoria Riverwalk where 9th Street dead-ends. Sight distance to the south was measured to be in excess of 270 feet, beyond the intersection of Marine Drive at 9th Street.

9th Street at the Astoria Riverwalk

At the direction of City of Astoria staff, intersection sight distances were measured at the 9th Street intersection with the Astoria Riverwalk multi-use path, assuming the 9th Street approaches for motor vehicles as the minor-street. As described in the *Multi-Modal Facilities* section, the Astoria Riverfront Trolley is a single vehicle that operates daily between 12:00 PM to 6:00 PM with an average round trip of approximately one hour, where roughly two to four crossings will occur at the intersection per hour. The trolley system spans approximately three miles.

It is assumed that the trolley operates with an average travel speed of approximately 10 mph (that is a six-mile round trip over one hour while accommodating stops), but for the purposes of this analysis, it is assumed the trolley may travel at a maximum speed of 15 mph. However, it should be noted that the trolley crossing at 9th Street is located adjacent to a regular transit stop location; therefore, the trolley would either be accelerating from a stopped position in the westbound direction or decelerating to stop in the eastbound direction. Additionally, the Astoria Riverwalk is also shared with pedestrians and bicyclists on the boardwalk section of the path, whereby it's unlikely the trolley would be traveling at 15 mph near the site. Therefore, assuming a 15-mph trolley travel speed at this location may be considered conservatively high with regard to determining sufficient intersection sight distance.

Based on an assumed 15 mph travel speed, the minimum recommended intersection sight distance at the Astoria Riverwalk intersection with 9th Street is 170 feet. Intersection sight distance for both northbound and southbound stopped vehicles along 9th Street were measured to be in excess to 200 feet viewing east and west. Accordingly, sufficient sight distance is expected to be available to allow a vehicle to safely judge an appropriate gap to cross the trolley tracks.



Analysis Summary

Based on the sight distance analysis, upon completion of construction at the 9th Street intersection with the Astoria Riverwalk, adequate sight distances can be made available at the intersection as well as the proposed egress access to ensure safe and efficient operation along area roadways and intersections. No sight distance mitigation is necessary or recommended.

Turning-Movement Analysis

At the direction of City of Astoria staff, a turning movement analysis was conducted depicting driveway ingress and egress for the parking lot as well as egress at the four proposed loading/unloading valet parking spaces along the north side of the Astoria Riverwalk multi-use path.

The turning movement analysis was conducted using AutoTurn software and referencing an AASHTO “P” design vehicle. At a length of 19 feet, the “P” design vehicle is considered one of the largest passenger vehicle types that may be used by the average motor vehicle operator. Diagrams depicting analysis scenarios are included within the appendix to this report and are listed below (note that figures B through E depict egress from the parking stalls located north of the Astoria Riverwalk, where stalls are numbered 1 through 4 from west to east):

- Figure A – Parking Lot Ingress & Egress
- Figure B – Egress from Parking Stall 1
- Figure C – Egress from Parking Stall 2
- Figure D – Egress from Parking Stall 3
- Figure E1 – Egress from Parking Stall 4 (Single Motion)
- Figure E2 – Egress from Parking Stall 4 (Jockeying)

Based on the turning movement analysis (as depicted in the above listed figures), no issues were found with regard to ingress and egress to and from the parking lot. Regarding the parking stalls north of the Astoria Riverwalk, parked vehicles from stalls 1 through 3 were able to conduct a 180-degree turnaround in a single reverse and forward motion without encroaching onto the trolley tracks while conducting the reverse movement. Parking stall 4, however, required that a reversing “P” design vehicle encroach onto the trolley tracks in order to conduct a single reverse and forward egress motion (as shown in Figure E1). Alternatively, the “P” design vehicle could exit the parking stall without encroaching onto the tracks by performing a forward/reserve jockeying motion three times in each direction (as shown in Figure E2). Given that sight distances for reversing vehicles is sufficient to prevent potential collisions with the trolley and given the trolley is expected to be traveling at low speeds near the site, no significant safety issues or conflicts are expected to occur between egressing vehicles and the trolley.



Warrant Analysis

Preliminary traffic signal warrants were examined for the unsignalized ODOT study intersections to determine whether the installation of a new traffic signal will be warranted at these intersections upon completion of the proposed development. Due to insufficient main and side-street traffic volumes, traffic signal warrants are not projected to be met at the unsignalized study intersections under any of the analysis scenarios.



Operational Analysis

Intersection Capacity Analysis

A capacity and delay analysis was conducted for each of the study intersections per the signalized and unsignalized intersection analysis methodologies in the *Highway Capacity Manual*³ (HCM). Intersections are generally evaluated based on the average control delay experienced by vehicles and are assigned a grade according to their operation. The level of service (LOS) of an intersection can range from LOS A, which indicates very little or no delay experienced by vehicles, to LOS F, which indicates a high degree of congestion and delay. The volume-to-capacity (v/c) ratio is a measure that compares the traffic volumes (demand) against the available capacity of an intersection.

Per the City of Astoria's 2013 Transportation System Plan (TSP), the following minimum operation standards are applicable to intersections under City jurisdiction:

- Signalized, roundabout, and all-way stop-controlled intersections shall operate at LOS E or better with a v/c ratio no greater than 0.85.
- For all other unsignalized intersections, movements serving more than 20 vehicles shall operate at LOS E or better with a v/c ratio no greater than 0.90. LOS F is acceptable at movements serving no more than 20 vehicles during the peak hour.

The study intersections along Marine Drive and Commercial Street are ODOT facilities and must meet standards established in the *Oregon Highway Plan*. Based on the highway's classification as a Freight Route on a Statewide Highway with a posted speed of 20 mph to 25 mph, study intersections along the two ODOT roadways are required to operate with a v/c ratio of 0.85.

The intersection of Astor Street at 10th Street, for all approaches, as well as the southbound approach at the intersection of Astor Street at 9th Street, currently operate under uncontrolled conditions. However, the HCM, utilizing Synchro 10 software, does not provide operational results for uncontrolled intersections. Therefore, the intersection was analyzed assuming each uncontrolled approach operates under yield control.

Additionally, Synchro 10 software does not have the ability to analyze the intersection of Commercial Street at 8th Street, where the northbound and eastbound approaches operate under stop control. Therefore, the intersection was re-oriented within the model assuming the southbound left-turn movement is considered the through movement within the intersection and the eastbound and northbound stop-controlled approaches are the opposing minor-street approaches. The lane configurations and traffic volumes were adjusted accordingly.

The v/c, delay, and LOS results of the capacity analysis are shown in Table 6 for the morning and evening peak hours. The reported results are based on the analysis methodologies provided in the HCM 2000. While more recent versions of the HCM are available, the methodologies used in the later editions (utilizing

³ Transportation Research Board, *Highway Capacity Manual*, 2000.



Trafficware software) do not report v/c ratios for the major-street through movements nor does it provide an overall v/c ratio for signalized intersections, which are the standards by which ODOT evaluates intersection operation.

Detailed calculations as well as tables showing the relationship between delay and LOS are included in the appendix to this report.

Table 6: Intersection Capacity Analysis Summary

| | Morning Peak Hour | | | Evening Peak Hour | | |
|---------------------------------------|-------------------|-----------|-------------|-------------------|-----------|-------------|
| | LOS | Delay (s) | v/c | LOS | Delay (s) | v/c |
| 1 Astor Street at Marine Drive | | | | | | |
| 2018 Existing Conditions | F | 65 | 0.41 | F | 61 | 0.41 |
| 2021 Background Conditions | F | 69 | 0.41 | F | 64 | 0.42 |
| 2021 Buildout Conditions | F | 71 | 0.41 | F | 67 | 0.42 |
| 2 Astor Street at 8th Street | | | | | | |
| 2018 Existing Conditions | A | 9 | 0.01 | A | 10 | 0.02 |
| 2021 Background Conditions | A | 9 | 0.01 | A | 10 | 0.02 |
| 2021 Buildout Conditions | A | 9 | 0.01 | A | 10 | 0.03 |
| 3 Astor Street at 9th Street | | | | | | |
| 2018 Existing Conditions | A | 9 | 0.03 | A | 10 | 0.05 |
| 2021 Background Conditions | A | 9 | 0.03 | A | 10 | 0.06 |
| 2021 Buildout Conditions | A | 9 | 0.04 | A | 10 | 0.06 |
| 4 Astor Street at 10th Street | | | | | | |
| 2018 Existing Conditions | A | 7 | <i>0.17</i> | A | 7 | <i>0.20</i> |
| 2021 Background Conditions | A | 7 | <i>0.17</i> | A | 7 | <i>0.20</i> |
| 2021 Buildout Conditions | A | 7 | <i>0.17</i> | A | 7 | <i>0.20</i> |
| 5 Marine Drive at 8th Street | | | | | | |
| 2018 Existing Conditions | D | 30 | 0.46 | E | 40 | 0.48 |
| 2021 Background Conditions | D | 31 | 0.47 | E | 43 | 0.48 |
| 2021 Buildout Conditions | D | 31 | 0.47 | E | 43 | 0.48 |

Italics indicates Intersection Capacity Utilization (ICU) reported in place of v/c ratio.



Table 6: Intersection Capacity Analysis Summary (continued)

| | Morning Peak Hour | | | Evening Peak Hour | | |
|--|-------------------|-----------|------|-------------------|-----------|------|
| | LOS | Delay (s) | v/c | LOS | Delay (s) | v/c |
| 6 Marine Drive at 9th Street | | | | | | |
| 2018 Existing Conditions | B | 12 | 0.38 | B | 16 | 0.60 |
| 2021 Background Conditions | B | 13 | 0.39 | B | 16 | 0.62 |
| 2021 Buildout Conditions | B | 13 | 0.39 | B | 16 | 0.62 |
| 7 Marine Drive at 10th Street | | | | | | |
| 2018 Existing Conditions | C | 20 | 0.29 | E | 37 | 0.42 |
| 2021 Background Conditions | C | 20 | 0.30 | E | 39 | 0.43 |
| 2021 Buildout Conditions | C | 21 | 0.30 | E | 42 | 0.43 |
| 8 Commercial Street at 8th Street | | | | | | |
| 2018 Existing Conditions | C | 23 | 0.39 | D | 33 | 0.43 |
| 2023 Background Conditions | D | 26 | 0.42 | E | 39 | 0.46 |
| 2023 Buildout Conditions | D | 26 | 0.42 | E | 39 | 0.46 |
| 9 Commercial Street at 9th Street | | | | | | |
| 2018 Existing Conditions | B | 13 | 0.40 | B | 13 | 0.48 |
| 2023 Background Conditions | B | 13 | 0.41 | B | 14 | 0.49 |
| 2023 Buildout Conditions | B | 13 | 0.41 | B | 14 | 0.49 |
| 10 Commercial Street at 10th Street | | | | | | |
| 2018 Existing Conditions | C | 21 | 0.49 | C | 17 | 0.44 |
| 2023 Background Conditions | C | 21 | 0.50 | C | 17 | 0.45 |
| 2023 Buildout Conditions | C | 21 | 0.50 | C | 18 | 0.45 |

Based on the results of the operational analysis, all study intersections are currently operating acceptably per their respective jurisdictional standards and are projected to continue operating acceptably through the 2021 buildout year of the site. No operational mitigation is necessary or recommended at these intersections.



Conclusions

The intersection of Commercial Street at 8th Street was calculated to have a crash rate in excess of the 90th-percentile rate per ODOT's APM. One mitigation which may potentially decrease future crashes at the intersection includes properly maintaining the southbound left-turn lane striping through the intersection.

No other significant trends and crash patterns were identified at any of the other study intersections that were indicative of safety concerns.

Upon completion of construction at the 9th Street intersection with the Astoria Riverwalk, adequate sight distances can be made available at the intersection as well as the proposed egress access to ensure safe and efficient operation along area roadways and intersections.

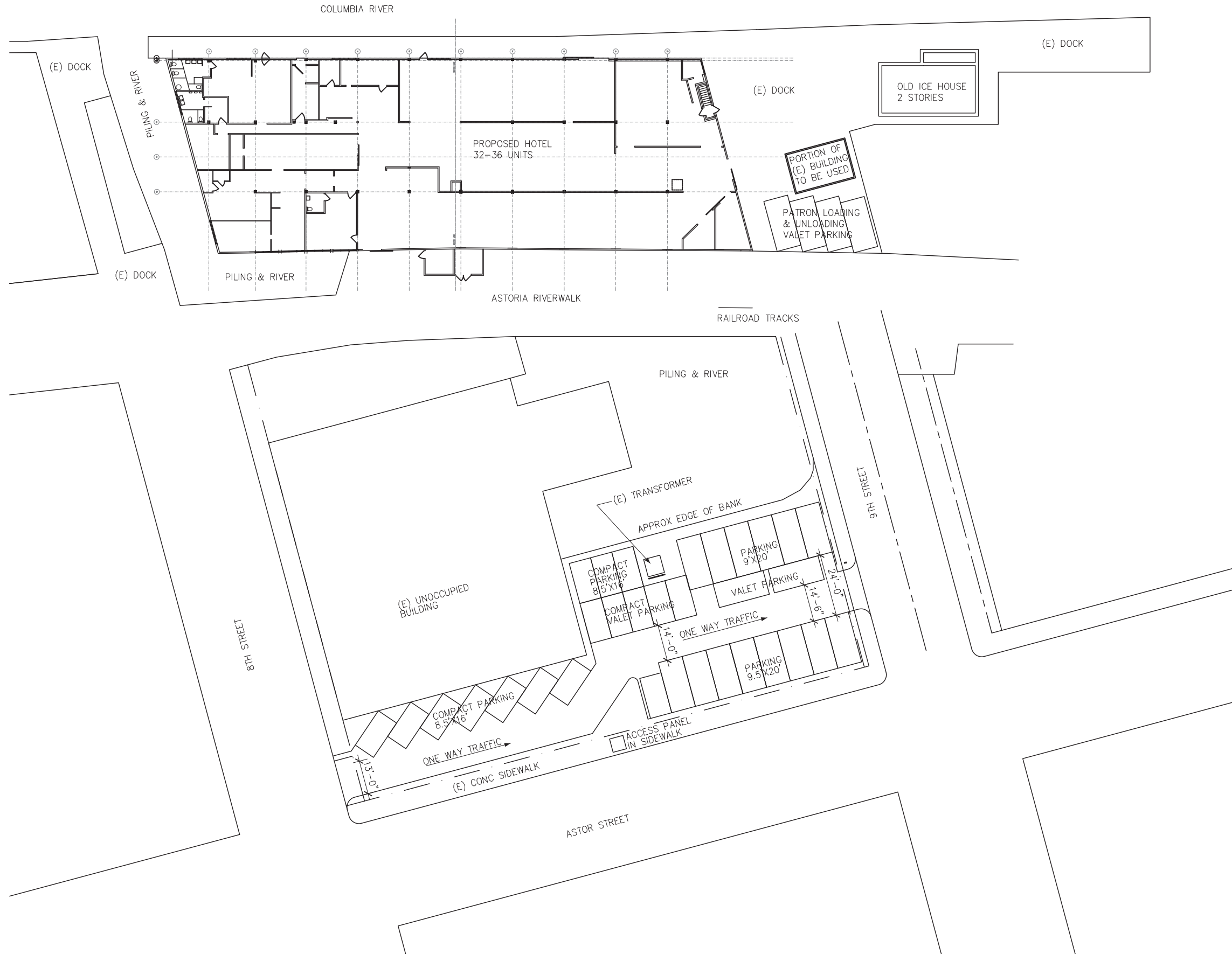
No issues were found with regard to ingress and egress to and from the proposed hotel parking lot. Regarding the loading/unloading valet parking stalls north of the Astoria Riverwalk, no significant safety issues or conflicts are expected to occur between egressing vehicles and the Astoria Riverfront Trolley.

Due to insufficient main and side-street traffic volumes, traffic signal warrants are not projected to be met at the unsignalized study intersections under any of the analysis scenarios.

All study intersections are currently operating acceptably per their respective jurisdictional standards and are projected to continue operating acceptably through the 2021 buildout year of the site.



Appendix



REMODEL OF:
ASTORIA HOLDING
#1-9th STREET
ASTORIA, OR 97103

OWNER'S NAME
ADDRESS
ADDRESS
PHONE

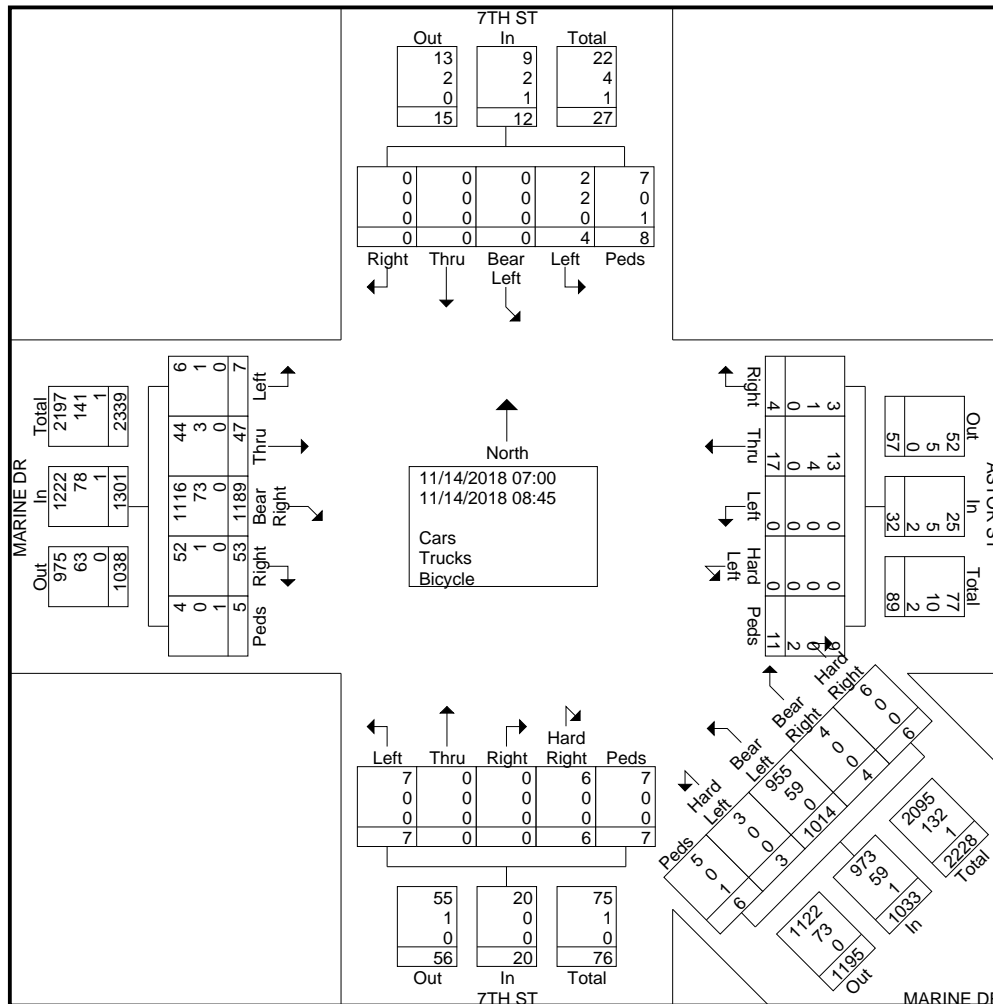
PRE-LIMINARY
DATE:
11-20-18
DATE REVISED:

DRAWN BY:
MRD
FILE NAME:

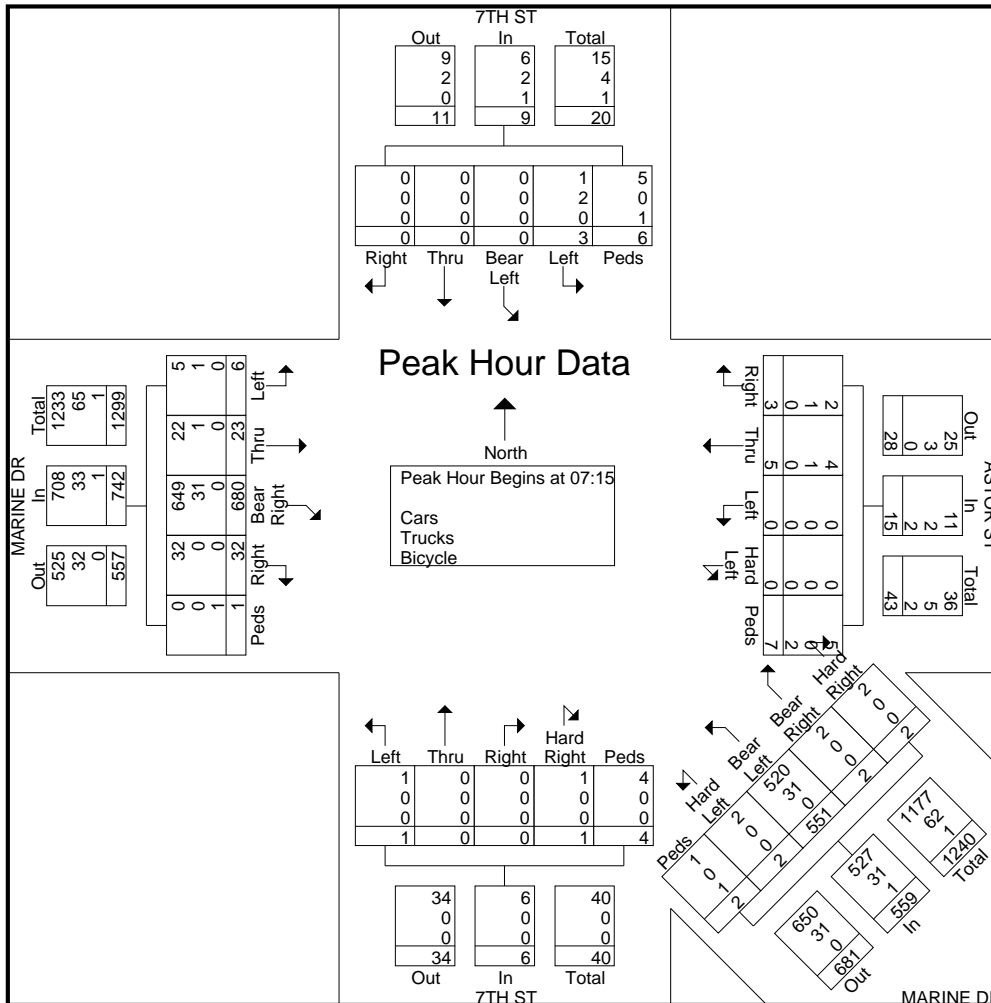
SHEET:
A-1

Groups Printed- Cars - Trucks - Bicycle

| Start Time | 7TH ST Southbound | | | | | | ASTOR ST Westbound | | | | | | MARINE DR Northwestbound | | | | | | 7TH ST Northbound | | | | | | MARINE DR Eastbound | | | | | | Int. Total |
|--------------|-------------------|-----------|------|-------|------|------------|--------------------|------|------|-------|------|------------|--------------------------|-----------|------------|------------|------|------------|-------------------|------|-------|------------|------|------------|---------------------|------|------------|-------|------|------------|------------|
| | Left | Bear Left | Thru | Right | Peds | App. Total | Hard Left | Left | Thru | Right | Peds | App. Total | Hard Left | Bear Left | Bear Right | Hard Right | Peds | App. Total | Left | Thru | Right | Hard Right | Peds | App. Total | Left | Thru | Bear Right | Right | Peds | App. Total | |
| 07:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 98 | 1 | 0 | 1 | 100 | 2 | 0 | 0 | 3 | 1 | 6 | 0 | 4 | 74 | 2 | 1 | 81 | 191 |
| 07:15 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 1 | 0 | 2 | 3 | 0 | 134 | 0 | 0 | 1 | 135 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 3 | 157 | 8 | 1 | 170 | 312 |
| 07:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 1 | 120 | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 7 | 138 | 6 | 0 | 152 | 276 |
| 07:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 4 | 1 | 156 | 0 | 0 | 1 | 158 | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 8 | 228 | 11 | 0 | 248 | 412 |
| Total | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 7 | 3 | 3 | 13 | 2 | 508 | 1 | 0 | 3 | 514 | 3 | 0 | 0 | 4 | 4 | 11 | 3 | 22 | 597 | 27 | 2 | 651 | 1191 |
| 08:00 | 3 | 0 | 0 | 0 | 4 | 7 | 0 | 0 | 2 | 0 | 4 | 6 | 0 | 141 | 2 | 2 | 0 | 145 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 5 | 157 | 7 | 0 | 172 | 331 |
| 08:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 6 | 0 | 121 | 0 | 0 | 3 | 124 | 1 | 0 | 0 | 2 | 0 | 3 | 1 | 9 | 132 | 4 | 2 | 148 | 281 |
| 08:30 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 3 | 1 | 1 | 5 | 0 | 125 | 0 | 0 | 0 | 125 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 5 | 146 | 6 | 0 | 157 | 291 |
| 08:45 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 2 | 1 | 119 | 1 | 4 | 0 | 125 | 2 | 0 | 0 | 0 | 1 | 3 | 0 | 6 | 157 | 9 | 1 | 173 | 304 |
| Total | 4 | 0 | 0 | 0 | 6 | 10 | 0 | 0 | 10 | 1 | 8 | 19 | 1 | 506 | 3 | 6 | 3 | 519 | 4 | 0 | 0 | 2 | 3 | 9 | 4 | 25 | 592 | 26 | 3 | 650 | 1207 |
| Grand Total | 4 | 0 | 0 | 0 | 8 | 12 | 0 | 0 | 17 | 4 | 11 | 32 | 3 | 1014 | 4 | 6 | 6 | 1033 | 7 | 0 | 0 | 6 | 7 | 20 | 7 | 47 | 1189 | 53 | 5 | 1301 | 2398 |
| Apprch % | 33.3 | 0 | 0 | 0 | 66.7 | | 0 | 0 | 53.1 | 12.5 | 34.4 | | 0.3 | 98.2 | 0.4 | 0.6 | 0.6 | | 35 | 0 | 0 | 30 | 35 | | 0.5 | 3.6 | 91.4 | 4.1 | 0.4 | | |
| Total % | 0.2 | 0 | 0 | 0 | 0.3 | 0.5 | 0 | 0 | 0.7 | 0.2 | 0.5 | 1.3 | 0.1 | 42.3 | 0.2 | 0.3 | 0.3 | 43.1 | 0.3 | 0 | 0 | 0.3 | 0.3 | 0.8 | 0.3 | 2 | 49.6 | 2.2 | 0.2 | 54.3 | |
| Cars | 2 | 0 | 0 | 0 | 7 | 9 | 0 | 0 | 13 | 3 | 9 | 25 | 3 | 955 | | | | | | | | | | | | | | | | | |
| % Cars | 50 | 0 | 0 | 0 | 87.5 | 75 | 0 | 0 | 76.5 | 75 | 81.8 | 78.1 | 100 | 94.2 | 100 | 100 | 83.3 | 94.2 | 100 | 0 | 0 | 100 | 100 | 100 | 85.7 | 93.6 | 93.9 | 98.1 | 80 | 93.9 | 93.8 |
| Trucks | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 4 | 1 | 0 | 5 | 0 | 59 | 0 | 0 | 0 | 59 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 73 | 1 | 0 | 78 | 144 |
| % Trucks | | | | | | | | | 23.5 | | | | | 5.8 | | | | | | | | | | | 14.3 | 6.4 | 6.1 | 1.9 | | | |
| Bicycle | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 5 |
| % Bicycle | 0 | 0 | 0 | 0 | 12.5 | 8.3 | 0 | 0 | 0 | 0 | 18.2 | 6.2 | 0 | 0 | 0 | 0 | 16.7 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0.1 | 0.2 |

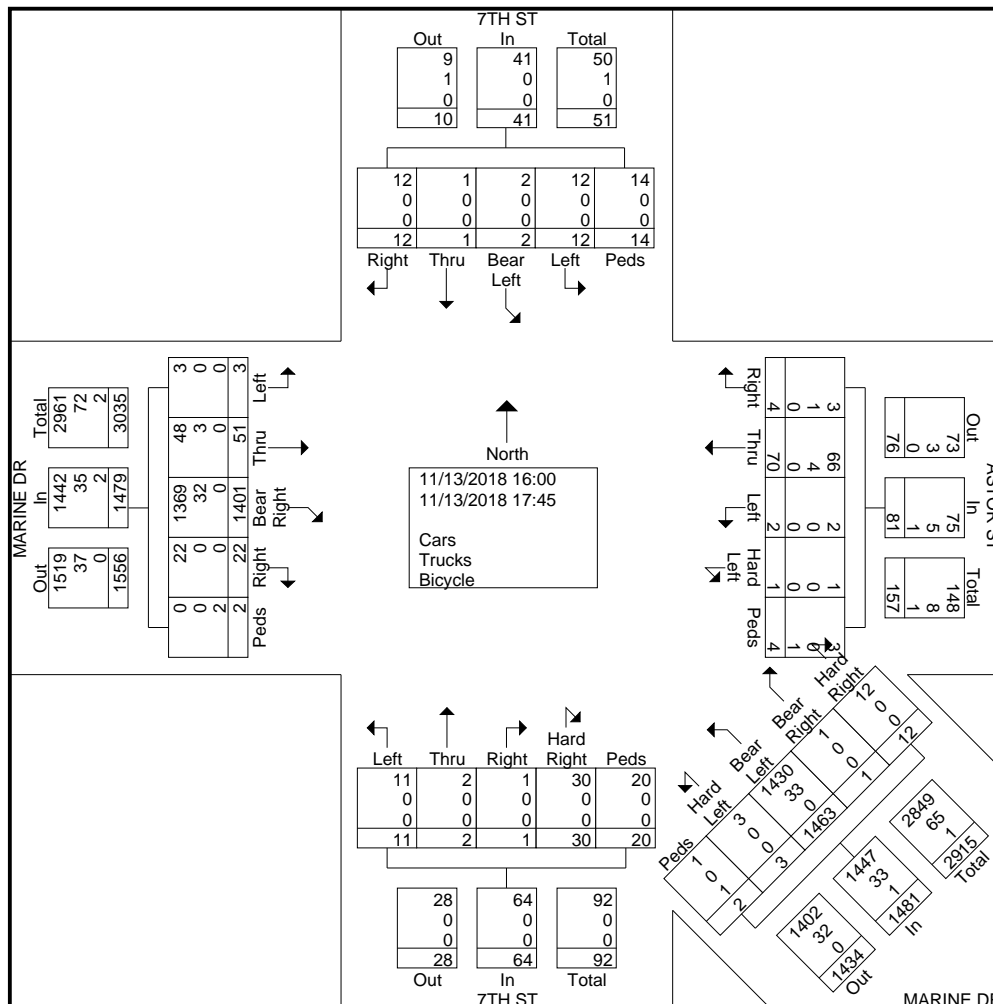


| Start Time | 7TH ST Southbound | | | | | | ASTOR ST Westbound | | | | | | MARINE DR Northwestbound | | | | | | 7TH ST Northbound | | | | | | MARINE DR Eastbound | | | | | | Int. Total | |
|--|-------------------|-----------|------|-------|------|------------|--------------------|------|------|-------|------|------------|--------------------------|-----------|------------|------------|------|------------|-------------------|------|-------|------------|------|------------|---------------------|------|------------|-------|------|------------|------------|--|
| | Left | Bear Left | Thru | Right | Peds | App. Total | Hard Left | Left | Thru | Right | Peds | App. Total | Hard Left | Bear Left | Bear Right | Hard Right | Peds | App. Total | Left | Thru | Right | Hard Right | Peds | App. Total | Left | Thru | Bear Right | Right | Peds | App. Total | | |
| Peak Hour Analysis From 7:00:00 AM to 8:45:00 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 7:15:00 AM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7:15:00 AM | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 1 | 0 | 2 | 3 | 0 | 134 | 0 | 0 | 1 | 135 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 3 | 157 | 8 | 1 | 170 | 312 | |
| 7:30:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 1 | 120 | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 7 | 138 | 6 | 0 | 152 | 276 | |
| 7:45:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 4 | 1 | 156 | 0 | 0 | 1 | 158 | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 8 | 228 | 11 | 0 | 248 | 412 | |
| 8:00:00 AM | 3 | 0 | 0 | 0 | 4 | 7 | 0 | 0 | 2 | 0 | 4 | 6 | 0 | 141 | 2 | 2 | 0 | 145 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 5 | 157 | 7 | 0 | 172 | 331 | |
| Total Volume | 3 | 0 | 0 | 0 | 6 | 9 | 0 | 0 | 5 | 3 | 7 | 15 | 2 | 551 | 2 | 2 | 2 | 559 | 1 | 0 | 0 | 1 | 4 | 6 | 6 | 23 | 680 | 32 | 1 | 742 | 1331 | |
| % App. Total | 33.3 | 0 | 0 | 0 | 66.7 | | 0 | 0 | 33.3 | 20 | 46.7 | | 0.4 | 98.6 | 0.4 | 0.4 | 0.4 | | 16.7 | 0 | 0 | 16.7 | 66.7 | | 0.8 | 3.1 | 91.6 | 4.3 | 0.1 | | | |
| PHF | .250 | .000 | .000 | .000 | .375 | .321 | .000 | .000 | .625 | .375 | .438 | .625 | .500 | .883 | .250 | .250 | .500 | .884 | .250 | .000 | .000 | .250 | .500 | .750 | .500 | .719 | .746 | .727 | .250 | .748 | .808 | |
| Cars | 1 | 0 | 0 | 0 | 5 | 6 | 0 | 0 | 4 | 2 | 5 | 11 | 2 | 520 | | | | | | | | | | | | | 649 | | | 1258 | | |
| % Cars | 33.3 | 0 | 0 | 0 | 83.3 | 66.7 | 0 | 0 | 80.0 | 66.7 | 71.4 | 73.3 | 100 | 94.4 | 100 | 100 | 50.0 | 94.3 | 100 | 0 | 0 | 100 | 100 | 100 | 83.3 | 95.7 | 95.4 | 100 | 0 | 95.4 | 94.5 | |
| Trucks | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 31 | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 31 | 0 | 0 | 33 | 68 | |
| % Trucks | 66.7 | | | | 22.2 | | 0 | 0 | 20.0 | 33.3 | | 13.3 | 0 | 5.6 | | | | | | | | | | | 16.7 | 4.3 | 4.6 | | | | | |
| Bicycle | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 5 | |
| % Bicycle | 0 | 0 | 0 | 0 | 16.7 | 11.1 | 0 | 0 | 0 | 0 | 28.6 | 13.3 | 0 | 0 | 0 | 0 | 50.0 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 0.1 | 0.4 | |

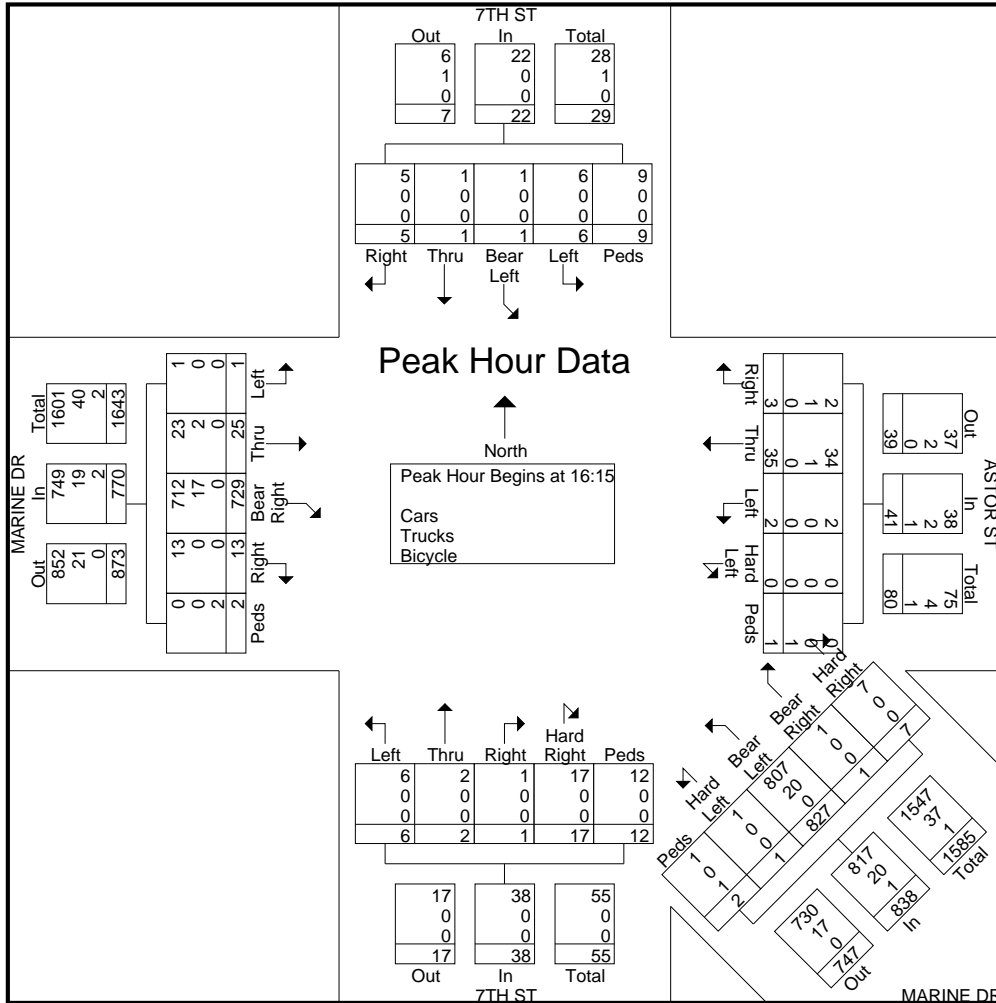


Groups Printed- Cars - Trucks - Bicycle

| Start Time | 7TH ST Southbound | | | | | | ASTOR ST Westbound | | | | | | MARINE DR Northwestbound | | | | | | 7TH ST Northbound | | | | | | MARINE DR Eastbound | | | | | | Int. Total |
|-------------|-------------------|-----------|------|-------|------|------------|--------------------|------|------|-------|------|------------|--------------------------|-----------|------------|------------|------|------------|-------------------|------|-------|------------|------|------------|---------------------|------|------------|-------|------|------------|------------|
| | Left | Bear Left | Thru | Right | Peds | App. Total | Hard Left | Left | Thru | Right | Peds | App. Total | Hard Left | Bear Left | Bear Right | Hard Right | Peds | App. Total | Left | Thru | Right | Hard Right | Peds | App. Total | Left | Thru | Bear Right | Right | Peds | App. Total | |
| 16:00 | 1 | 1 | 0 | 4 | 2 | 8 | 0 | 0 | 6 | 0 | 2 | 8 | 1 | 210 | 0 | 1 | 0 | 212 | 0 | 0 | 0 | 4 | 4 | 8 | 0 | 6 | 190 | 6 | 0 | 202 | 438 |
| 16:15 | 1 | 1 | 0 | 0 | 1 | 3 | 0 | 0 | 8 | 0 | 0 | 8 | 0 | 187 | 0 | 3 | 0 | 190 | 3 | 2 | 0 | 3 | 1 | 9 | 1 | 8 | 165 | 4 | 1 | 179 | 389 |
| 16:30 | 3 | 0 | 0 | 2 | 3 | 8 | 0 | 1 | 12 | 0 | 1 | 14 | 1 | 214 | 0 | 3 | 1 | 219 | 2 | 0 | 0 | 6 | 5 | 13 | 0 | 6 | 186 | 3 | 0 | 195 | 449 |
| 16:45 | 1 | 0 | 1 | 2 | 0 | 4 | 0 | 1 | 6 | 2 | 0 | 9 | 0 | 184 | 0 | 0 | 0 | 184 | 1 | 0 | 1 | 5 | 3 | 10 | 0 | 3 | 190 | 4 | 1 | 198 | 405 |
| Total | 6 | 2 | 1 | 8 | 6 | 23 | 0 | 2 | 32 | 2 | 3 | 39 | 2 | 795 | 0 | 7 | 1 | 805 | 6 | 2 | 1 | 18 | 13 | 40 | 1 | 23 | 731 | 17 | 2 | 774 | 1681 |
| 17:00 | 1 | 0 | 0 | 1 | 5 | 7 | 0 | 0 | 9 | 1 | 0 | 10 | 0 | 242 | 1 | 1 | 1 | 245 | 0 | 0 | 0 | 3 | 3 | 6 | 0 | 8 | 188 | 2 | 0 | 198 | 466 |
| 17:15 | 0 | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 9 | 1 | 0 | 11 | 1 | 176 | 0 | 2 | 0 | 179 | 1 | 0 | 0 | 2 | 2 | 5 | 1 | 7 | 174 | 2 | 0 | 184 | 381 |
| 17:30 | 3 | 0 | 0 | 0 | 2 | 5 | 0 | 0 | 7 | 0 | 1 | 8 | 0 | 131 | 0 | 2 | 0 | 133 | 1 | 0 | 0 | 3 | 2 | 6 | 0 | 2 | 165 | 0 | 0 | 167 | 319 |
| 17:45 | 2 | 0 | 0 | 1 | 1 | 4 | 0 | 0 | 13 | 0 | 0 | 13 | 0 | 119 | 0 | 0 | 0 | 119 | 3 | 0 | 0 | 4 | 0 | 7 | 1 | 11 | 143 | 1 | 0 | 156 | 299 |
| Total | 6 | 0 | 0 | 4 | 8 | 18 | 1 | 0 | 38 | 2 | 1 | 42 | 1 | 668 | 1 | 5 | 1 | 676 | 5 | 0 | 0 | 12 | 7 | 24 | 2 | 28 | 670 | 5 | 0 | 705 | 1465 |
| Grand Total | 12 | 2 | 1 | 12 | 14 | 41 | 1 | 2 | 70 | 4 | 4 | 81 | 3 | 1463 | 1 | 12 | 2 | 1481 | 11 | 2 | 1 | 30 | 20 | 64 | 3 | 51 | 1401 | 22 | 2 | 1479 | 3146 |
| Apprch % | 29.3 | 4.9 | 2.4 | 29.3 | 34.1 | | 1.2 | 2.5 | 86.4 | 4.9 | 4.9 | | 0.2 | 98.8 | 0.1 | 0.8 | 0.1 | | 17.2 | 3.1 | 1.6 | 46.9 | 31.2 | | 0.2 | 3.4 | 94.7 | 1.5 | 0.1 | | |
| Total % | 0.4 | 0.1 | 0 | 0.4 | 0.4 | 1.3 | 0 | 0.1 | 2.2 | 0.1 | 0.1 | 2.6 | 0.1 | 46.5 | 0 | 0.4 | 0.1 | 47.1 | 0.3 | 0.1 | 0 | 1 | 0.6 | 2 | 0.1 | 1.6 | 44.5 | 0.7 | 0.1 | 47 | |
| Cars | 12 | 2 | 1 | 12 | 14 | 41 | 1 | 2 | 66 | 3 | 3 | 75 | 3 | 1430 | 1 | 12 | 1 | 1447 | 11 | 2 | 1 | 30 | 20 | 64 | 3 | 48 | 1369 | 22 | 0 | 1442 | 3069 |
| % Cars | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 94.3 | 75 | 75 | 92.6 | 100 | 97.7 | 100 | 100 | 50 | 97.7 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 94.1 | 97.7 | 100 | 0 | 97.5 | 97.6 |
| Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 5 | 0 | 33 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 32 | 0 | 0 | 35 | 73 |
| % Trucks | | | | | | | | | 5.7 | | | | | 2.3 | | | | | | | | | | | | 5.9 | 2.3 | | | | |
| Bicycle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 |
| % Bicycle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 1.2 | 0 | 0 | 0 | 0 | 50 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 0.1 | 0.1 |



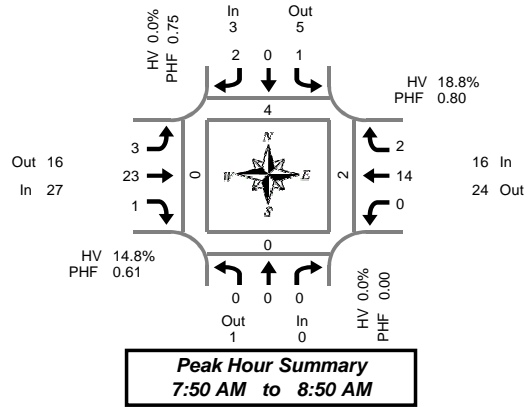
| Start Time | 7TH ST Southbound | | | | | | ASTOR ST Westbound | | | | | | MARINE DR Northwestbound | | | | | | 7TH ST Northbound | | | | | | MARINE DR Eastbound | | | | | | Int. Total | |
|--|-------------------|-----------|------|-------|------|------------|--------------------|------|------|-------|------|------------|--------------------------|-----------|------------|------------|------|------------|-------------------|------|-------|------------|------|------------|---------------------|------|------------|-------|------|------------|------------|--|
| | Left | Bear Left | Thru | Right | Peds | App. Total | Hard Left | Left | Thru | Right | Peds | App. Total | Hard Left | Bear Left | Bear Right | Hard Right | Peds | App. Total | Left | Thru | Right | Hard Right | Peds | App. Total | Left | Thru | Bear Right | Right | Peds | App. Total | | |
| Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 4:15:00 PM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4:15:00 PM | 1 | 1 | 0 | 0 | 1 | 3 | 0 | 0 | 8 | 0 | 0 | 8 | 0 | 187 | 0 | 3 | 0 | 190 | 3 | 2 | 0 | 3 | 1 | 9 | 1 | 8 | 165 | 4 | 1 | 179 | 389 | |
| 4:30:00 PM | 3 | 0 | 0 | 2 | 3 | 8 | 0 | 1 | 12 | 0 | 1 | 14 | 1 | 214 | 0 | 3 | 1 | 219 | 2 | 0 | 0 | 6 | 5 | 13 | 0 | 6 | 186 | 3 | 0 | 195 | 449 | |
| 4:45:00 PM | 1 | 0 | 1 | 2 | 0 | 4 | 0 | 1 | 6 | 2 | 0 | 9 | 0 | 184 | 0 | 0 | 0 | 184 | 1 | 0 | 1 | 5 | 3 | 10 | 0 | 3 | 190 | 4 | 1 | 198 | 405 | |
| 5:00:00 PM | 1 | 0 | 0 | 1 | 5 | 7 | 0 | 0 | 9 | 1 | 0 | 10 | 0 | 242 | 1 | 1 | 1 | 245 | 0 | 0 | 0 | 3 | 3 | 6 | 0 | 8 | 188 | 2 | 0 | 198 | 466 | |
| Total Volume | 6 | 1 | 1 | 5 | 9 | 22 | 0 | 2 | 35 | 3 | 1 | 41 | 1 | 827 | 1 | 7 | 2 | 838 | 6 | 2 | 1 | 17 | 12 | 38 | 1 | 25 | 729 | 13 | 2 | 770 | 1709 | |
| % App. Total | 27.3 | 4.5 | 4.5 | 22.7 | 40.9 | | 0 | 4.9 | 85.4 | 7.3 | 2.4 | | 0.1 | 98.7 | 0.1 | 0.8 | 0.2 | | 15.8 | 5.3 | 2.6 | 44.7 | 31.6 | | 0.1 | 3.2 | 94.7 | 1.7 | 0.3 | | | |
| PHF | .500 | .250 | .250 | .625 | .450 | .688 | .000 | .500 | .729 | .375 | .250 | .732 | .250 | .854 | .250 | .583 | .500 | .855 | .500 | .250 | .250 | .708 | .600 | .731 | .250 | .781 | .959 | .813 | .500 | .972 | .917 | |
| Cars | 6 | 1 | 1 | 5 | 9 | 22 | 0 | 2 | 34 | 2 | 0 | 38 | 1 | 807 | | | | | | | | | | | | | | | | 712 | 1664 | |
| % Cars | 100 | 100 | 100 | 100 | 100 | 100 | 0 | 100 | 97.1 | 66.7 | 0 | 92.7 | 100 | 97.6 | 100 | 100 | 50.0 | 97.5 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 92.0 | 97.7 | 100 | 0 | 97.3 | 97.4 | |
| Trucks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 20 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 19 | 41 | |
| % Trucks | | | | | | | | | 2.9 | 33.3 | | | | 2.4 | | | | | | | | | | | | 8.0 | 2.3 | | | | | |
| Bicycle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | |
| % Bicycle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 2.4 | 0 | 0 | 0 | 0 | 50.0 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 0.3 | 0.2 | |



Total Vehicle Summary



Clay Carney
(503) 833-2740



8th St & Astor St

Thursday, November 01, 2018
7:00 AM to 9:00 AM

**5-Minute Interval Summary
7:00 AM to 9:00 AM**

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | Pedestrians Crosswalk | | | | |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|--------------------|----|---|-------|--------------------|----|---|-------|----------------|-----------------------|-------|------|------|---|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| 7:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| 7:10 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| 7:20 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 7:25 AM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 |
| 7:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 |
| 7:40 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 4 | 1 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 |
| 7:50 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 7 | 2 | 0 | 0 | 0 |
| 7:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 5 | 0 | 0 | 1 | 0 |
| 8:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 |
| 8:10 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 |
| 8:20 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 |
| 8:25 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 0 |
| 8:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 |
| 8:40 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 |
| 8:50 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 0 |
| 8:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 |
| Total Survey | 0 | 0 | 1 | 0 | 1 | 0 | 3 | 0 | 4 | 42 | 2 | 0 | 0 | 20 | 2 | 1 | 0 | 75 | 7 | 0 | 2 | 0 |

**15-Minute Interval Summary
7:00 AM to 9:00 AM**

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | Pedestrians Crosswalk | | | | |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|--------------------|----|---|-------|--------------------|----|---|-------|----------------|-----------------------|-------|------|------|---|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 0 | 1 | 0 | 5 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 8 | 1 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 11 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 16 | 2 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 4 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 9 | 0 | 0 | 1 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 7 | 0 | 0 | 1 | 0 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 9 | 2 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 9 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 15 | 2 | 0 | 0 | 0 |
| Total Survey | 0 | 0 | 1 | 0 | 1 | 0 | 3 | 0 | 4 | 42 | 2 | 0 | 0 | 20 | 2 | 1 | 0 | 75 | 7 | 0 | 2 | 0 |

**Peak Hour Summary
7:50 AM to 8:50 AM**

| By Approach | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Total | Pedestrians Crosswalk | | | |
|-------------|-------------------|-----|-------|-------|-------------------|-----|-------|-------|--------------------|-----|-------|-------|--------------------|-----|-------|-------|-------|-----------------------|-------|------|------|
| | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | | North | South | East | West |
| Volume | 0 | 1 | 1 | 0 | 3 | 5 | 8 | 0 | 27 | 16 | 43 | 0 | 16 | 24 | 40 | 0 | 46 | 4 | 0 | 2 | 0 |
| %HV | 0.0% | | | | 0.0% | | | | 14.8% | | | | 18.8% | | | | 15.2% | | | | |
| PHF | 0.00 | | | | 0.75 | | | | 0.61 | | | | 0.80 | | | | 0.68 | | | | |

| By Movement | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Total |
|-------------|-------------------|------|------|-------|-------------------|------|------|-------|--------------------|-------|------|-------|--------------------|-------|-------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 3 | 3 | 23 | 1 | 27 | 0 | 14 | 2 | 16 | 46 |
| %HV | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 17.4% | 0.0% | 14.8% | 0.0% | 14.3% | 50.0% | 18.8% | 15.2% |
| PHF | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 | 0.00 | 0.50 | 0.75 | 0.38 | 0.64 | 0.25 | 0.61 | 0.00 | 0.70 | 0.50 | 0.80 | 0.68 |

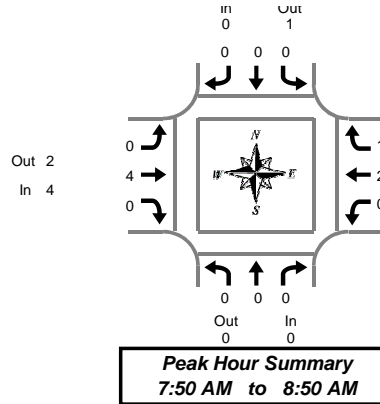
**Rolling Hour Summary
7:00 AM to 9:00 AM**

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|--------------------|----|---|-------|--------------------|----|---|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 7:00 AM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 21 | 1 | 0 | 0 | 8 | 1 | 1 | 35 | 3 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 4 | 21 | 1 | 0 | 0 | 9 | 1 | 1 | 38 | 3 | 0 | 1 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 4 | 23 | 0 | 0 | 0 | 9 | 2 | 0 | 40 | 3 | 0 | 2 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 3 | 23 | 1 | 0 | 0 | 10 | 2 | 0 | 41 | 4 | 0 | 2 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 1 | 21 | 1 | 0 | 0 | 12 | 1 | 0 | 40 | 4 | 0 | 2 | 0 |

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



8th St & Astor St

Thursday, November 01, 2018
7:00 AM to 9:00 AM

Heavy Vehicle 5-Minute Interval Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|---|-------|----------------|----|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:10 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:20 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 |
| 7:25 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:40 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:50 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 |
| 8:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:10 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:20 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:25 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 |
| 8:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:40 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:50 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 0 | 4 | 1 | 5 | 10 | 10 |

Heavy Vehicle 15-Minute Interval Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|---|-------|----------------|----|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 | 2 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 0 | 4 | 1 | 5 | 10 | 10 |

Heavy Vehicle Peak Hour Summary 7:50 AM to 8:50 AM

| By Approach | Northbound 8th St | | | Southbound 8th St | | | Eastbound Astor St | | | Westbound Astor St | | | Total |
|-------------|-------------------|-----|-------|-------------------|-----|-------|--------------------|-----|-------|--------------------|-----|-------|-------|
| | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | |
| Volume | 0 | 0 | 0 | 0 | 1 | 1 | 4 | 2 | 6 | 3 | 4 | 7 | 7 |
| PHF | 0.00 | | | 0.00 | | | 0.50 | | | 0.38 | | | 0.58 |

| By Movement | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Total |
|-------------|-------------------|------|------|-------|-------------------|------|------|-------|--------------------|------|------|-------|--------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 2 | 1 | 3 | 7 |
| PHF | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.50 | 0.00 | 0.50 | 0.00 | 0.50 | 0.25 | 0.38 | 0.58 |

Heavy Vehicle Rolling Hour Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|---|-------|----------------|---|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 2 | 0 | 2 | 5 | 5 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 3 | 0 | 3 | 5 | 5 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 1 | 1 | 2 | 4 | 4 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 1 | 3 | 5 | 5 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 1 | 3 | 5 | 5 |

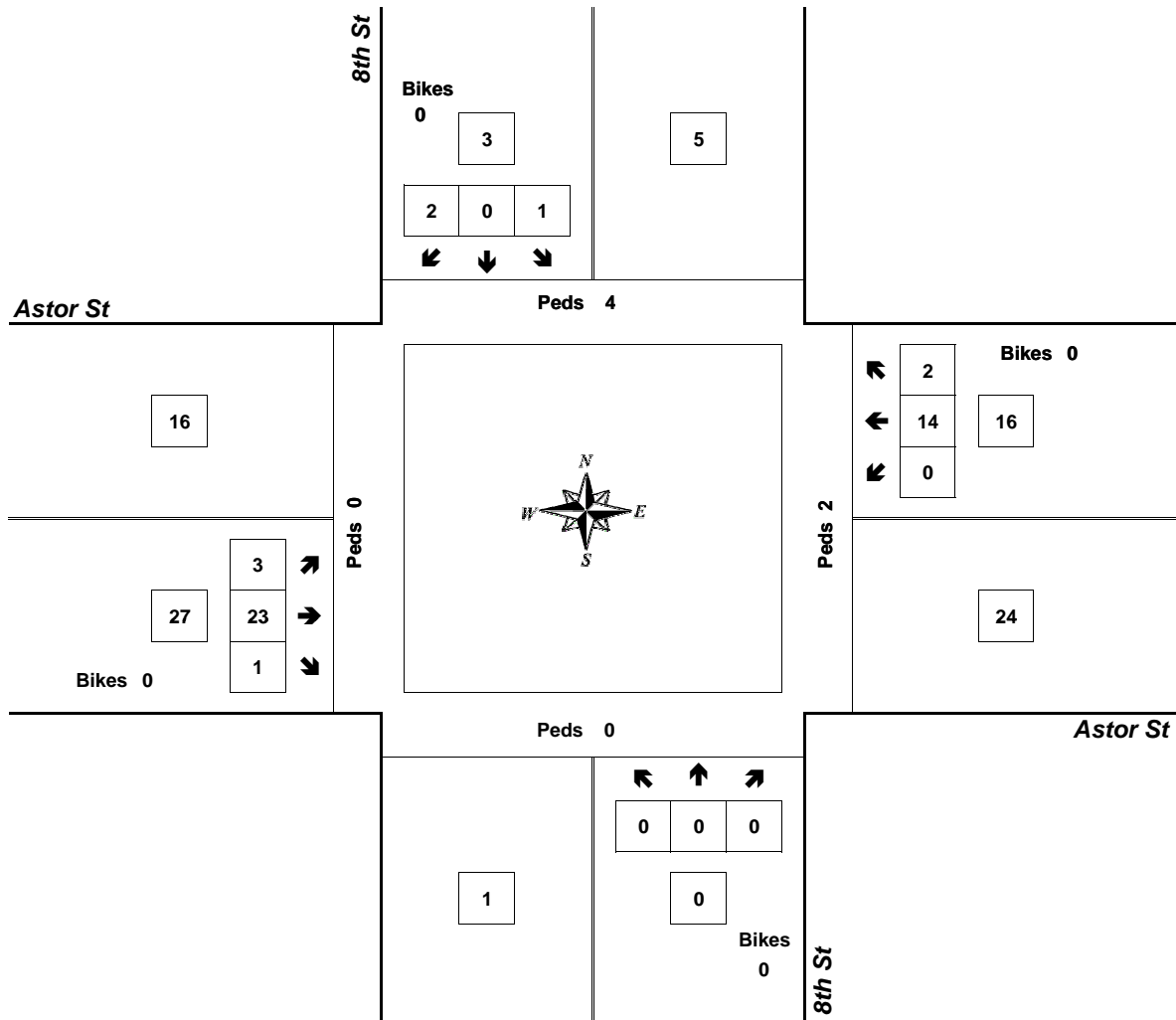
Peak Hour Summary



Clay Carney
(503) 833-2740

8th St & Astor St

7:50 AM to 8:50 AM
Thursday, November 01, 2018



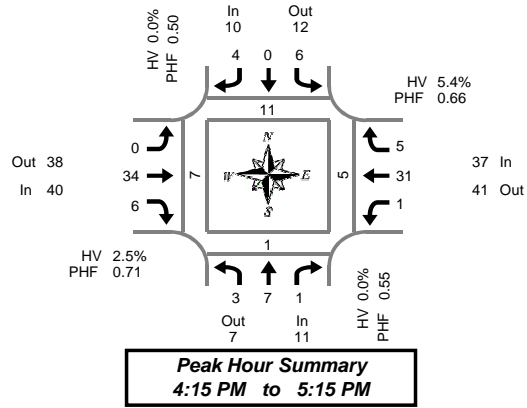
| Approach | PHF | HV% | Volume |
|---------------------|-------------|--------------|-----------|
| EB | 0.61 | 14.8% | 27 |
| WB | 0.80 | 18.8% | 16 |
| NB | 0.00 | 0.0% | 0 |
| SB | 0.75 | 0.0% | 3 |
| Intersection | 0.68 | 15.2% | 46 |

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary



Clay Carney
(503) 833-2740



8th St & Astor St

Thursday, November 01, 2018
4:00 PM to 6:00 PM

5-Minute Interval Summary 4:00 PM to 6:00 PM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | Pedestrians Crosswalk | | | | |
|---------------------|-------------------|---|---|-------|-------------------|---|----|-------|--------------------|----|---|-------|--------------------|----|---|-------|----------------|-----------------------|-------|------|------|----|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West | |
| 4:00 PM | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 12 | 2 | 0 | 0 | 0 |
| 4:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 |
| 4:10 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 5 | 2 | 1 | 0 | 0 |
| 4:15 PM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 1 | 0 | 0 | 0 |
| 4:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 4 | 1 | 0 | 0 | 0 |
| 4:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 5 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 4 | 0 | 0 | 0 | 8 | 2 | 0 | 1 | 2 |
| 4:35 PM | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 8 | 1 | 1 | 0 | 0 |
| 4:40 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 8 | 1 | 0 | 0 | 0 |
| 4:45 PM | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 4 | 0 | 0 | 0 | 13 | 1 | 0 | 0 | 3 |
| 4:50 PM | 0 | 2 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 1 |
| 4:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 |
| 5:00 PM | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 14 | 3 | 0 | 1 | 1 |
| 5:05 PM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 1 | 0 | 3 | 0 |
| 5:10 PM | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 4 | 1 | 0 | 0 | 2 | 0 | 1 | 0 | 9 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 0 | 0 | 0 | 0 |
| 5:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 |
| 5:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 1 |
| 5:30 PM | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 11 | 3 | 0 | 0 | 0 |
| 5:35 PM | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 6 | 2 | 0 | 0 | 1 |
| 5:40 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 6 | 2 | 3 | 1 | 1 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 7 | 1 | 0 | 0 | 1 |
| 5:50 PM | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 10 | 0 | 0 | 1 | 0 |
| 5:55 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 4 | 2 | 2 | 0 | 2 |
| Total Survey | 5 | 9 | 5 | 0 | 10 | 0 | 10 | 0 | 6 | 62 | 8 | 2 | 1 | 52 | 6 | 2 | 0 | 174 | 27 | 7 | 8 | 13 |

15-Minute Interval Summary 4:00 PM to 6:00 PM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | Pedestrians Crosswalk | | | | |
|---------------------|-------------------|---|---|-------|-------------------|---|----|-------|--------------------|----|---|-------|--------------------|----|---|-------|----------------|-----------------------|-------|------|------|----|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West | |
| 4:00 PM | 1 | 1 | 1 | 0 | 2 | 0 | 1 | 0 | 1 | 8 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 23 | 4 | 1 | 0 | 0 |
| 4:15 PM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 5 | 3 | 0 | 0 | 15 | 2 | 0 | 0 | 0 |
| 4:30 PM | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 11 | 2 | 0 | 1 | 7 | 0 | 0 | 0 | 24 | 4 | 1 | 1 | 2 |
| 4:45 PM | 0 | 3 | 1 | 0 | 3 | 0 | 2 | 0 | 0 | 10 | 1 | 0 | 0 | 12 | 0 | 0 | 0 | 32 | 1 | 0 | 0 | 4 |
| 5:00 PM | 2 | 3 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 9 | 2 | 0 | 0 | 7 | 2 | 1 | 0 | 27 | 4 | 0 | 4 | 1 |
| 5:15 PM | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 5 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 9 | 2 | 0 | 1 | 1 |
| 5:30 PM | 0 | 0 | 2 | 0 | 0 | 0 | 3 | 0 | 1 | 8 | 0 | 0 | 0 | 8 | 1 | 0 | 0 | 23 | 7 | 3 | 1 | 2 |
| 5:45 PM | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 4 | 7 | 1 | 1 | 0 | 5 | 0 | 0 | 0 | 21 | 3 | 2 | 1 | 3 |
| Total Survey | 5 | 9 | 5 | 0 | 10 | 0 | 10 | 0 | 6 | 62 | 8 | 2 | 1 | 52 | 6 | 2 | 0 | 174 | 27 | 7 | 8 | 13 |

Peak Hour Summary 4:15 PM to 5:15 PM

| By Approach | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Total | Pedestrians Crosswalk | | | |
|-------------|-------------------|-----|-------|-------|-------------------|-----|-------|-------|--------------------|-----|-------|-------|--------------------|-----|-------|-------|-------|-----------------------|-------|------|------|
| | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | | North | South | East | West |
| Volume | 11 | 7 | 18 | 0 | 10 | 12 | 22 | 0 | 40 | 38 | 78 | 0 | 37 | 41 | 78 | 1 | 98 | 11 | 1 | 5 | 7 |
| %HV | 0.0% | | | | 0.0% | | | | 2.5% | | | | 5.4% | | | | 3.1% | | | | |
| PHF | 0.55 | | | | 0.50 | | | | 0.71 | | | | 0.66 | | | | 0.74 | | | | |

| By Movement | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Total |
|-------------|-------------------|------|------|-------|-------------------|------|------|-------|--------------------|------|------|-------|--------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 3 | 7 | 1 | 11 | 6 | 0 | 4 | 10 | 0 | 34 | 6 | 40 | 1 | 31 | 5 | 37 | 98 |
| %HV | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 2.9% | 0.0% | 2.5% | 0.0% | 6.5% | 0.0% | 5.4% | 3.1% |
| PHF | 0.38 | 0.44 | 0.25 | 0.55 | 0.50 | 0.00 | 0.50 | 0.50 | 0.00 | 0.65 | 0.75 | 0.71 | 0.25 | 0.65 | 0.42 | 0.66 | 0.74 |

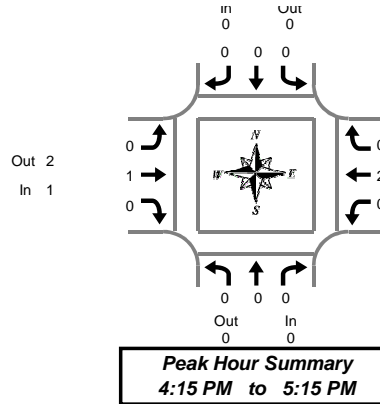
Rolling Hour Summary 4:00 PM to 6:00 PM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | Pedestrians Crosswalk | | | | |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|--------------------|----|---|-------|--------------------|----|---|-------|----------------|-----------------------|-------|------|------|---|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West | |
| 4:00 PM | 2 | 5 | 2 | 0 | 7 | 0 | 4 | 0 | 1 | 33 | 4 | 0 | 1 | 32 | 3 | 0 | 0 | 94 | 11 | 2 | 1 | 6 |
| 4:15 PM | 3 | 7 | 1 | 0 | 6 | 0 | 4 | 0 | 0 | 34 | 6 | 0 | 1 | 31 | 5 | 1 | 0 | 98 | 11 | 1 | 5 | 7 |
| 4:30 PM | 3 | 6 | 2 | 0 | 5 | 0 | 6 | 0 | 0 | 35 | 6 | 1 | 1 | 26 | 2 | 2 | 0 | 92 | 11 | 1 | 6 | 8 |
| 4:45 PM | 2 | 6 | 4 | 0 | 4 | 0 | 8 | 0 | 1 | 32 | 4 | 1 | 0 | 27 | 3 | 2 | 0 | 91 | 14 | 3 | 6 | 8 |
| 5:00 PM | 3 | 4 | 3 | 0 | 3 | 0 | 6 | 0 | 5 | 29 | 4 | 2 | 0 | 20 | 3 | 2 | 0 | 80 | 16 | 5 | 7 | 7 |

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



8th St & Astor St

Thursday, November 01, 2018

4:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary 4:00 PM to 6:00 PM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|---|-------|----------------|---|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:10 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:35 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:40 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 2 |
| 4:50 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 |
| 5:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:10 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:35 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 |
| 5:40 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:50 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 4 | 0 | 4 | 0 | 6 |

Heavy Vehicle 15-Minute Interval Summary 4:00 PM to 6:00 PM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|---|-------|----------------|---|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 2 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 4 | 0 | 4 | 0 | 6 |

Heavy Vehicle Peak Hour Summary 4:15 PM to 5:15 PM

| By Approach | Northbound 8th St | | | Southbound 8th St | | | Eastbound Astor St | | | Westbound Astor St | | | Total |
|-------------|-------------------|-----|-------|-------------------|-----|-------|--------------------|-----|-------|--------------------|-----|-------|-------|
| | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | |
| Volume | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 2 | 1 | 3 | 3 |
| PHF | 0.00 | | | 0.00 | | | 0.25 | | | 0.50 | | | 0.38 |

| By Movement | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Total |
|-------------|-------------------|------|------|-------|-------------------|------|------|-------|--------------------|------|------|-------|--------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 2 | 3 |
| PHF | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 | 0.00 | 0.25 | 0.00 | 0.50 | 0.00 | 0.50 | 0.38 |

Heavy Vehicle Rolling Hour Summary 4:00 PM to 6:00 PM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|---|-------|----------------|---|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 2 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 2 | 0 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 2 | 0 | 3 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 4 | 0 | 4 | 0 | 5 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 3 | 0 | 3 | 0 | 4 |

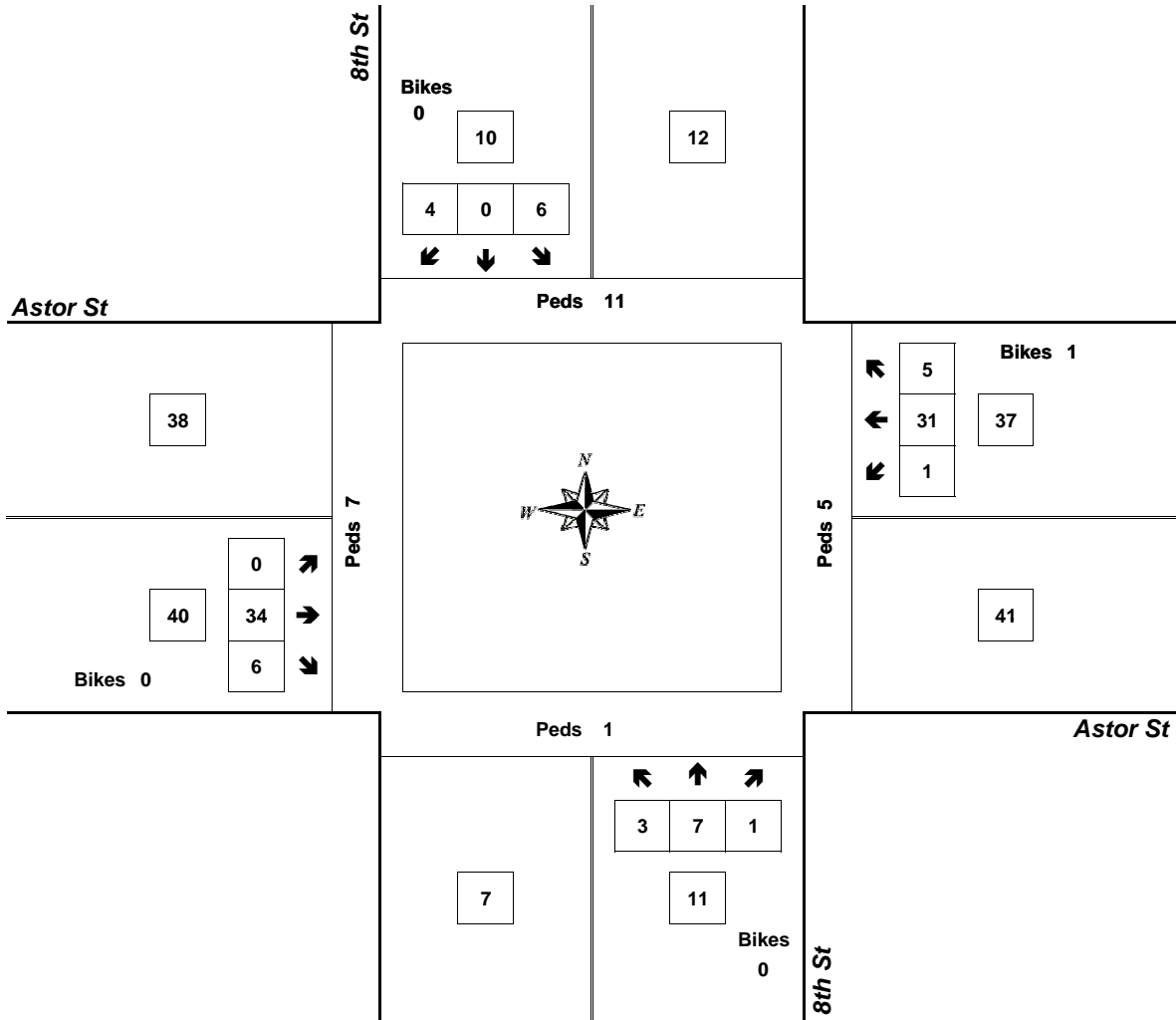
Peak Hour Summary



Clay Carney
(503) 833-2740

8th St & Astor St

4:15 PM to 5:15 PM
Thursday, November 01, 2018



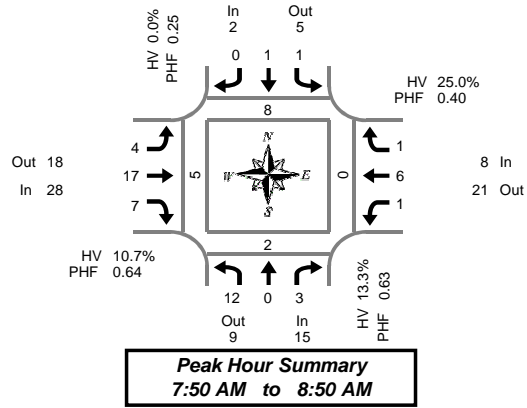
| Approach | PHF | HV% | Volume |
|---------------------|-------------|-------------|-----------|
| EB | 0.71 | 2.5% | 40 |
| WB | 0.66 | 5.4% | 37 |
| NB | 0.55 | 0.0% | 11 |
| SB | 0.50 | 0.0% | 10 |
| Intersection | 0.74 | 3.1% | 98 |

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary



Clay Carney
(503) 833-2740



9th St & Astor St

Thursday, November 01, 2018
7:00 AM to 9:00 AM

5-Minute Interval Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|--------------------|----|---|-------|--------------------|----|---|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:10 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 7:20 AM | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:25 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:35 AM | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 |
| 7:40 AM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 1 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 2 |
| 7:50 AM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 3 | 1 | 0 |
| 7:55 AM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| 8:00 AM | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:05 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| 8:10 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:15 AM | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 8:20 AM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:25 AM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 8:30 AM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:35 AM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 8:40 AM | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:50 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 8:55 AM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Survey | 14 | 2 | 6 | 1 | 1 | 1 | 1 | 0 | 6 | 24 | 9 | 0 | 6 | 10 | 1 | 0 | 81 | 16 | 10 | 2 | 6 |

15-Minute Interval Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|--------------------|----|---|-------|--------------------|----|---|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 2 | 0 | 0 | 6 | 0 | 0 | 0 | 0 |
| 7:15 AM | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 7 | 1 | 1 | 0 | 0 |
| 7:30 AM | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 6 | 3 | 5 | 0 | 0 |
| 7:45 AM | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 6 | 1 | 0 | 1 | 3 | 0 | 0 | 16 | 6 | 3 | 2 | 1 |
| 8:00 AM | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 2 | 0 | 0 | 10 | 1 | 0 | 0 | 1 |
| 8:15 AM | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 1 | 0 | 10 | 2 | 0 | 0 | 1 |
| 8:30 AM | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 10 | 2 | 0 | 0 | 2 |
| 8:45 AM | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 3 | 0 | 1 | 1 | 0 | 0 | 16 | 1 | 1 | 0 | 1 |
| Total Survey | 14 | 2 | 6 | 1 | 1 | 1 | 1 | 0 | 6 | 24 | 9 | 0 | 6 | 10 | 1 | 0 | 81 | 16 | 10 | 2 | 6 |

Peak Hour Summary 7:50 AM to 8:50 AM

| By Approach | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Total | Pedestrians Crosswalk | | | |
|-------------|-------------------|-----|-------|-------|-------------------|-----|-------|-------|--------------------|-----|-------|-------|--------------------|-----|-------|-------|-------|-----------------------|-------|------|------|
| | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | | North | South | East | West |
| Volume | 15 | 9 | 24 | 0 | 2 | 5 | 7 | 0 | 28 | 18 | 46 | 0 | 8 | 21 | 29 | 0 | 53 | 8 | 2 | 0 | 5 |
| %HV | 13.3% | | | | 0.0% | | | | 10.7% | | | | 25.0% | | | | 13.2% | | | | |
| PHF | 0.63 | | | | 0.25 | | | | 0.64 | | | | 0.40 | | | | 0.63 | | | | |

| By Movement | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Total |
|-------------|-------------------|------|------|-------|-------------------|------|------|-------|--------------------|------|-------|-------|--------------------|-------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 12 | 0 | 3 | 15 | 1 | 1 | 0 | 2 | 4 | 17 | 7 | 28 | 1 | 6 | 1 | 8 | 53 |
| %HV | 16.7% | 0.0% | 0.0% | 13.3% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 5.9% | 28.6% | 10.7% | ##### | 16.7% | 0.0% | 25.0% | 13.2% |
| PHF | 0.75 | 0.00 | 0.38 | 0.63 | 0.25 | 0.25 | 0.00 | 0.25 | 0.25 | 0.61 | 0.58 | 0.64 | 0.25 | 0.38 | 0.25 | 0.40 | 0.63 |

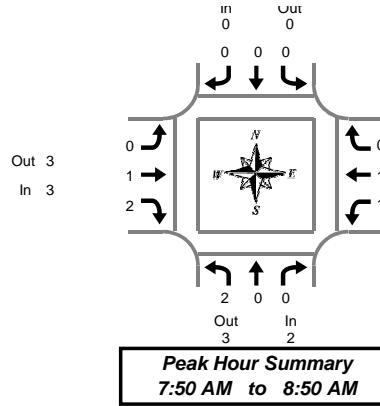
Rolling Hour Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|--------------------|----|---|-------|--------------------|---|---|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 7:00 AM | 4 | 1 | 2 | 1 | 0 | 0 | 1 | 0 | 5 | 8 | 2 | 0 | 5 | 7 | 0 | 0 | 35 | 10 | 9 | 2 | 1 |
| 7:15 AM | 6 | 1 | 3 | 1 | 0 | 1 | 1 | 0 | 5 | 10 | 1 | 0 | 4 | 7 | 0 | 0 | 39 | 11 | 9 | 2 | 2 |
| 7:30 AM | 8 | 1 | 2 | 0 | 1 | 1 | 0 | 0 | 5 | 12 | 3 | 0 | 1 | 7 | 1 | 0 | 42 | 12 | 8 | 2 | 3 |
| 7:45 AM | 9 | 0 | 3 | 0 | 1 | 1 | 0 | 0 | 4 | 16 | 5 | 0 | 1 | 5 | 1 | 0 | 46 | 11 | 3 | 2 | 5 |
| 8:00 AM | 10 | 1 | 4 | 0 | 1 | 1 | 0 | 0 | 1 | 16 | 7 | 0 | 1 | 3 | 1 | 0 | 46 | 6 | 1 | 0 | 5 |

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



9th St & Astor St

Thursday, November 01, 2018

7:00 AM to 9:00 AM

Heavy Vehicle 5-Minute Interval Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| 7:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 7:10 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:20 AM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:25 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:40 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:50 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 2 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 8:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:10 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:20 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:25 AM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:30 AM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:40 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 2 |
| 8:50 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |
| Total Survey | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 4 | 3 | 1 | 0 | 4 | 11 |

Heavy Vehicle 15-Minute Interval Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 2 |
| 7:15 AM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 2 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 8:15 AM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:30 AM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 1 | 3 |
| Total Survey | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 4 | 3 | 1 | 0 | 4 | 11 |

Heavy Vehicle Peak Hour Summary 7:50 AM to 8:50 AM

| By Approach | Northbound 9th St | | | Southbound 9th St | | | Eastbound Astor St | | | Westbound Astor St | | | Total |
|-------------|-------------------|-----|-------|-------------------|-----|-------|--------------------|-----|-------|--------------------|-----|-------|-------|
| | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | |
| Volume | 2 | 3 | 5 | 0 | 0 | 0 | 3 | 3 | 6 | 2 | 1 | 3 | 7 |
| PHF | 0.25 | | | 0.00 | | | 0.38 | | | 0.25 | | | 0.58 |

| By Movement | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Total |
|-------------|-------------------|------|------|-------|-------------------|------|------|-------|--------------------|------|------|-------|--------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 1 | 1 | 0 | 2 | 7 |
| PHF | 0.25 | 0.00 | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 | 0.50 | 0.38 | 0.25 | 0.25 | 0.00 | 0.25 | 0.58 |

Heavy Vehicle Rolling Hour Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 7:00 AM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 0 | 0 | 2 | 5 |
| 7:15 AM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 2 | 4 |
| 7:30 AM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 2 | 4 |
| 7:45 AM | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 2 | 5 |
| 8:00 AM | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 1 | 0 | 2 | 6 |

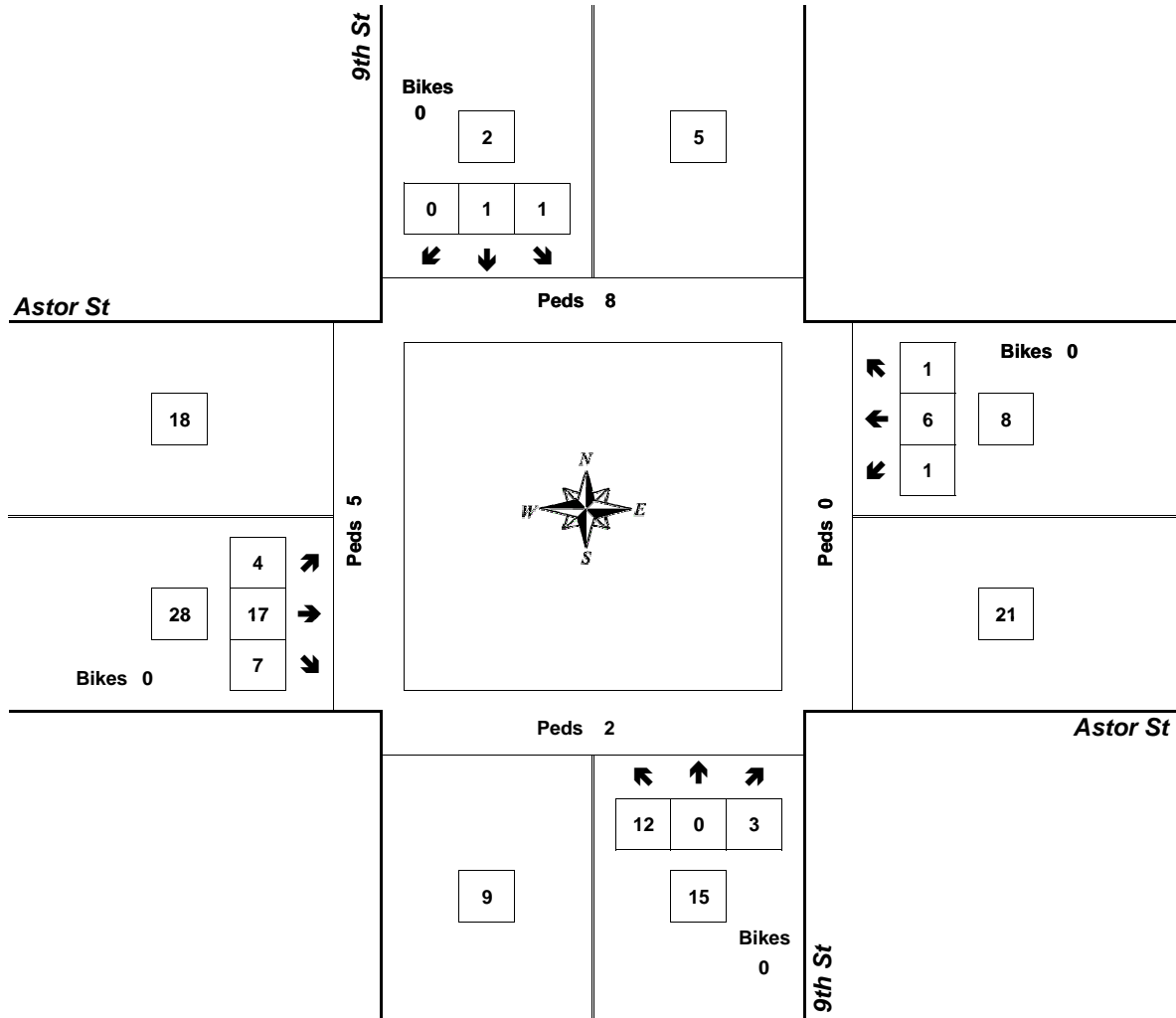
Peak Hour Summary



Clay Carney
(503) 833-2740

9th St & Astor St

7:50 AM to 8:50 AM
Thursday, November 01, 2018



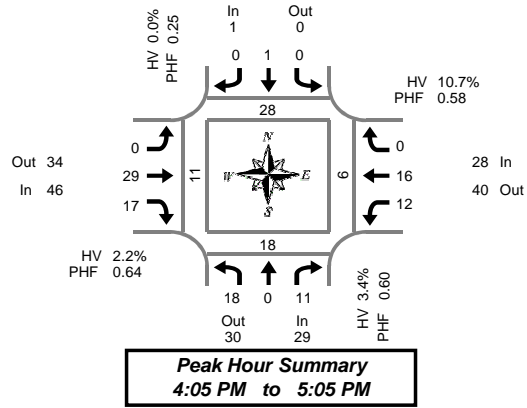
| Approach | PHF | HV% | Volume |
|---------------------|-------------|--------------|-----------|
| EB | 0.64 | 10.7% | 28 |
| WB | 0.40 | 25.0% | 8 |
| NB | 0.63 | 13.3% | 15 |
| SB | 0.25 | 0.0% | 2 |
| Intersection | 0.63 | 13.2% | 53 |

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary



Clay Carney
(503) 833-2740



9th St & Astor St

Thursday, November 01, 2018

4:00 PM to 6:00 PM

5-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | Pedestrians Crosswalk | | | | | |
|---------------------|-------------------|---|----|-------|-------------------|---|---|-------|--------------------|----|----|-------|--------------------|----|----|-------|----------------|-----------------------|-------|------|------|----|----|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West | | |
| 4:00 PM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 7 | 1 | 0 | 0 | 0 |
| 4:05 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 |
| 4:10 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 7 | 2 | 1 | 0 | 2 |
| 4:15 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 |
| 4:20 PM | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 6 | 2 | 0 | 2 | 1 |
| 4:25 PM | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 |
| 4:30 PM | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 10 | 3 | 3 | 0 | 1 |
| 4:35 PM | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 4 | 1 | 2 | 2 |
| 4:40 PM | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 10 | 8 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 8 | 6 | 2 | 0 | 2 |
| 4:50 PM | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 13 | 0 | 2 | 0 | 0 |
| 4:55 PM | 3 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 12 | 0 | 5 | 1 | 2 |
| 5:00 PM | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 12 | 3 | 4 | 1 | 1 |
| 5:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| 5:10 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 6 | 3 | 0 | 0 | 1 |
| 5:15 PM | 1 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 9 | 1 | 3 | 0 | 1 |
| 5:20 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 3 | 2 | 3 | 1 |
| 5:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 6 | 2 | 1 | 0 |
| 5:30 PM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 10 | 3 | 1 | 1 | 0 |
| 5:35 PM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 5 | 3 | 1 | 0 | 0 |
| 5:40 PM | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 8 | 1 | 2 | 0 | 2 |
| 5:45 PM | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 7 | 1 | 0 | 1 | 0 |
| 5:50 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 5 | 10 | 1 | 2 | 0 |
| 5:55 PM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 6 | 0 | 1 | 0 | 0 |
| Total Survey | 27 | 0 | 15 | 2 | 1 | 1 | 0 | 0 | 0 | 53 | 28 | 3 | 0 | 20 | 29 | 0 | 1 | 0 | 174 | 60 | 31 | 14 | 16 |

15-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | Pedestrians Crosswalk | | | | | |
|---------------------|-------------------|---|----|-------|-------------------|---|---|-------|--------------------|----|----|-------|--------------------|----|----|-------|----------------|-----------------------|-------|------|------|----|----|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West | | |
| 4:00 PM | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 2 | 0 | 0 | 3 | 6 | 0 | 0 | 0 | 21 | 3 | 1 | 0 | 2 |
| 4:15 PM | 5 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 1 | 0 | 1 | 2 | 0 | 0 | 0 | 16 | 2 | 0 | 2 | 1 |
| 4:30 PM | 6 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 5 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 29 | 15 | 4 | 2 | 3 |
| 4:45 PM | 5 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 10 | 5 | 0 | 0 | 4 | 6 | 0 | 0 | 0 | 33 | 6 | 9 | 1 | 4 |
| 5:00 PM | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 6 | 0 | 0 | 2 | 4 | 0 | 1 | 0 | 20 | 6 | 4 | 1 | 2 |
| 5:15 PM | 1 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 14 | 10 | 7 | 4 | 2 |
| 5:30 PM | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 9 | 2 | 0 | 0 | 2 | 6 | 0 | 0 | 0 | 23 | 7 | 4 | 1 | 2 |
| 5:45 PM | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 3 | 1 | 0 | 4 | 2 | 0 | 0 | 0 | 18 | 11 | 2 | 3 | 0 |
| Total Survey | 27 | 0 | 15 | 2 | 1 | 1 | 0 | 0 | 0 | 53 | 28 | 3 | 0 | 20 | 29 | 0 | 1 | 0 | 174 | 60 | 31 | 14 | 16 |

Peak Hour Summary

4:05 PM to 5:05 PM

| By Approach | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Total | Pedestrians Crosswalk | | | |
|-------------|-------------------|-----|-------|-------|-------------------|-----|-------|-------|--------------------|-----|-------|-------|--------------------|-----|-------|-------|-------|-----------------------|-------|------|------|
| | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | | North | South | East | West |
| Volume | 29 | 30 | 59 | 0 | 1 | 0 | 1 | 0 | 46 | 34 | 80 | 1 | 28 | 40 | 68 | 0 | 104 | 28 | 18 | 6 | 11 |
| %HV | 3.4% | | | | 0.0% | | | | 2.2% | | | | 10.7% | | | | 4.8% | | | | |
| PHF | 0.60 | | | | 0.25 | | | | 0.64 | | | | 0.58 | | | | 0.70 | | | | |

| By Movement | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Total |
|-------------|-------------------|------|------|-------|-------------------|------|------|-------|--------------------|------|------|-------|--------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 18 | 0 | 11 | 29 | 0 | 1 | 0 | 1 | 0 | 29 | 17 | 46 | 12 | 16 | 0 | 28 | 104 |
| %HV | 5.6% | 0.0% | 0.0% | 3.4% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 5.9% | 2.2% | 16.7% | 6.3% | 0.0% | 10.7% | 4.8% |
| PHF | 0.64 | 0.00 | 0.55 | 0.60 | 0.00 | 0.25 | 0.00 | 0.25 | 0.00 | 0.60 | 0.71 | 0.64 | 0.60 | 0.57 | 0.00 | 0.58 | 0.70 |

Rolling Hour Summary

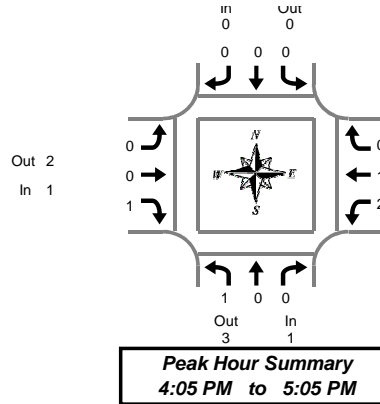
4:00 PM to 6:00 PM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | Pedestrians Crosswalk | | | | |
|---------------------|-------------------|---|----|-------|-------------------|---|---|-------|--------------------|----|----|-------|--------------------|----|---|-------|----------------|-----------------------|-------|------|------|----|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West | |
| 4:00 PM | 17 | 0 | 10 | 0 | 0 | 1 | 0 | 0 | 0 | 30 | 14 | 1 | 10 | 17 | 0 | 0 | 0 | 99 | 26 | 14 | 5 | 10 |
| 4:15 PM | 19 | 0 | 9 | 1 | 0 | 1 | 0 | 0 | 0 | 27 | 18 | 1 | 9 | 15 | 0 | 1 | 0 | 98 | 29 | 17 | 6 | 10 |
| 4:30 PM | 15 | 0 | 10 | 1 | 1 | 1 | 0 | 0 | 0 | 27 | 19 | 1 | 10 | 13 | 0 | 1 | 0 | 96 | 37 | 24 | 8 | 11 |
| 4:45 PM | 12 | 0 | 7 | 2 | 1 | 1 | 0 | 0 | 0 | 27 | 16 | 1 | 10 | 16 | 0 | 1 | 0 | 90 | 29 | 24 | 7 | 10 |
| 5:00 PM | 10 | 0 | 5 | 2 | 1 | 0 | 0 | 0 | 0 | 23 | 14 | 2 | 10 | 12 | 0 | 1 | 0 | 75 | 34 | 17 | 9 | 6 |

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



9th St & Astor St

Thursday, November 01, 2018

4:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary 4:00 PM to 6:00 PM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|---|-------|----------------|---|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:10 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:35 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:40 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:50 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 |
| 4:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 |
| 5:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:10 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:35 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:40 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:50 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 |
| Total Survey | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 2 | 0 | 5 | 9 | 9 |

Heavy Vehicle 15-Minute Interval Summary 4:00 PM to 6:00 PM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|---|-------|----------------|---|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 2 | 2 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 2 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 2 | 2 |
| Total Survey | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 2 | 0 | 5 | 9 | 9 |

Heavy Vehicle Peak Hour Summary 4:05 PM to 5:05 PM

| By Approach | Northbound 9th St | | | Southbound 9th St | | | Eastbound Astor St | | | Westbound Astor St | | | Total |
|-------------|-------------------|-----|-------|-------------------|-----|-------|--------------------|-----|-------|--------------------|-----|-------|-------|
| | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | |
| Volume | 1 | 3 | 4 | 0 | 0 | 0 | 1 | 2 | 3 | 3 | 0 | 3 | 5 |
| PHF | 0.25 | | | 0.00 | | | 0.25 | | | 0.38 | | | 0.42 |

| By Movement | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Total |
|-------------|-------------------|------|------|-------|-------------------|------|------|-------|--------------------|------|------|-------|--------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 3 | 5 |
| PHF | 0.25 | 0.00 | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 | 0.25 | 0.50 | 0.25 | 0.00 | 0.38 | 0.42 |

Heavy Vehicle Rolling Hour Summary 4:00 PM to 6:00 PM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|---|-------|----------------|---|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | |
| 4:00 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 2 | 4 | 4 |
| 4:15 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 2 | 4 | 4 |
| 4:30 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 2 | 4 | 4 |
| 4:45 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 0 | 3 | 5 | 5 |
| 5:00 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 0 | 3 | 5 | 5 |

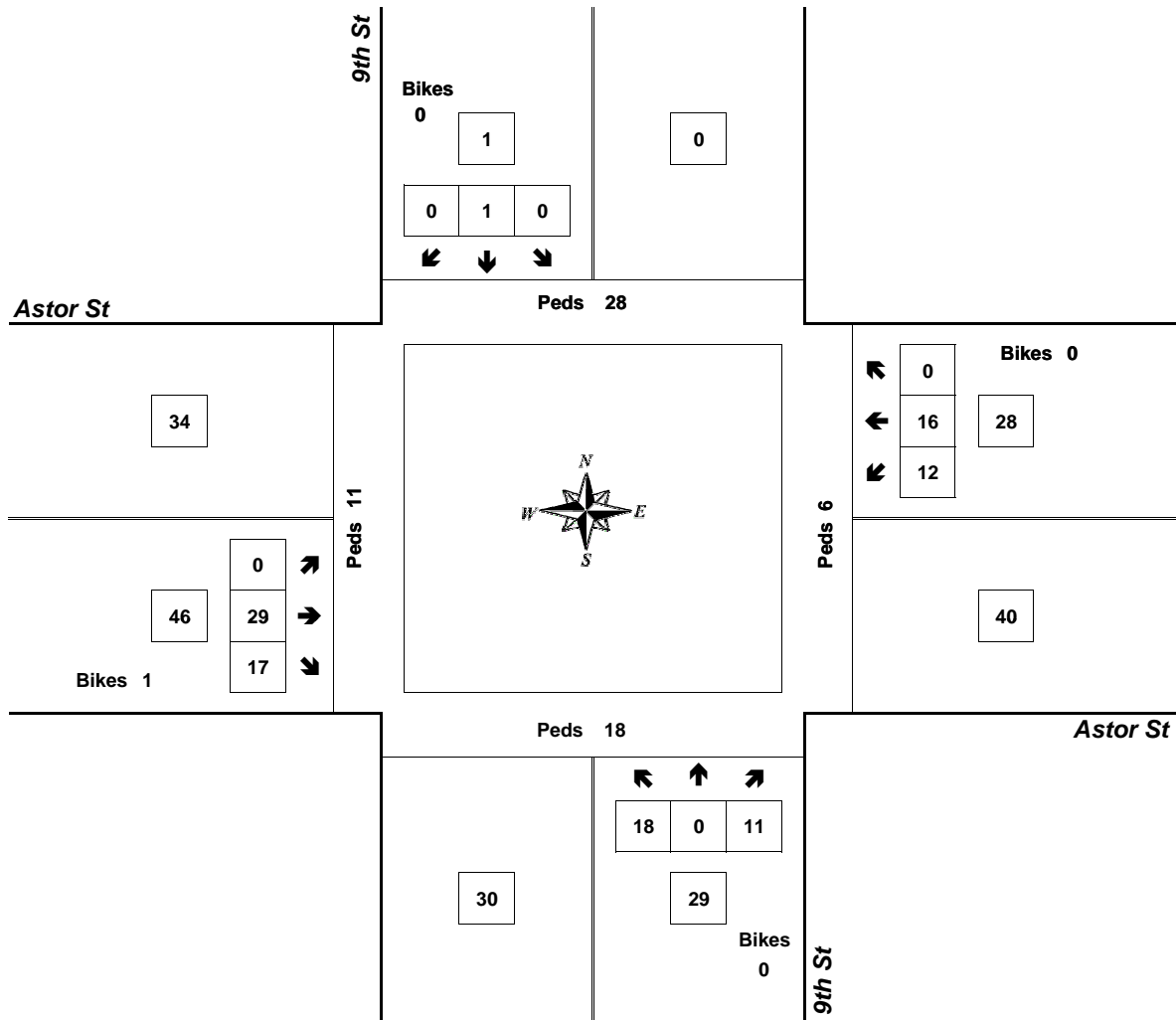
Peak Hour Summary



Clay Carney
(503) 833-2740

9th St & Astor St

4:05 PM to 5:05 PM
Thursday, November 01, 2018



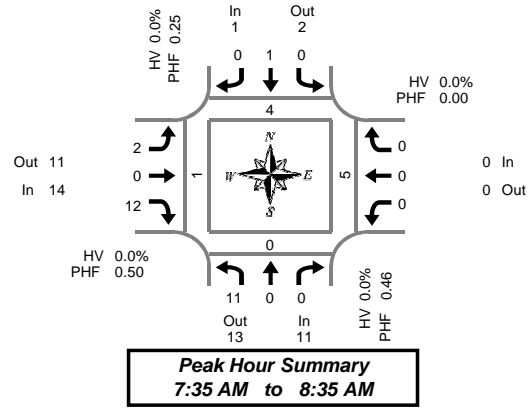
| Approach | PHF | HV% | Volume |
|---------------------|-------------|-------------|------------|
| EB | 0.64 | 2.2% | 46 |
| WB | 0.58 | 10.7% | 28 |
| NB | 0.60 | 3.4% | 29 |
| SB | 0.25 | 0.0% | 1 |
| Intersection | 0.70 | 4.8% | 104 |

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary



Clay Carney
(503) 833-2740



10th St & Astor St

Thursday, November 01, 2018

7:00 AM to 9:00 AM

5-Minute Interval Summary

7:00 AM to 9:00 AM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|--------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|----|-------|--------------------|---|---|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 7:00 AM | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7:10 AM | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7:20 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7:25 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | |
| 7:40 AM | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7:45 AM | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7:50 AM | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | |
| 7:55 AM | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 8:05 AM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:10 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | |
| 8:20 AM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | |
| 8:25 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | |
| 8:40 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | |
| 8:45 AM | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | |
| 8:50 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | |
| 8:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total Survey | 16 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 1 | 19 | 1 | 0 | 0 | 0 | 0 | 40 | 7 | 1 | 14 | 2 |

15-Minute Interval Summary

7:00 AM to 9:00 AM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|--------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|----|-------|--------------------|---|---|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 7:00 AM | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | |
| 7:30 AM | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | |
| 7:45 AM | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | |
| 8:00 AM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 8:15 AM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | |
| 8:30 AM | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | |
| 8:45 AM | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 5 | |
| Total Survey | 16 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 1 | 19 | 1 | 0 | 0 | 0 | 0 | 40 | 7 | 1 | 14 | 2 |

Peak Hour Summary

7:35 AM to 8:35 AM

| By Approach | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Total | Pedestrians Crosswalk | | | |
|-------------|--------------------|-----|-------|-------|--------------------|-----|-------|-------|--------------------|-----|-------|-------|--------------------|-----|-------|-------|-------|-----------------------|-------|------|------|
| | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | | North | South | East | West |
| Volume | 11 | 13 | 24 | 0 | 1 | 2 | 3 | 0 | 14 | 11 | 25 | 1 | 0 | 0 | 0 | 0 | 26 | 4 | 0 | 5 | 1 |
| %HV | 0.0% | | | | 0.0% | | | | 0.0% | | | | 0.0% | | | | 0.0% | | | | |
| PHF | 0.46 | | | | 0.25 | | | | 0.50 | | | | 0.00 | | | | 0.54 | | | | |

| By Movement | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Total |
|-------------|--------------------|------|------|-------|--------------------|------|------|-------|--------------------|------|------|-------|--------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 11 | 0 | 0 | 11 | 0 | 1 | 0 | 1 | 2 | 0 | 12 | 14 | 0 | 0 | 0 | 0 | 26 |
| %HV | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| PHF | 0.46 | 0.00 | 0.00 | 0.46 | 0.00 | 0.25 | 0.00 | 0.25 | 0.25 | 0.00 | 0.60 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.54 |

Rolling Hour Summary

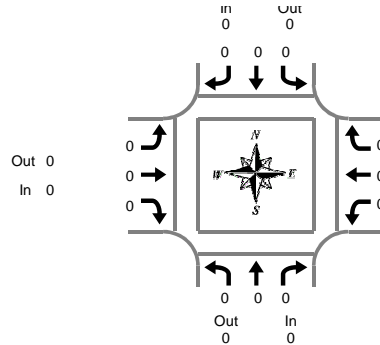
7:00 AM to 9:00 AM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|--------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|----|-------|--------------------|---|---|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 7:00 AM | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 6 | 1 | 0 | 0 | 0 | 0 | 20 | 4 | 0 | 3 | 1 |
| 7:15 AM | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 11 | 1 | 0 | 0 | 0 | 0 | 22 | 4 | 0 | 3 | 2 |
| 7:30 AM | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 11 | 1 | 0 | 0 | 0 | 0 | 23 | 4 | 0 | 5 | 1 |
| 7:45 AM | 9 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 1 | 11 | 1 | 0 | 0 | 0 | 0 | 24 | 4 | 0 | 8 | 1 |
| 8:00 AM | 4 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 13 | 0 | 0 | 0 | 0 | 0 | 20 | 3 | 1 | 11 | 1 |

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



10th St & Astor St

Thursday, November 01, 2018

7:00 AM to 9:00 AM

Peak Hour Summary
7:35 AM to 8:35 AM

Heavy Vehicle 5-Minute Interval Summary

7:00 AM to 9:00 AM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | |
|---------------------|--------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|---|-------|----------------|---|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:10 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:20 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:25 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:40 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:50 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:10 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:20 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:25 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:40 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:50 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | |
|---------------------|--------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|---|-------|----------------|---|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |

Heavy Vehicle Peak Hour Summary

7:35 AM to 8:35 AM

| By Approach | Northbound 10th St | | | Southbound 10th St | | | Eastbound Astor St | | | Westbound Astor St | | | Total |
|-------------|--------------------|-----|-------|--------------------|-----|-------|--------------------|-----|-------|--------------------|-----|-------|-------|
| | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | |
| Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PHF | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 |

| By Movement | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Total | |
|-------------|--------------------|------|------|-------|--------------------|------|------|-------|--------------------|------|------|-------|--------------------|------|------|-------|-------|------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | |
| Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PHF | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | |
|---------------------|--------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|---|-------|----------------|---|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |

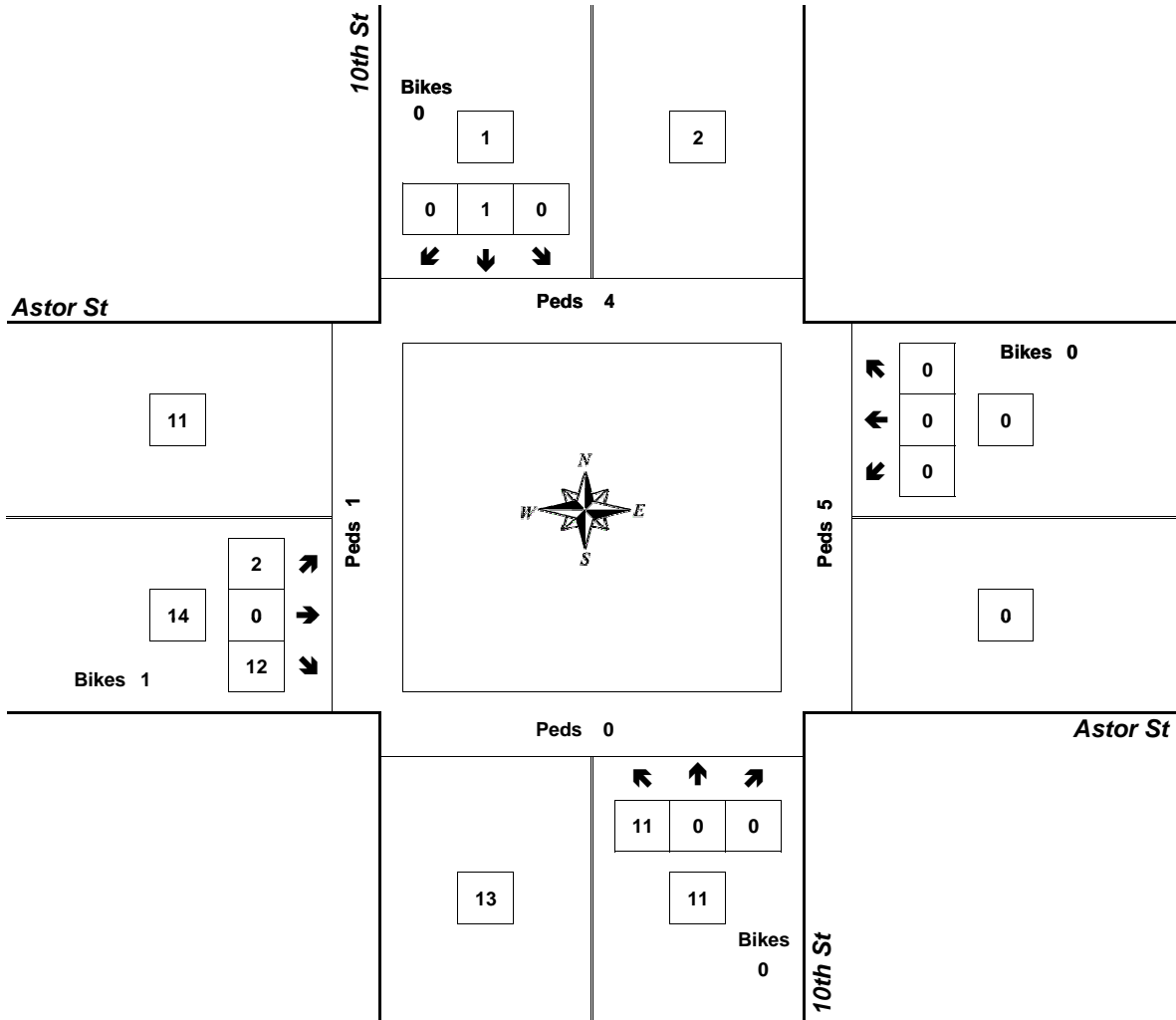
Peak Hour Summary



Clay Carney
(503) 833-2740

10th St & Astor St

7:35 AM to 8:35 AM
Thursday, November 01, 2018



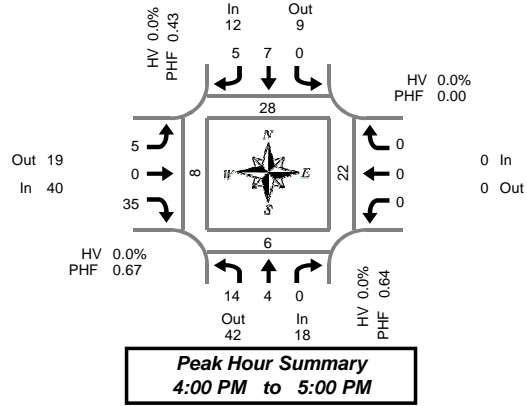
| Approach | PHF | HV% | Volume |
|---------------------|-------------|-------------|-----------|
| EB | 0.50 | 0.0% | 14 |
| WB | 0.00 | 0.0% | 0 |
| NB | 0.46 | 0.0% | 11 |
| SB | 0.25 | 0.0% | 1 |
| Intersection | 0.54 | 0.0% | 26 |

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary



Clay Carney
(503) 833-2740



10th St & Astor St

Thursday, November 01, 2018

4:00 PM to 6:00 PM

5-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | Pedestrians Crosswalk | | | | | | |
|---------------------|--------------------|---|---|-------|--------------------|----|---|-------|--------------------|---|----|-------|--------------------|---|---|-------|----------------|-----------------------|-------|------|------|----|----|---|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West | | | |
| 4:00 PM | 1 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 1 | 3 | 1 |
| 4:05 PM | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 0 | 0 |
| 4:10 PM | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 3 | 0 | 0 | 0 | |
| 4:15 PM | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 6 | 0 | 1 | 1 | |
| 4:20 PM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 1 | 0 | |
| 4:25 PM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 1 | 2 | |
| 4:30 PM | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 2 | 0 | |
| 4:35 PM | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 3 | 1 | 4 | 2 | |
| 4:40 PM | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 2 | 0 | 1 | 0 | |
| 4:45 PM | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 0 | 6 | 1 | |
| 4:50 PM | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 2 | 1 | 0 | |
| 4:55 PM | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 2 | 0 | 2 | 1 | |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 2 | 0 | |
| 5:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | |
| 5:10 PM | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 1 | 0 | 2 | 1 | |
| 5:15 PM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 2 | 0 | 0 | 2 | |
| 5:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | |
| 5:25 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 3 | |
| 5:30 PM | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 4 | 0 | 3 | 0 | |
| 5:35 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 2 | |
| 5:40 PM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | |
| 5:45 PM | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 3 | 0 | 1 | 0 | |
| 5:50 PM | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 0 | 2 | 2 | |
| 5:55 PM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 2 | 3 | |
| Total Survey | 23 | 8 | 0 | 1 | 0 | 10 | 7 | 0 | 5 | 1 | 61 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 115 | 50 | 9 | 39 | 22 | |

15-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | Pedestrians Crosswalk | | | | | |
|---------------------|--------------------|---|---|-------|--------------------|----|---|-------|--------------------|---|----|-------|--------------------|---|---|-------|----------------|-----------------------|-------|------|------|----|----|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West | | |
| 4:00 PM | 2 | 1 | 0 | 0 | 0 | 5 | 2 | 0 | 3 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 4 | 1 | 3 | 1 |
| 4:15 PM | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 9 | 1 | 3 | 3 |
| 4:30 PM | 4 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 8 | 2 | 7 | 2 |
| 4:45 PM | 4 | 1 | 0 | 1 | 0 | 2 | 2 | 0 | 1 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 7 | 2 | 9 | 2 |
| 5:00 PM | 1 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 3 | 0 | 5 | 2 |
| 5:15 PM | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 2 | 3 | 0 | 5 |
| 5:30 PM | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 4 | 0 | 7 | 2 |
| 5:45 PM | 4 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 13 | 0 | 5 | 5 |
| Total Survey | 23 | 8 | 0 | 1 | 0 | 10 | 7 | 0 | 5 | 1 | 61 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 115 | 50 | 9 | 39 | 22 |

Peak Hour Summary

4:00 PM to 5:00 PM

| By Approach | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Total | Pedestrians Crosswalk | | | | | |
|-------------|--------------------|-----|-------|-------|--------------------|-----|-------|-------|--------------------|-----|-------|-------|--------------------|-----|-------|-------|-------|-----------------------|-------|------|------|----|---|
| | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | | North | South | East | West | | |
| Volume | 18 | 42 | 60 | 1 | 12 | 9 | 21 | 0 | 40 | 19 | 59 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 70 | 28 | 6 | 22 | 8 |
| %HV | 0.0% | | | | 0.0% | | | | 0.0% | | | | 0.0% | | | | 0.0% | | | | | | |
| PHF | 0.64 | | | | 0.43 | | | | 0.67 | | | | 0.00 | | | | 0.76 | | | | | | |

| By Movement | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Total |
|-------------|--------------------|------|------|-------|--------------------|------|------|-------|--------------------|------|------|-------|--------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 14 | 4 | 0 | 18 | 0 | 7 | 5 | 12 | 5 | 0 | 35 | 40 | 0 | 0 | 0 | 0 | 70 |
| %HV | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| PHF | 0.70 | 0.33 | 0.00 | 0.64 | 0.00 | 0.35 | 0.63 | 0.43 | 0.42 | 0.00 | 0.58 | 0.67 | 0.00 | 0.00 | 0.00 | 0.00 | 0.76 |

Rolling Hour Summary

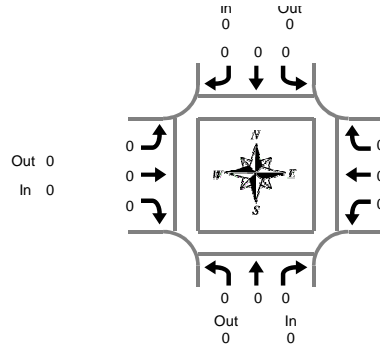
4:00 PM to 6:00 PM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total | Pedestrians Crosswalk | | | | |
|---------------------|--------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|----|-------|--------------------|---|---|-------|----------------|-----------------------|-------|------|------|----|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West | |
| 4:00 PM | 14 | 4 | 0 | 1 | 0 | 7 | 5 | 0 | 5 | 0 | 35 | 1 | 0 | 0 | 0 | 0 | 0 | 70 | 28 | 6 | 22 | 8 |
| 4:15 PM | 13 | 4 | 0 | 1 | 0 | 5 | 3 | 0 | 2 | 1 | 32 | 1 | 0 | 0 | 0 | 0 | 0 | 60 | 27 | 5 | 24 | 9 |
| 4:30 PM | 10 | 5 | 0 | 1 | 0 | 5 | 3 | 0 | 2 | 1 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 62 | 20 | 7 | 21 | 11 |
| 4:45 PM | 9 | 3 | 0 | 1 | 0 | 5 | 3 | 0 | 1 | 1 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 52 | 16 | 5 | 21 | 11 |
| 5:00 PM | 9 | 4 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 1 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 22 | 3 | 17 | 14 |

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



Peak Hour Summary
4:00 PM to 5:00 PM

10th St & Astor St

Thursday, November 01, 2018

4:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total |
|---------------------|--------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:10 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:35 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:40 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:50 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:10 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:35 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:40 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:50 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Heavy Vehicle 15-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total |
|---------------------|--------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Heavy Vehicle Peak Hour Summary

4:00 PM to 5:00 PM

| By Approach | Northbound 10th St | | | Southbound 10th St | | | Eastbound Astor St | | | Westbound Astor St | | | Total |
|-------------|--------------------|-----|-------|--------------------|-----|-------|--------------------|-----|-------|--------------------|-----|-------|-------|
| | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | |
| Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PHF | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 |

| By Movement | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Total |
|-------------|--------------------|------|------|-------|--------------------|------|------|-------|--------------------|------|------|-------|--------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PHF | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Heavy Vehicle Rolling Hour Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Astor St | | | | Westbound Astor St | | | | Interval Total |
|---------------------|--------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|---|-------|--------------------|---|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

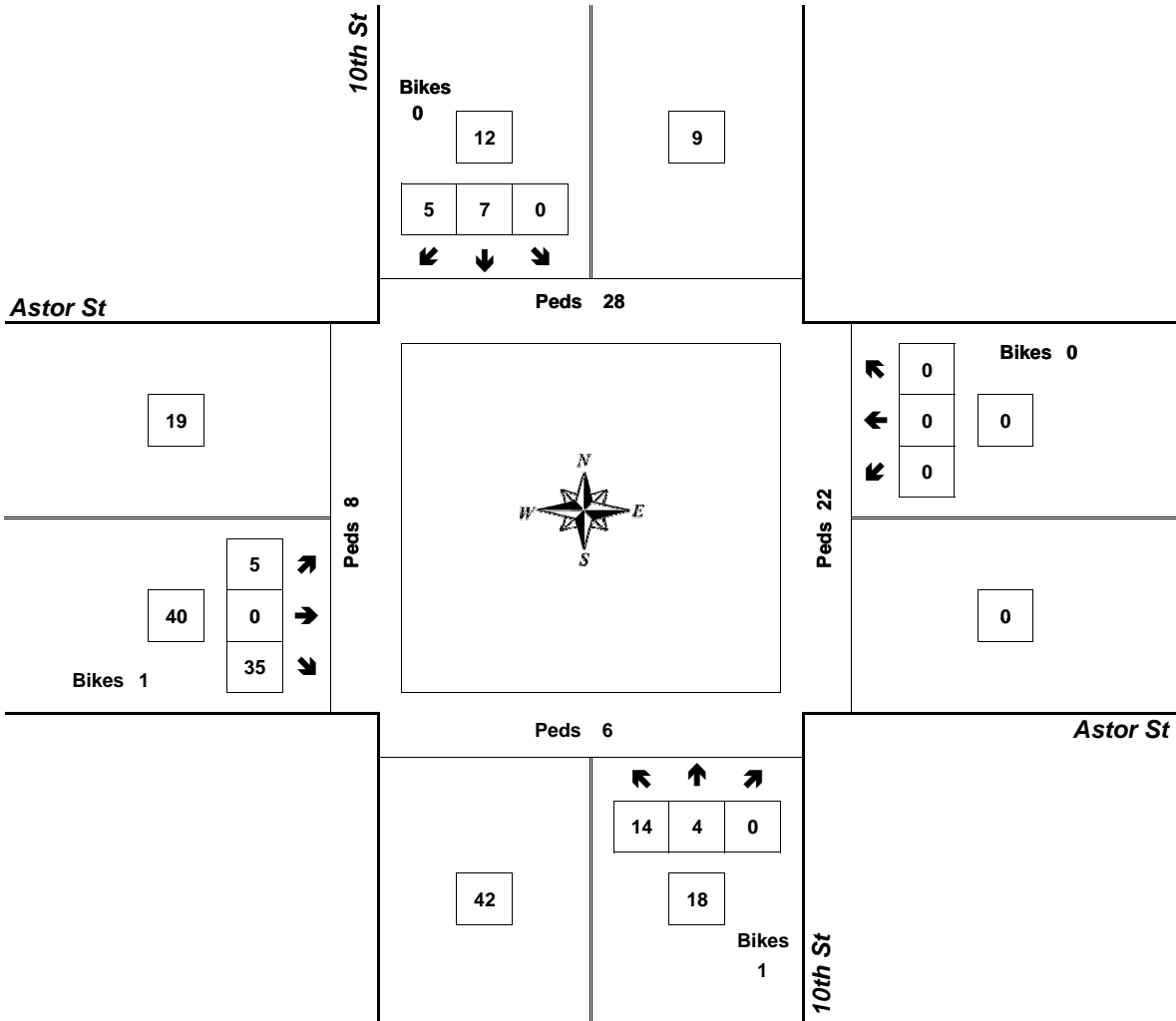
Peak Hour Summary



Clay Carney
(503) 833-2740

10th St & Astor St

4:00 PM to 5:00 PM
Thursday, November 01, 2018



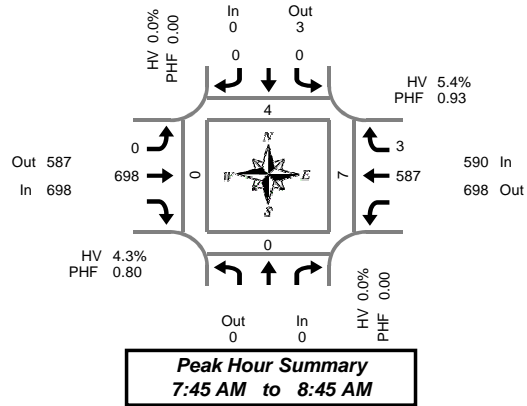
| Approach | PHF | HV% | Volume |
|---------------------|-------------|-------------|-----------|
| EB | 0.67 | 0.0% | 40 |
| WB | 0.00 | 0.0% | 0 |
| NB | 0.64 | 0.0% | 18 |
| SB | 0.43 | 0.0% | 12 |
| Intersection | 0.76 | 0.0% | 70 |

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary



Clay Carney
(503) 833-2740



8th St & Marine Dr

Thursday, November 01, 2018

7:00 AM to 9:00 AM

5-Minute Interval Summary

7:00 AM to 9:00 AM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Marine Dr | | | Westbound Marine Dr | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|-------------------|-----|-------|-------|-------------------|---|-------|-------|---------------------|---|-------|---------------------|---|-------|----------------|-----------------------|-------|------|------|
| | In | Out | Total | Bikes | L | R | Total | Bikes | L | T | Bikes | T | R | Bikes | | North | South | East | West |
| 7:00 AM | | | | | | | | | | | | | | | | | | | |
| 7:05 AM | | | | | | | | | | | | | | | | | | | |
| 7:10 AM | | | | | | | | | | | | | | | | | | | |
| 7:15 AM | | | | | | | | | | | | | | | | | | | |
| 7:20 AM | | | | | | | | | | | | | | | | | | | |
| 7:25 AM | | | | | | | | | | | | | | | | | | | |
| 7:30 AM | | | | | | | | | | | | | | | | | | | |
| 7:35 AM | | | | | | | | | | | | | | | | | | | |
| 7:40 AM | | | | | | | | | | | | | | | | | | | |
| 7:45 AM | | | | | | | | | | | | | | | | | | | |
| 7:50 AM | | | | | | | | | | | | | | | | | | | |
| 7:55 AM | | | | | | | | | | | | | | | | | | | |
| 8:00 AM | | | | | | | | | | | | | | | | | | | |
| 8:05 AM | | | | | | | | | | | | | | | | | | | |
| 8:10 AM | | | | | | | | | | | | | | | | | | | |
| 8:15 AM | | | | | | | | | | | | | | | | | | | |
| 8:20 AM | | | | | | | | | | | | | | | | | | | |
| 8:25 AM | | | | | | | | | | | | | | | | | | | |
| 8:30 AM | | | | | | | | | | | | | | | | | | | |
| 8:35 AM | | | | | | | | | | | | | | | | | | | |
| 8:40 AM | | | | | | | | | | | | | | | | | | | |
| 8:45 AM | | | | | | | | | | | | | | | | | | | |
| 8:50 AM | | | | | | | | | | | | | | | | | | | |
| 8:55 AM | | | | | | | | | | | | | | | | | | | |
| Total Survey | | | | | | | | | | | | | | | | | | | |

15-Minute Interval Summary

7:00 AM to 9:00 AM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Marine Dr | | | Westbound Marine Dr | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|-------------------|-----|-------|-------|-------------------|---|-------|-------|---------------------|---|-------|---------------------|---|-------|----------------|-----------------------|-------|------|------|
| | In | Out | Total | Bikes | L | R | Total | Bikes | L | T | Bikes | T | R | Bikes | | North | South | East | West |
| 7:00 AM | | | | | | | | | | | | | | | | | | | |
| 7:15 AM | | | | | | | | | | | | | | | | | | | |
| 7:30 AM | | | | | | | | | | | | | | | | | | | |
| 7:45 AM | | | | | | | | | | | | | | | | | | | |
| 8:00 AM | | | | | | | | | | | | | | | | | | | |
| 8:15 AM | | | | | | | | | | | | | | | | | | | |
| 8:30 AM | | | | | | | | | | | | | | | | | | | |
| 8:45 AM | | | | | | | | | | | | | | | | | | | |
| Total Survey | | | | | | | | | | | | | | | | | | | |

Peak Hour Summary

7:45 AM to 8:45 AM

| By Approach | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Marine Dr | | | Westbound Marine Dr | | | Total | Pedestrians Crosswalk | | | | | |
|-------------|-------------------|-----|-------|-------|-------------------|-----|-------|-------|---------------------|-----|-------|---------------------|-----|-----|-------|-----------------------|-------|-------|-------|------|------|
| | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | | Total | Bikes | North | South | East | West |
| Volume | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 698 | 587 | 1,285 | 0 | 590 | 698 | 1,288 | 1 | 1,288 | 4 | 0 | 7 | 0 |
| %HV | 0.0% | | | | 0.0% | | | | 4.3% | | | 5.4% | | | 4.8% | | | | | | |
| PHF | 0.00 | | | | 0.00 | | | | 0.80 | | | 0.93 | | | 0.85 | | | | | | |

| By Movement | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Marine Dr | | | Westbound Marine Dr | | | Total | | | | | |
|-------------|-------------------|-----|-------|-------|-------------------|----|-------|-------|---------------------|------|-------|---------------------|----|-------|-------|------|------|--|--|--|
| | In | Out | Total | Bikes | L | R | Total | Bikes | L | T | Total | T | R | Total | | | | | | |
| Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 698 | 587 | 698 | 587 | 3 | 590 | 1,288 | | | | | |
| %HV | NA | NA | NA | 0.0% | 0.0% | NA | 0.0% | 0.0% | 0.0% | 4.3% | NA | 4.3% | NA | 5.5% | 0.0% | 5.4% | 4.8% | | | |
| PHF | | | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.80 | | 0.80 | | 0.93 | 0.38 | 0.93 | 0.85 | | | |

Rolling Hour Summary

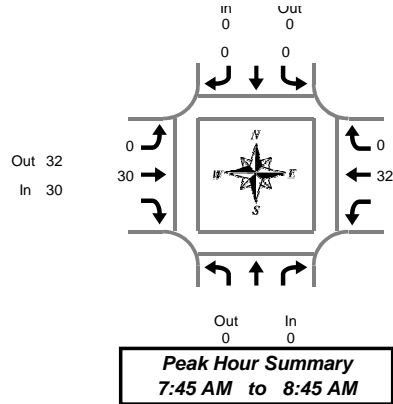
7:00 AM to 9:00 AM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Marine Dr | | | Westbound Marine Dr | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|-------------------|-----|-------|-------|-------------------|---|-------|-------|---------------------|---|-------|---------------------|---|-------|----------------|-----------------------|-------|------|------|
| | In | Out | Total | Bikes | L | R | Total | Bikes | L | T | Bikes | T | R | Bikes | | North | South | East | West |
| 7:00 AM | | | | | | | | | | | | | | | | | | | |
| 7:15 AM | | | | | | | | | | | | | | | | | | | |
| 7:30 AM | | | | | | | | | | | | | | | | | | | |
| 7:45 AM | | | | | | | | | | | | | | | | | | | |
| 8:00 AM | | | | | | | | | | | | | | | | | | | |

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



8th St & Marine Dr

Thursday, November 01, 2018
7:00 AM to 9:00 AM

Heavy Vehicle 5-Minute Interval Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 8th St | | | Southbound 8th St | | | Eastbound Marine Dr | | | Westbound Marine Dr | | | Interval Total |
|---------------------|-------------------|-----|-------|-------------------|---|-------|---------------------|----|-------|---------------------|----|-------|----------------|
| | In | Out | Total | L | R | Total | L | T | Total | T | R | Total | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 0 | 3 | 6 |
| 7:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 0 | 3 |
| 7:10 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 | 4 | 0 | 10 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 4 | 0 | 7 |
| 7:20 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 0 | 0 | 2 |
| 7:25 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 5 | 3 | 0 | 8 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 5 | 2 | 0 | 7 |
| 7:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 5 | 0 | 6 |
| 7:40 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 3 | 0 | 5 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 3 | 0 | 5 |
| 7:50 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 1 | 0 | 4 |
| 7:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 3 | 0 | 4 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 | 2 | 0 | 8 |
| 8:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 2 |
| 8:10 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 0 | 4 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 3 | 0 | 5 |
| 8:20 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 4 | 0 | 5 |
| 8:25 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 4 | 0 | 6 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 5 | 3 | 0 | 8 |
| 8:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 4 | 0 | 7 |
| 8:40 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 0 | 4 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 4 | 0 | 7 |
| 8:50 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 3 | 0 | 5 |
| 8:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | 0 | 6 |
| Total Survey | | | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 66 | 68 | 0 | 134 |

Heavy Vehicle 15-Minute Interval Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 8th St | | | Southbound 8th St | | | Eastbound Marine Dr | | | Westbound Marine Dr | | | Interval Total |
|---------------------|-------------------|-----|-------|-------------------|---|-------|---------------------|----|-------|---------------------|----|-------|----------------|
| | In | Out | Total | L | R | Total | L | T | Total | T | R | Total | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 10 | 10 | 9 | 0 | 19 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 10 | 10 | 7 | 0 | 17 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 8 | 10 | 0 | 18 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 | 7 | 0 | 13 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 9 | 9 | 5 | 0 | 14 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 5 | 11 | 0 | 16 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 10 | 10 | 9 | 0 | 19 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 8 | 10 | 0 | 18 |
| Total Survey | | | 0 | 0 | 0 | 0 | 0 | 66 | 66 | 66 | 68 | 0 | 134 |

Heavy Vehicle Peak Hour Summary 7:45 AM to 8:45 AM

| By Approach | Northbound 8th St | | | Southbound 8th St | | | Eastbound Marine Dr | | | Westbound Marine Dr | | | Total |
|-------------|-------------------|-----|-------|-------------------|-----|-------|---------------------|-----|-------|---------------------|-----|-------|-------|
| | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | |
| Volume | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 32 | 62 | 32 | 30 | 62 | 62 |
| PHF | 0.00 | | | 0.00 | | | 0.75 | | | 0.73 | | | 0.74 |

| By Movement | Northbound 8th St | | | Southbound 8th St | | | Eastbound Marine Dr | | | Westbound Marine Dr | | | Total | |
|-------------|-------------------|-----|-------|-------------------|---|-------|---------------------|------|-------|---------------------|------|-------|-------|------|
| | In | Out | Total | L | R | Total | L | T | Total | T | R | Total | | |
| Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 30 | 32 | 0 | 32 | 62 | |
| PHF | | | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.75 | 0.75 | 0.73 | 0.00 | 0.73 | 0.74 |

Heavy Vehicle Rolling Hour Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 8th St | | | Southbound 8th St | | | Eastbound Marine Dr | | | Westbound Marine Dr | | | Interval Total |
|---------------------|-------------------|-----|-------|-------------------|---|-------|---------------------|----|-------|---------------------|----|-------|----------------|
| | In | Out | Total | L | R | Total | L | T | Total | T | R | Total | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 34 | 34 | 33 | 0 | 67 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 33 | 33 | 29 | 0 | 62 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 28 | 28 | 33 | 0 | 61 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 30 | 30 | 32 | 0 | 62 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32 | 32 | 32 | 35 | 0 | 67 |

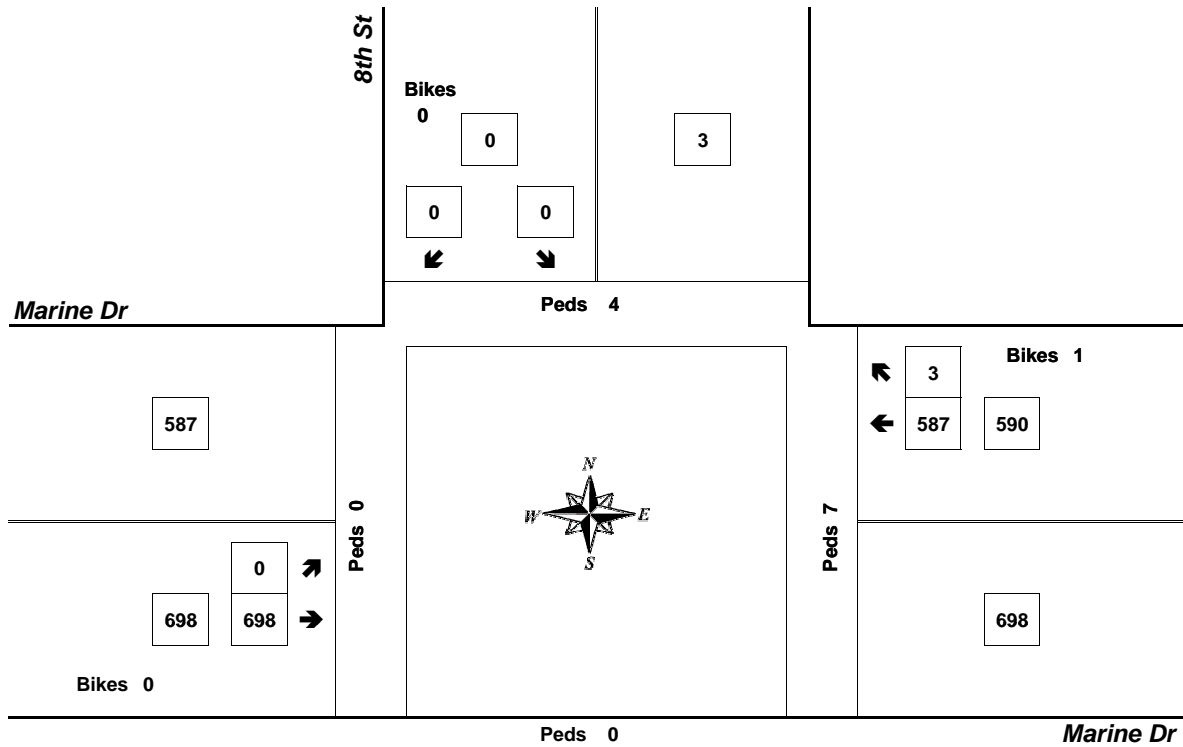
Peak Hour Summary



Clay Carney
(503) 833-2740

8th St & Marine Dr

7:45 AM to 8:45 AM
Thursday, November 01, 2018



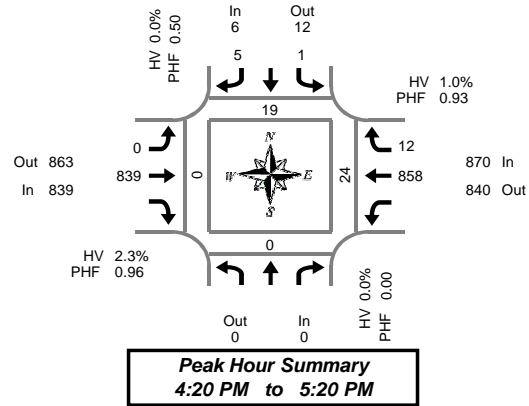
| Approach | PHF | HV% | Volume |
|---------------------|-------------|-------------|--------------|
| EB | 0.80 | 4.3% | 698 |
| WB | 0.93 | 5.4% | 590 |
| NB | 0.00 | 0.0% | 0 |
| SB | 0.00 | 0.0% | 0 |
| Intersection | 0.85 | 4.8% | 1,288 |

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary



Clay Carney
(503) 833-2740



8th St & Marine Dr

Thursday, November 01, 2018

4:00 PM to 6:00 PM

5-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Marine Dr | | | Westbound Marine Dr | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|-------------------|-----|-------|-------|-------------------|---|-------|-------|---------------------|-------|-------|---------------------|----|-------|----------------|-----------------------|-------|------|------|
| | In | Out | Total | Bikes | L | R | Total | Bikes | L | T | Bikes | T | R | Bikes | | North | South | East | West |
| 4:00 PM | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 67 | 0 | 84 | 2 | 0 | 154 | 3 | 0 | 3 | 0 |
| 4:05 PM | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 66 | 0 | 64 | 0 | 0 | 131 | 1 | 0 | 0 | 0 |
| 4:10 PM | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 57 | 0 | 58 | 0 | 0 | 116 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 69 | 0 | 65 | 1 | 0 | 136 | 0 | 0 | 0 | 0 |
| 4:20 PM | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 80 | 0 | 75 | 0 | 0 | 156 | 3 | 0 | 1 | 0 |
| 4:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 69 | 0 | 66 | 0 | 0 | 135 | 0 | 0 | 1 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 63 | 0 | 65 | 0 | 0 | 128 | 3 | 0 | 2 | 0 |
| 4:35 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 0 | 87 | 2 | 0 | 155 | 2 | 0 | 0 | 0 |
| 4:40 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 71 | 0 | 70 | 0 | 0 | 141 | 3 | 0 | 1 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 76 | 0 | 69 | 2 | 0 | 149 | 3 | 0 | 3 | 0 |
| 4:50 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 71 | 0 | 65 | 2 | 0 | 138 | 0 | 0 | 2 | 0 |
| 4:55 PM | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 60 | 0 | 67 | 2 | 0 | 130 | 3 | 0 | 1 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 75 | 0 | 63 | 1 | 0 | 139 | 0 | 0 | 1 | 0 |
| 5:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 64 | 0 | 71 | 1 | 0 | 136 | 0 | 0 | 6 | 0 |
| 5:10 PM | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 64 | 0 | 96 | 2 | 0 | 164 | 1 | 0 | 3 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 80 | 0 | 64 | 0 | 0 | 144 | 1 | 0 | 3 | 0 |
| 5:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 65 | 0 | 76 | 0 | 0 | 141 | 0 | 0 | 2 | 0 |
| 5:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 72 | 0 | 58 | 0 | 0 | 130 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 79 | 0 | 57 | 0 | 0 | 136 | 0 | 0 | 0 | 0 |
| 5:35 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 67 | 0 | 70 | 0 | 0 | 137 | 1 | 0 | 0 | 0 |
| 5:40 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 59 | 1 | 55 | 0 | 0 | 114 | 0 | 0 | 1 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47 | 0 | 56 | 0 | 0 | 103 | 0 | 0 | 0 | 0 |
| 5:50 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 0 | 43 | 2 | 0 | 90 | 0 | 0 | 0 | 0 |
| 5:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50 | 0 | 47 | 0 | 0 | 97 | 0 | 0 | 1 | 0 |
| Total Survey | | | | 0 | 1 | | 9 | 0 | 0 | 1,582 | 1 | 1,591 | 17 | 0 | 3,200 | 24 | 0 | 31 | 0 |

15-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Marine Dr | | | Westbound Marine Dr | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|-------------------|-----|-------|-------|-------------------|---|-------|-------|---------------------|-------|-------|---------------------|----|-------|----------------|-----------------------|-------|------|------|
| | In | Out | Total | Bikes | L | R | Total | Bikes | L | T | Bikes | T | R | Bikes | | North | South | East | West |
| 4:00 PM | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 190 | 0 | 206 | 2 | 0 | 401 | 4 | 0 | 3 | 0 |
| 4:15 PM | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 218 | 0 | 206 | 1 | 0 | 427 | 3 | 0 | 2 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 200 | 0 | 222 | 2 | 0 | 424 | 8 | 0 | 3 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 207 | 0 | 201 | 6 | 0 | 417 | 6 | 0 | 6 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 203 | 0 | 230 | 4 | 0 | 439 | 1 | 0 | 10 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 217 | 0 | 198 | 0 | 0 | 415 | 1 | 0 | 5 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 205 | 1 | 182 | 0 | 0 | 387 | 1 | 0 | 1 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 142 | 0 | 146 | 2 | 0 | 290 | 0 | 0 | 1 | 0 |
| Total Survey | | | | 0 | 1 | | 9 | 0 | 0 | 1,582 | 1 | 1,591 | 17 | 0 | 3,200 | 24 | 0 | 31 | 0 |

Peak Hour Summary

4:20 PM to 5:20 PM

| By Approach | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Marine Dr | | | Westbound Marine Dr | | | Total | Pedestrians Crosswalk | | | | | |
|-------------|-------------------|-----|-------|-------|-------------------|-----|-------|-------|---------------------|-----|-------|---------------------|-----|-----|-------|-----------------------|-------|-------|-------|------|------|
| | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | | Total | Bikes | North | South | East | West |
| Volume | 0 | 0 | 0 | 0 | 6 | 12 | 18 | 0 | 839 | 863 | 1,702 | 0 | 870 | 840 | 1,710 | 0 | 1,715 | 19 | 0 | 24 | 0 |
| %HV | 0.0% | | | | 0.0% | | | | 2.3% | | | 1.0% | | | 1.6% | | | | | | |
| PHF | 0.00 | | | | 0.50 | | | | 0.96 | | | 0.93 | | | 0.96 | | | | | | |

| By Movement | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Marine Dr | | | Westbound Marine Dr | | | Total |
|-------------|-------------------|-----|-------|-------|-------------------|------|-------|-------|---------------------|------|-------|---------------------|------|-------|-------|
| | In | Out | Total | Bikes | L | R | Total | Bikes | L | T | Bikes | T | R | Total | |
| Volume | 0 | 0 | 0 | 0 | 1 | 5 | 6 | 0 | 839 | 839 | 0 | 858 | 12 | 870 | 1,715 |
| %HV | NA | NA | NA | 0.0% | 0.0% | NA | 0.0% | 0.0% | 0.0% | 2.3% | NA | 2.3% | NA | 1.0% | 1.6% |
| PHF | | | | 0.00 | 0.25 | 0.42 | 0.50 | 0.00 | 0.96 | 0.96 | | 0.93 | 0.50 | 0.93 | 0.96 |

Rolling Hour Summary

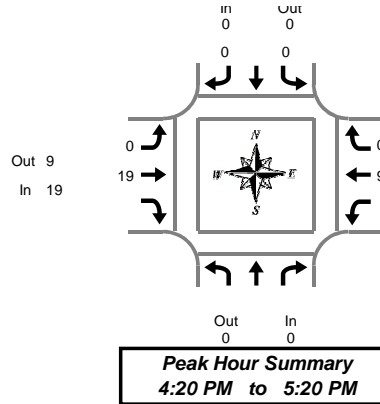
4:00 PM to 6:00 PM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Marine Dr | | | Westbound Marine Dr | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|-------------------|-----|-------|-------|-------------------|---|-------|-------|---------------------|-----|-------|---------------------|----|-------|----------------|-----------------------|-------|------|------|
| | In | Out | Total | Bikes | L | R | Total | Bikes | L | T | Bikes | T | R | Bikes | | North | South | East | West |
| 4:00 PM | 0 | 1 | 1 | 0 | 7 | 0 | 7 | 0 | 0 | 815 | 0 | 835 | 11 | 0 | 1,669 | 21 | 0 | 14 | 0 |
| 4:15 PM | 0 | 1 | 1 | 0 | 6 | 0 | 6 | 0 | 0 | 828 | 0 | 859 | 13 | 0 | 1,707 | 18 | 0 | 21 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 827 | 0 | 851 | 12 | 0 | 1,695 | 16 | 0 | 24 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 832 | 1 | 811 | 10 | 0 | 1,658 | 9 | 0 | 22 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 767 | 1 | 756 | 6 | 0 | 1,531 | 3 | 0 | 17 | 0 |

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



8th St & Marine Dr

Thursday, November 01, 2018

4:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary 4:00 PM to 6:00 PM

| Interval Start Time | Northbound 8th St | | | Southbound 8th St | | | Eastbound Marine Dr | | | Westbound Marine Dr | | | Interval Total |
|---------------------|-------------------|-----|-------|-------------------|---|-------|---------------------|----|-------|---------------------|---|-------|----------------|
| | In | Out | Total | L | R | Total | L | T | Total | T | R | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1 | 0 | 1 | 4 |
| 4:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 4 |
| 4:10 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 4 | 0 | 4 | 7 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 3 | 0 | 3 | 7 |
| 4:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 2 |
| 4:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 2 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1 | 0 | 1 | 4 |
| 4:35 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 1 | 3 |
| 4:40 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 2 | 3 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 1 | 3 |
| 4:50 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 4:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 |
| 5:10 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 5 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 2 |
| 5:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 4 |
| 5:35 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 1 | 3 |
| 5:40 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 2 | 3 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 1 | 3 |
| 5:50 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 |
| 5:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 43 | 24 | 0 | 24 | 67 |

Heavy Vehicle 15-Minute Interval Summary 4:00 PM to 6:00 PM

| Interval Start Time | Northbound 8th St | | | Southbound 8th St | | | Eastbound Marine Dr | | | Westbound Marine Dr | | | Interval Total |
|---------------------|-------------------|-----|-------|-------------------|---|-------|---------------------|----|-------|---------------------|---|-------|----------------|
| | In | Out | Total | L | R | Total | L | T | Total | T | R | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 10 | 5 | 0 | 5 | 15 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 7 | 4 | 0 | 4 | 11 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 4 | 0 | 4 | 10 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 0 | 4 | 6 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 6 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 0 | 2 | 4 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 7 | 3 | 0 | 3 | 10 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 | 0 | 2 | 5 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 43 | 24 | 0 | 24 | 67 |

Heavy Vehicle Peak Hour Summary 4:20 PM to 5:20 PM

| By Approach | Northbound 8th St | | | Southbound 8th St | | | Eastbound Marine Dr | | | Westbound Marine Dr | | | Total |
|-------------|-------------------|-----|-------|-------------------|-----|-------|---------------------|-----|-------|---------------------|-----|-------|-------|
| | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | |
| Volume | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 9 | 28 | 9 | 19 | 28 | 28 |
| PHF | 0.00 | | | 0.00 | | | 0.59 | | | 0.45 | | | 0.70 |

| By Movement | Northbound 8th St | | | Southbound 8th St | | | Eastbound Marine Dr | | | Westbound Marine Dr | | | Total |
|-------------|-------------------|------|-------|-------------------|------|-------|---------------------|------|-------|---------------------|------|-------|-------|
| | L | R | Total | L | R | Total | L | T | Total | T | R | Total | |
| Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 19 | 9 | 0 | 9 | 28 |
| PHF | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | 0.59 | 0.59 | 0.45 | 0.00 | 0.45 | 0.70 |

Heavy Vehicle Rolling Hour Summary 4:00 PM to 6:00 PM

| Interval Start Time | Northbound 8th St | | | Southbound 8th St | | | Eastbound Marine Dr | | | Westbound Marine Dr | | | Interval Total |
|---------------------|-------------------|-----|-------|-------------------|---|-------|---------------------|----|-------|---------------------|---|-------|----------------|
| | In | Out | Total | L | R | Total | L | T | Total | T | R | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 25 | 17 | 0 | 17 | 42 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 21 | 12 | 0 | 12 | 33 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 10 | 0 | 10 | 26 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 17 | 9 | 0 | 9 | 26 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 18 | 7 | 0 | 7 | 25 |

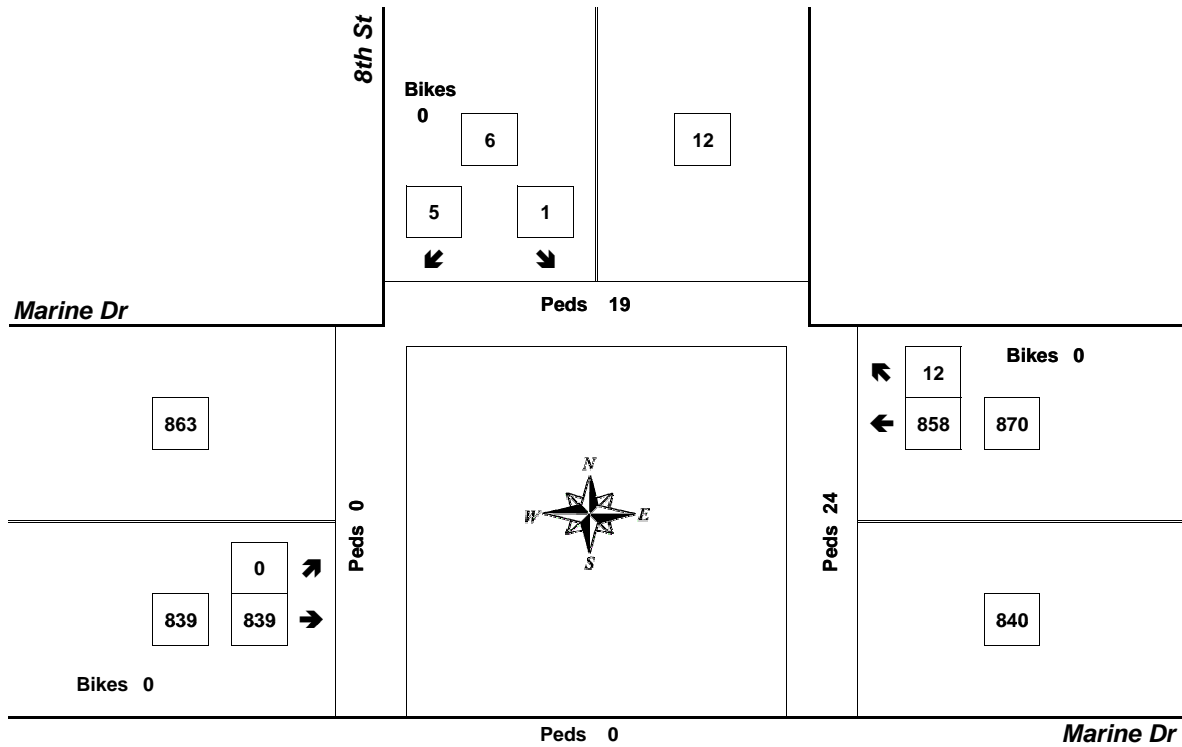
Peak Hour Summary



Clay Carney
(503) 833-2740

8th St & Marine Dr

4:20 PM to 5:20 PM
Thursday, November 01, 2018



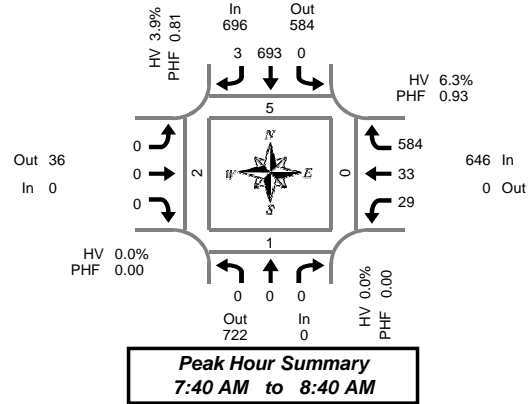
| Approach | PHF | HV% | Volume |
|---------------------|-------------|-------------|--------------|
| EB | 0.96 | 2.3% | 839 |
| WB | 0.93 | 1.0% | 870 |
| NB | 0.00 | 0.0% | 0 |
| SB | 0.50 | 0.0% | 6 |
| Intersection | 0.96 | 1.6% | 1,715 |

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary



Clay Carney
(503) 833-2740



8th St & Bond St

Thursday, November 01, 2018

7:00 AM to 9:00 AM

5-Minute Interval Summary

7:00 AM to 9:00 AM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Bond St | | | | Westbound Bond St | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|-------------------|---|---|-------|-------------------|-------|---|-------|-------------------|---|---|-------|-------------------|----|-------|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 26 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 23 | 0 | 53 | 0 | 0 | 0 | 0 |
| 7:05 AM | 0 | 0 | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 29 | 0 | 66 | 0 | 0 | 0 | 0 |
| 7:10 AM | 0 | 0 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 31 | 0 | 73 | 1 | 1 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 30 | 1 | 70 | 1 | 1 | 0 | 0 |
| 7:20 AM | 0 | 0 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 40 | 0 | 83 | 0 | 0 | 0 | 0 |
| 7:25 AM | 0 | 0 | 0 | 0 | 0 | 47 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 36 | 0 | 88 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 47 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 46 | 0 | 95 | 1 | 0 | 0 | 0 |
| 7:35 AM | 0 | 0 | 0 | 0 | 0 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 1 | 33 | 0 | 77 | 0 | 0 | 0 | 0 |
| 7:40 AM | 0 | 0 | 0 | 0 | 0 | 53 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 48 | 0 | 107 | 0 | 0 | 0 | 1 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 62 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 44 | 0 | 113 | 1 | 0 | 0 | 0 |
| 7:50 AM | 0 | 0 | 0 | 0 | 0 | 87 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 47 | 0 | 139 | 1 | 0 | 0 | 0 |
| 7:55 AM | 0 | 0 | 0 | 0 | 0 | 64 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 60 | 0 | 132 | 1 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 61 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 3 | 46 | 0 | 116 | 0 | 0 | 0 | 0 |
| 8:05 AM | 0 | 0 | 0 | 0 | 0 | 57 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 49 | 0 | 109 | 0 | 1 | 0 | 0 |
| 8:10 AM | 0 | 0 | 0 | 0 | 0 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 44 | 0 | 91 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 57 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 52 | 0 | 115 | 1 | 0 | 0 | 0 |
| 8:20 AM | 0 | 0 | 0 | 0 | 0 | 58 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 40 | 0 | 104 | 1 | 0 | 0 | 0 |
| 8:25 AM | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 54 | 0 | 106 | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 51 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 45 | 0 | 99 | 0 | 0 | 0 | 1 |
| 8:35 AM | 0 | 0 | 0 | 0 | 0 | 54 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 55 | 0 | 111 | 0 | 0 | 0 | 0 |
| 8:40 AM | 0 | 0 | 0 | 0 | 0 | 48 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 40 | 0 | 93 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 55 | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 33 | 0 | 97 | 0 | 0 | 0 | 0 |
| 8:50 AM | 0 | 0 | 0 | 0 | 0 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 45 | 1 | 101 | 0 | 1 | 0 | 0 |
| 8:55 AM | 0 | 0 | 0 | 0 | 0 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 30 | 0 | 72 | 0 | 0 | 0 | 0 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 1,186 | 8 | 0 | 0 | 0 | 0 | 0 | 56 | 60 | 1,000 | 2 | 2,310 | 8 | 4 | 0 | 2 |

15-Minute Interval Summary

7:00 AM to 9:00 AM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Bond St | | | | Westbound Bond St | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|-------------------|---|---|-------|-------------------|-------|---|-------|-------------------|---|---|-------|-------------------|----|-------|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 98 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 6 | 83 | 0 | 192 | 1 | 1 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 7 | 106 | 1 | 241 | 1 | 1 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 136 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 7 | 127 | 0 | 279 | 1 | 0 | 0 | 1 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 213 | 1 | 0 | 0 | 0 | 0 | 0 | 8 | 11 | 151 | 0 | 384 | 3 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 163 | 1 | 0 | 0 | 0 | 0 | 0 | 8 | 5 | 139 | 0 | 316 | 0 | 1 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 159 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 11 | 146 | 0 | 325 | 2 | 0 | 0 | 0 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 153 | 2 | 0 | 0 | 0 | 0 | 0 | 6 | 2 | 140 | 0 | 303 | 0 | 0 | 0 | 1 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 143 | 3 | 0 | 0 | 0 | 0 | 0 | 5 | 11 | 108 | 1 | 270 | 0 | 1 | 0 | 0 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 1,186 | 8 | 0 | 0 | 0 | 0 | 0 | 56 | 60 | 1,000 | 2 | 2,310 | 8 | 4 | 0 | 2 |

Peak Hour Summary

7:40 AM to 8:40 AM

| By Approach | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Bond St | | | | Westbound Bond St | | | | Total | Pedestrians Crosswalk | | | |
|-------------|-------------------|-----|-------|-------|-------------------|-----|-------|-------|-------------------|-----|-------|-------|-------------------|-----|-------|-------|-------|-----------------------|-------|------|------|
| | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | | North | South | East | West |
| Volume | 0 | 722 | 722 | 0 | 696 | 584 | 1,280 | 0 | 0 | 36 | 36 | 0 | 646 | 0 | 646 | 0 | 1,342 | 5 | 1 | 0 | 2 |
| %HV | 0.0% | | | | 3.9% | | | | 0.0% | | | | 6.3% | | | | 5.1% | | | | |
| PHF | 0.00 | | | | 0.81 | | | | 0.00 | | | | 0.93 | | | | 0.87 | | | | |

| By Movement | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Bond St | | | | Westbound Bond St | | | | Total |
|-------------|-------------------|------|------|-------|-------------------|------|------|-------|-------------------|------|------|-------|-------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 0 | 0 | 0 | 0 | 0 | 693 | 3 | 696 | 0 | 0 | 0 | 0 | 29 | 33 | 584 | 646 | 1,342 |
| %HV | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 3.9% | 0.0% | 3.9% | 0.0% | 0.0% | 0.0% | 0.0% | 6.9% | 3.0% | 6.5% | 6.3% | 5.1% |
| PHF | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.81 | 0.38 | 0.81 | 0.00 | 0.00 | 0.00 | 0.00 | 0.73 | 0.69 | 0.94 | 0.93 | 0.87 |

Rolling Hour Summary

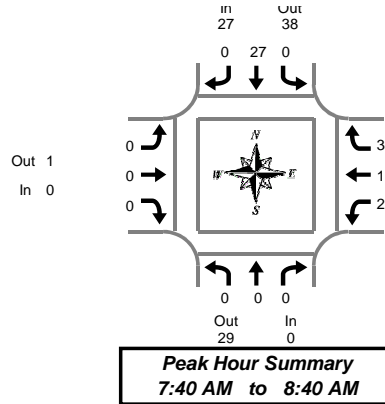
7:00 AM to 9:00 AM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Bond St | | | | Westbound Bond St | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|-------------------|---|---|-------|-------------------|-----|---|-------|-------------------|---|---|-------|-------------------|----|-----|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 568 | 2 | 0 | 0 | 0 | 0 | 0 | 28 | 31 | 467 | 1 | 1,096 | 6 | 2 | 0 | 1 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 633 | 2 | 0 | 0 | 0 | 0 | 0 | 32 | 30 | 523 | 1 | 1,220 | 5 | 2 | 0 | 1 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 671 | 2 | 0 | 0 | 0 | 0 | 0 | 34 | 34 | 563 | 0 | 1,304 | 6 | 1 | 0 | 1 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 688 | 4 | 0 | 0 | 0 | 0 | 0 | 31 | 29 | 576 | 0 | 1,328 | 5 | 1 | 0 | 1 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 618 | 6 | 0 | 0 | 0 | 0 | 0 | 28 | 29 | 533 | 1 | 1,214 | 2 | 2 | 0 | 1 |

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



8th St & Bond St

Thursday, November 01, 2018
7:00 AM to 9:00 AM

Heavy Vehicle 5-Minute Interval Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Bond St | | | | Westbound Bond St | | | | Interval Total | |
|---------------------|-------------------|---|---|-------|-------------------|----|---|-------|-------------------|---|---|-------|-------------------|---|----|-------|----------------|-----|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 7:05 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 4 | 5 | 5 |
| 7:10 AM | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 8 | 8 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 8 | 8 |
| 7:20 AM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| 7:25 AM | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 6 | 6 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 4 | 9 | 9 |
| 7:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 | 4 |
| 7:40 AM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 5 | 5 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 6 | 6 |
| 7:50 AM | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 4 | 4 |
| 7:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 5 | 5 | 5 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 9 | 9 |
| 8:05 AM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 3 |
| 8:10 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 4 | 4 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 7 | 7 |
| 8:20 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 3 | 4 | 4 |
| 8:25 AM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 4 | 6 | 6 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 7 | 7 |
| 8:35 AM | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 8 | 8 |
| 8:40 AM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 6 | 6 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 4 | 8 | 8 |
| 8:50 AM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 6 | 6 |
| 8:55 AM | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 3 | 6 | 6 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 62 | 0 | 62 | 0 | 0 | 0 | 0 | 5 | 5 | 67 | 77 | 139 | 139 |

Heavy Vehicle 15-Minute Interval Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Bond St | | | | Westbound Bond St | | | | Interval Total | |
|---------------------|-------------------|---|---|-------|-------------------|----|---|-------|-------------------|---|---|-------|-------------------|---|----|-------|----------------|-----|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 10 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 6 | 16 | 16 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 7 | 16 | 16 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 1 | 10 | 11 | 18 | 18 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 10 | 15 | 15 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 7 | 16 | 16 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 1 | 1 | 10 | 12 | 17 | 17 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 13 | 21 | 21 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 9 | 0 | 0 | 0 | 0 | 2 | 1 | 8 | 11 | 20 | 20 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 62 | 0 | 62 | 0 | 0 | 0 | 0 | 5 | 5 | 67 | 77 | 139 | 139 |

Heavy Vehicle Peak Hour Summary 7:40 AM to 8:40 AM

| By Approach | Northbound 8th St | | | Southbound 8th St | | | Eastbound Bond St | | | Westbound Bond St | | | Total |
|-------------|-------------------|-----|-------|-------------------|-----|-------|-------------------|-----|-------|-------------------|-----|-------|-------|
| | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | |
| Volume | 0 | 29 | 29 | 27 | 38 | 65 | 0 | 1 | 1 | 41 | 0 | 41 | 68 |
| PHF | 0.00 | | | 0.75 | | | 0.00 | | | 0.79 | | | 0.81 |

| By Movement | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Bond St | | | | Westbound Bond St | | | | Total |
|-------------|-------------------|------|------|-------|-------------------|------|------|-------|-------------------|------|------|-------|-------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 27 | 0 | 0 | 0 | 0 | 2 | 1 | 38 | 41 | 68 |
| PHF | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.75 | 0.00 | 0.75 | 0.00 | 0.00 | 0.00 | 0.00 | 0.50 | 0.25 | 0.79 | 0.79 | 0.81 |

Heavy Vehicle Rolling Hour Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Bond St | | | | Westbound Bond St | | | | Interval Total | |
|---------------------|-------------------|---|---|-------|-------------------|----|---|-------|-------------------|---|---|-------|-------------------|----|----|-------|----------------|----|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 31 | 0 | 31 | 0 | 0 | 0 | 2 | 3 | 29 | 34 | 65 | 65 | |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 30 | 0 | 0 | 0 | 0 | 1 | 1 | 33 | 35 | 65 | 65 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 26 | 0 | 26 | 0 | 0 | 0 | 0 | 2 | 2 | 36 | 40 | 66 | 66 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 27 | 0 | 0 | 0 | 0 | 2 | 1 | 39 | 42 | 69 | 69 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 31 | 0 | 31 | 0 | 0 | 0 | 0 | 3 | 2 | 38 | 43 | 74 | 74 |

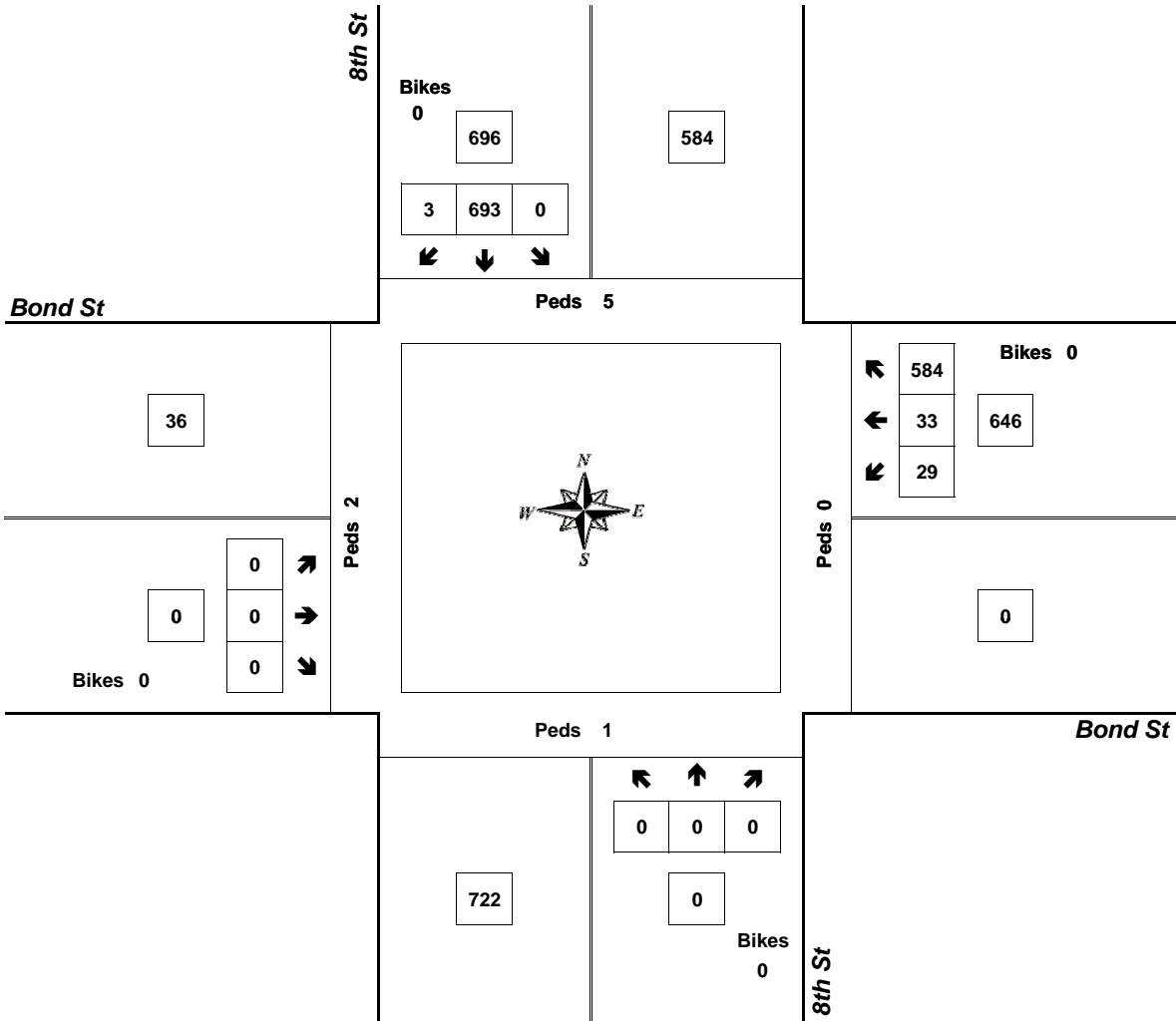
Peak Hour Summary



Clay Carney
(503) 833-2740

8th St & Bond St

7:40 AM to 8:40 AM
Thursday, November 01, 2018



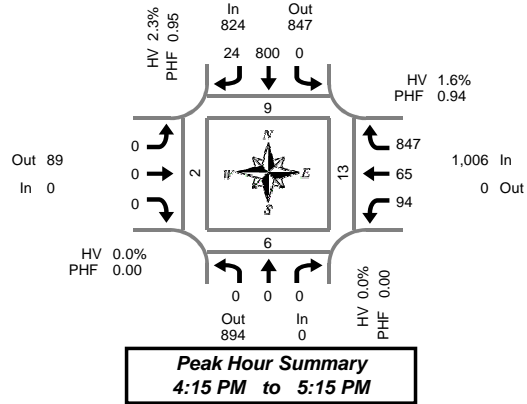
| Approach | PHF | HV% | Volume |
|---------------------|-------------|-------------|--------------|
| EB | 0.00 | 0.0% | 0 |
| WB | 0.93 | 6.3% | 646 |
| NB | 0.00 | 0.0% | 0 |
| SB | 0.81 | 3.9% | 696 |
| Intersection | 0.87 | 5.1% | 1,342 |

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary



Clay Carney
(503) 833-2740



8th St & Bond St

Thursday, November 01, 2018

4:00 PM to 6:00 PM

5-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Bond St | | | | Westbound Bond St | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|-------------------|---|---|-------|-------------------|-------|----|-------|-------------------|---|---|-------|-------------------|-----|-------|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 64 | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 78 | 0 | 155 | 3 | 0 | 2 | 1 |
| 4:05 PM | 0 | 0 | 0 | 0 | 0 | 65 | 2 | 0 | 0 | 0 | 0 | 0 | 9 | 7 | 67 | 0 | 150 | 0 | 0 | 1 | 2 |
| 4:10 PM | 0 | 0 | 0 | 0 | 0 | 57 | 4 | 0 | 0 | 0 | 0 | 0 | 7 | 4 | 57 | 0 | 129 | 0 | 1 | 1 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 61 | 5 | 0 | 0 | 0 | 0 | 0 | 7 | 10 | 67 | 0 | 150 | 0 | 0 | 0 | 1 |
| 4:20 PM | 0 | 0 | 0 | 0 | 0 | 78 | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 3 | 76 | 0 | 164 | 1 | 1 | 1 | 0 |
| 4:25 PM | 0 | 0 | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 4 | 56 | 0 | 139 | 1 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 61 | 3 | 0 | 0 | 0 | 0 | 0 | 8 | 7 | 80 | 0 | 159 | 0 | 0 | 1 | 0 |
| 4:35 PM | 0 | 0 | 0 | 0 | 0 | 63 | 2 | 0 | 0 | 0 | 0 | 0 | 9 | 3 | 77 | 0 | 154 | 0 | 0 | 0 | 0 |
| 4:40 PM | 0 | 0 | 0 | 0 | 0 | 72 | 3 | 0 | 0 | 0 | 0 | 0 | 6 | 3 | 74 | 0 | 158 | 1 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 71 | 2 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 62 | 0 | 148 | 2 | 0 | 3 | 0 |
| 4:50 PM | 0 | 0 | 0 | 0 | 0 | 67 | 2 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 66 | 0 | 147 | 1 | 1 | 1 | 0 |
| 4:55 PM | 0 | 0 | 0 | 0 | 0 | 64 | 3 | 0 | 0 | 0 | 0 | 0 | 4 | 8 | 66 | 0 | 145 | 2 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 62 | 2 | 0 | 0 | 0 | 0 | 0 | 10 | 7 | 63 | 0 | 144 | 0 | 1 | 0 | 0 |
| 5:05 PM | 0 | 0 | 0 | 0 | 0 | 63 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 2 | 78 | 0 | 153 | 0 | 2 | 7 | 0 |
| 5:10 PM | 0 | 0 | 0 | 0 | 0 | 70 | 1 | 0 | 0 | 0 | 0 | 0 | 11 | 5 | 82 | 0 | 169 | 1 | 1 | 0 | 1 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 72 | 2 | 0 | 0 | 0 | 0 | 0 | 11 | 4 | 60 | 0 | 149 | 3 | 0 | 0 | 0 |
| 5:20 PM | 0 | 0 | 0 | 0 | 0 | 67 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 67 | 0 | 142 | 2 | 1 | 2 | 0 |
| 5:25 PM | 0 | 0 | 0 | 0 | 0 | 64 | 4 | 0 | 0 | 0 | 0 | 0 | 6 | 5 | 62 | 0 | 141 | 0 | 0 | 0 | 1 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 75 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 7 | 50 | 0 | 138 | 0 | 0 | 0 | 1 |
| 5:35 PM | 0 | 0 | 0 | 0 | 0 | 61 | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 2 | 70 | 0 | 140 | 0 | 0 | 0 | 0 |
| 5:40 PM | 0 | 0 | 0 | 0 | 0 | 58 | 3 | 1 | 0 | 0 | 0 | 0 | 7 | 7 | 52 | 0 | 127 | 1 | 0 | 2 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 3 | 59 | 0 | 114 | 0 | 0 | 0 | 1 |
| 5:50 PM | 0 | 0 | 0 | 0 | 0 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 3 | 40 | 0 | 92 | 0 | 1 | 0 | 0 |
| 5:55 PM | 0 | 0 | 0 | 0 | 0 | 47 | 2 | 0 | 0 | 0 | 0 | 0 | 8 | 1 | 47 | 0 | 105 | 2 | 0 | 0 | 1 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 1,521 | 46 | 1 | 0 | 0 | 0 | 0 | 171 | 118 | 1,556 | 0 | 3,412 | 20 | 9 | 21 | 9 |

15-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Bond St | | | | Westbound Bond St | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|-------------------|---|---|-------|-------------------|-------|----|-------|-------------------|---|---|-------|-------------------|-----|-------|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 186 | 7 | 0 | 0 | 0 | 0 | 0 | 22 | 17 | 202 | 0 | 434 | 3 | 1 | 4 | 3 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 207 | 6 | 0 | 0 | 0 | 0 | 0 | 24 | 17 | 199 | 0 | 453 | 2 | 1 | 1 | 1 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 196 | 8 | 0 | 0 | 0 | 0 | 0 | 23 | 13 | 231 | 0 | 471 | 1 | 0 | 1 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 202 | 7 | 0 | 0 | 0 | 0 | 0 | 16 | 21 | 194 | 0 | 440 | 5 | 1 | 4 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 195 | 3 | 0 | 0 | 0 | 0 | 0 | 31 | 14 | 223 | 0 | 466 | 1 | 4 | 7 | 1 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 203 | 8 | 0 | 0 | 0 | 0 | 0 | 19 | 13 | 189 | 0 | 432 | 5 | 1 | 2 | 1 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 194 | 5 | 1 | 0 | 0 | 0 | 0 | 18 | 16 | 172 | 0 | 405 | 1 | 0 | 2 | 1 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 138 | 2 | 0 | 0 | 0 | 0 | 0 | 18 | 7 | 146 | 0 | 311 | 2 | 1 | 0 | 2 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 1,521 | 46 | 1 | 0 | 0 | 0 | 0 | 171 | 118 | 1,556 | 0 | 3,412 | 20 | 9 | 21 | 9 |

Peak Hour Summary

4:15 PM to 5:15 PM

| By Approach | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Bond St | | | | Westbound Bond St | | | | Total | Pedestrians Crosswalk | | | |
|-------------|-------------------|-----|-------|-------|-------------------|-----|-------|-------|-------------------|-----|-------|-------|-------------------|-----|-------|-------|-------|-----------------------|-------|------|------|
| | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | | North | South | East | West |
| Volume | 0 | 894 | 894 | 0 | 824 | 847 | 1,671 | 0 | 0 | 89 | 89 | 0 | 1,006 | 0 | 1,006 | 0 | 1,830 | 9 | 6 | 13 | 2 |
| %HV | 0.0% | | | | 2.3% | | | | 0.0% | | | | 1.6% | | | | 1.9% | | | | |
| PHF | 0.00 | | | | 0.95 | | | | 0.00 | | | | 0.94 | | | | 0.97 | | | | |

| By Movement | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Bond St | | | | Westbound Bond St | | | | Total | | | | |
|-------------|-------------------|------|------|-------|-------------------|------|------|-------|-------------------|------|------|-------|-------------------|------|------|-------|-------|--|--|--|--|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | | | | |
| Volume | 0 | 0 | 0 | 0 | 0 | 800 | 24 | 824 | 0 | 0 | 0 | 0 | 94 | 65 | 847 | 1,006 | 1,830 | | | | |
| %HV | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 2.4% | 0.0% | 2.3% | 0.0% | 0.0% | 0.0% | 0.0% | 2.1% | 0.0% | 1.7% | 1.6% | 1.9% | | | | |
| PHF | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.95 | 0.75 | 0.95 | 0.00 | 0.00 | 0.00 | 0.00 | 0.76 | 0.77 | 0.92 | 0.94 | 0.97 | | | | |

Rolling Hour Summary

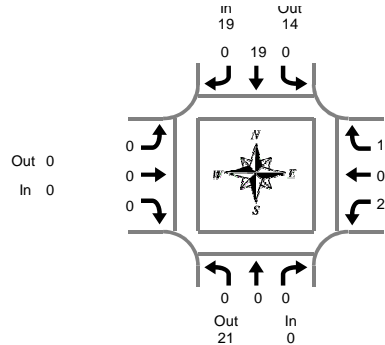
4:00 PM to 6:00 PM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Bond St | | | | Westbound Bond St | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|-------------------|---|---|-------|-------------------|-----|----|-------|-------------------|---|---|-------|-------------------|----|-----|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 791 | 28 | 0 | 0 | 0 | 0 | 0 | 85 | 68 | 826 | 0 | 1,798 | 11 | 3 | 10 | 4 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 800 | 24 | 0 | 0 | 0 | 0 | 0 | 94 | 65 | 847 | 0 | 1,830 | 9 | 6 | 13 | 2 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 796 | 26 | 0 | 0 | 0 | 0 | 0 | 89 | 61 | 837 | 0 | 1,809 | 12 | 6 | 14 | 2 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 794 | 23 | 1 | 0 | 0 | 0 | 0 | 84 | 64 | 778 | 0 | 1,743 | 12 | 6 | 15 | 3 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 730 | 18 | 1 | 0 | 0 | 0 | 0 | 86 | 50 | 730 | 0 | 1,614 | 9 | 6 | 11 | 5 |

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



Peak Hour Summary
4:15 PM to 5:15 PM

8th St & Bond St

Thursday, November 01, 2018

4:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Bond St | | | | Westbound Bond St | | | | Interval Total |
|---------------------|-------------------|---|---|-------|-------------------|----|---|-------|-------------------|---|---|-------|-------------------|---|----|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 4 |
| 4:05 PM | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 4:10 PM | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 8 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 7 |
| 4:20 PM | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 4 |
| 4:35 PM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3 |
| 4:40 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 4:50 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 |
| 4:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 2 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |
| 5:10 PM | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3 |
| 5:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 5:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 4 |
| 5:35 PM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3 |
| 5:40 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3 |
| 5:50 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 5:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 2 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 40 | 0 | 40 | 0 | 0 | 0 | 0 | 3 | 0 | 30 | 33 | 73 |

Heavy Vehicle 15-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Bond St | | | | Westbound Bond St | | | | Interval Total |
|---------------------|-------------------|---|---|-------|-------------------|----|---|-------|-------------------|---|---|-------|-------------------|---|----|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 16 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 12 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 10 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 6 | 7 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 6 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 5 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 10 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 4 | 7 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 40 | 0 | 40 | 0 | 0 | 0 | 0 | 3 | 0 | 30 | 33 | 73 |

Heavy Vehicle Peak Hour Summary

4:15 PM to 5:15 PM

| By Approach | Northbound 8th St | | | Southbound 8th St | | | Eastbound Bond St | | | Westbound Bond St | | | Total |
|-------------|-------------------|-----|-------|-------------------|-----|-------|-------------------|-----|-------|-------------------|-----|-------|-------|
| | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | |
| Volume | 0 | 21 | 21 | 19 | 14 | 33 | 0 | 0 | 0 | 16 | 0 | 16 | 35 |
| PHF | 0.00 | | | 0.68 | | | 0.00 | | | 0.67 | | | 0.73 |

| By Movement | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Bond St | | | | Westbound Bond St | | | | Total |
|-------------|-------------------|------|------|-------|-------------------|------|------|-------|-------------------|------|------|-------|-------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 19 | 0 | 0 | 0 | 0 | 2 | 0 | 14 | 16 | 35 |
| PHF | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.68 | 0.00 | 0.68 | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 | 0.00 | 0.58 | 0.67 | 0.73 |

Heavy Vehicle Rolling Hour Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Bond St | | | | Westbound Bond St | | | | Interval Total |
|---------------------|-------------------|---|---|-------|-------------------|----|---|-------|-------------------|---|---|-------|-------------------|---|----|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 24 | 0 | 0 | 0 | 0 | 1 | 0 | 20 | 21 | 45 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 19 | 0 | 0 | 0 | 0 | 2 | 0 | 14 | 16 | 35 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 14 | 0 | 0 | 0 | 0 | 2 | 0 | 12 | 14 | 28 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 14 | 0 | 0 | 0 | 0 | 2 | 0 | 12 | 14 | 28 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 16 | 0 | 0 | 0 | 0 | 2 | 0 | 10 | 12 | 28 |

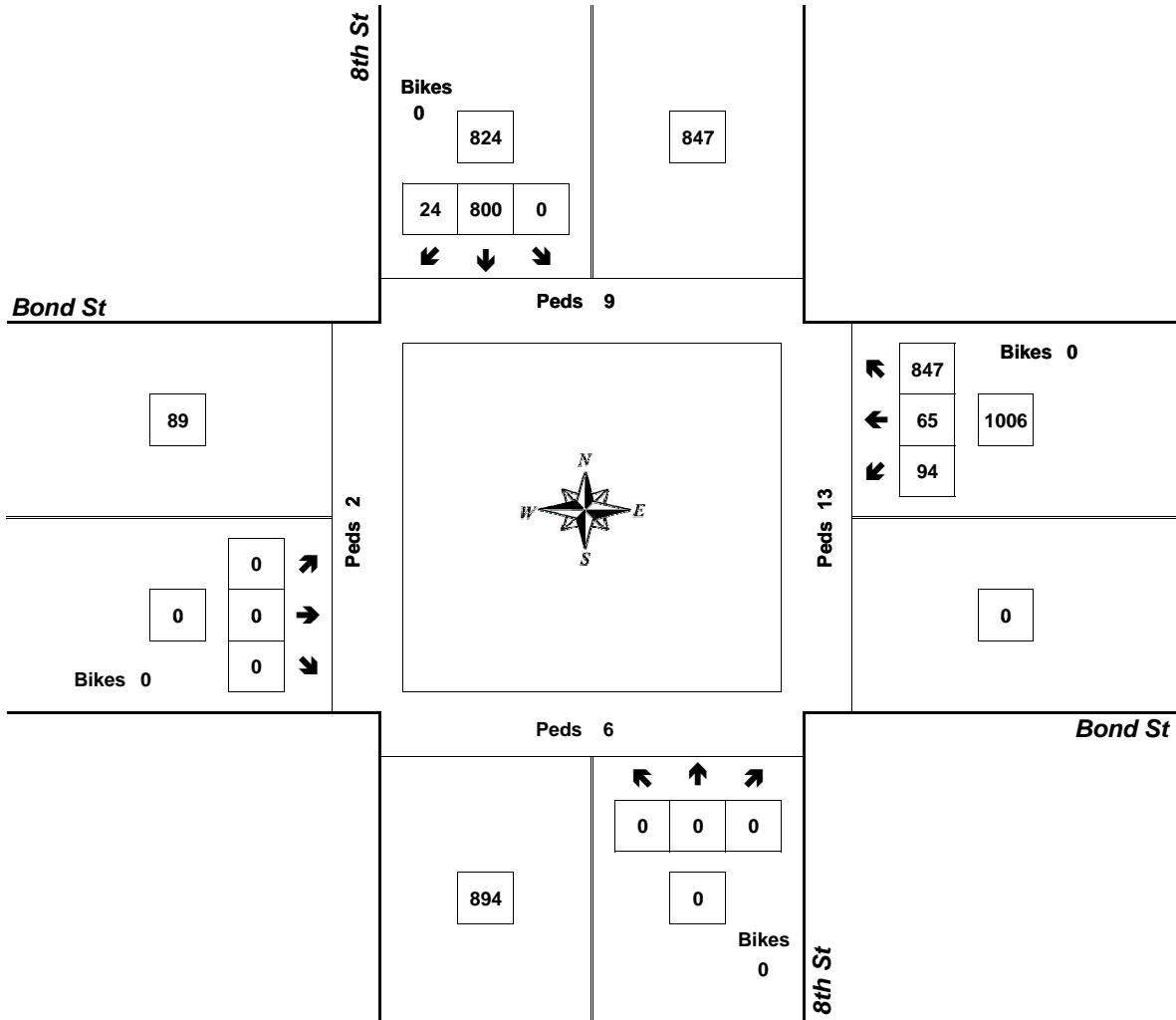
Peak Hour Summary



Clay Carney
(503) 833-2740

8th St & Bond St

4:15 PM to 5:15 PM
Thursday, November 01, 2018



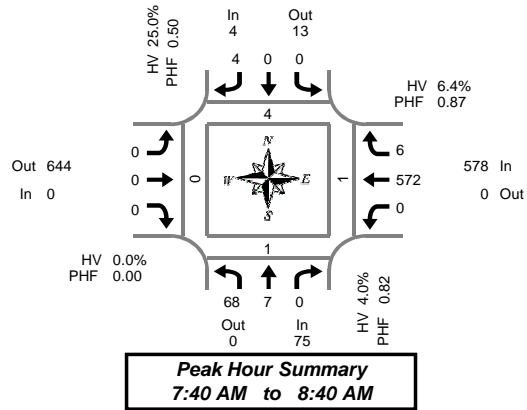
| Approach | PHF | HV% | Volume |
|---------------------|-------------|-------------|--------------|
| EB | 0.00 | 0.0% | 0 |
| WB | 0.94 | 1.6% | 1,006 |
| NB | 0.00 | 0.0% | 0 |
| SB | 0.95 | 2.3% | 824 |
| Intersection | 0.97 | 1.9% | 1,830 |

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary



Clay Carney
(503) 833-2740



9th St & Marine Dr

Thursday, November 01, 2018

7:00 AM to 9:00 AM

5-Minute Interval Summary

7:00 AM to 9:00 AM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|-------------------|----|---|-------|-------------------|---|----|-------|---------------------|---|---|-------|---------------------|-------|----|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 7:00 AM | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 1 | 0 | 32 | 0 | 0 | 0 | 0 |
| 7:05 AM | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 | 0 | 0 | 39 | 0 | 0 | 0 | 0 |
| 7:10 AM | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 0 | 0 | 31 | 1 | 1 | 0 | 0 |
| 7:15 AM | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 39 | 0 | 0 | 42 | 0 | 0 | 1 | 0 |
| 7:20 AM | 4 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 37 | 0 | 0 | 43 | 0 | 0 | 0 | 0 |
| 7:25 AM | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 0 | 0 | 50 | 2 | 0 | 0 | 2 |
| 7:30 AM | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 0 | 0 | 41 | 0 | 1 | 0 | 0 |
| 7:35 AM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 46 | 0 | 0 | 0 | 0 |
| 7:40 AM | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 49 | 0 | 0 | 0 | 0 |
| 7:45 AM | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 | 1 | 0 | 54 | 0 | 0 | 0 | 0 |
| 7:50 AM | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 | 1 | 0 | 57 | 1 | 0 | 0 | 0 |
| 7:55 AM | 6 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 56 | 0 | 0 | 64 | 0 | 0 | 0 | 0 |
| 8:00 AM | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 58 | 2 | 0 | 66 | 0 | 0 | 0 | 0 |
| 8:05 AM | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 38 | 0 | 0 | 46 | 0 | 1 | 0 | 0 |
| 8:10 AM | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 51 | 0 | 0 | 0 | 0 |
| 8:15 AM | 5 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 47 | 0 | 0 | 54 | 0 | 0 | 1 | 0 |
| 8:20 AM | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 | 1 | 0 | 50 | 0 | 0 | 0 | 0 |
| 8:25 AM | 6 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 52 | 0 | 0 | 60 | 2 | 0 | 0 | 0 |
| 8:30 AM | 5 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 51 | 0 | 0 | 0 | 0 |
| 8:35 AM | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 | 1 | 0 | 55 | 1 | 0 | 0 | 0 |
| 8:40 AM | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 46 | 0 | 0 | 1 | 0 |
| 8:45 AM | 3 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 40 | 4 | 0 | 49 | 0 | 0 | 0 | 0 |
| 8:50 AM | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 40 | 0 | 1 | 45 | 0 | 0 | 1 | 2 |
| 8:55 AM | 6 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 38 | 0 | 0 | 46 | 0 | 0 | 0 | 0 |
| Total Survey | 113 | 14 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 1,019 | 11 | 1 | 1,167 | 7 | 3 | 4 | 4 |

15-Minute Interval Summary

7:00 AM to 9:00 AM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|-------------------|----|---|-------|-------------------|---|----|-------|---------------------|---|---|-------|---------------------|-------|----|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 7:00 AM | 11 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 89 | 1 | 0 | 102 | 1 | 1 | 0 | 0 |
| 7:15 AM | 12 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 119 | 0 | 0 | 135 | 2 | 0 | 1 | 2 |
| 7:30 AM | 12 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 0 | 0 | 136 | 0 | 1 | 0 | 0 |
| 7:45 AM | 17 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 154 | 2 | 0 | 175 | 1 | 0 | 0 | 0 |
| 8:00 AM | 21 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 138 | 2 | 0 | 163 | 0 | 1 | 0 | 0 |
| 8:15 AM | 14 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 145 | 1 | 0 | 164 | 2 | 0 | 1 | 0 |
| 8:30 AM | 13 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 135 | 1 | 0 | 152 | 1 | 0 | 1 | 0 |
| 8:45 AM | 13 | 2 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 4 | 1 | 140 | 0 | 0 | 1 | 2 |
| Total Survey | 113 | 14 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 1,019 | 11 | 1 | 1,167 | 7 | 3 | 4 | 4 |

Peak Hour Summary

7:40 AM to 8:40 AM

| By Approach | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Total | Pedestrians Crosswalk | | | |
|-------------|-------------------|-----|-------|-------|-------------------|-----|-------|-------|---------------------|-----|-------|-------|---------------------|-----|-------|-------|-------|-----------------------|-------|------|------|
| | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | | North | South | East | West |
| Volume | 75 | 0 | 75 | 0 | 4 | 13 | 17 | 0 | 0 | 644 | 644 | 0 | 578 | 0 | 578 | 0 | 657 | 4 | 1 | 1 | 0 |
| %HV | 4.0% | | | | 25.0% | | | | 0.0% | | | | 6.4% | | | | 6.2% | | | | |
| PHF | 0.82 | | | | 0.50 | | | | 0.00 | | | | 0.87 | | | | 0.88 | | | | |

| By Movement | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Total |
|-------------|-------------------|-------|------|-------|-------------------|------|-------|-------|---------------------|------|------|-------|---------------------|------|-------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 68 | 7 | 0 | 75 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 572 | 6 | 578 | 657 |
| %HV | 1.5% | 28.6% | 0.0% | 4.0% | 0.0% | 0.0% | 25.0% | 25.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 6.3% | 16.7% | 6.4% | 6.2% |
| PHF | 0.81 | 0.88 | 0.00 | 0.82 | 0.00 | 0.00 | 0.50 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.88 | 0.50 | 0.87 | 0.88 |

Rolling Hour Summary

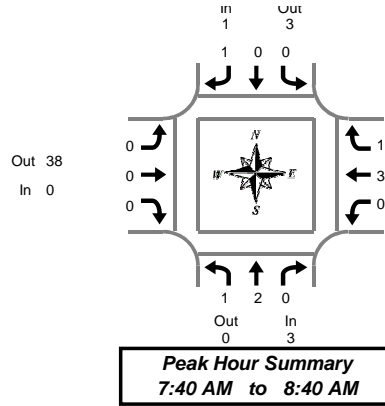
7:00 AM to 9:00 AM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|---------------------|---|---|-------|---------------------|-----|---|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 7:00 AM | 52 | 6 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 483 | 3 | 0 | 548 | 4 | 2 | 1 | 2 |
| 7:15 AM | 62 | 8 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 532 | 4 | 0 | 609 | 3 | 2 | 1 | 2 |
| 7:30 AM | 64 | 8 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 558 | 5 | 0 | 638 | 3 | 2 | 1 | 0 |
| 7:45 AM | 65 | 7 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 572 | 6 | 0 | 654 | 4 | 1 | 2 | 0 |
| 8:00 AM | 61 | 8 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 536 | 8 | 1 | 619 | 3 | 1 | 3 | 2 |

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



9th St & Marine Dr

Thursday, November 01, 2018

7:00 AM to 9:00 AM

Heavy Vehicle 5-Minute Interval Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Interval Total |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|---------------------|---|---|-------|---------------------|----|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 3 |
| 7:05 AM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 5 |
| 7:10 AM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 4 |
| 7:15 AM | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 5 |
| 7:20 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:25 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 3 |
| 7:30 AM | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 5 |
| 7:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 5 |
| 7:40 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 3 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 4 | 4 |
| 7:50 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 7:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 3 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 3 |
| 8:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 8:10 AM | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 5 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 3 |
| 8:20 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 8:25 AM | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 6 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 3 |
| 8:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 5 |
| 8:40 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 4 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 1 | 6 | 6 |
| 8:50 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 8:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 3 |
| Total Survey | 5 | 3 | 0 | 8 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 74 | 2 | 76 | 86 |

Heavy Vehicle 15-Minute Interval Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Interval Total |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|---------------------|---|---|-------|---------------------|----|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 7:00 AM | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 10 | 12 |
| 7:15 AM | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 8 |
| 7:30 AM | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 11 | 13 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 7 | 1 | 8 | 9 |
| 8:00 AM | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 9 | 10 |
| 8:15 AM | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 9 | 11 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 12 | 12 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 9 | 1 | 10 | 11 |
| Total Survey | 5 | 3 | 0 | 8 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 74 | 2 | 76 | 86 |

Heavy Vehicle Peak Hour Summary 7:40 AM to 8:40 AM

| By Approach | Northbound 9th St | | | Southbound 9th St | | | Eastbound Marine Dr | | | Westbound Marine Dr | | | Total |
|-------------|-------------------|-----|-------|-------------------|-----|-------|---------------------|-----|-------|---------------------|-----|-------|-------|
| | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | |
| Volume | 3 | 0 | 3 | 1 | 3 | 4 | 0 | 38 | 38 | 37 | 0 | 37 | 41 |
| PHF | 0.38 | | | 0.25 | | | 0.00 | | | 0.77 | | | 0.73 |

| By Movement | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Total |
|-------------|-------------------|------|------|-------|-------------------|------|------|-------|---------------------|------|------|-------|---------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 1 | 2 | 0 | 3 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 36 | 1 | 37 | 41 |
| PHF | 0.25 | 0.50 | 0.00 | 0.38 | 0.00 | 0.00 | 0.25 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.75 | 0.25 | 0.77 | 0.73 |

Heavy Vehicle Rolling Hour Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Interval Total |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|---------------------|---|---|-------|---------------------|----|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 7:00 AM | 4 | 1 | 0 | 5 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 35 | 1 | 36 | 42 |
| 7:15 AM | 2 | 2 | 0 | 4 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 34 | 1 | 35 | 40 |
| 7:30 AM | 3 | 2 | 0 | 5 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 36 | 1 | 37 | 43 |
| 7:45 AM | 1 | 2 | 0 | 3 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 37 | 1 | 38 | 42 |
| 8:00 AM | 1 | 2 | 0 | 3 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 39 | 1 | 40 | 44 |

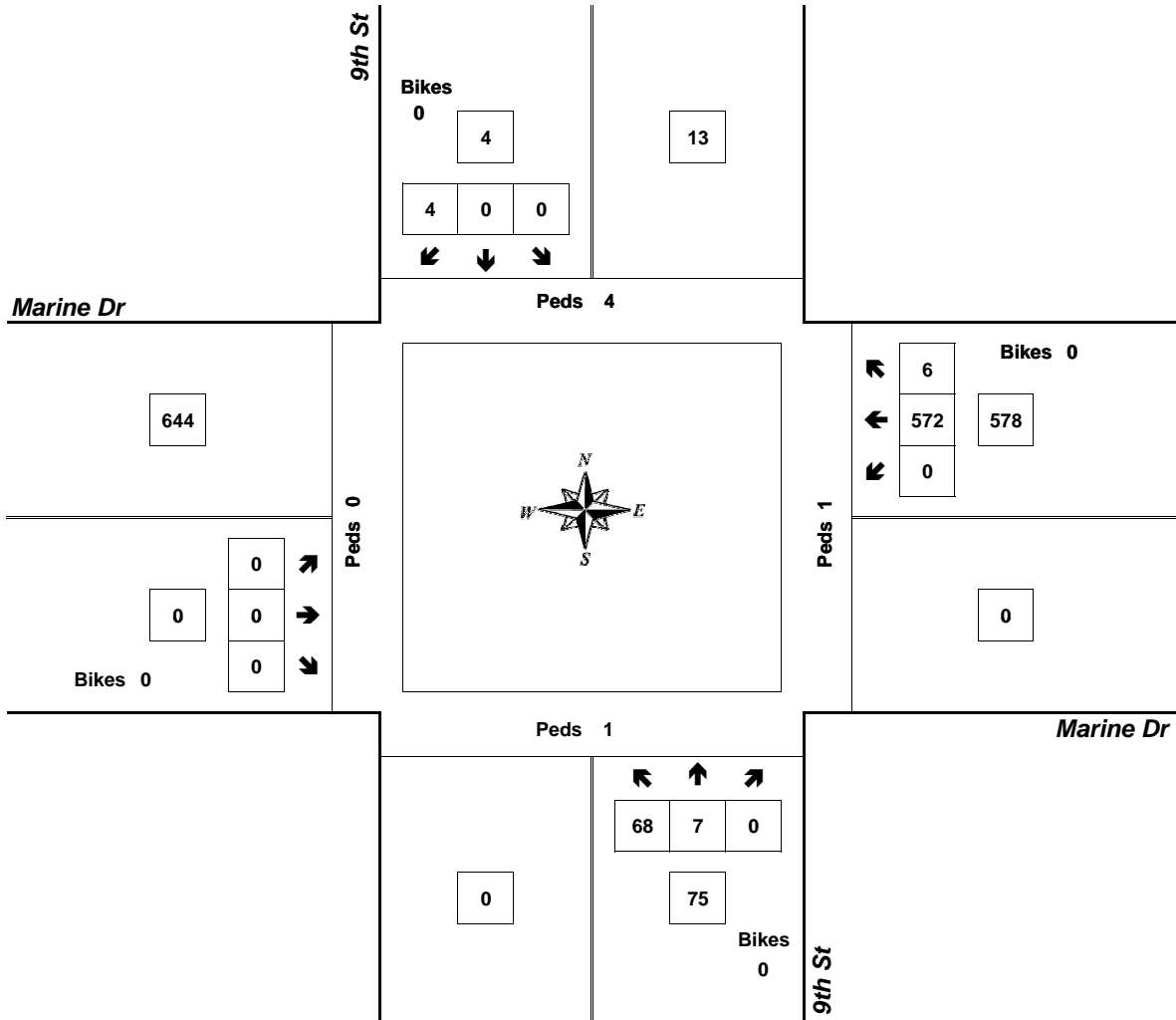
Peak Hour Summary



Clay Carney
(503) 833-2740

9th St & Marine Dr

7:40 AM to 8:40 AM
Thursday, November 01, 2018



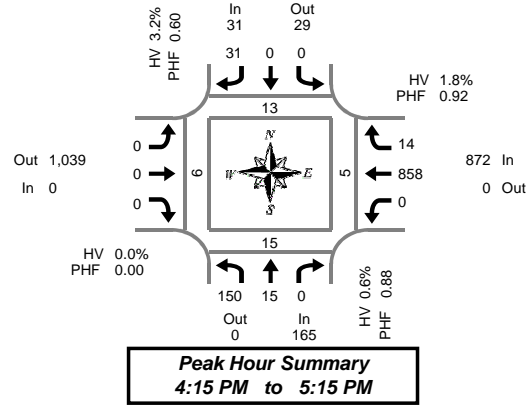
| Approach | PHF | HV% | Volume |
|---------------------|-------------|-------------|------------|
| EB | 0.00 | 0.0% | 0 |
| WB | 0.87 | 6.4% | 578 |
| NB | 0.82 | 4.0% | 75 |
| SB | 0.50 | 25.0% | 4 |
| Intersection | 0.88 | 6.2% | 657 |

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary



Clay Carney
(503) 833-2740



9th St & Marine Dr

Thursday, November 01, 2018

4:00 PM to 6:00 PM

5-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|-------------------|----|---|-------|-------------------|---|----|-------|---------------------|---|---|-------|---------------------|----|---|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 4:00 PM | 12 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 71 | 1 | 0 | 86 | 0 | 2 | 0 | 3 | |
| 4:05 PM | 12 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 69 | 1 | 0 | 84 | 3 | 2 | 0 | 0 | |
| 4:10 PM | 11 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 56 | 1 | 0 | 70 | 1 | 1 | 1 | 1 | |
| 4:15 PM | 14 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 75 | 0 | 0 | 90 | 0 | 1 | 0 | 0 | |
| 4:20 PM | 15 | 2 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 63 | 1 | 0 | 85 | 1 | 1 | 0 | 0 | |
| 4:25 PM | 8 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 64 | 2 | 0 | 77 | 3 | 2 | 0 | 1 | |
| 4:30 PM | 4 | 1 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 84 | 3 | 0 | 96 | 1 | 3 | 1 | 0 | |
| 4:35 PM | 14 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 79 | 2 | 0 | 97 | 0 | 0 | 0 | 0 | |
| 4:40 PM | 13 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 68 | 1 | 0 | 85 | 2 | 1 | 0 | 0 | |
| 4:45 PM | 13 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 64 | 0 | 0 | 81 | 1 | 2 | 0 | 0 | |
| 4:50 PM | 13 | 2 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 65 | 2 | 0 | 85 | 0 | 1 | 0 | 1 | |
| 4:55 PM | 11 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 63 | 3 | 0 | 81 | 2 | 2 | 2 | 2 | |
| 5:00 PM | 16 | 1 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 63 | 0 | 0 | 87 | 1 | 1 | 1 | 0 | |
| 5:05 PM | 11 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 79 | 0 | 0 | 91 | 0 | 1 | 0 | 1 | |
| 5:10 PM | 18 | 1 | 0 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 91 | 0 | 0 | 113 | 2 | 0 | 1 | 1 | |
| 5:15 PM | 13 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 | 2 | 0 | 62 | 1 | 0 | 0 | 0 | |
| 5:20 PM | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 71 | 0 | 0 | 80 | 0 | 2 | 2 | 1 | |
| 5:25 PM | 12 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 59 | 0 | 0 | 73 | 4 | 0 | 1 | 1 | |
| 5:30 PM | 5 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 61 | 0 | 0 | 69 | 2 | 0 | 0 | 0 | |
| 5:35 PM | 9 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 64 | 0 | 0 | 77 | 0 | 0 | 0 | 0 | |
| 5:40 PM | 7 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 67 | 1 | 0 | 76 | 6 | 0 | 0 | 0 | |
| 5:45 PM | 8 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 54 | 0 | 0 | 65 | 1 | 0 | 1 | 0 | |
| 5:50 PM | 6 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 40 | 0 | 0 | 50 | 0 | 0 | 0 | 0 | |
| 5:55 PM | 7 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 52 | 1 | 0 | 64 | 0 | 0 | 0 | 0 | |
| Total Survey | 259 | 27 | 0 | 2 | 0 | 0 | 49 | 0 | 0 | 0 | 0 | 0 | 1,568 | 21 | 0 | 1,924 | 31 | 22 | 10 | 12 | |

15-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|-------------------|----|---|-------|-------------------|---|----|-------|---------------------|---|---|-------|---------------------|----|---|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 4:00 PM | 35 | 1 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 196 | 3 | 0 | 240 | 4 | 5 | 1 | 4 | |
| 4:15 PM | 37 | 6 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 202 | 3 | 0 | 252 | 4 | 4 | 0 | 1 | |
| 4:30 PM | 31 | 3 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 231 | 6 | 0 | 278 | 3 | 4 | 1 | 0 | |
| 4:45 PM | 37 | 4 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 192 | 5 | 0 | 247 | 3 | 5 | 2 | 3 | |
| 5:00 PM | 45 | 2 | 0 | 1 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 233 | 0 | 0 | 291 | 3 | 2 | 2 | 2 | |
| 5:15 PM | 32 | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 176 | 2 | 0 | 215 | 5 | 2 | 3 | 2 | |
| 5:30 PM | 21 | 4 | 0 | 1 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 192 | 1 | 0 | 222 | 8 | 0 | 0 | 0 | |
| 5:45 PM | 21 | 4 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 146 | 1 | 0 | 179 | 1 | 0 | 1 | 0 | |
| Total Survey | 259 | 27 | 0 | 2 | 0 | 0 | 49 | 0 | 0 | 0 | 0 | 0 | 1,568 | 21 | 0 | 1,924 | 31 | 22 | 10 | 12 | |

Peak Hour Summary

4:15 PM to 5:15 PM

| By Approach | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Total | Pedestrians Crosswalk | | | |
|-------------|-------------------|-----|-------|-------|-------------------|-----|-------|-------|---------------------|-------|-------|-------|---------------------|-----|-------|-------|-------|-----------------------|-------|------|------|
| | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | | North | South | East | West |
| Volume | 165 | 0 | 165 | 1 | 31 | 29 | 60 | 0 | 0 | 1,039 | 1,039 | 0 | 872 | 0 | 872 | 0 | 1,068 | 13 | 15 | 5 | 6 |
| %HV | 0.6% | | | | 3.2% | | | | 0.0% | | | | 1.8% | | | | 1.7% | | | | |
| PHF | 0.88 | | | | 0.60 | | | | 0.00 | | | | 0.92 | | | | 0.92 | | | | |

| By Movement | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Total |
|-------------|-------------------|------|------|-------|-------------------|------|------|-------|---------------------|------|------|-------|---------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 150 | 15 | 0 | 165 | 0 | 0 | 31 | 31 | 0 | 0 | 0 | 0 | 0 | 858 | 14 | 872 | 1,068 |
| %HV | 0.0% | 6.7% | 0.0% | 0.6% | 0.0% | 0.0% | 3.2% | 3.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 1.7% | 7.1% | 1.8% | 1.7% |
| PHF | 0.83 | 0.63 | 0.00 | 0.88 | 0.00 | 0.00 | 0.60 | 0.60 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.92 | 0.50 | 0.92 | 0.92 |

Rolling Hour Summary

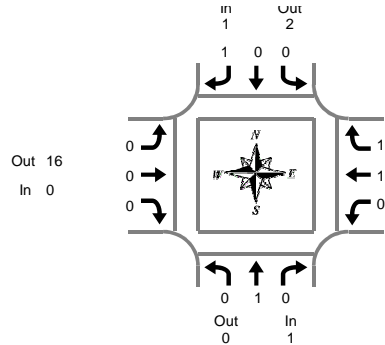
4:00 PM to 6:00 PM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|-------------------|----|---|-------|-------------------|---|----|-------|---------------------|---|---|-------|---------------------|----|---|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 4:00 PM | 140 | 14 | 0 | 0 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 821 | 17 | 0 | 1,017 | 14 | 18 | 4 | 8 | |
| 4:15 PM | 150 | 15 | 0 | 1 | 0 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 858 | 14 | 0 | 1,068 | 13 | 15 | 5 | 6 | |
| 4:30 PM | 145 | 12 | 0 | 1 | 0 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 832 | 13 | 0 | 1,031 | 14 | 13 | 8 | 7 | |
| 4:45 PM | 135 | 13 | 0 | 2 | 0 | 0 | 26 | 0 | 0 | 0 | 0 | 0 | 793 | 8 | 0 | 975 | 19 | 9 | 7 | 7 | |
| 5:00 PM | 119 | 13 | 0 | 2 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 747 | 4 | 0 | 907 | 17 | 4 | 6 | 4 | |

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



Peak Hour Summary
4:15 PM to 5:15 PM

9th St & Marine Dr

Thursday, November 01, 2018

4:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Interval Total |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|---------------------|---|---|-------|---------------------|----|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 4:10 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 5 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 3 |
| 4:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 4:35 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 4:40 PM | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 3 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 4:50 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 4 | 5 |
| 4:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:10 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:30 PM | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:35 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:40 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 3 | 3 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:50 PM | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| Total Survey | 0 | 3 | 0 | 3 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 27 | 3 | 30 | 36 |

Heavy Vehicle 15-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Interval Total |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|---------------------|---|---|-------|---------------------|----|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 5 | 6 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 4 |
| 4:30 PM | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 5 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 1 | 6 | 7 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 3 |
| 5:30 PM | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 4 | 5 |
| 5:45 PM | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 4 |
| Total Survey | 0 | 3 | 0 | 3 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 27 | 3 | 30 | 36 |

Heavy Vehicle Peak Hour Summary

4:15 PM to 5:15 PM

| By Approach | Northbound 9th St | | | Southbound 9th St | | | Eastbound Marine Dr | | | Westbound Marine Dr | | | Total |
|-------------|-------------------|-----|-------|-------------------|-----|-------|---------------------|-----|-------|---------------------|-----|-------|-------|
| | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | |
| Volume | 1 | 0 | 1 | 1 | 2 | 3 | 0 | 16 | 16 | 16 | 0 | 16 | 18 |
| PHF | 0.25 | | | 0.25 | | | 0.00 | | | 0.57 | | | 0.50 |

| By Movement | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Total |
|-------------|-------------------|------|------|-------|-------------------|------|------|-------|---------------------|------|------|-------|---------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 15 | 1 | 16 | 18 |
| PHF | 0.00 | 0.25 | 0.00 | 0.25 | 0.00 | 0.00 | 0.25 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.63 | 0.25 | 0.57 | 0.50 |

Heavy Vehicle Rolling Hour Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Interval Total |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|---------------------|---|---|-------|---------------------|----|----|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 4:00 PM | 0 | 1 | 0 | 1 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 17 | 2 | 19 | 22 | |
| 4:15 PM | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 15 | 1 | 16 | 18 |
| 4:30 PM | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 14 | 1 | 15 | 17 |
| 4:45 PM | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 13 | 2 | 15 | 17 |
| 5:00 PM | 0 | 2 | 0 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 10 | 1 | 11 | 14 |

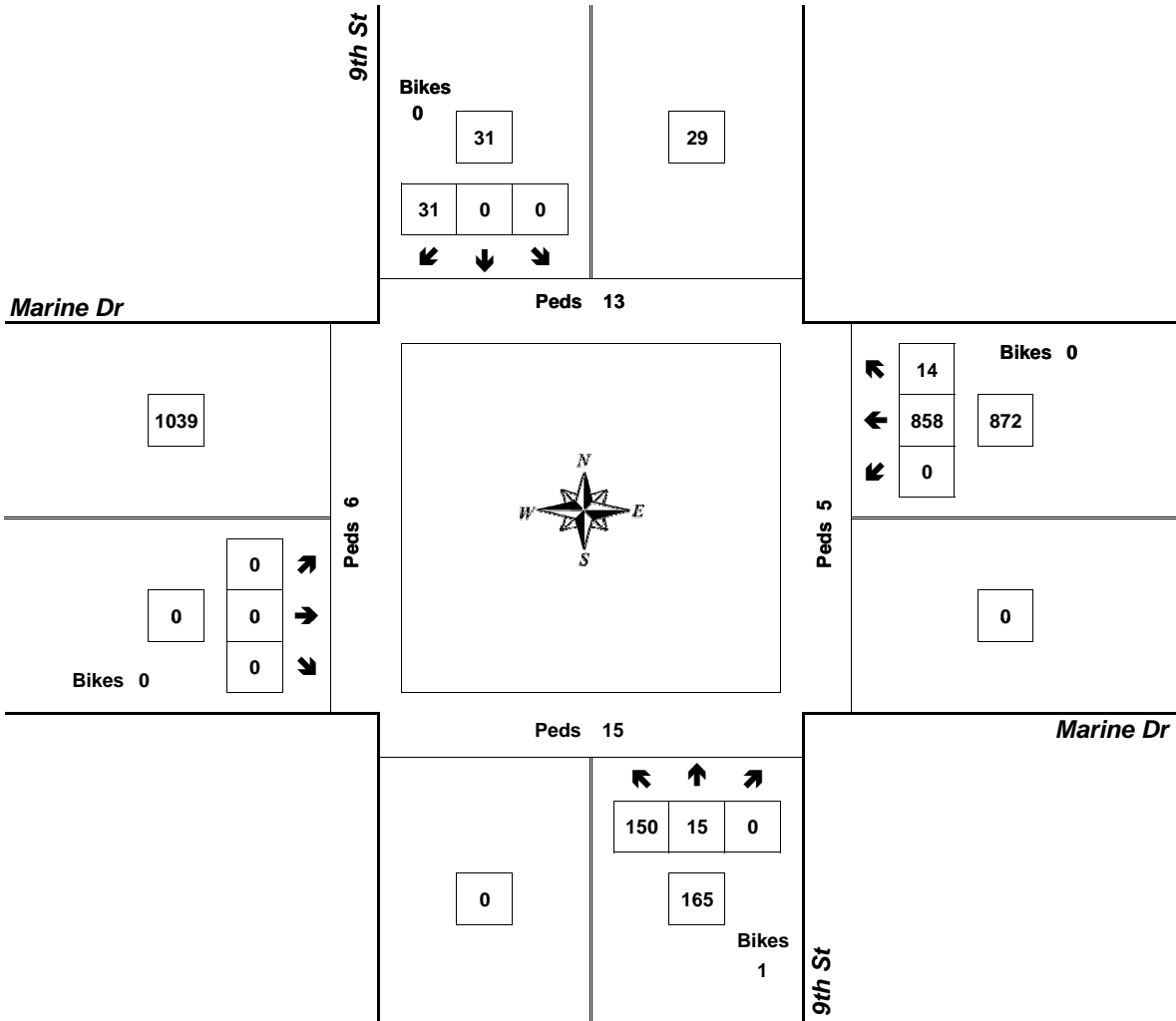
Peak Hour Summary



Clay Carney
(503) 833-2740

9th St & Marine Dr

4:15 PM to 5:15 PM
Thursday, November 01, 2018



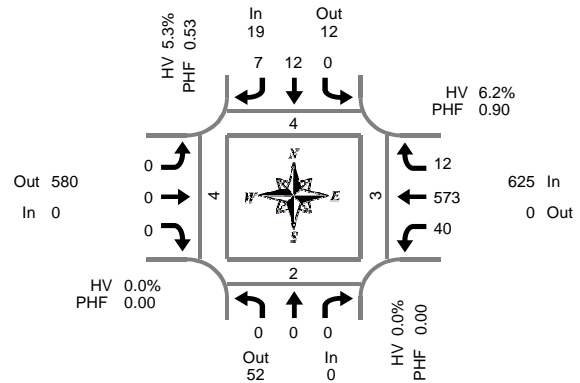
| Approach | PHF | HV% | Volume |
|---------------------|-------------|-------------|--------------|
| EB | 0.00 | 0.0% | 0 |
| WB | 0.92 | 1.8% | 872 |
| NB | 0.88 | 0.6% | 165 |
| SB | 0.60 | 3.2% | 31 |
| Intersection | 0.92 | 1.7% | 1,068 |

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary



Clay Carney
(503) 833-2740



Peak Hour Summary
7:50 AM to 8:50 AM

10th St & Marine Dr

Wednesday, November 14, 2018
7:00 AM to 9:00 AM

15-Minute Interval Summary

7:00 AM to 9:00 AM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|--------------------|---|---|-------|--------------------|----|---|-------|---------------------|---|---|-------|---------------------|-------|----|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 91 | 3 | 0 | 95 | 0 | 1 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 132 | 0 | 1 | 137 | 1 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 118 | 2 | 0 | 125 | 0 | 1 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 162 | 1 | 0 | 174 | 1 | 1 | 1 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 9 | 138 | 3 | 1 | 153 | 1 | 0 | 0 | 2 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 6 | 146 | 4 | 0 | 161 | 1 | 0 | 1 | 2 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 12 | 126 | 3 | 1 | 147 | 1 | 0 | 2 | 0 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 11 | 122 | 1 | 0 | 138 | 1 | 2 | 1 | 0 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 14 | 8 | 1 | 0 | 0 | 0 | 0 | 56 | 1,035 | 17 | 3 | 1,130 | 6 | 5 | 5 | 4 |

Peak Hour Summary

7:50 AM to 8:50 AM

| By Approach | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Total | Pedestrians Crosswalk | | | |
|-------------|--------------------|-----|-------|-------|--------------------|-----|-------|-------|---------------------|-----|-------|-------|---------------------|-----|-------|-------|-------|-----------------------|-------|------|------|
| | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | | North | South | East | West |
| Volume | 0 | 52 | 52 | 0 | 19 | 12 | 31 | 1 | 0 | 580 | 580 | 0 | 625 | 0 | 625 | 2 | 644 | 4 | 2 | 3 | 4 |
| %HV | 0.0% | | | | 5.3% | | | | 0.0% | | | | 6.2% | | | | 6.2% | | | | |
| PHF | 0.00 | | | | 0.53 | | | | 0.00 | | | | 0.90 | | | | 0.91 | | | | |

| By Movement | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Total |
|-------------|--------------------|------|------|-------|--------------------|------|------|-------|---------------------|------|------|-------|---------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 0 | 0 | 0 | 0 | 0 | 12 | 7 | 19 | 0 | 0 | 0 | 0 | 40 | 573 | 12 | 625 | 644 |
| %HV | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 8.3% | 0.0% | 5.3% | 0.0% | 0.0% | 0.0% | 0.0% | 7.5% | 6.3% | 0.0% | 6.2% | 6.2% |
| PHF | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.50 | 0.58 | 0.53 | 0.00 | 0.00 | 0.00 | 0.00 | 0.71 | 0.91 | 0.60 | 0.90 | 0.91 |

Rolling Hour Summary

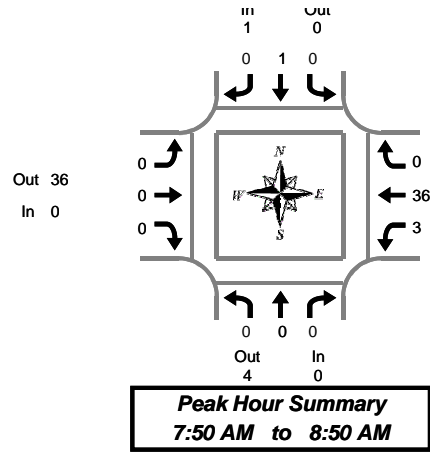
7:00 AM to 9:00 AM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|--------------------|---|---|-------|--------------------|----|---|-------|---------------------|---|---|-------|---------------------|-----|----|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 503 | 6 | 1 | 531 | 2 | 3 | 1 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 26 | 550 | 6 | 2 | 589 | 3 | 2 | 1 | 2 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 7 | 4 | 1 | 0 | 0 | 0 | 0 | 28 | 564 | 10 | 1 | 613 | 3 | 2 | 2 | 4 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 10 | 6 | 1 | 0 | 0 | 0 | 0 | 36 | 572 | 11 | 2 | 635 | 4 | 1 | 4 | 4 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 10 | 8 | 1 | 0 | 0 | 0 | 0 | 38 | 532 | 11 | 2 | 599 | 4 | 2 | 4 | 4 |

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



10th St & Marine Dr Wednesday, November 14, 2018 7:00 AM to 9:00 AM

Heavy Vehicle 15-Minute Interval Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Interval Total | |
|---------------------|--------------------|---|---|-------|--------------------|---|---|-------|---------------------|---|---|-------|---------------------|----|---|-------|----------------|----|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 7 | 7 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 9 | 0 | 10 | 10 | 10 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 7 | 7 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 7 | 7 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 11 | 0 | 13 | 13 | 13 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 9 | 0 | 10 | 11 | 11 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 10 | 10 | 10 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 4 | 4 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 4 | 64 | 0 | 68 | 69 | 69 |

Heavy Vehicle Peak Hour Summary 7:50 AM to 8:50 AM

| By Approach | Northbound 10th St | | | Southbound 10th St | | | Eastbound Marine Dr | | | Westbound Marine Dr | | | Total |
|-------------|--------------------|-----|-------|--------------------|-----|-------|---------------------|-----|-------|---------------------|-----|-------|-------|
| | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | |
| Volume | 0 | 4 | 4 | 1 | 0 | 1 | 0 | 36 | 36 | 39 | 0 | 39 | 40 |
| PHF | 0.00 | | | 0.25 | | | 0.00 | | | 0.75 | | | 0.71 |

| By Movement | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Total |
|-------------|--------------------|------|------|-------|--------------------|------|------|-------|---------------------|------|------|-------|---------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 36 | 0 | 39 | 40 |
| PHF | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.38 | 0.69 | 0.00 | 0.75 | 0.71 |

Heavy Vehicle Rolling Hour Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Interval Total |
|---------------------|--------------------|---|---|-------|--------------------|---|---|-------|---------------------|---|---|-------|---------------------|----|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 30 | 0 | 31 | 31 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 34 | 0 | 37 | 37 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 34 | 0 | 37 | 38 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 37 | 0 | 40 | 41 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 34 | 0 | 37 | 38 |

Peak Hour Summary

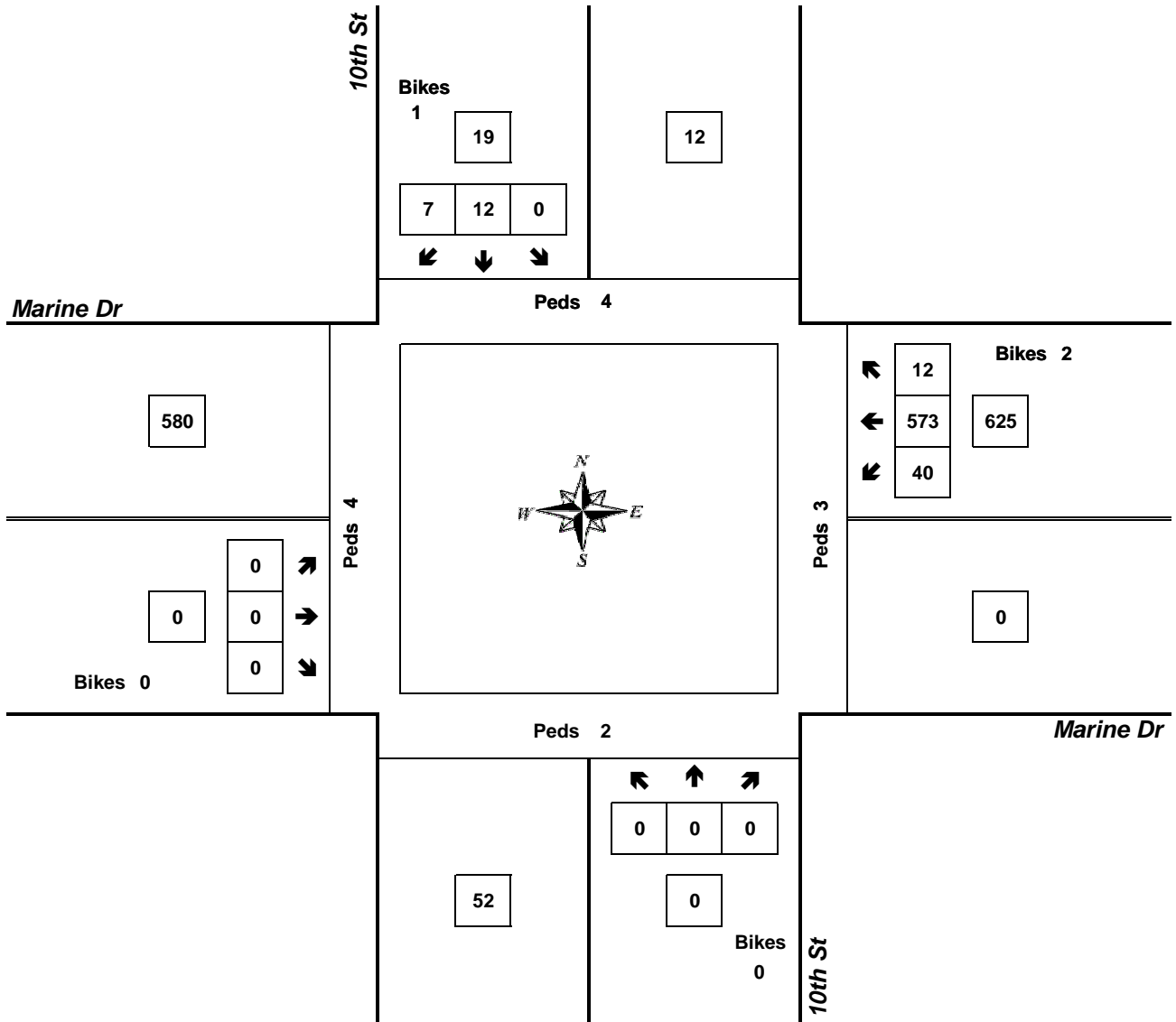


Clay Carney
(503) 833-2740

10th St & Marine Dr

7:50 AM to 8:50 AM

Wednesday, November 14, 2018



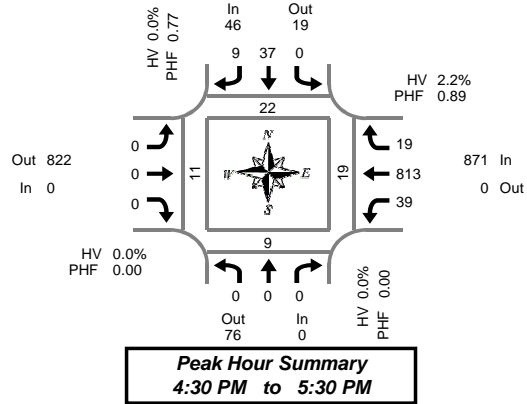
| Approach | PHF | HV% | Volume |
|---------------------|-------------|-------------|------------|
| EB | 0.00 | 0.0% | 0 |
| WB | 0.90 | 6.2% | 625 |
| NB | 0.00 | 0.0% | 0 |
| SB | 0.53 | 5.3% | 19 |
| Intersection | 0.91 | 6.2% | 644 |

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary



Clay Carney
(503) 833-2740



10th St & Marine Dr

Tuesday, November 13, 2018

4:00 PM to 6:00 PM

5-Minute Interval Summary 4:00 PM to 6:00 PM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|--------------------|---|---|-------|--------------------|----|----|-------|---------------------|---|---|-------|---------------------|-------|----|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 62 | 3 | 0 | 73 | 2 | 0 | 2 | 3 |
| 4:05 PM | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 85 | 1 | 0 | 94 | 3 | 3 | 0 | 1 |
| 4:10 PM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 65 | 3 | 0 | 71 | 0 | 1 | 2 | 2 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 62 | 2 | 0 | 69 | 2 | 0 | 1 | 1 |
| 4:20 PM | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 62 | 4 | 0 | 73 | 1 | 1 | 0 | 1 |
| 4:25 PM | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 66 | 0 | 0 | 70 | 1 | 1 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 63 | 0 | 0 | 70 | 1 | 0 | 2 | 0 |
| 4:35 PM | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 8 | 67 | 2 | 0 | 83 | 0 | 0 | 2 | 0 |
| 4:40 PM | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 87 | 2 | 0 | 96 | 2 | 1 | 2 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 65 | 1 | 0 | 76 | 2 | 0 | 1 | 1 |
| 4:50 PM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 56 | 0 | 0 | 59 | 0 | 3 | 0 | 1 |
| 4:55 PM | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 52 | 2 | 1 | 63 | 2 | 0 | 1 | 2 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 73 | 0 | 0 | 80 | 4 | 1 | 4 | 3 |
| 5:05 PM | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 92 | 3 | 0 | 100 | 3 | 0 | 3 | 0 |
| 5:10 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 68 | 3 | 0 | 72 | 6 | 0 | 1 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 59 | 3 | 0 | 68 | 0 | 2 | 1 | 0 |
| 5:20 PM | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 69 | 3 | 0 | 79 | 1 | 1 | 2 | 2 |
| 5:25 PM | 0 | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 62 | 0 | 0 | 71 | 1 | 1 | 0 | 1 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 39 | 0 | 0 | 43 | 1 | 0 | 1 | 0 |
| 5:35 PM | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 54 | 0 | 0 | 60 | 2 | 0 | 0 | 0 |
| 5:40 PM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 45 | 0 | 0 | 51 | 2 | 2 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 41 | 1 | 0 | 45 | 2 | 0 | 0 | 0 |
| 5:50 PM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 51 | 2 | 0 | 58 | 2 | 0 | 1 | 0 |
| 5:55 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 40 | 1 | 0 | 46 | 1 | 0 | 2 | 1 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 60 | 15 | 1 | 0 | 0 | 0 | 0 | 74 | 1,485 | 36 | 1 | 1,670 | 41 | 17 | 28 | 20 |

15-Minute Interval Summary 4:00 PM to 6:00 PM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|--------------------|---|---|-------|--------------------|----|----|-------|---------------------|---|---|-------|---------------------|-------|----|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 9 | 1 | 1 | 0 | 0 | 0 | 0 | 9 | 212 | 7 | 0 | 238 | 5 | 4 | 4 | 6 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 10 | 190 | 6 | 0 | 212 | 4 | 2 | 1 | 2 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 11 | 3 | 0 | 0 | 0 | 0 | 0 | 14 | 217 | 4 | 0 | 249 | 3 | 1 | 6 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 9 | 3 | 0 | 0 | 0 | 0 | 0 | 10 | 173 | 3 | 1 | 198 | 4 | 3 | 2 | 4 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 233 | 6 | 0 | 252 | 13 | 1 | 8 | 3 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 11 | 2 | 0 | 0 | 0 | 0 | 0 | 9 | 190 | 6 | 0 | 218 | 2 | 4 | 3 | 3 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 8 | 138 | 0 | 0 | 154 | 5 | 2 | 1 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 132 | 4 | 0 | 149 | 5 | 0 | 3 | 1 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 60 | 15 | 1 | 0 | 0 | 0 | 0 | 74 | 1,485 | 36 | 1 | 1,670 | 41 | 17 | 28 | 20 |

Peak Hour Summary 4:30 PM to 5:30 PM

| By Approach | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Total | Pedestrians Crosswalk | | | |
|-------------|--------------------|-----|-------|-------|--------------------|-----|-------|-------|---------------------|-----|-------|-------|---------------------|-----|-------|-------|-------|-----------------------|-------|------|------|
| | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | | North | South | East | West |
| Volume | 0 | 76 | 76 | 0 | 46 | 19 | 65 | 0 | 0 | 822 | 822 | 0 | 871 | 0 | 871 | 1 | 917 | 22 | 9 | 19 | 11 |
| %HV | 0.0% | | | | 0.0% | | | | 0.0% | | | | 2.2% | | | | 2.1% | | | | |
| PHF | 0.00 | | | | 0.77 | | | | 0.00 | | | | 0.89 | | | | 0.90 | | | | |

| By Movement | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Total |
|-------------|--------------------|------|------|-------|--------------------|------|------|-------|---------------------|------|------|-------|---------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 0 | 0 | 0 | 0 | 0 | 37 | 9 | 46 | 0 | 0 | 0 | 0 | 39 | 813 | 19 | 871 | 917 |
| %HV | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 2.3% | 0.0% | 2.2% | 2.1% |
| PHF | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.84 | 0.56 | 0.77 | 0.00 | 0.00 | 0.00 | 0.00 | 0.61 | 0.87 | 0.53 | 0.89 | 0.90 |

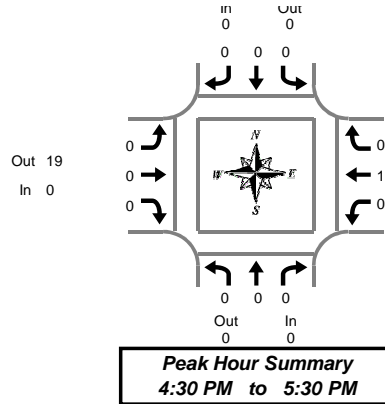
Rolling Hour Summary 4:00 PM to 6:00 PM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|--------------------|---|---|-------|--------------------|----|---|-------|---------------------|---|---|-------|---------------------|-----|----|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 33 | 9 | 1 | 0 | 0 | 0 | 0 | 43 | 792 | 20 | 1 | 897 | 16 | 10 | 13 | 13 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 30 | 9 | 0 | 0 | 0 | 0 | 0 | 40 | 813 | 19 | 1 | 911 | 24 | 7 | 17 | 10 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 37 | 9 | 0 | 0 | 0 | 0 | 0 | 39 | 813 | 19 | 1 | 917 | 22 | 9 | 19 | 11 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 31 | 9 | 0 | 0 | 0 | 0 | 0 | 33 | 734 | 15 | 1 | 822 | 24 | 10 | 14 | 10 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 27 | 6 | 0 | 0 | 0 | 0 | 0 | 31 | 693 | 16 | 0 | 773 | 25 | 7 | 15 | 7 |

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



10th St & Marine Dr

Tuesday, November 13, 2018

4:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary 4:00 PM to 6:00 PM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Interval Total |
|---------------------|--------------------|---|---|-------|--------------------|---|---|-------|---------------------|---|---|-------|---------------------|----|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 4:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:10 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 4:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 4:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:35 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 3 |
| 4:40 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 4:50 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 4:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 3 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 5:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 5:10 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:35 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:40 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 5:50 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 3 |
| 5:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 0 | 34 | 34 |

Heavy Vehicle 15-Minute Interval Summary 4:00 PM to 6:00 PM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Interval Total |
|---------------------|--------------------|---|---|-------|--------------------|---|---|-------|---------------------|---|---|-------|---------------------|----|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 4 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 4 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 3 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 7 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 5 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 4 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 3 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 4 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 0 | 34 | 34 |

Heavy Vehicle Peak Hour Summary 4:30 PM to 5:30 PM

| By Approach | Northbound 10th St | | | Southbound 10th St | | | Eastbound Marine Dr | | | Westbound Marine Dr | | | Total |
|-------------|--------------------|-----|-------|--------------------|-----|-------|---------------------|------|-------|---------------------|------|-------|-------|
| | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | |
| Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 19 | 19 | 0 | 19 | 19 |
| PHF | 0.00 | | | 0.00 | | | 0.00 | 0.68 | | | 0.68 | | 0.68 |

| By Movement | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Total |
|-------------|--------------------|------|------|-------|--------------------|------|------|-------|---------------------|------|------|-------|---------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 19 | 19 |
| PHF | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.68 | 0.00 | 0.68 | 0.68 |

Heavy Vehicle Rolling Hour Summary 4:00 PM to 6:00 PM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Marine Dr | | | | Westbound Marine Dr | | | | Interval Total |
|---------------------|--------------------|---|---|-------|--------------------|---|---|-------|---------------------|---|---|-------|---------------------|----|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 18 | 18 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 19 | 19 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 19 | 19 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 19 | 19 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 16 | 16 |

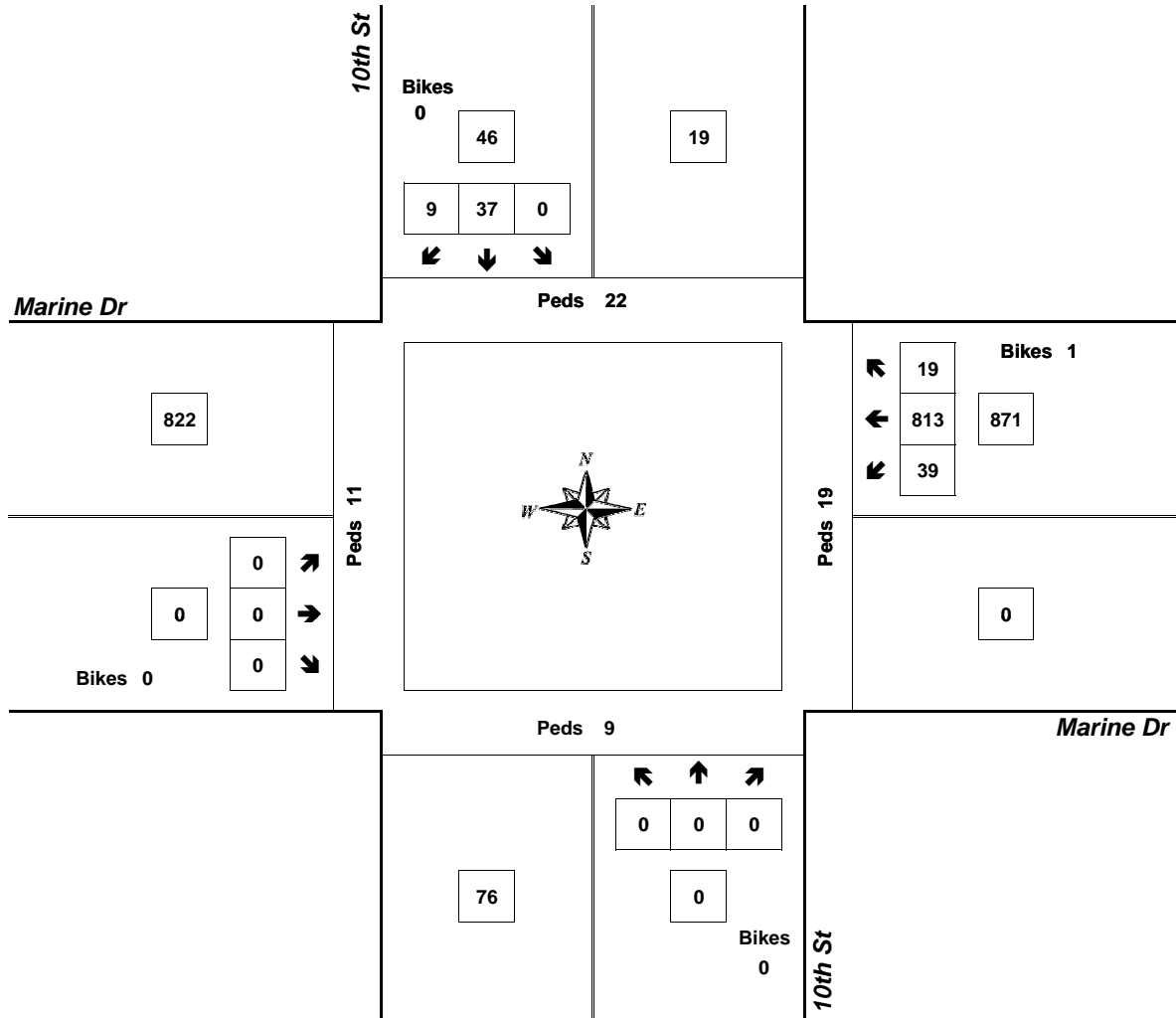
Peak Hour Summary



Clay Carney
(503) 833-2740

10th St & Marine Dr

4:30 PM to 5:30 PM
Tuesday, November 13, 2018



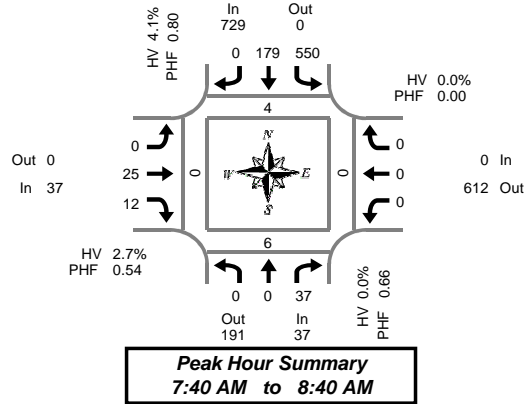
| Approach | PHF | HV% | Volume |
|---------------------|-------------|-------------|------------|
| EB | 0.00 | 0.0% | 0 |
| WB | 0.89 | 2.2% | 871 |
| NB | 0.00 | 0.0% | 0 |
| SB | 0.77 | 0.0% | 46 |
| Intersection | 0.90 | 2.1% | 917 |

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary



Clay Carney
(503) 833-2740



8th St & Commercial St

Thursday, November 01, 2018
7:00 AM to 9:00 AM

5-Minute Interval Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total | Pedestrians Crosswalk | | | | | | | |
|---------------------|-------------------|---|----|-------|-------------------|-----|---|-------|-------------------------|----|----|-------|-------------------------|---|---|-------|----------------|-----------------------|-------|------|-------|----|---|---|---|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West | | | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 20 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 0 | 0 | 0 | 0 |
| 7:05 AM | 0 | 0 | 1 | 0 | 26 | 7 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 | 1 | 0 | 0 | 0 |
| 7:10 AM | 0 | 0 | 7 | 0 | 35 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 48 | 1 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 3 | 0 | 30 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 | 0 | 0 | 0 | 0 |
| 7:20 AM | 0 | 0 | 4 | 0 | 35 | 8 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 51 | 0 | 0 | 0 | 0 |
| 7:25 AM | 0 | 0 | 4 | 0 | 37 | 12 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 55 | 2 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 5 | 0 | 42 | 8 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 57 | 1 | 0 | 0 | 0 |
| 7:35 AM | 0 | 0 | 4 | 0 | 29 | 13 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 48 | 0 | 0 | 0 | 0 |
| 7:40 AM | 0 | 0 | 3 | 0 | 41 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 55 | 0 | 1 | 0 | 0 |
| 7:45 AM | 0 | 0 | 5 | 0 | 52 | 16 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 75 | 0 | 1 | 0 | 0 |
| 7:50 AM | 0 | 0 | 6 | 0 | 63 | 22 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 92 | 2 | 1 | 0 | 0 |
| 7:55 AM | 0 | 0 | 2 | 0 | 62 | 14 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 80 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 4 | 0 | 45 | 18 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 72 | 1 | 1 | 0 | 0 |
| 8:05 AM | 0 | 0 | 5 | 0 | 44 | 16 | 0 | 0 | 0 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 72 | 0 | 0 | 0 | 0 |
| 8:10 AM | 0 | 0 | 4 | 0 | 30 | 17 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 56 | 0 | 1 | 0 | 0 |
| 8:15 AM | 0 | 0 | 3 | 0 | 42 | 20 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 70 | 0 | 0 | 0 | 0 |
| 8:20 AM | 0 | 0 | 3 | 0 | 42 | 17 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 65 | 0 | 1 | 0 | 0 |
| 8:25 AM | 0 | 0 | 0 | 0 | 39 | 8 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 48 | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 0 | 0 | 0 | 46 | 10 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 57 | 0 | 0 | 0 | 0 |
| 8:35 AM | 0 | 0 | 2 | 0 | 44 | 10 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 61 | 1 | 0 | 0 | 0 |
| 8:40 AM | 0 | 0 | 0 | 0 | 36 | 14 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 55 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 2 | 0 | 43 | 11 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 59 | 0 | 0 | 0 | 0 |
| 8:50 AM | 0 | 0 | 2 | 0 | 42 | 10 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 59 | 0 | 0 | 0 | 0 |
| 8:55 AM | 0 | 0 | 5 | 0 | 36 | 6 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 | 1 | 2 | 0 | 0 |
| Total Survey | 0 | 0 | 74 | 0 | 961 | 285 | 0 | 0 | 0 | 47 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,391 | 10 | 8 | 0 | 0 |

15-Minute Interval Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total | Pedestrians Crosswalk | | | | | | | |
|---------------------|-------------------|---|----|-------|-------------------|-----|---|-------|-------------------------|----|----|-------|-------------------------|---|---|-------|----------------|-----------------------|-------|------|-------|----|---|---|---|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West | | | | |
| 7:00 AM | 0 | 0 | 8 | 0 | 81 | 18 | 0 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 113 | 2 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 11 | 0 | 102 | 26 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 145 | 2 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 12 | 0 | 112 | 32 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 160 | 1 | 1 | 0 | 0 |
| 7:45 AM | 0 | 0 | 13 | 0 | 177 | 52 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 247 | 2 | 2 | 0 | 0 |
| 8:00 AM | 0 | 0 | 13 | 0 | 119 | 51 | 0 | 0 | 0 | 11 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 200 | 1 | 2 | 0 | 0 |
| 8:15 AM | 0 | 0 | 6 | 0 | 123 | 45 | 0 | 0 | 0 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 183 | 0 | 1 | 0 | 0 |
| 8:30 AM | 0 | 0 | 2 | 0 | 126 | 34 | 0 | 0 | 0 | 6 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 173 | 1 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 9 | 0 | 121 | 27 | 0 | 0 | 0 | 8 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 170 | 1 | 2 | 0 | 0 |
| Total Survey | 0 | 0 | 74 | 0 | 961 | 285 | 0 | 0 | 0 | 47 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,391 | 10 | 8 | 0 | 0 |

Peak Hour Summary 7:40 AM to 8:40 AM

| By Approach | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Total | Pedestrians Crosswalk | | | |
|-------------|-------------------|-----|-------|-------|-------------------|-----|-------|-------|-------------------------|-----|-------|-------|-------------------------|-----|-------|-------|-------|-----------------------|-------|------|------|
| | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | | North | South | East | West |
| Volume | 37 | 191 | 228 | 0 | 729 | 0 | 729 | 0 | 37 | 0 | 37 | 0 | 0 | 612 | 612 | 0 | 803 | 4 | 6 | 0 | 0 |
| %HV | 0.0% | | | | 4.1% | | | | 2.7% | | | | 0.0% | | | | 3.9% | | | | |
| PHF | 0.66 | | | | 0.80 | | | | 0.54 | | | | 0.00 | | | | 0.81 | | | | |

| By Movement | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Total | Pedestrians Crosswalk | | | |
|-------------|-------------------|------|------|-------|-------------------|------|------|-------|-------------------------|------|------|-------|-------------------------|------|------|-------|-------|-----------------------|-------|------|------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | North | South | East | West |
| Volume | 0 | 0 | 37 | 37 | 550 | 179 | 0 | 729 | 0 | 25 | 12 | 37 | 0 | 0 | 0 | 0 | 803 | | | | |
| %HV | 0.0% | 0.0% | 0.0% | 0.0% | 5.5% | 0.0% | 0.0% | 4.1% | 0.0% | 4.0% | 0.0% | 2.7% | 0.0% | 0.0% | 0.0% | 0.0% | 3.9% | | | | |
| PHF | 0.00 | 0.00 | 0.66 | 0.66 | 0.78 | 0.83 | 0.00 | 0.80 | 0.00 | 0.57 | 0.43 | 0.54 | 0.00 | 0.00 | 0.00 | 0.00 | 0.81 | | | | |

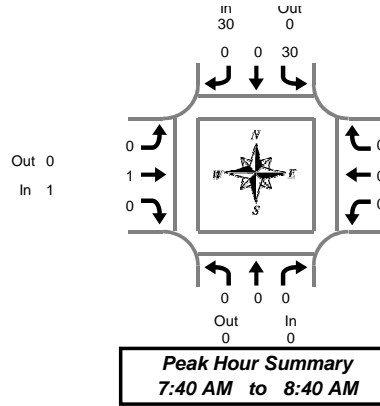
Rolling Hour Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total | Pedestrians Crosswalk | | | | | | | |
|---------------------|-------------------|---|----|-------|-------------------|-----|---|-------|-------------------------|----|----|-------|-------------------------|---|---|-------|----------------|-----------------------|-------|------|------|---|---|---|---|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West | | | | |
| 7:00 AM | 0 | 0 | 44 | 0 | 472 | 128 | 0 | 0 | 0 | 14 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 665 | 7 | 3 | 0 | 0 |
| 7:15 AM | 0 | 0 | 49 | 0 | 510 | 161 | 0 | 0 | 0 | 20 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 752 | 6 | 5 | 0 | 0 |
| 7:30 AM | 0 | 0 | 44 | 0 | 531 | 180 | 0 | 0 | 0 | 24 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 790 | 4 | 6 | 0 | 0 |
| 7:45 AM | 0 | 0 | 34 | 0 | 545 | 182 | 0 | 0 | 0 | 27 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 803 | 4 | 5 | 0 | 0 |
| 8:00 AM | 0 | 0 | 30 | 0 | 489 | 157 | 0 | 0 | 0 | 33 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 726 | 3 | 5 | 0 | 0 |

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



8th St & Commercial St

Thursday, November 01, 2018

7:00 AM to 9:00 AM

Heavy Vehicle 5-Minute Interval Summary

7:00 AM to 9:00 AM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|-------------------------|---|---|-------|-------------------------|---|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 7:00 AM | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 7:05 AM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:10 AM | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 7 |
| 7:15 AM | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 7:20 AM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:25 AM | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 7:30 AM | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 7:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:40 AM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:45 AM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:50 AM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:55 AM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:00 AM | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 8:05 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:10 AM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:15 AM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:20 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:25 AM | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 4 |
| 8:30 AM | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 8:35 AM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:40 AM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:45 AM | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 8:50 AM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:55 AM | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| Total Survey | 0 | 0 | 0 | 0 | 63 | 4 | 0 | 67 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 69 |

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|-------------------------|---|---|-------|-------------------------|---|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 7:00 AM | 0 | 0 | 0 | 0 | 8 | 3 | 0 | 11 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 12 |
| 7:15 AM | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 7:30 AM | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 7:45 AM | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 8:00 AM | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 8:15 AM | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 7 |
| 8:30 AM | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 8:45 AM | 0 | 0 | 0 | 0 | 9 | 1 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| Total Survey | 0 | 0 | 0 | 0 | 63 | 4 | 0 | 67 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 69 |

Heavy Vehicle Peak Hour Summary

7:40 AM to 8:40 AM

| By Approach | Northbound 8th St | | | Southbound 8th St | | | Eastbound Commercial St | | | Westbound Commercial St | | | Total |
|-------------|-------------------|-----|-------|-------------------|-----|-------|-------------------------|-----|-------|-------------------------|-----|-------|-------|
| | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | |
| Volume | 0 | 0 | 0 | 30 | 0 | 30 | 1 | 0 | 1 | 0 | 31 | 31 | 31 |
| PHF | 0.00 | | | 0.75 | | | 0.25 | | | 0.00 | | | 0.70 |

| By Movement | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Total |
|-------------|-------------------|------|------|-------|-------------------|------|------|-------|-------------------------|------|------|-------|-------------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 30 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 31 |
| PHF | 0.00 | 0.00 | 0.00 | 0.00 | 0.75 | 0.00 | 0.00 | 0.75 | 0.00 | 0.25 | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.70 |

Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|-------------------------|---|---|-------|-------------------------|---|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 7:00 AM | 0 | 0 | 0 | 0 | 30 | 3 | 0 | 33 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 34 |
| 7:15 AM | 0 | 0 | 0 | 0 | 31 | 0 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 |
| 7:30 AM | 0 | 0 | 0 | 0 | 28 | 0 | 0 | 28 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 29 |
| 7:45 AM | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 30 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 31 |
| 8:00 AM | 0 | 0 | 0 | 0 | 33 | 1 | 0 | 34 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 35 |

Peak Hour Summary

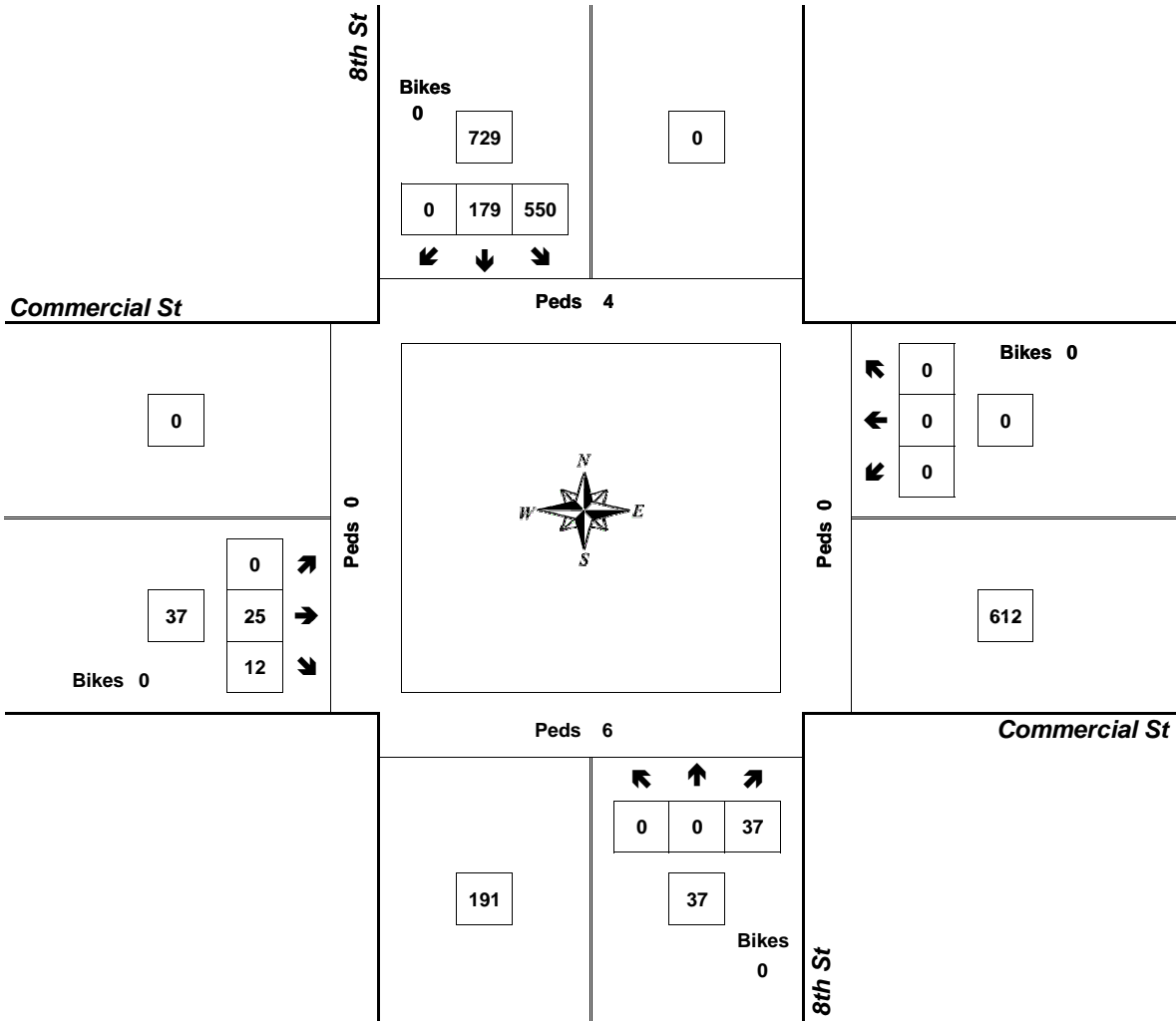


Clay Carney
(503) 833-2740

8th St & Commercial St

7:40 AM to 8:40 AM

Thursday, November 01, 2018



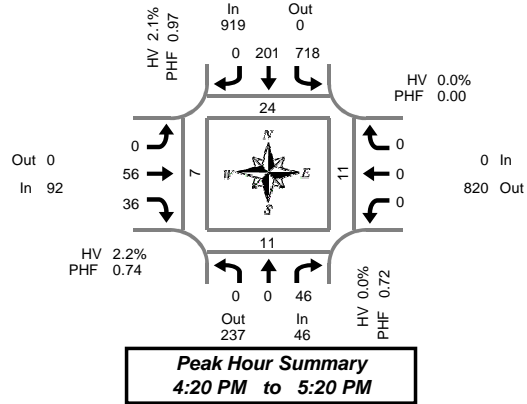
| Approach | PHF | HV% | Volume |
|---------------------|-------------|-------------|------------|
| EB | 0.54 | 2.7% | 37 |
| WB | 0.00 | 0.0% | 0 |
| NB | 0.66 | 0.0% | 37 |
| SB | 0.80 | 4.1% | 729 |
| Intersection | 0.81 | 3.9% | 803 |

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary



Clay Carney
(503) 833-2740



8th St & Commercial St

Thursday, November 01, 2018

4:00 PM to 6:00 PM

5-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total | Pedestrians Crosswalk | | | | | | |
|---------------------|-------------------|---|----|-------|-------------------|-----|---|-------|-------------------------|-----|----|-------|-------------------------|---|---|-------|----------------|-----------------------|-------|-------|------|----|----|----|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West | | | |
| 4:00 PM | 0 | 0 | 5 | 0 | 59 | 14 | 0 | 0 | 0 | 11 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 1 | 1 | 0 | 0 |
| 4:05 PM | 0 | 0 | 3 | 0 | 56 | 16 | 0 | 0 | 0 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 83 | 2 | 2 | 0 | 0 |
| 4:10 PM | 0 | 0 | 1 | 0 | 50 | 11 | 0 | 1 | 0 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 71 | 2 | 2 | 0 | 2 |
| 4:15 PM | 0 | 0 | 0 | 0 | 51 | 19 | 0 | 0 | 0 | 6 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 81 | 2 | 5 | 0 | 3 |
| 4:20 PM | 0 | 0 | 6 | 0 | 67 | 16 | 0 | 0 | 0 | 7 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 97 | 1 | 2 | 0 | 2 |
| 4:25 PM | 0 | 0 | 3 | 0 | 65 | 19 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 89 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 2 | 0 | 54 | 13 | 0 | 0 | 0 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 77 | 6 | 2 | 0 | 2 |
| 4:35 PM | 0 | 0 | 4 | 0 | 55 | 14 | 0 | 0 | 0 | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 82 | 4 | 0 | 0 | 0 |
| 4:40 PM | 0 | 0 | 3 | 0 | 61 | 14 | 0 | 0 | 0 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 85 | 2 | 0 | 2 | 0 |
| 4:45 PM | 0 | 0 | 3 | 0 | 68 | 13 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 90 | 4 | 1 | 1 | 0 |
| 4:50 PM | 0 | 0 | 6 | 0 | 55 | 16 | 0 | 0 | 0 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 85 | 2 | 2 | 1 | 0 |
| 4:55 PM | 0 | 0 | 7 | 0 | 55 | 13 | 0 | 0 | 0 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 84 | 2 | 3 | 1 | 0 |
| 5:00 PM | 0 | 0 | 3 | 0 | 61 | 22 | 0 | 0 | 0 | 3 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 95 | 2 | 0 | 2 | 0 |
| 5:05 PM | 0 | 0 | 4 | 0 | 52 | 26 | 0 | 0 | 0 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 95 | 0 | 0 | 3 | 0 |
| 5:10 PM | 0 | 0 | 2 | 0 | 58 | 12 | 0 | 0 | 0 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 79 | 1 | 0 | 0 | 2 |
| 5:15 PM | 0 | 0 | 3 | 0 | 67 | 23 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 99 | 0 | 1 | 1 | 1 |
| 5:20 PM | 0 | 0 | 6 | 0 | 57 | 10 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 79 | 0 | 2 | 0 | 0 |
| 5:25 PM | 0 | 0 | 3 | 0 | 60 | 14 | 0 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 83 | 1 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 2 | 0 | 69 | 14 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 88 | 0 | 1 | 0 | 0 |
| 5:35 PM | 0 | 0 | 1 | 0 | 59 | 12 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 75 | 0 | 3 | 0 | 1 |
| 5:40 PM | 0 | 0 | 5 | 0 | 51 | 10 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 0 | 3 | 1 | 2 |
| 5:45 PM | 0 | 0 | 3 | 0 | 43 | 12 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 61 | 2 | 1 | 0 | 0 |
| 5:50 PM | 0 | 0 | 1 | 0 | 37 | 12 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 55 | 1 | 0 | 0 | 0 |
| 5:55 PM | 0 | 0 | 3 | 0 | 44 | 12 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 62 | 1 | 0 | 1 | 0 |
| Total Survey | 0 | 0 | 79 | 0 | 1,354 | 357 | 0 | 2 | 0 | 104 | 60 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,954 | 36 | 31 | 13 | 15 |

15-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total | Pedestrians Crosswalk | | | | | | |
|---------------------|-------------------|---|----|-------|-------------------|-----|---|-------|-------------------------|-----|----|-------|-------------------------|---|---|-------|----------------|-----------------------|-------|-------|------|----|----|----|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West | | | |
| 4:00 PM | 0 | 0 | 9 | 0 | 165 | 41 | 0 | 1 | 0 | 20 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 245 | 5 | 5 | 0 | 2 |
| 4:15 PM | 0 | 0 | 9 | 0 | 183 | 54 | 0 | 0 | 0 | 15 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 267 | 3 | 7 | 0 | 5 |
| 4:30 PM | 0 | 0 | 9 | 0 | 170 | 41 | 0 | 0 | 0 | 13 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 244 | 12 | 2 | 2 | 2 |
| 4:45 PM | 0 | 0 | 16 | 0 | 178 | 42 | 0 | 0 | 0 | 16 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 259 | 8 | 6 | 3 | 0 |
| 5:00 PM | 0 | 0 | 9 | 0 | 171 | 60 | 0 | 0 | 0 | 15 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 269 | 3 | 0 | 5 | 2 |
| 5:15 PM | 0 | 0 | 12 | 0 | 184 | 47 | 0 | 0 | 0 | 12 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 261 | 1 | 3 | 1 | 1 |
| 5:30 PM | 0 | 0 | 8 | 0 | 179 | 36 | 0 | 1 | 0 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 231 | 0 | 7 | 1 | 3 |
| 5:45 PM | 0 | 0 | 7 | 0 | 124 | 36 | 0 | 0 | 0 | 8 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 178 | 4 | 1 | 1 | 0 |
| Total Survey | 0 | 0 | 79 | 0 | 1,354 | 357 | 0 | 2 | 0 | 104 | 60 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,954 | 36 | 31 | 13 | 15 |

Peak Hour Summary

4:20 PM to 5:20 PM

| By Approach | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Total | Pedestrians Crosswalk | | | |
|-------------|-------------------|-----|-------|-------|-------------------|-----|-------|-------|-------------------------|-----|-------|-------|-------------------------|-----|-------|-------|-------|-----------------------|-------|------|------|
| | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | | North | South | East | West |
| Volume | 46 | 237 | 283 | 0 | 919 | 0 | 919 | 0 | 92 | 0 | 92 | 1 | 0 | 820 | 820 | 0 | 1,057 | 24 | 11 | 11 | 7 |
| %HV | 0.0% | | | | 2.1% | | | | 2.2% | | | | 0.0% | | | | 2.0% | | | | |
| PHF | 0.72 | | | | 0.97 | | | | 0.74 | | | | 0.00 | | | | 0.96 | | | | |

| By Movement | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Total |
|-------------|-------------------|------|------|-------|-------------------|------|------|-------|-------------------------|------|------|-------|-------------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 0 | 0 | 46 | 46 | 718 | 201 | 0 | 919 | 0 | 56 | 36 | 92 | 0 | 0 | 0 | 0 | 1,057 |
| %HV | 0.0% | 0.0% | 0.0% | 0.0% | 2.4% | 1.0% | 0.0% | 2.1% | 0.0% | 3.6% | 0.0% | 2.2% | 0.0% | 0.0% | 0.0% | 0.0% | 2.0% |
| PHF | 0.00 | 0.00 | 0.72 | 0.72 | 0.97 | 0.82 | 0.00 | 0.97 | 0.00 | 0.88 | 0.56 | 0.74 | 0.00 | 0.00 | 0.00 | 0.00 | 0.96 |

Rolling Hour Summary

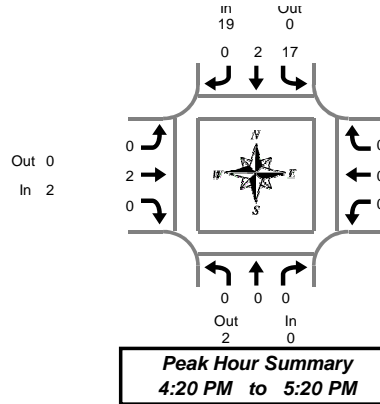
4:00 PM to 6:00 PM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|-------------------|---|----|-------|-------------------|-----|---|-------|-------------------------|----|----|-------|-------------------------|---|---|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 4:00 PM | 0 | 0 | 43 | 0 | 696 | 178 | 0 | 1 | 0 | 64 | 34 | 1 | 0 | 0 | 0 | 0 | 1,015 | 28 | 20 | 5 | 9 |
| 4:15 PM | 0 | 0 | 43 | 0 | 702 | 197 | 0 | 0 | 0 | 59 | 38 | 1 | 0 | 0 | 0 | 0 | 1,039 | 26 | 15 | 10 | 9 |
| 4:30 PM | 0 | 0 | 46 | 0 | 703 | 190 | 0 | 0 | 0 | 56 | 38 | 0 | 0 | 0 | 0 | 0 | 1,033 | 24 | 11 | 11 | 5 |
| 4:45 PM | 0 | 0 | 45 | 0 | 712 | 185 | 0 | 1 | 0 | 48 | 30 | 0 | 0 | 0 | 0 | 0 | 1,020 | 12 | 16 | 10 | 6 |
| 5:00 PM | 0 | 0 | 36 | 0 | 658 | 179 | 0 | 1 | 0 | 40 | 26 | 0 | 0 | 0 | 0 | 0 | 939 | 8 | 11 | 8 | 6 |

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



8th St & Commercial St

Thursday, November 01, 2018

4:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary 4:00 PM to 6:00 PM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total | |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|-------------------------|---|---|-------|-------------------------|---|---|-------|----------------|----|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:05 PM | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 4:10 PM | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:15 PM | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:20 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:25 PM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:30 PM | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 5 |
| 4:35 PM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:40 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:50 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:55 PM | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:05 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:10 PM | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 5:15 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 5:35 PM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:40 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:45 PM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:50 PM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:55 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total Survey | 0 | 0 | 0 | 0 | 39 | 4 | 0 | 43 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 45 |

Heavy Vehicle 15-Minute Interval Summary 4:00 PM to 6:00 PM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total | |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|-------------------------|---|---|-------|-------------------------|---|---|-------|----------------|----|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 9 | 1 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 4:15 PM | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 4:30 PM | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 8 |
| 4:45 PM | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 5:00 PM | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 5:15 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:30 PM | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 5:45 PM | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Total Survey | 0 | 0 | 0 | 0 | 39 | 4 | 0 | 43 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 45 |

Heavy Vehicle Peak Hour Summary 4:20 PM to 5:20 PM

| By Approach | Northbound 8th St | | | Southbound 8th St | | | Eastbound Commercial St | | | Westbound Commercial St | | | Total |
|-------------|-------------------|-----|-------|-------------------|-----|-------|-------------------------|-----|-------|-------------------------|-----|-------|-------|
| | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | |
| Volume | 0 | 2 | 2 | 19 | 0 | 19 | 2 | 0 | 2 | 0 | 19 | 19 | 21 |
| PHF | 0.00 | | | 0.68 | | | 0.25 | | | 0.00 | | | 0.58 |

| By Movement | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Total | |
|-------------|-------------------|------|------|-------|-------------------|------|------|-------|-------------------------|------|------|-------|-------------------------|------|------|-------|-------|------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | |
| Volume | 0 | 0 | 0 | 0 | 17 | 2 | 0 | 19 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 21 |
| PHF | 0.00 | 0.00 | 0.00 | 0.00 | 0.61 | 0.25 | 0.00 | 0.68 | 0.00 | 0.25 | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.58 |

Heavy Vehicle Rolling Hour Summary 4:00 PM to 6:00 PM

| Interval Start Time | Northbound 8th St | | | | Southbound 8th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total | |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|-------------------------|---|---|-------|-------------------------|---|---|-------|----------------|----|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 24 | 2 | 0 | 26 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 28 |
| 4:15 PM | 0 | 0 | 0 | 0 | 19 | 2 | 0 | 21 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 23 |
| 4:30 PM | 0 | 0 | 0 | 0 | 14 | 2 | 0 | 16 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 18 |
| 4:45 PM | 0 | 0 | 0 | 0 | 13 | 3 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| 5:00 PM | 0 | 0 | 0 | 0 | 15 | 2 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |

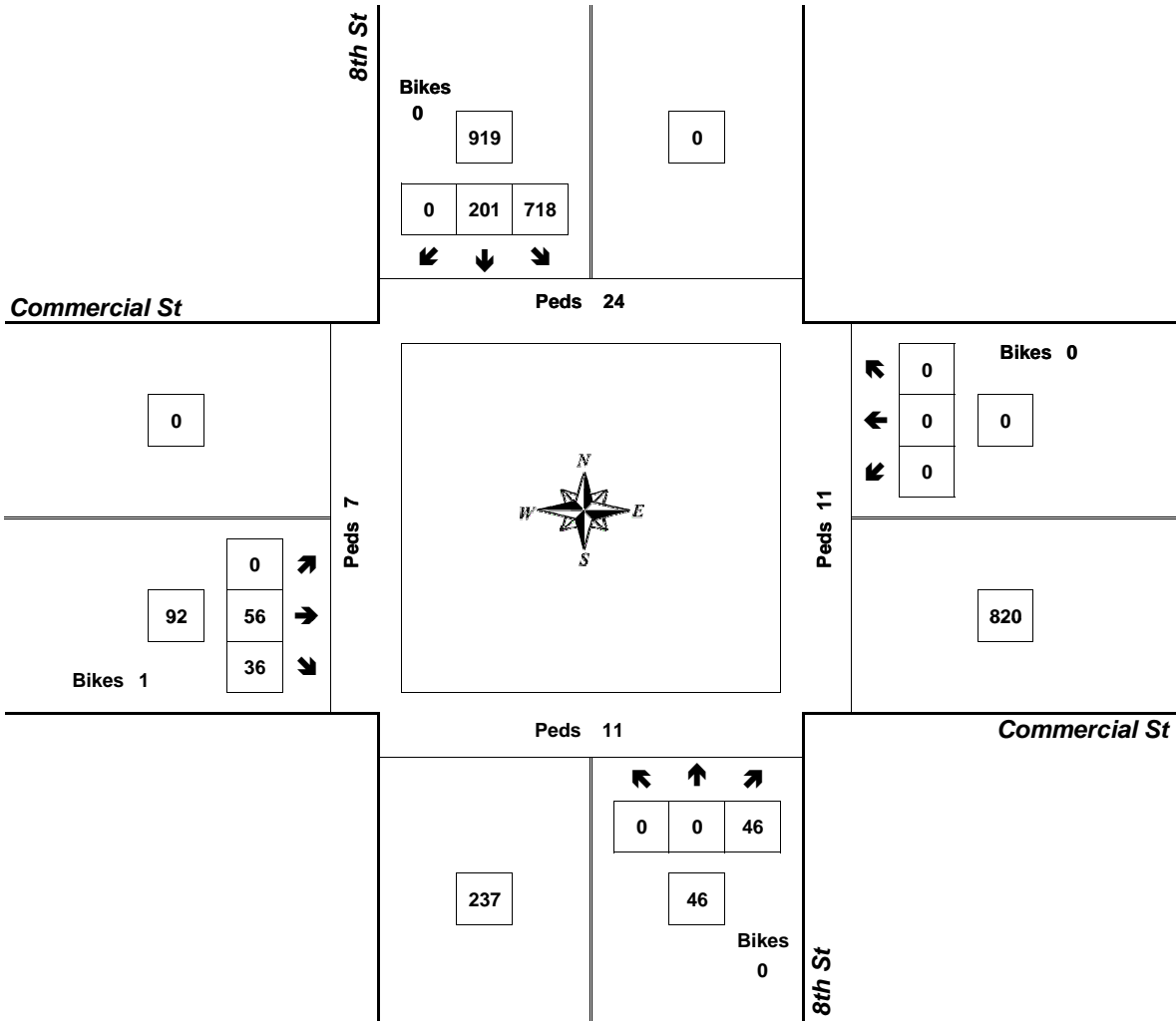
Peak Hour Summary



Clay Carney
(503) 833-2740

8th St & Commercial St

4:20 PM to 5:20 PM
Thursday, November 01, 2018



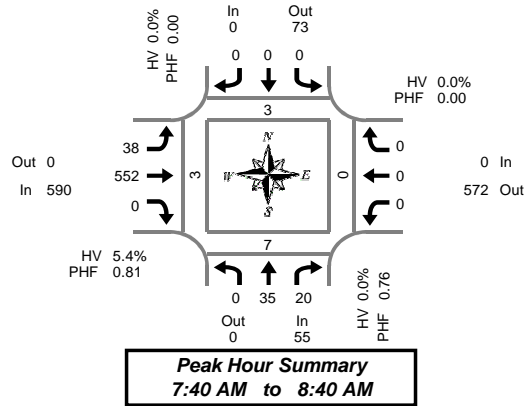
| Approach | PHF | HV% | Volume |
|---------------------|-------------|-------------|--------------|
| EB | 0.74 | 2.2% | 92 |
| WB | 0.00 | 0.0% | 0 |
| NB | 0.72 | 0.0% | 46 |
| SB | 0.97 | 2.1% | 919 |
| Intersection | 0.96 | 2.0% | 1,057 |

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary



Clay Carney
(503) 833-2740



9th St & Commercial St

Thursday, November 01, 2018

7:00 AM to 9:00 AM

5-Minute Interval Summary

7:00 AM to 9:00 AM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total | Pedestrians Crosswalk | | | | | | | |
|---------------------|-------------------|----|----|-------|-------------------|---|---|-------|-------------------------|----|-----|-------|-------------------------|---|---|-------|----------------|-----------------------|-------|------|-------|---|---|---|---|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West | | | | |
| 7:00 AM | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 0 | 0 |
| 7:05 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 0 | 0 |
| 7:10 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 | 0 | 0 | 1 | 0 |
| 7:20 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 0 | 0 |
| 7:25 AM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 1 | 0 | 0 | 0 |
| 7:35 AM | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 1 | 0 | 0 |
| 7:40 AM | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 55 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 46 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 | 0 | 2 | 0 | 0 |
| 7:50 AM | 0 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 75 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 84 | 1 | 0 | 0 | 0 |
| 7:55 AM | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 0 | 0 | 0 | 1 |
| 8:00 AM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 51 | 0 | 1 | 0 | 0 |
| 8:05 AM | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 51 | 0 | 0 | 0 | 0 |
| 8:10 AM | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 1 | 0 | 0 |
| 8:15 AM | 0 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 46 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 57 | 0 | 0 | 0 | 0 |
| 8:20 AM | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 54 | 0 | 1 | 0 | 0 |
| 8:25 AM | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 | 1 | 0 | 0 | 0 |
| 8:30 AM | 0 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 51 | 0 | 2 | 0 | 2 |
| 8:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 46 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47 | 1 | 0 | 0 | 0 |
| 8:40 AM | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 54 | 1 | 0 | 0 | 0 |
| 8:50 AM | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 46 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 | 0 | 0 | 1 | 0 |
| 8:55 AM | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 48 | 1 | 0 | 0 | 0 |
| Total Survey | 0 | 57 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 69 | 993 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,151 | 6 | 8 | 2 | 3 |

15-Minute Interval Summary

7:00 AM to 9:00 AM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total | Pedestrians Crosswalk | | | | | | | |
|---------------------|-------------------|----|----|-------|-------------------|---|---|-------|-------------------------|----|-----|-------|-------------------------|---|---|-------|----------------|-----------------------|-------|------|-------|---|---|---|---|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West | | | | |
| 7:00 AM | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 99 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 108 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 123 | 0 | 0 | 1 | 0 |
| 7:30 AM | 0 | 8 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 123 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 142 | 1 | 1 | 0 | 0 |
| 7:45 AM | 0 | 11 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 172 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 196 | 1 | 2 | 0 | 1 |
| 8:00 AM | 0 | 8 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 118 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 144 | 0 | 2 | 0 | 0 |
| 8:15 AM | 0 | 7 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 128 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 152 | 1 | 1 | 0 | 0 |
| 8:30 AM | 0 | 7 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 141 | 1 | 2 | 0 | 2 |
| 8:45 AM | 0 | 7 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 131 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 154 | 2 | 0 | 1 | 0 |
| Total Survey | 0 | 57 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 69 | 993 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,151 | 6 | 8 | 2 | 3 |

Peak Hour Summary

7:40 AM to 8:40 AM

| By Approach | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Total | Pedestrians Crosswalk | | | |
|-------------|-------------------|-----|-------|-------|-------------------|-----|-------|-------|-------------------------|-----|-------|-------|-------------------------|-----|-------|-------|-------|-----------------------|-------|------|------|
| | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | | North | South | East | West |
| Volume | 55 | 0 | 55 | 0 | 0 | 73 | 73 | 0 | 590 | 0 | 590 | 0 | 0 | 572 | 572 | 0 | 645 | 3 | 7 | 0 | 3 |
| %HV | 0.0% | | | | 0.0% | | | | 5.4% | | | | 0.0% | | | | 5.0% | | | | |
| PHF | 0.76 | | | | 0.00 | | | | 0.81 | | | | 0.00 | | | | 0.82 | | | | |

| By Movement | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Total |
|-------------|-------------------|------|------|-------|-------------------|------|------|-------|-------------------------|------|------|-------|-------------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 0 | 35 | 20 | 55 | 0 | 0 | 0 | 0 | 38 | 552 | 0 | 590 | 0 | 0 | 0 | 0 | 645 |
| %HV | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 7.9% | 5.3% | 0.0% | 5.4% | 0.0% | 0.0% | 0.0% | 0.0% | 5.0% |
| PHF | 0.00 | 0.80 | 0.56 | 0.76 | 0.00 | 0.00 | 0.00 | 0.00 | 0.63 | 0.80 | 0.00 | 0.81 | 0.00 | 0.00 | 0.00 | 0.00 | 0.82 |

Rolling Hour Summary

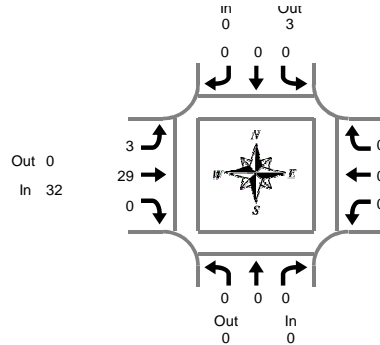
7:00 AM to 9:00 AM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|-------------------|----|----|-------|-------------------|---|---|-------|-------------------------|-----|---|-------|-------------------------|---|---|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 7:00 AM | 0 | 28 | 9 | 0 | 0 | 0 | 0 | 0 | 32 | 491 | 0 | 1 | 0 | 0 | 0 | 0 | 560 | 2 | 3 | 1 | 1 |
| 7:15 AM | 0 | 30 | 12 | 0 | 0 | 0 | 0 | 0 | 42 | 521 | 0 | 1 | 0 | 0 | 0 | 0 | 605 | 2 | 5 | 1 | 1 |
| 7:30 AM | 0 | 34 | 21 | 0 | 0 | 0 | 0 | 0 | 38 | 541 | 0 | 0 | 0 | 0 | 0 | 0 | 634 | 3 | 6 | 0 | 1 |
| 7:45 AM | 0 | 33 | 20 | 0 | 0 | 0 | 0 | 0 | 37 | 543 | 0 | 0 | 0 | 0 | 0 | 0 | 633 | 3 | 7 | 0 | 3 |
| 8:00 AM | 0 | 29 | 23 | 0 | 0 | 0 | 0 | 0 | 37 | 502 | 0 | 0 | 0 | 0 | 0 | 0 | 591 | 4 | 5 | 1 | 2 |

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



9th St & Commercial St

Thursday, November 01, 2018

7:00 AM to 9:00 AM

Heavy Vehicle 5-Minute Interval Summary

7:00 AM to 9:00 AM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|-------------------------|----|----|-------|-------------------------|---|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 7:05 AM | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:10 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 8 | 0 | 0 | 0 | 0 | 8 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 8 | 0 | 0 | 0 | 0 | 4 |
| 7:20 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 0 | 0 | 0 | 0 | 2 |
| 7:25 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 6 | 0 | 0 | 0 | 0 | 3 |
| 7:30 AM | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 6 | 0 | 0 | 0 | 0 | 5 |
| 7:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:40 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 6 | 0 | 0 | 0 | 0 | 3 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 1 |
| 7:50 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 6 | 0 | 0 | 0 | 0 | 3 |
| 7:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 1 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 12 | 0 | 0 | 0 | 0 | 6 |
| 8:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 0 | 0 | 0 | 0 | 2 |
| 8:10 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 1 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 0 | 0 | 0 | 0 | 2 |
| 8:20 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 1 |
| 8:25 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 0 | 0 | 0 | 0 | 3 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 12 | 0 | 0 | 0 | 0 | 6 |
| 8:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 0 | 0 | 0 | 0 | 2 |
| 8:40 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 6 | 0 | 0 | 0 | 0 | 3 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 6 | 0 | 0 | 0 | 0 | 3 |
| 8:50 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 0 | 0 | 0 | 0 | 2 |
| 8:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 6 | 0 | 0 | 0 | 0 | 3 |
| Total Survey | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 5 | 59 | 64 | 123 | 0 | 0 | 0 | 0 | 67 |

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|-------------------------|----|----|-------|-------------------------|---|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 7:00 AM | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 7 | 9 | 16 | 0 | 0 | 0 | 0 | 10 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 9 | 18 | 0 | 0 | 0 | 0 | 9 |
| 7:30 AM | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 12 | 0 | 0 | 0 | 0 | 8 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 10 | 0 | 0 | 0 | 0 | 5 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 8 | 9 | 18 | 0 | 0 | 0 | 0 | 9 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 7 | 12 | 0 | 0 | 0 | 0 | 7 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 22 | 0 | 0 | 0 | 0 | 11 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 16 | 0 | 0 | 0 | 0 | 8 |
| Total Survey | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 5 | 59 | 64 | 123 | 0 | 0 | 0 | 0 | 67 |

Heavy Vehicle Peak Hour Summary

7:40 AM to 8:40 AM

| By Approach | Northbound 9th St | | | Southbound 9th St | | | Eastbound Commercial St | | | Westbound Commercial St | | | Total |
|-------------|-------------------|-----|-------|-------------------|-----|-------|-------------------------|-----|-------|-------------------------|-----|-------|-------|
| | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | |
| Volume | 0 | 0 | 0 | 0 | 3 | 3 | 32 | 0 | 32 | 0 | 29 | 29 | 32 |
| PHF | 0.00 | | | 0.00 | | | 0.73 | | | 0.00 | | | 0.73 |

| By Movement | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Total |
|-------------|-------------------|------|------|-------|-------------------|------|------|-------|-------------------------|------|------|-------|-------------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 29 | 0 | 32 | 0 | 0 | 0 | 0 | 32 |
| PHF | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.38 | 0.73 | 0.00 | 0.73 | 0.00 | 0.00 | 0.00 | 0.00 | 0.73 |

Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|-------------------------|----|---|-------|-------------------------|---|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 7:00 AM | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 27 | 0 | 29 | 0 | 0 | 0 | 0 | 32 |
| 7:15 AM | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 28 | 0 | 29 | 0 | 0 | 0 | 0 | 31 |
| 7:30 AM | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 3 | 24 | 0 | 27 | 0 | 0 | 0 | 0 | 29 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 29 | 0 | 32 | 0 | 0 | 0 | 0 | 32 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 32 | 0 | 35 | 0 | 0 | 0 | 0 | 35 |

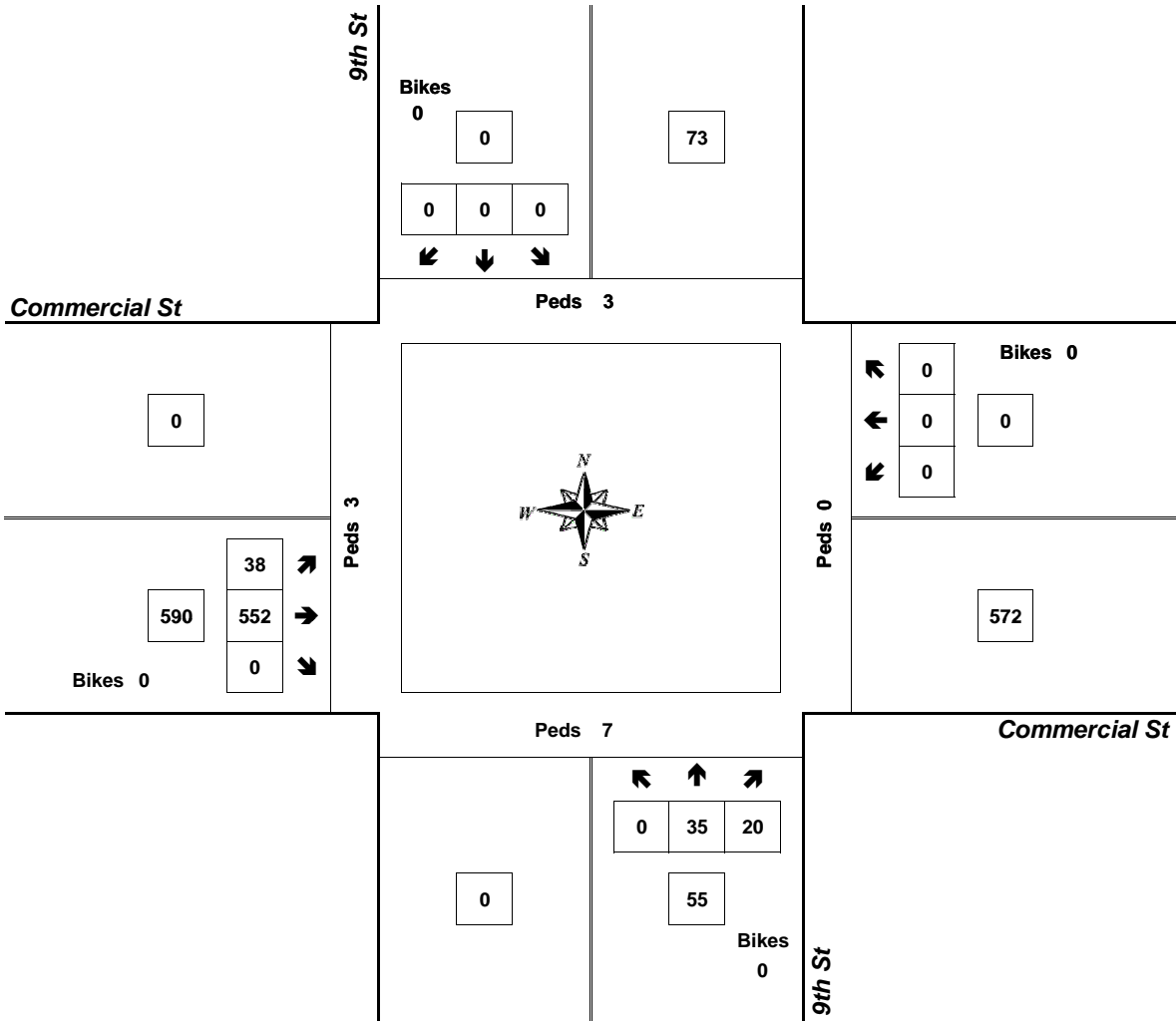
Peak Hour Summary



Clay Carney
(503) 833-2740

9th St & Commercial St

7:40 AM to 8:40 AM
Thursday, November 01, 2018



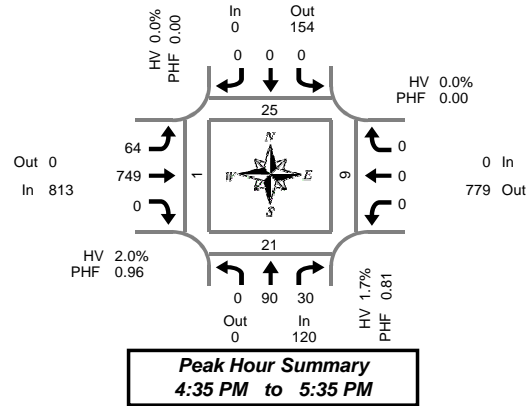
| Approach | PHF | HV% | Volume |
|---------------------|-------------|-------------|------------|
| EB | 0.81 | 5.4% | 590 |
| WB | 0.00 | 0.0% | 0 |
| NB | 0.76 | 0.0% | 55 |
| SB | 0.00 | 0.0% | 0 |
| Intersection | 0.82 | 5.0% | 645 |

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary



Clay Carney
(503) 833-2740



9th St & Commercial St

Thursday, November 01, 2018

4:00 PM to 6:00 PM

5-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total | Pedestrians Crosswalk | | | | | | | |
|---------------------|-------------------|-----|----|-------|-------------------|---|---|-------|-------------------------|-------|---|-------|-------------------------|---|---|-------|----------------|-----------------------|-------|------|-------|----|----|----|---|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West | | | | |
| 4:00 PM | 0 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 68 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 81 | 2 | 1 | 0 | 1 |
| 4:05 PM | 0 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 3 | 59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 72 | 0 | 2 | 1 | 0 |
| 4:10 PM | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 2 | 58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 72 | 4 | 3 | 0 | 3 |
| 4:15 PM | 0 | 11 | 2 | 0 | 0 | 0 | 0 | 0 | 11 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 74 | 2 | 0 | 1 | 0 |
| 4:20 PM | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 6 | 71 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 83 | 2 | 2 | 0 | 0 |
| 4:25 PM | 0 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 72 | 7 | 0 | 0 | 1 |
| 4:30 PM | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 69 | 1 | 1 | 0 | 0 |
| 4:35 PM | 0 | 12 | 4 | 0 | 0 | 0 | 0 | 0 | 5 | 57 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 78 | 1 | 3 | 0 | 0 |
| 4:40 PM | 0 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 6 | 61 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 76 | 4 | 0 | 1 | 0 |
| 4:45 PM | 0 | 6 | 4 | 0 | 0 | 0 | 0 | 0 | 7 | 67 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 84 | 3 | 2 | 1 | 0 |
| 4:50 PM | 0 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 5 | 66 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 79 | 3 | 1 | 0 | 0 |
| 4:55 PM | 0 | 12 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 61 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 79 | 2 | 2 | 3 | 0 |
| 5:00 PM | 0 | 8 | 3 | 0 | 0 | 0 | 0 | 0 | 7 | 59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 77 | 2 | 4 | 0 | 0 |
| 5:05 PM | 0 | 11 | 2 | 0 | 0 | 0 | 0 | 0 | 9 | 54 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 76 | 2 | 0 | 0 | 0 |
| 5:10 PM | 0 | 9 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 69 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 81 | 1 | 0 | 1 | 0 |
| 5:15 PM | 0 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 72 | 1 | 3 | 0 | 0 |
| 5:20 PM | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 4 | 66 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 76 | 1 | 4 | 2 | 0 |
| 5:25 PM | 0 | 7 | 4 | 0 | 0 | 0 | 0 | 0 | 6 | 65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 82 | 5 | 0 | 1 | 0 |
| 5:30 PM | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 66 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 73 | 0 | 2 | 0 | 1 |
| 5:35 PM | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 57 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 63 | 0 | 2 | 0 | 0 |
| 5:40 PM | 0 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 49 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 57 | 0 | 4 | 0 | 0 |
| 5:45 PM | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 8 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 57 | 0 | 2 | 1 | 0 |
| 5:50 PM | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 1 | 0 | 0 | 0 |
| 5:55 PM | 0 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 5 | 47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 0 | 0 | 1 | 0 |
| Total Survey | 0 | 157 | 55 | 1 | 0 | 0 | 0 | 0 | 110 | 1,414 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,736 | 44 | 38 | 13 | 6 |

15-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total | Pedestrians Crosswalk | | | | | | | |
|---------------------|-------------------|-----|----|-------|-------------------|---|---|-------|-------------------------|-------|---|-------|-------------------------|---|---|-------|----------------|-----------------------|-------|------|-------|----|----|----|---|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West | | | | |
| 4:00 PM | 0 | 24 | 9 | 0 | 0 | 0 | 0 | 0 | 7 | 185 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 225 | 6 | 6 | 1 | 4 |
| 4:15 PM | 0 | 22 | 7 | 0 | 0 | 0 | 0 | 0 | 21 | 179 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 229 | 11 | 2 | 1 | 1 |
| 4:30 PM | 0 | 20 | 8 | 0 | 0 | 0 | 0 | 0 | 12 | 183 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 223 | 6 | 4 | 1 | 0 |
| 4:45 PM | 0 | 23 | 8 | 0 | 0 | 0 | 0 | 0 | 17 | 194 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 242 | 8 | 5 | 4 | 0 |
| 5:00 PM | 0 | 28 | 6 | 1 | 0 | 0 | 0 | 0 | 18 | 182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 234 | 5 | 4 | 1 | 0 |
| 5:15 PM | 0 | 18 | 9 | 0 | 0 | 0 | 0 | 0 | 14 | 189 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 230 | 7 | 7 | 3 | 0 |
| 5:30 PM | 0 | 13 | 1 | 0 | 0 | 0 | 0 | 0 | 7 | 172 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 193 | 0 | 8 | 0 | 1 |
| 5:45 PM | 0 | 9 | 7 | 0 | 0 | 0 | 0 | 0 | 14 | 130 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 160 | 1 | 2 | 2 | 0 |
| Total Survey | 0 | 157 | 55 | 1 | 0 | 0 | 0 | 0 | 110 | 1,414 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,736 | 44 | 38 | 13 | 6 |

Peak Hour Summary

4:35 PM to 5:35 PM

| By Approach | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Total | Pedestrians Crosswalk | | | |
|-------------|-------------------|-----|-------|-------|-------------------|-----|-------|-------|-------------------------|-----|-------|-------|-------------------------|-----|-------|-------|-------|-----------------------|-------|------|------|
| | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | | North | South | East | West |
| Volume | 120 | 0 | 120 | 1 | 0 | 154 | 154 | 0 | 813 | 0 | 813 | 0 | 0 | 779 | 779 | 0 | 933 | 25 | 21 | 9 | 1 |
| %HV | 1.7% | | | | 0.0% | | | | 2.0% | | | | 0.0% | | | | 1.9% | | | | |
| PHF | 0.81 | | | | 0.00 | | | | 0.96 | | | | 0.00 | | | | 0.96 | | | | |

| By Movement | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Total |
|-------------|-------------------|------|------|-------|-------------------|------|------|-------|-------------------------|------|------|-------|-------------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 0 | 90 | 30 | 120 | 0 | 0 | 0 | 0 | 64 | 749 | 0 | 813 | 0 | 0 | 0 | 0 | 933 |
| %HV | 0.0% | 0.0% | 6.7% | 1.7% | 0.0% | 0.0% | 0.0% | 0.0% | 3.1% | 1.9% | 0.0% | 2.0% | 0.0% | 0.0% | 0.0% | 0.0% | 1.9% |
| PHF | 0.00 | 0.73 | 0.68 | 0.81 | 0.00 | 0.00 | 0.00 | 0.00 | 0.76 | 0.95 | 0.00 | 0.96 | 0.00 | 0.00 | 0.00 | 0.00 | 0.96 |

Rolling Hour Summary

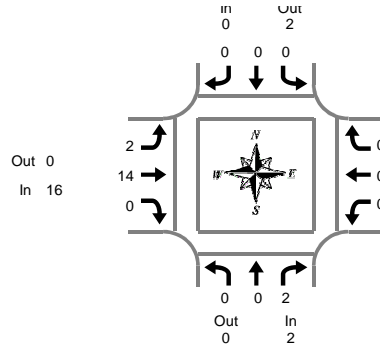
4:00 PM to 6:00 PM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|-------------------|----|----|-------|-------------------|---|---|-------|-------------------------|-----|---|-------|-------------------------|---|---|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 4:00 PM | 0 | 89 | 32 | 0 | 0 | 0 | 0 | 0 | 57 | 741 | 0 | 1 | 0 | 0 | 0 | 0 | 919 | 31 | 17 | 7 | 5 |
| 4:15 PM | 0 | 93 | 29 | 1 | 0 | 0 | 0 | 0 | 68 | 738 | 0 | 1 | 0 | 0 | 0 | 0 | 928 | 30 | 15 | 7 | 1 |
| 4:30 PM | 0 | 89 | 31 | 1 | 0 | 0 | 0 | 0 | 61 | 748 | 0 | 0 | 0 | 0 | 0 | 0 | 929 | 26 | 20 | 9 | 0 |
| 4:45 PM | 0 | 82 | 24 | 1 | 0 | 0 | 0 | 0 | 56 | 737 | 0 | 2 | 0 | 0 | 0 | 0 | 899 | 20 | 24 | 8 | 1 |
| 5:00 PM | 0 | 68 | 23 | 1 | 0 | 0 | 0 | 0 | 53 | 673 | 0 | 2 | 0 | 0 | 0 | 0 | 817 | 13 | 21 | 6 | 1 |

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



Peak Hour Summary
4:35 PM to 5:35 PM

9th St & Commercial St

Thursday, November 01, 2018

4:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total | |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|-------------------------|---|----|-------|-------------------------|---|---|-------|----------------|----|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| 4:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 4 |
| 4:10 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 4 |
| 4:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| 4:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| 4:35 PM | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| 4:40 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 4:50 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 4:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 5:10 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 4 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 5:20 PM | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| 5:35 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 5:40 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| 5:50 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 5:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Survey | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 3 | 42 | 0 | 45 | 0 | 0 | 0 | 0 | 47 |

Heavy Vehicle 15-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total | |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|-------------------------|---|----|-------|-------------------------|---|---|-------|----------------|----|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 9 | 0 | 0 | 0 | 0 | 9 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 10 | 0 | 0 | 0 | 0 | 10 |
| 4:30 PM | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 5 | 0 | 0 | 0 | 0 | 6 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 6 |
| 5:15 PM | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 3 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 5 | 0 | 0 | 0 | 0 | 5 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 5 | 0 | 0 | 0 | 0 | 5 |
| Total Survey | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 3 | 42 | 0 | 45 | 0 | 0 | 0 | 0 | 47 |

Heavy Vehicle Peak Hour Summary

4:35 PM to 5:35 PM

| By Approach | Northbound 9th St | | | Southbound 9th St | | | Eastbound Commercial St | | | Westbound Commercial St | | | Total |
|-------------|-------------------|-----|-------|-------------------|-----|-------|-------------------------|-----|-------|-------------------------|-----|-------|-------|
| | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | |
| Volume | 2 | 0 | 2 | 0 | 2 | 2 | 16 | 0 | 16 | 0 | 16 | 16 | 18 |
| PHF | 0.50 | | | 0.00 | | | 0.50 | | | 0.00 | | | 0.56 |

| By Movement | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Total |
|-------------|-------------------|------|------|-------|-------------------|------|------|-------|-------------------------|------|------|-------|-------------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 14 | 0 | 16 | 0 | 0 | 0 | 0 | 18 |
| PHF | 0.00 | 0.00 | 0.50 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.50 | 0.44 | 0.00 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.56 |

Heavy Vehicle Rolling Hour Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 9th St | | | | Southbound 9th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total | |
|---------------------|-------------------|---|---|-------|-------------------|---|---|-------|-------------------------|---|----|-------|-------------------------|---|---|-------|----------------|----|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | | |
| 4:00 PM | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 26 | 0 | 27 | 0 | 0 | 0 | 0 | 28 |
| 4:15 PM | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 23 | 0 | 24 | 0 | 0 | 0 | 0 | 25 |
| 4:30 PM | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 15 | 0 | 16 | 0 | 0 | 0 | 0 | 18 |
| 4:45 PM | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 15 | 0 | 16 | 0 | 0 | 0 | 0 | 17 |
| 5:00 PM | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 16 | 0 | 18 | 0 | 0 | 0 | 0 | 19 |

Peak Hour Summary

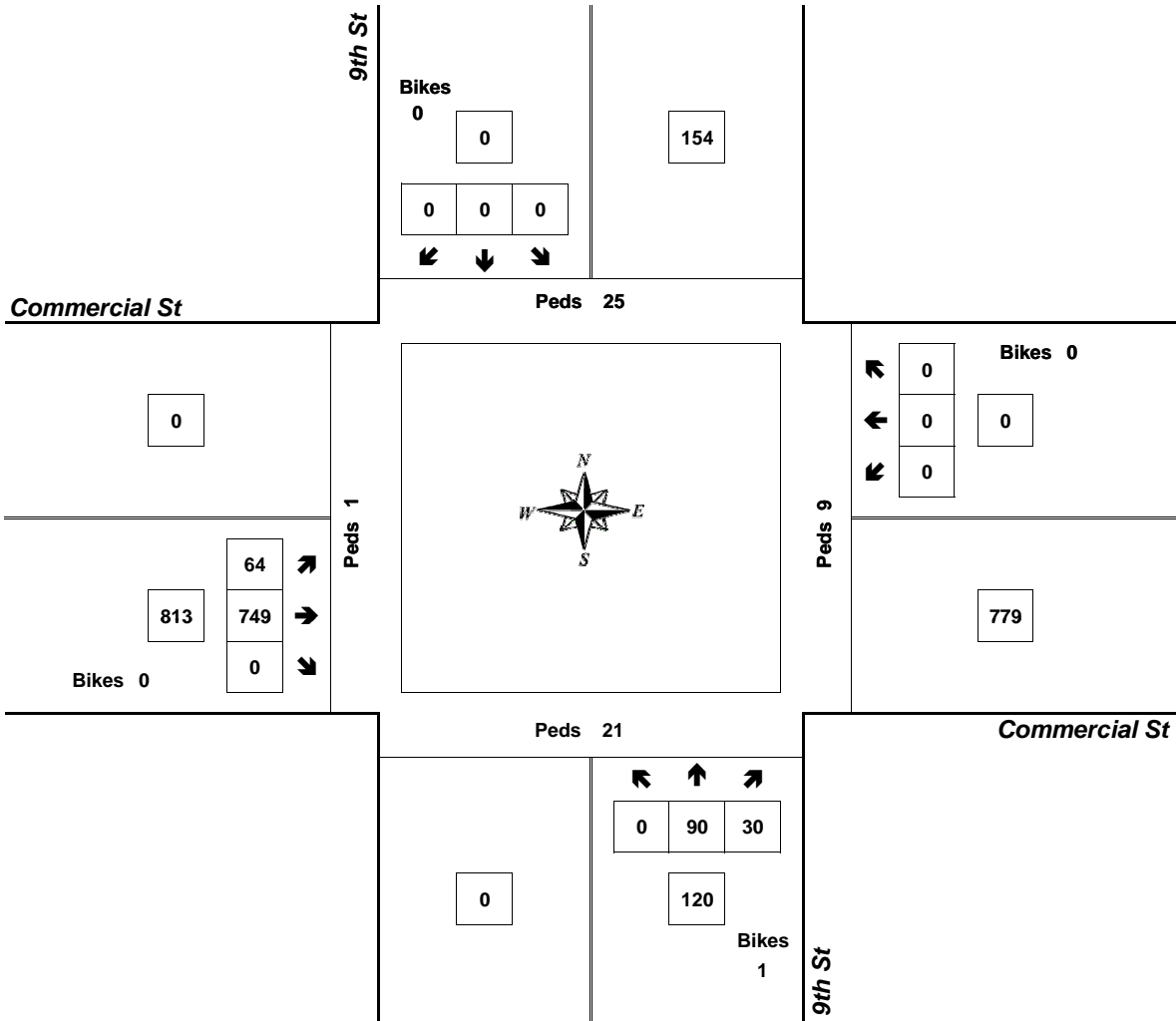


Clay Carney
(503) 833-2740

9th St & Commercial St

4:35 PM to 5:35 PM

Thursday, November 01, 2018



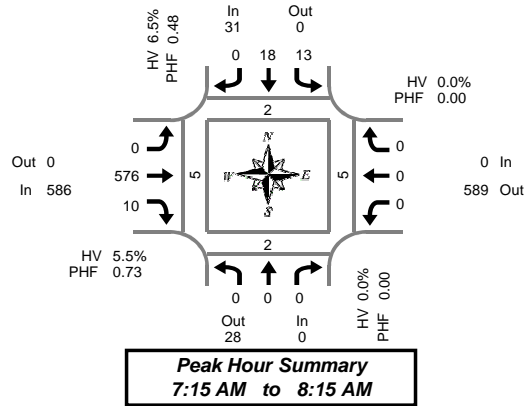
| Approach | PHF | HV% | Volume |
|---------------------|-------------|-------------|------------|
| EB | 0.96 | 2.0% | 813 |
| WB | 0.00 | 0.0% | 0 |
| NB | 0.81 | 1.7% | 120 |
| SB | 0.00 | 0.0% | 0 |
| Intersection | 0.96 | 1.9% | 933 |

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary



Clay Carney
(503) 833-2740



10th St & Commercial St

Wednesday, November 14, 2018

7:00 AM to 9:00 AM

5-Minute Interval Summary

7:00 AM to 9:00 AM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total | Pedestrians Crosswalk | | | | | | |
|---------------------|--------------------|---|---|-------|--------------------|----|---|-------|-------------------------|-----|----|-------|-------------------------|---|---|-------|----------------|-----------------------|-------|-------|------|---|---|----|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West | | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 0 | 0 | 0 | 0 |
| 7:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 0 | 0 | 0 | 0 |
| 7:10 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50 | 0 | 1 | 1 | 0 |
| 7:20 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 41 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 0 | 0 | 0 | 0 |
| 7:25 AM | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 44 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 1 | 0 | 0 | 0 |
| 7:35 AM | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 49 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 53 | 0 | 0 | 0 | 0 |
| 7:40 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 1 | 1 | 0 | 1 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 40 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 0 | 0 | 0 | 0 |
| 7:50 AM | 0 | 0 | 0 | 0 | 2 | 5 | 0 | 0 | 0 | 81 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 89 | 0 | 0 | 2 | 1 |
| 7:55 AM | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 62 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 55 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 62 | 0 | 0 | 1 | 0 |
| 8:05 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 29 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 0 | 0 | 1 | 3 |
| 8:10 AM | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 55 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 36 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 1 | 0 | 0 | 2 |
| 8:20 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 41 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 0 | 0 | 0 | 1 |
| 8:25 AM | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 1 | 0 | 31 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 | 1 | 0 | 0 | 0 |
| 8:30 AM | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 36 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 | 0 | 0 | 1 | 0 |
| 8:35 AM | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 0 | 38 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 | 0 | 0 | 0 | 0 |
| 8:40 AM | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 45 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 40 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47 | 0 | 0 | 0 | 0 |
| 8:50 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 37 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 | 0 | 0 | 0 | 0 |
| 8:55 AM | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 47 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 57 | 2 | 0 | 2 | 3 |
| Total Survey | 0 | 0 | 0 | 0 | 31 | 31 | 0 | 1 | 0 | 997 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,090 | 6 | 2 | 8 | 11 |

15-Minute Interval Summary

7:00 AM to 9:00 AM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total | Pedestrians Crosswalk | | | | | | |
|---------------------|--------------------|---|---|-------|--------------------|----|---|-------|-------------------------|-----|----|-------|-------------------------|---|---|-------|----------------|-----------------------|-------|-------|------|---|---|----|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West | | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 70 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 72 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 135 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 142 | 0 | 1 | 1 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 119 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 124 | 2 | 1 | 0 | 1 |
| 7:45 AM | 0 | 0 | 0 | 0 | 3 | 8 | 0 | 0 | 0 | 183 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 198 | 0 | 0 | 2 | 1 |
| 8:00 AM | 0 | 0 | 0 | 0 | 7 | 4 | 0 | 0 | 0 | 139 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 153 | 0 | 0 | 2 | 3 |
| 8:15 AM | 0 | 0 | 0 | 0 | 6 | 2 | 0 | 1 | 0 | 108 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 123 | 2 | 0 | 0 | 3 |
| 8:30 AM | 0 | 0 | 0 | 0 | 5 | 7 | 0 | 0 | 0 | 119 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 134 | 0 | 0 | 1 | 0 |
| 8:45 AM | 0 | 0 | 0 | 0 | 7 | 3 | 0 | 0 | 0 | 124 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 144 | 2 | 0 | 2 | 3 |
| Total Survey | 0 | 0 | 0 | 0 | 31 | 31 | 0 | 1 | 0 | 997 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,090 | 6 | 2 | 8 | 11 |

Peak Hour Summary

7:15 AM to 8:15 AM

| By Approach | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Total | Pedestrians Crosswalk | | | |
|-------------|--------------------|-----|-------|-------|--------------------|-----|-------|-------|-------------------------|-----|-------|-------|-------------------------|-----|-------|-------|-------|-----------------------|-------|------|------|
| | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | | North | South | East | West |
| Volume | 0 | 28 | 28 | 0 | 31 | 0 | 31 | 0 | 586 | 0 | 586 | 0 | 0 | 589 | 589 | 0 | 617 | 2 | 2 | 5 | 5 |
| %HV | 0.0% | | | | 6.5% | | | | 5.5% | | | | 0.0% | | | | 5.5% | | | | |
| PHF | 0.00 | | | | 0.48 | | | | 0.73 | | | | 0.00 | | | | 0.71 | | | | |

| By Movement | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Total |
|-------------|--------------------|------|------|-------|--------------------|------|------|-------|-------------------------|------|------|-------|-------------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 0 | 0 | 0 | 0 | 13 | 18 | 0 | 31 | 0 | 576 | 10 | 586 | 0 | 0 | 0 | 0 | 617 |
| %HV | 0.0% | 0.0% | 0.0% | 0.0% | 7.7% | 5.6% | 0.0% | 6.5% | 0.0% | 5.6% | 0.0% | 5.5% | 0.0% | 0.0% | 0.0% | 0.0% | 5.5% |
| PHF | 0.00 | 0.00 | 0.00 | 0.00 | 0.46 | 0.50 | 0.00 | 0.48 | 0.00 | 0.73 | 0.63 | 0.73 | 0.00 | 0.00 | 0.00 | 0.00 | 0.71 |

Rolling Hour Summary

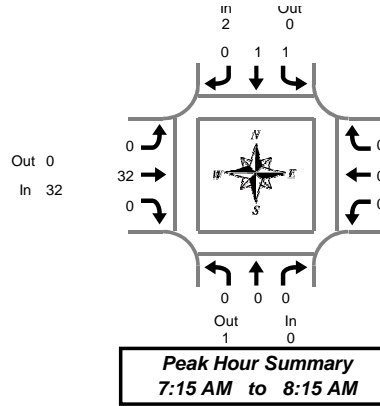
7:00 AM to 9:00 AM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|--------------------|---|---|-------|--------------------|----|---|-------|-------------------------|-----|----|-------|-------------------------|---|---|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 7:00 AM | 0 | 0 | 0 | 0 | 6 | 15 | 0 | 0 | 0 | 507 | 8 | 0 | 0 | 0 | 0 | 0 | 536 | 2 | 2 | 3 | 2 |
| 7:15 AM | 0 | 0 | 0 | 0 | 13 | 18 | 0 | 0 | 0 | 576 | 10 | 0 | 0 | 0 | 0 | 0 | 617 | 2 | 2 | 5 | 5 |
| 7:30 AM | 0 | 0 | 0 | 0 | 18 | 16 | 0 | 1 | 0 | 549 | 15 | 0 | 0 | 0 | 0 | 0 | 598 | 4 | 1 | 4 | 8 |
| 7:45 AM | 0 | 0 | 0 | 0 | 21 | 21 | 0 | 1 | 0 | 549 | 17 | 0 | 0 | 0 | 0 | 0 | 608 | 2 | 0 | 5 | 7 |
| 8:00 AM | 0 | 0 | 0 | 0 | 25 | 16 | 0 | 1 | 0 | 490 | 23 | 0 | 0 | 0 | 0 | 0 | 554 | 4 | 0 | 5 | 9 |

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



10th St & Commercial St

Wednesday, November 14, 2018

7:00 AM to 9:00 AM

Heavy Vehicle 5-Minute Interval Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total |
|---------------------|--------------------|---|---|-------|--------------------|---|---|-------|-------------------------|----|---|-------|-------------------------|---|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 7:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 7:10 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 7:20 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 7:25 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 6 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 7:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 7:40 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 5 |
| 7:50 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 5 |
| 7:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 8:00 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 4 |
| 8:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 8:10 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| 8:15 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 4 |
| 8:20 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 8:25 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 5 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| 8:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 8:40 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 0 | 0 | 0 | 0 | 7 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| 8:50 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 6 |
| 8:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 4 |
| Total Survey | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 4 | 0 | 71 | 0 | 71 | 0 | 0 | 0 | 0 | 75 |

Heavy Vehicle 15-Minute Interval Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total |
|---------------------|--------------------|---|---|-------|--------------------|---|---|-------|-------------------------|----|---|-------|-------------------------|---|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 6 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 8 | 0 | 8 | 0 | 0 | 0 | 0 | 9 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 4 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 12 | 0 | 0 | 0 | 0 | 12 |
| 8:00 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 8 | 0 | 8 | 0 | 0 | 0 | 0 | 9 |
| 8:15 AM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 9 | 0 | 9 | 0 | 0 | 0 | 0 | 11 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 11 | 0 | 0 | 0 | 0 | 11 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 13 | 0 | 0 | 0 | 0 | 13 |
| Total Survey | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 4 | 0 | 71 | 0 | 71 | 0 | 0 | 0 | 0 | 75 |

Heavy Vehicle Peak Hour Summary 7:15 AM to 8:15 AM

| By Approach | Northbound 10th St | | | Southbound 10th St | | | Eastbound Commercial St | | | Westbound Commercial St | | | Total |
|-------------|--------------------|-----|-------|--------------------|-----|-------|-------------------------|-----|-------|-------------------------|-----|-------|-------|
| | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | |
| Volume | 0 | 1 | 1 | 2 | 0 | 2 | 32 | 0 | 32 | 0 | 33 | 33 | 34 |
| PHF | 0.00 | | | 0.50 | | | 0.67 | | | 0.00 | | | 0.71 |

| By Movement | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Total |
|-------------|--------------------|------|------|-------|--------------------|------|------|-------|-------------------------|------|------|-------|-------------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 32 | 0 | 32 | 0 | 0 | 0 | 0 | 34 |
| PHF | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 | 0.25 | 0.00 | 0.50 | 0.00 | 0.67 | 0.00 | 0.67 | 0.00 | 0.00 | 0.00 | 0.00 | 0.71 |

Heavy Vehicle Rolling Hour Summary 7:00 AM to 9:00 AM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total |
|---------------------|--------------------|---|---|-------|--------------------|---|---|-------|-------------------------|----|---|-------|-------------------------|---|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 30 | 0 | 30 | 0 | 0 | 0 | 0 | 31 |
| 7:15 AM | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 32 | 0 | 32 | 0 | 0 | 0 | 0 | 34 |
| 7:30 AM | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 33 | 0 | 33 | 0 | 0 | 0 | 0 | 36 |
| 7:45 AM | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 40 | 0 | 40 | 0 | 0 | 0 | 0 | 43 |
| 8:00 AM | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 41 | 0 | 41 | 0 | 0 | 0 | 0 | 44 |

Peak Hour Summary

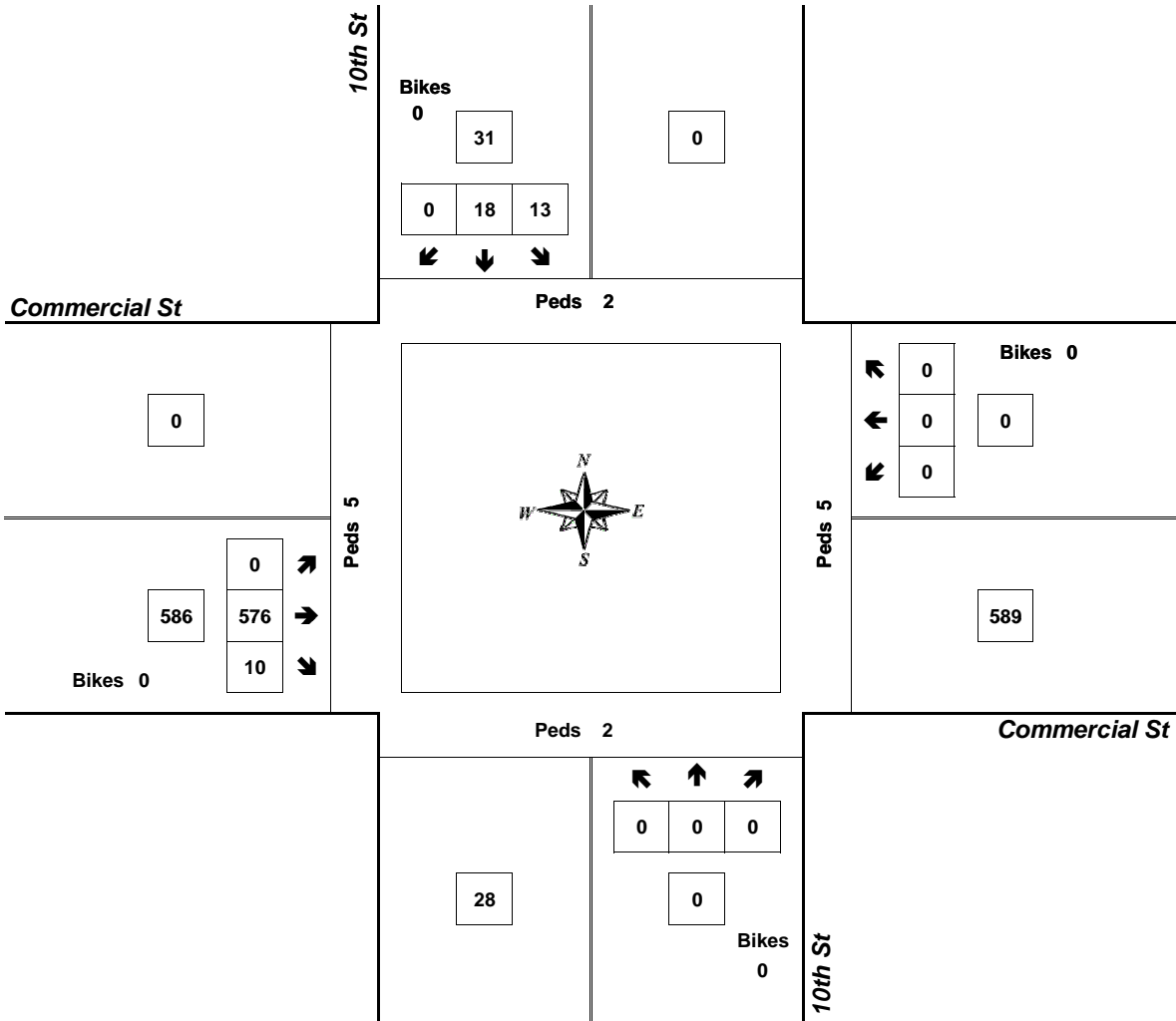


Clay Carney
(503) 833-2740

10th St & Commercial St

7:15 AM to 8:15 AM

Wednesday, November 14, 2018



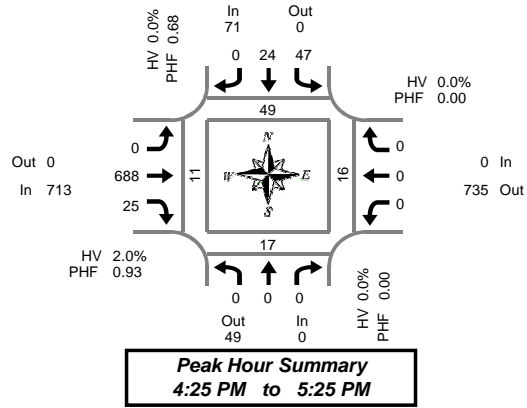
| Approach | PHF | HV% | Volume |
|---------------------|-------------|-------------|------------|
| EB | 0.73 | 5.5% | 586 |
| WB | 0.00 | 0.0% | 0 |
| NB | 0.00 | 0.0% | 0 |
| SB | 0.48 | 6.5% | 31 |
| Intersection | 0.71 | 5.5% | 617 |

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary



Clay Carney
(503) 833-2740



10th St & Commercial St

Tuesday, November 13, 2018

4:00 PM to 6:00 PM

5-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total | Pedestrians Crosswalk | | | | | | |
|---------------------|--------------------|---|---|-------|--------------------|----|---|-------|-------------------------|-------|----|-------|-------------------------|---|---|-------|----------------|-----------------------|-------|------|------|----|----|---|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West | | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 54 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 64 | 2 | 1 | 4 | 3 |
| 4:05 PM | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 1 | 0 | 65 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 74 | 5 | 2 | 0 | 0 |
| 4:10 PM | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 48 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 57 | 5 | 1 | 1 | 1 |
| 4:15 PM | 0 | 0 | 0 | 0 | 6 | 1 | 0 | 0 | 0 | 49 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 58 | 3 | 2 | 1 | 0 |
| 4:20 PM | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 48 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 53 | 2 | 2 | 2 | 0 |
| 4:25 PM | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 56 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 64 | 4 | 2 | 1 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 55 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 61 | 2 | 1 | 1 | 0 |
| 4:35 PM | 0 | 0 | 0 | 0 | 14 | 1 | 0 | 0 | 0 | 47 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 67 | 1 | 3 | 1 | 0 |
| 4:40 PM | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 53 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 61 | 2 | 2 | 2 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 57 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 65 | 4 | 0 | 0 | 1 |
| 4:50 PM | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 65 | 16 | 2 | 0 | 4 |
| 4:55 PM | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 52 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 5 | 1 | 1 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 5 | 3 | 0 | 0 | 0 | 70 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 79 | 4 | 1 | 1 | 0 |
| 5:05 PM | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 0 | 0 | 61 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 1 | 1 | 0 | 3 |
| 5:10 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 58 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 7 | 3 | 4 | 3 |
| 5:15 PM | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 55 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 64 | 0 | 1 | 0 | 0 |
| 5:20 PM | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 64 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 70 | 3 | 0 | 5 | 0 |
| 5:25 PM | 0 | 0 | 0 | 0 | 6 | 4 | 0 | 0 | 0 | 54 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 64 | 2 | 0 | 1 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 | 3 | 1 | 2 | 1 |
| 5:35 PM | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 54 | 3 | 1 | 0 | 2 |
| 5:40 PM | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 61 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 67 | 2 | 2 | 0 | 2 |
| 5:45 PM | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 66 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 71 | 2 | 0 | 2 | 0 |
| 5:50 PM | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 | 0 | 0 | 0 | 0 |
| 5:55 PM | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 36 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 43 | 1 | 0 | 1 | 0 |
| Total Survey | 0 | 0 | 0 | 0 | 100 | 37 | 0 | 1 | 0 | 1,314 | 42 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1,493 | 79 | 29 | 30 | 20 | |

15-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total | Pedestrians Crosswalk | | | | | |
|---------------------|--------------------|---|---|-------|--------------------|----|---|-------|-------------------------|-------|----|-------|-------------------------|---|---|-------|----------------|-----------------------|-------|------|------|----|---|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 15 | 2 | 0 | 1 | 0 | 167 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 195 | 12 | 4 | 5 | 4 |
| 4:15 PM | 0 | 0 | 0 | 0 | 14 | 3 | 0 | 0 | 0 | 153 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 175 | 9 | 6 | 4 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 18 | 7 | 0 | 0 | 0 | 155 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 189 | 5 | 6 | 4 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 11 | 5 | 0 | 0 | 0 | 169 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 190 | 25 | 3 | 1 | 5 |
| 5:00 PM | 0 | 0 | 0 | 0 | 7 | 8 | 0 | 0 | 0 | 189 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 207 | 12 | 5 | 5 | 6 |
| 5:15 PM | 0 | 0 | 0 | 0 | 13 | 6 | 0 | 0 | 0 | 173 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 198 | 5 | 1 | 6 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 11 | 2 | 0 | 0 | 0 | 158 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 173 | 8 | 4 | 2 | 5 |
| 5:45 PM | 0 | 0 | 0 | 0 | 11 | 4 | 0 | 0 | 0 | 150 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 166 | 3 | 0 | 3 | 0 |
| Total Survey | 0 | 0 | 0 | 0 | 100 | 37 | 0 | 1 | 0 | 1,314 | 42 | 1 | 0 | 0 | 0 | 0 | 1 | 1,493 | 79 | 29 | 30 | 20 | |

Peak Hour Summary

4:25 PM to 5:25 PM

| By Approach | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Total | Pedestrians Crosswalk | | | |
|-------------|--------------------|-----|-------|-------|--------------------|-----|-------|-------|-------------------------|-----|-------|-------|-------------------------|-----|-------|-------|-------|-----------------------|-------|------|------|
| | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | In | Out | Total | Bikes | | North | South | East | West |
| Volume | 0 | 49 | 49 | 0 | 71 | 0 | 71 | 0 | 713 | 0 | 713 | 0 | 0 | 735 | 735 | 0 | 784 | 49 | 17 | 16 | 11 |
| %HV | 0.0% | | | | 0.0% | | | | 2.0% | | | | 0.0% | | | | 1.8% | | | | |
| PHF | 0.00 | | | | 0.68 | | | | 0.93 | | | | 0.00 | | | | 0.95 | | | | |

| By Movement | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Total |
|-------------|--------------------|------|------|-------|--------------------|------|------|-------|-------------------------|------|------|-------|-------------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 0 | 0 | 0 | 0 | 47 | 24 | 0 | 71 | 0 | 688 | 25 | 713 | 0 | 0 | 0 | 0 | 784 |
| %HV | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 2.0% | 0.0% | 2.0% | 0.0% | 0.0% | 0.0% | 0.0% | 1.8% |
| PHF | 0.00 | 0.00 | 0.00 | 0.00 | 0.56 | 0.67 | 0.00 | 0.68 | 0.00 | 0.91 | 0.63 | 0.93 | 0.00 | 0.00 | 0.00 | 0.00 | 0.95 |

Rolling Hour Summary

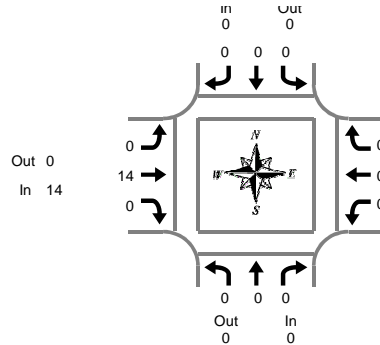
4:00 PM to 6:00 PM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total | Pedestrians Crosswalk | | | |
|---------------------|--------------------|---|---|-------|--------------------|----|---|-------|-------------------------|-----|----|-------|-------------------------|---|---|-------|----------------|-----------------------|-------|------|------|
| | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | L | T | R | Bikes | | North | South | East | West |
| 4:00 PM | 0 | 0 | 0 | 0 | 58 | 17 | 0 | 1 | 0 | 644 | 30 | 1 | 0 | 0 | 0 | 0 | 749 | 51 | 19 | 14 | 9 |
| 4:15 PM | 0 | 0 | 0 | 0 | 50 | 23 | 0 | 0 | 0 | 666 | 22 | 1 | 0 | 0 | 0 | 0 | 761 | 51 | 20 | 14 | 11 |
| 4:30 PM | 0 | 0 | 0 | 0 | 49 | 26 | 0 | 0 | 0 | 686 | 23 | 0 | 0 | 0 | 0 | 0 | 784 | 47 | 15 | 16 | 11 |
| 4:45 PM | 0 | 0 | 0 | 0 | 42 | 21 | 0 | 0 | 0 | 689 | 16 | 0 | 0 | 0 | 0 | 0 | 768 | 50 | 13 | 14 | 16 |
| 5:00 PM | 0 | 0 | 0 | 0 | 42 | 20 | 0 | 0 | 0 | 670 | 12 | 0 | 0 | 0 | 0 | 1 | 744 | 28 | 10 | 16 | 11 |

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



Peak Hour Summary
4:25 PM to 5:25 PM

10th St & Commercial St

Tuesday, November 13, 2018

4:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total |
|---------------------|--------------------|---|---|-------|--------------------|---|---|-------|-------------------------|----|---|-------|-------------------------|---|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 4:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 4:10 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 1 | 6 | 0 | 0 | 0 | 0 | 6 |
| 4:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 4:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 4 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 4:35 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:40 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 4:50 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 4:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:10 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 5:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 5:35 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 5:40 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:50 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 5:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 1 | 34 | 0 | 0 | 0 | 0 | 34 |

Heavy Vehicle 15-Minute Interval Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total |
|---------------------|--------------------|---|---|-------|--------------------|---|---|-------|-------------------------|----|---|-------|-------------------------|---|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 4 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 1 | 12 | 0 | 0 | 0 | 0 | 12 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 4 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| Total Survey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 1 | 34 | 0 | 0 | 0 | 0 | 34 |

Heavy Vehicle Peak Hour Summary

4:25 PM to 5:25 PM

| By Approach | Northbound 10th St | | | Southbound 10th St | | | Eastbound Commercial St | | | Westbound Commercial St | | | Total |
|-------------|--------------------|-----|-------|--------------------|-----|-------|-------------------------|-----|-------|-------------------------|-----|-------|-------|
| | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | |
| Volume | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 14 | 0 | 14 | 14 | 14 |
| PHF | 0.00 | | | 0.00 | | | 0.58 | | | 0.00 | | | 0.58 |

| By Movement | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Total |
|-------------|--------------------|------|------|-------|--------------------|------|------|-------|-------------------------|------|------|-------|-------------------------|------|------|-------|-------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 14 | 0 | 0 | 0 | 0 | 14 |
| PHF | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.58 | 0.00 | 0.58 | 0.00 | 0.00 | 0.00 | 0.00 | 0.58 |

Heavy Vehicle Rolling Hour Summary

4:00 PM to 6:00 PM

| Interval Start Time | Northbound 10th St | | | | Southbound 10th St | | | | Eastbound Commercial St | | | | Westbound Commercial St | | | | Interval Total |
|---------------------|--------------------|---|---|-------|--------------------|---|---|-------|-------------------------|----|---|-------|-------------------------|---|---|-------|----------------|
| | L | T | R | Total | L | T | R | Total | L | T | R | Total | L | T | R | Total | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 1 | 21 | 0 | 0 | 0 | 0 | 21 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 1 | 20 | 0 | 0 | 0 | 0 | 20 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 11 | 0 | 0 | 0 | 0 | 11 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 12 | 0 | 0 | 0 | 0 | 12 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 13 | 0 | 0 | 0 | 0 | 13 |

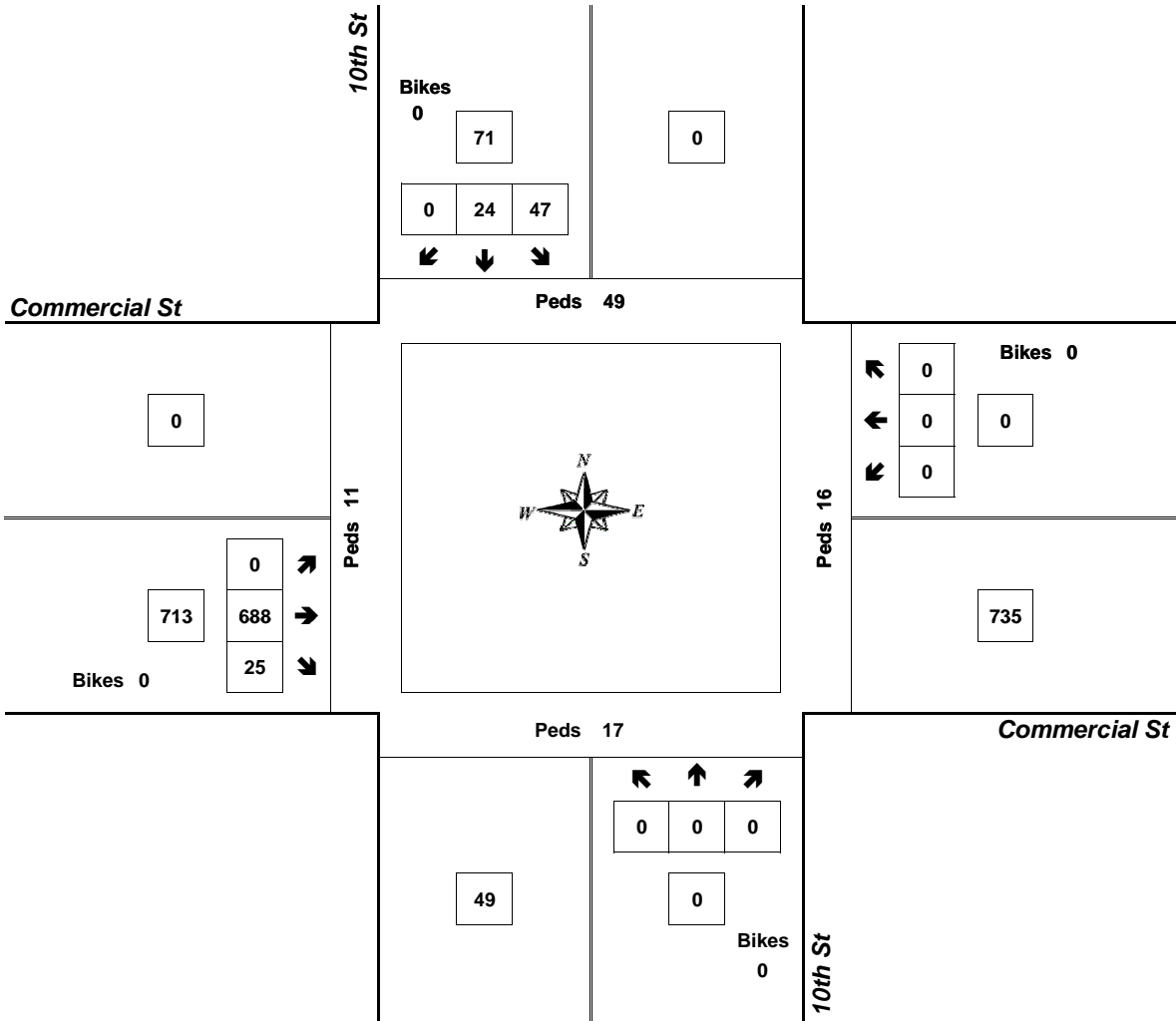
Peak Hour Summary



Clay Carney
(503) 833-2740

10th St & Commercial St

4:25 PM to 5:25 PM
Tuesday, November 13, 2018



| Approach | PHF | HV% | Volume |
|---------------------|-------------|-------------|------------|
| EB | 0.93 | 2.0% | 713 |
| WB | 0.00 | 0.0% | 0 |
| NB | 0.00 | 0.0% | 0 |
| SB | 0.68 | 0.0% | 71 |
| Intersection | 0.95 | 1.8% | 784 |

Count Period: 4:00 PM to 6:00 PM



TRIP GENERATION CALCULATIONS
Proposed Development

Land Use: Hotel
Land Use Code: 310
Setting/Location: General Urban/Suburban
Variable: Rooms
Variable Value: 39

AM PEAK HOUR

Trip Rate: 0.47

| | Enter | Exit | Total |
|--------------------------|-----------|----------|-----------|
| Directional Distribution | 59% | 41% | |
| Trip Ends | 11 | 7 | 18 |

PM PEAK HOUR

Trip Rate: 0.6

| | Enter | Exit | Total |
|--------------------------|-----------|-----------|-----------|
| Directional Distribution | 51% | 49% | |
| Trip Ends | 12 | 11 | 23 |

WEEKDAY

Trip Rate: 8.36

| | Enter | Exit | Total |
|--------------------------|------------|------------|------------|
| Directional Distribution | 50% | 50% | |
| Trip Ends | 163 | 163 | 326 |

SATURDAY

Trip Rate: 8.19

| | Enter | Exit | Total |
|--------------------------|------------|------------|------------|
| Directional Distribution | 50% | 50% | |
| Trip Ends | 160 | 160 | 320 |

Source: TRIP GENERATION, Tenth Edition

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

ASTOR ST at 7TH ST, City of Astoria, Clatsop County, 01/01/2012 to 12/31/2016

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

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirements, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

ASTOR ST at MARINE DR, City of Astoria, Clatsop County, 01/01/2012 to 12/31/2016

| COLLISION TYPE | FATAL CRASHES | NON-PROPERTY | | TOTAL CRASHES | PEOPLE KILLED | PEOPLE INJURED | TRUCKS | DRY SURF | WET SURF | DAY | DARK | INTER- SECTION RELATED | INTER- SECTION RELATED | OFF- ROAD |
|------------------------|------------------|------------------|----------------------------|------------------|------------------|-------------------|----------|-------------|-------------|----------|----------|------------------------------|------------------------------|--------------|
| | | FATAL CRASHES | PROPERTY DAMAGE ONLY | | | | | | | | | | | |
| YEAR: 2015 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| REAR-END | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| YEAR 2015 TOTAL | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| FINAL TOTAL | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |

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

ASTOR ST at MARINE DR, City of Astoria, Clatsop County, 01/01/2012 to 12/31/2016
1 - 1 of 1 Crash records shown.

CITY OF ASTORIA, CLATSOP COUNTY

| SER# | P | R | S | W | DATE | CLASS | CITY STREET | RD CHAR | INT-TYPE | INT-REL | OFFRD | WTHR | CRASH | SPCL USE | TRLR QTY | MOVE | OWNER | VH TYPE | TO | PH TYPE | SVTY | E | X | RES | LOC | ERROR | ACT. EVENT | CAUSE |
|--------|---|---|---|---|---------------------|-------|---------------|---------|----------|-----------|-------|-------|---------|----------|----------|-------|---------|---------|------|---------|------|-------|-------|-------|------|-------|------------|-------|
| INVEST | E | A | U | C | O | DIST | FIRST STREET | DIRECT | (MEDIAN) | TRAF- | RDDET | SURF | COLL | TRNGR | QTY | FROM | TYPE | TYPE | TYPE | TYPE | TYPE | TYPE | TYPE | TYPE | TYPE | TYPE | TYPE | TYPE |
| RD DPT | E | L | G | H | R | TIME | SECOND STREET | LOCN | LEGS | CONTL | DRVWY | LIGHT | SVTY | 01 | NONE | 0 | STRTGHT | 01 | DRVR | NONE | 32 | F | OTH-Y | N-RES | 026 | 000 | 000 | 00 |
| UNLOC? | D | C | S | L | K | LAT | LONG | INTER | 3-LEG | N | N | RAIN | S-1STOP | 0 | STRGHT | 01 | DRVR | NONE | 49 | M | OR-Y | OR<25 | 000 | 000 | 000 | 00 | 00 | |
| 00640 | N | N | N | N | 12/18/2015 | 14 | ASTOR ST | CN | 0 | STOP SIGN | N | WET | REAR | PRVTE | 0 | NW-SE | 01 | DRVR | NONE | 32 | F | OTH-Y | N-RES | 026 | 000 | 000 | 00 | |
| NONE | N | N | N | N | 46 11 25.15 -123 50 | 8.31 | MARINE DR | 04 | 0 | STOP SIGN | N | WET | REAR | PRVTE | 0 | NW-SE | 01 | DRVR | NONE | 49 | M | OR-Y | OR<25 | 000 | 000 | 000 | 00 | |

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

7TH ST at MARINE DR, City of Astoria, Clatsop County, 01/01/2012 to 12/31/2016

| COLLISION TYPE | FATAL CRASHES | NON-FATAL CRASHES | PROPERTY DAMAGE ONLY | TOTAL CRASHES | PEOPLE KILLED | PEOPLE INJURED | TRUCKS | DRY SURF | WET SURF | DAY | DARK | INTER-SECTION RELATED | INTER-SECTION RELATED | OFF-ROAD |
|-------------------|---------------|-------------------|----------------------|---------------|---------------|----------------|--------|----------|----------|-----|------|-----------------------|-----------------------|----------|
| | | | | | | | | | | | | | | |
| YEAR: 2016 | | | | | | | | | | | | | | |
| TURNING MOVEMENTS | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 0 |
| YEAR 2016 TOTAL | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 0 |
| YEAR: 2015 | | | | | | | | | | | | | | |
| ANGLE | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| REAR-END | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| YEAR 2015 TOTAL | 0 | 1 | 1 | 2 | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 0 |
| YEAR: 2012 | | | | | | | | | | | | | | |
| TURNING MOVEMENTS | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| YEAR 2012 TOTAL | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| FINAL TOTAL | 0 | 3 | 2 | 5 | 0 | 4 | 1 | 4 | 1 | 5 | 0 | 5 | 0 | 0 |

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OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 URBAN NON-SYSTEM CRASH LISTING
7TH ST at MARINE DR, City of Astoria, Clatsop County, 01/01/2012 to 12/31/2015

1 - 4 of 5 Crash records shown.

| SER# | INVEST | RD DFT | UNLOC# | D | R | S | W | DATE | CLASS | CITY STREET | RD CHAR | INT-REL | INT-TYPE | (MEDIAN) | INT-REL | LEGS | (#LANES) | CONTL | CROSS | INTER | LOCN | DRVWY | LIGHT | SVFTY | VH TYPE | SPCL USE | TRLR QTY | OWNER | MOVE | PH TYPE | SVRTY | E X RES | LOC | ERROR | ACT. EVENT | CAUSE | | | | | | | |
|-------|--------|--------|--------|---|---|---|---|-------------|-------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-----|-----|---|
| 00138 | N | N | N | N | N | N | N | 04/04/2012 | 14 | MARINE DR | INTER | N | CROSS | N | STOP SIGN | N | WET | TURN | CLD | O-1 | L-TURN | 01 | NONE | 0 | TURN-L | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 02 | | | | | |
| | CITY | | | | | | | WE | | 7TH ST | CN | STOP SIGN | N | PRVTE | PSNGR CAR | 01 | DRVR | NONE | 73 | F | OR-Y | OR<25 | 028 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 00 | | | | | | |
| | N | | | | | | | 7A | | | 02 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 02 | | | | |
| | N | | | | | | | 46 11 | | | 02 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 02 | | | |
| | N | | | | | | | 25.1500236 | | | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | | | |
| 00413 | N | N | N | N | N | N | N | 08/15/2015 | 14 | MARINE DR | INTER | N | CROSS | N | STOP SIGN | N | DRY | REAR | CLR | S-1STOP | 01 | NONE | 0 | STRGHT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 07 | | | |
| | CITY | | | | | | | SA | | 7TH ST | CN | STOP SIGN | N | PRVTE | PSNGR CAR | 01 | DRVR | INJB | 35 | M | OR-Y | OR<25 | 043 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | | | | |
| | N | | | | | | | 6P | | | 03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 07 | | |
| | N | | | | | | | 46 11 25.15 | | | 03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | N | | | | | | | 8.31 | | | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | | | |
| 00070 | N | N | N | N | N | N | N | 02/23/2015 | 14 | MARINE DR | INTER | N | CROSS | N | STOP SIGN | N | DRY | ANGL | CLR | ANGL-OTH | 01 | NONE | 0 | STRGHT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | CITY | | | | | | | MO | | 7TH ST | CN | STOP SIGN | N | PRVTE | PSNGR CAR | 01 | DRVR | NONE | 87 | M | OR-Y | OR<25 | 051,021 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | | |
| | N | | | | | | | 3P | | | 01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | N | | | | | | | 46 11 25.15 | | | 01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | N | | | | | | | 8.31 | | | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | | | |
| 00148 | N | N | N | N | N | N | N | 03/29/2016 | 14 | MARINE DR | INTER | N | CROSS | N | STOP SIGN | N | DRY | TURN | CLR | S-1TURN | 01 | NONE | 0 | TURN-R | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | CITY | | | | | | | TU | | 7TH ST | CN | STOP SIGN | N | PRVTE | PSNGR CAR | 01 | DRVR | NONE | 48 | M | OR-Y | OR<25 | 006 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | | |
| | N | | | | | | | 6P | | | 03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | N | | | | | | | 46 11 25.15 | | | 03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | N | | | | | | | 8.31 | | | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | | | |
| 00202 | N | N | N | N | N | N | N | 04/25/2016 | 14 | MARINE DR | INTER | N | CROSS | N | STOP SIGN | N | DRY | TURN | CLR | ANGL-OTH | 01 | NONE | 0 | TURN-L | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | CITY | | | | | | | MO | | 7TH ST | CN | STOP SIGN | N | PRVTE | PSNGR CAR | 01 | DRVR | NONE | 36 | M | OTH-Y | N-RES | 028 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | |
| | N | | | | | | | 1P | | | 04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | N | | | | | | | 46 11 25.15 | | | 04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | N | | | | | | | 8.31 | | | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | 009200100500 | | | |

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CDS380
11/19/2018

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

URBAN NON-SYSTEM CRASH LISTING
7TH ST at MARINE DR, City of Astoria, Clatsop County, 01/01/2012 to 12/31/2016
5 - 5 of 5 Crash records shown.

CITY OF ASTORIA, CLATSOP COUNTY

| SER# | INVEST | RD DFT | UNLOC? | D | R | S | W | DATE | CLASS | CITY STREET | RD CHAR | INT-TYPE | INT-REL | OFFRD | WTHR | CRASH | SPCL USE | TRLR QTY | MOVE | FROM | PRTC | INJ | SVTY | E | X | RES | LOC | ERROR | ACT. EVENT | CAUSE |
|------|--------|--------|--------|-------|-------|------|-------|-------|-------|-------------|---------|----------|---------|-------|------|-------|----------|----------|------|------|------|------|------|------|------|------|------|-------|------------|-------|
| RD | DFT | E | L | G | H | R | T | I | M | F | I | R | S | T | R | E | E | T | Q | Q | U | T | E | X | R | E | S | L | O | C |
| LOC | TIME | STREET | RECT | LANES | CONTL | DRVY | LIGHT | SVRTY | TYPE | TYPE | TYPE | TYPE | TYPE | TYPE | TYPE | TYPE | TYPE | TYPE | TYPE | TYPE | TYPE | TYPE | TYPE | TYPE | TYPE | TYPE | TYPE | TYPE | TYPE | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CRASH SUMMARIES BY YEAR BY COLLISION TYPE

ASTOR ST at 8TH ST, City of Astoria, Clatsop County, 01/01/2012 to 12/31/2016

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

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

ASTOR ST at 9TH ST, City of Astoria, Clatsop County, 01/01/2012 to 12/31/2016

| COLLISION TYPE | FATAL CRASHES | NON- FATAL CRASHES | PROPERTY DAMAGE ONLY | TOTAL CRASHES | PEOPLE KILLED | PEOPLE INJURED | TRUCKS | DRY SURF | WET SURF | DAY | DARK | INTER- SECTION RELATED | INTER- SECTION RELATED | OFF- ROAD |
|----------------|------------------|--------------------------|----------------------------|------------------|------------------|-------------------|--------|-------------|-------------|-----|------|------------------------------|------------------------------|--------------|
| | | | | | | | | | | | | | | |
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OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CRASH SUMMARIES BY YEAR BY COLLISION TYPE

ASTOR ST at 10TH ST, City of Astoria, Clatsop County, 01/01/2012 to 12/31/2016

| COLLISION TYPE | FATAL CRASHES | NON- FATAL CRASHES | PROPERTY DAMAGE ONLY | TOTAL CRASHES | PEOPLE KILLED | PEOPLE INJURED | TRUCKS | DRY SURF | WET SURF | DAY | DARK | INTER- SECTION RELATED | INTER- SECTION RELATED | OFF- ROAD |
|----------------|------------------|--------------------------|----------------------------|------------------|------------------|-------------------|--------|-------------|-------------|-----|------|------------------------------|------------------------------|--------------|
| | | | | | | | | | | | | | | |
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8TH ST at MARINE DR, City of Astoria, Clatsop County, 01/01/2012 to 12/31/2016

| COLLISION TYPE | FATAL CRASHES | NON-FATAL CRASHES | PROPERTY DAMAGE ONLY | TOTAL CRASHES | PEOPLE KILLED | PEOPLE INJURED | TRUCKS | DRY SURF | WET SURF | DAY | DARK | INTER-SECTION RELATED | INTER-SECTION RELATED | OFF-ROAD |
|----------------------|---------------|-------------------|----------------------|---------------|---------------|----------------|--------|----------|----------|-----|------|-----------------------|-----------------------|----------|
| | | | | | | | | | | | | | | |
| YEAR: 2016 | | | | | | | | | | | | | | |
| PEDESTRIAN | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| YEAR 2016 TOTAL | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| YEAR: 2015 | | | | | | | | | | | | | | |
| FIXED / OTHER OBJECT | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| REAR-END | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| YEAR 2015 TOTAL | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 1 |
| YEAR: 2014 | | | | | | | | | | | | | | |
| REAR-END | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 0 | 0 |
| YEAR 2014 TOTAL | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 0 | 0 |
| YEAR: 2012 | | | | | | | | | | | | | | |
| PEDESTRIAN | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| YEAR 2012 TOTAL | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| FINAL TOTAL | 0 | 2 | 4 | 6 | 0 | 2 | 0 | 4 | 2 | 5 | 1 | 6 | 0 | 1 |

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CDS380
11/19/2018

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

8TH ST at MARINE DR, City of Astoria, Clatsop County, 01/01/2012 to 12/31/2015

1 - 5 of 6 Crash records shown.

CITY OF ASTORIA, CLATSOP COUNTY

| SER# | INVEST | RD DFT | UNLOC7 | D | R | S | W | DATE | CLASS | CITY STREET | RD CHAR | INT-TYPE | INT-REL | OFFRD | WTHR | CRASH | SPCL USE | TRLR QTY | OWNER | MOVE | FROM | PH TYPE | SVRTY | E | X | RES | LOC | ERROR | ACT. EVENT | CAUSE | | | | | |
|-------|--------|--------|--------|---|---|---|---|-------------|-------|-------------|---------|----------|---------|-------|------|---------|-----------|----------|-------|--------|--------|---------|-------|------|------|------|-------|-------|------------|-------|----|--|--|--|--|
| 00450 | N | N | N | N | N | N | N | 09/28/2012 | 14 | MARINE DR | INTER | CROSS | N | N | CLR | PED | 0 | NONE | 0 | STRGHT | STRGHT | 01 | PED | NONE | 70 | F | OTH-Y | 029 | 000 | 00 | | | | | |
| | | | | | | | | | | 8TH ST | N | STOP | SIGN | N | DRY | PED | PRVTE | E | -W | | | | | | | | | | | | | | | | |
| N | | | | | | | | 12P | | | 06 | 0 | | | DAY | INJ | PSNGR CAR | | | | 01 | DRVR | NONE | | | | | | | | | | | | |
| N | | | | | | | | 46 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | | | | | | | | 25.1500236 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 00105 | N | N | N | N | N | N | N | 03/13/2015 | 14 | MARINE DR | INTER | 5-LEG | N | N | CLR | S-1STOP | 0 | NONE | 0 | STRGHT | STRGHT | 01 | PED | NONE | 68 | F | I | XWLK | 000 | 034 | 00 | | | | |
| | | | | | | | | | | 8TH ST | SE | SP | PED | SIG | N | DRY | REAR | PRVTE | NW-SE | | | | | | | | | | | | | | | | |
| N | | | | | | | | 3P | | | 05 | 0 | | | DAY | PDO | PSNGR CAR | | | | 01 | DRVR | NONE | 45 | M | OR-Y | 026 | 000 | 00 | 29 | | | | | |
| N | | | | | | | | 46 11 23.93 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | | | | | | | | 5.36 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 00253 | N | N | N | N | N | N | N | 06/03/2015 | 14 | MARINE DR | INTER | 4-LEG | N | Y | CLR | FIX | OBJ | 0 | NONE | 0 | STRGHT | STRGHT | 01 | DRVR | NONE | 46 | M | OR-Y | 088 | 088 | 10 | | | | |
| | | | | | | | | | | 8TH ST | SE | STOP | SIGN | N | DRY | FIX | PRVTE | SE-NW | | | | | | | | | | | | | | | | | |
| N | | | | | | | | 7A | | | 05 | 0 | | | DAY | PDO | PSNGR CAR | | | | 01 | DRVR | NONE | | | | | | | | | | | | |
| N | | | | | | | | 46 11 23.93 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | | | | | | | | 5.36 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 00023 | N | N | N | N | N | N | N | 01/11/2016 | 14 | MARINE DR | INTER | 3-LEG | N | N | RAIN | PED | 0 | NONE | 0 | STRGHT | STRGHT | 01 | DRVR | NONE | 49 | M | OR-Y | 029 | 000 | 02 | | | | | |
| | | | | | | | | | | 8TH ST | SE | STOP | SIGN | N | WET | PED | PRVTE | SE-NW | | | | | | | | | | | | | | | | | |
| N | | | | | | | | 11A | | | 06 | 0 | | | DAY | INJ | PSNGR CAR | | | | 01 | DRVR | NONE | | | | | | | | | | | | |
| N | | | | | | | | 46 11 23.93 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | | | | | | | | 5.36 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 00494 | N | N | N | N | N | N | N | 10/04/2014 | 14 | MARINE DR | INTER | 5-LEG | N | N | CLR | S-1STOP | 0 | NONE | 0 | STRGHT | STRGHT | 01 | DRVR | NONE | 22 | M | OR-Y | 043 | 000 | 07 | | | | | |
| | | | | | | | | | | 8TH ST | S | NONE | | | DRY | REAR | PRVTE | N-S | | | | | | | | | | | | | | | | | |
| N | | | | | | | | 9P | | | 06 | 0 | | | DLIT | PDO | PSNGR CAR | | | | 01 | DRVR | NONE | | | | | | | | | | | | |
| N | | | | | | | | 46 11 23.11 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | | | | | | | | 4.88 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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8TH ST at BOND ST, City of Astoria, Clatsop County, 01/01/2012 to 12/31/2016

| COLLISION TYPE | FATAL CRASHES | NON-PROPERTY | | TOTAL CRASHES | PEOPLE KILLED | PEOPLE INJURED | TRUCKS | DRY SURF | WET SURF | DAY | DARK | INTER-SECTION RELATED | INTER-SECTION RELATED | OFF-ROAD |
|-----------------|---------------|---------------|----------------------|---------------|---------------|----------------|--------|----------|----------|-----|------|-----------------------|-----------------------|----------|
| | | FATAL CRASHES | PROPERTY DAMAGE ONLY | | | | | | | | | | | |
| YEAR: 2016 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| ANGLE | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |
| REAR-END | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |
| YEAR 2016 TOTAL | 0 | 1 | 1 | 2 | 0 | 2 | 0 | 1 | 0 | 2 | 0 | 2 | 0 | 0 |
| YEAR: 2013 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| ANGLE | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| YEAR 2013 TOTAL | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| FINAL TOTAL | 0 | 2 | 1 | 3 | 0 | 3 | 0 | 2 | 0 | 3 | 0 | 3 | 0 | 0 |

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OREGON . . DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 URBAN NON-SYSTEM CRASH LISTING
8TH ST at BOND ST, City of Astoria, Clatsop County, 01/01/2012 to 12/31/2016
 1 - 3 of 3 Crash records shown.

CDS380
 11/19/2018
 CITY OF ASTORIA, CLATSOP COUNTY

| SER# | P | R | S | W | DATE | CLASS | CITY STREET | RD CHAR | INT-TYPE (MEDIAN) | INT-REL | OFFRD | WTHR | CRASH | SPLC USE | TRLR QTY | OWNER | VH TYPE | 01 NONE | 0 | STRGHT | 01 DRIVER | NONE | 31 M | OR-Y | UNK | 026 | ERROR | ACT. EVENT | 004 | CAUSE | 29 | | | | | | | | |
|--------|-------------|-----------|---|---|------------|-------|---------------|---------|-------------------|---------|-------|-------|----------|-----------|----------|--------|-----------|---------|------|--------|-----------|------|-------|------------|-----|-------|-------|------------|-----|-------|----|--|--|--|--|--|--|--|--|
| INVEST | E | A | U | C | O | DAY | FIRST STREET | DIRECT | LEGS TRAF- | CONTL | DRVWY | LIGHT | SVRTY | COLL | FROM | PRTC | INJ | G | E | LICNS | PED | | | | | | | | | | | | | | | | | | |
| RD DFT | E | L | G | H | R | TIME | SECOND STREET | LOCN | (#LANES) | 5-LEG | N | UNK | S-1STOP | REAR | MOVE | INJ | SVRTY | E | X | RES | LOC | | | | | | | | | | | | | | | | | | |
| UNLOC? | D | C | S | L | K | LAT | LONG | INTER | STOP SIGN | CROSS | N | CLD | ANGL-OTH | 01 NONE | 0 | STRGHT | 01 DRIVER | NONE | 31 M | OR-Y | UNK | 026 | ERROR | ACT. EVENT | 004 | CAUSE | 29 | | | | | | | | | | | | |
| 00201 | N | N | N | N | 04/24/2016 | 14 | BOND ST | 06 | 0 | 0 | N | UNK | REAR | 02 NONE | 0 | STOP | 01 DRIVER | NONE | 31 M | OR-Y | UNK | 026 | | | | | | | | | | | | | | | | | |
| NONE | SU | | | | | | 8TH ST | N | STOP SIGN | CROSS | N | UNK | REAR | PRVTE | N-S | | | | | | | | | | | | | | | | | | | | | | | | |
| N | 4P | | | | | | | 06 | 0 | 0 | N | DAY | INJ | PSNGR CAR | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | 46 11 23.11 | -123 50 | | | | | 009200200800 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 00517 | N | N | N | N | 11/05/2013 | 14 | BOND ST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CITY | TU | | | | | | 8TH ST | CN | STOP SIGN | CROSS | N | DRY | ANGL | PRVTE | N-S | | | | | | | | | | | | | | | | | | | | | | | | |
| N | 11A | | | | | | | 01 | 0 | 0 | N | DAY | INJ | PSNGR CAR | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | 46 11 | -123 50 | | | | | 009200200800 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | 23.1139679 | 4.8820199 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 00200 | N | N | N | N | 04/22/2016 | 14 | BOND ST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CITY | FR | | | | | | 8TH ST | CN | STOP SIGN | CROSS | N | DRY | ANGL | N/A | E-W | | | | | | | | | | | | | | | | | | | | | | | | |
| N | 11A | | | | | | | 01 | 0 | 0 | N | DAY | FOO | PSNGR CAR | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | 46 11 23.11 | -123 50 | | | | | 009200200800 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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BOND ST at MARINE DR, City of Astoria, Clatsop County, 01/01/2012 to 12/31/2016

| COLLISION TYPE | FATAL CRASHES | NON-PROPERTY | | TOTAL CRASHES | TOTAL PEOPLE KILLED | TOTAL PEOPLE INJURED | TRUCKS | DRY SURF | WET SURF | DAY | DARK | INTER-SECTION RELATED | INTER-SECTION RELATED | OFF-ROAD |
|------------------------|---------------|---------------|----------------------|---------------|---------------------|----------------------|----------|----------|----------|----------|----------|-----------------------|-----------------------|----------|
| | | FATAL CRASHES | PROPERTY DAMAGE ONLY | | | | | | | | | | | |
| TURNING MOVEMENTS | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| YEAR 2012 TOTAL | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| FINAL TOTAL | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirements, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

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

9TH ST at MARINE DR, City of Astoria, Clatsop County, 01/01/2012 to 12/31/2016

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

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10TH ST at MARINE DR, City of Astoria, Clatsop County, 01/01/2012 to 12/31/2016

| COLLISION TYPE | FATAL CRASHES | NON-PROPERTY | | TOTAL CRASHES | PEOPLE KILLED | PEOPLE INJURED | TRUCKS | DRY SURF | WET SURF | DAY | DARK | INTER- SECTION RELATED | INTER- SECTION RELATED | OFF- ROAD |
|-----------------|------------------|------------------|----------------|------------------|------------------|-------------------|--------|-------------|-------------|-----|------|------------------------------|------------------------------|--------------|
| | | FATAL CRASHES | DAMAGE ONLY | | | | | | | | | | | |
| YEAR: 2014 | | | | | | | | | | | | | | |
| PEDESTRIAN | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| YEAR 2014 TOTAL | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| YEAR: 2013 | | | | | | | | | | | | | | |
| REAR-END | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| YEAR 2013 TOTAL | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| FINAL TOTAL | 0 | 2 | 0 | 2 | 0 | 2 | 1 | 2 | 0 | 2 | 0 | 2 | 0 | 0 |

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8TH ST at COMMERCIAL ST, City of Astoria, Clatsop County, 01/01/2012 to 12/31/2016

| COLLISION TYPE | FATAL CRASHES | NON-PROPERTY | | | TOTAL CRASHES | PEOPLE KILLED | PEOPLE INJURED | TRUCKS | DRY SURF | WET SURF | DAY | DARK | INTER-SECTION RELATED | INTER-SECTION RELATED | OFF-ROAD |
|------------------------|---------------|---------------|----------------------|-----------|---------------|---------------|----------------|-----------|----------|----------|-----------|----------|-----------------------|-----------------------|----------|
| | | FATAL CRASHES | PROPERTY DAMAGE ONLY | CRASHES | | | | | | | | | | | |
| YEAR: 2016 | | | | | | | | | | | | | | | |
| FIXED / OTHER OBJECT | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| TURNING MOVEMENTS | 0 | 0 | 2 | 2 | 0 | 0 | 1 | 0 | 2 | 2 | 2 | 0 | 2 | 0 | 0 |
| YEAR 2016 TOTAL | 0 | 0 | 3 | 3 | 0 | 0 | 2 | 0 | 3 | 3 | 2 | 1 | 3 | 0 | 1 |
| YEAR: 2015 | | | | | | | | | | | | | | | |
| TURNING MOVEMENTS | 0 | 2 | 2 | 4 | 0 | 2 | 1 | 4 | 0 | 0 | 3 | 1 | 4 | 0 | 0 |
| YEAR 2015 TOTAL | 0 | 2 | 2 | 4 | 0 | 2 | 1 | 4 | 0 | 0 | 3 | 1 | 4 | 0 | 0 |
| YEAR: 2014 | | | | | | | | | | | | | | | |
| TURNING MOVEMENTS | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |
| YEAR 2014 TOTAL | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |
| YEAR: 2013 | | | | | | | | | | | | | | | |
| BACKING | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |
| REAR-END | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| TURNING MOVEMENTS | 0 | 1 | 2 | 3 | 0 | 1 | 1 | 3 | 0 | 0 | 3 | 0 | 3 | 0 | 0 |
| YEAR 2013 TOTAL | 0 | 3 | 2 | 5 | 0 | 3 | 1 | 5 | 0 | 0 | 5 | 0 | 5 | 0 | 0 |
| YEAR: 2012 | | | | | | | | | | | | | | | |
| FIXED / OTHER OBJECT | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 |
| YEAR 2012 TOTAL | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 |
| FINAL TOTAL | 0 | 5 | 9 | 14 | 0 | 5 | 5 | 10 | 3 | 3 | 12 | 2 | 14 | 0 | 2 |

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CDS380
11/19/2018

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

8TH ST at COMMERCIAL ST, City of Astoria, Clatsop County, 01/01/2012 to 12/31/2015

1 - 5 of 14 Crash records shown.

CITY OF ASTORIA, CLATSOP COUNTY

| SER# | INVEST | RD DFT | UNLOC? | D C S L K LAT | LONG | CLASS | CITY STREET | RD CHAR | INT-REL | OFFRD | WTHR | CRASH | SPCL USE | TRLR QTY | OWNER | MOVE | PRTC | INJ | G E LICNS | PED | PH TYPE | SVRTY | E X RES | LOC | ERROR | ACT. EVENT | CAUSE | |
|-------|------------|-----------|---------|---------------|------|-------|---------------|---------|------------|-------|------|---------|-----------|----------|--------|--------|--------|------|-----------|-----|---------|-------|---------|-----|-------|------------|-------------|---------|
| 00266 | N N N N | N N N N | N | 06/26/2013 | 14 | | COMMERCIAL ST | INTER | CROSS | N | CLR | O-1STOP | 01 NONE | 0 | BACK | | | | | | | | | | | 092 | 26 | |
| CITY | WE | 8TH ST | | | | | | N | FLASHBCN-A | N | DRY | BACK | GOWMT | | E -N | | 01 | DRVR | NONE | 23 | M | OTH-Y | OR<25 | 011 | | 007 | 092 | 26 |
| N | 3P | 46 11 | -123 50 | | | | 009200200800 | 06 | 0 | N | DAY | INJ | PSNGR CAR | | | | | | | | | | | | | 000 | 00 | |
| N | 20.703624 | 4.9542359 | | | | | | | | | | | 02 NONE | 0 | STOP | | | | | | | | | | | | 012 | 00 |
| | | | | | | | | | | | | | PRVTE | | N -S | | | | | | | | | | | 000 | 00 | |
| | | | | | | | | | | | | | PSNGR CAR | | | | 01 | DRVR | INJC | 24 | F | OR-Y | OR<25 | 000 | | 000 | 00 | |
| 00613 | N N N | N N N | N | 11/30/2015 | 14 | | COMMERCIAL ST | INTER | CROSS | N | CLD | S-1TURN | 01 NONE | 0 | STRGHT | | | | | | | | | | | | 27 | |
| CITY | MO | 8TH ST | | | | | | N | FLASHBCN-A | N | DRY | TURN | PRVTE | | N -S | | | | | | | | | | | | 000 | 00 |
| N | 11A | 46 11 | -123 50 | | | | 009200200800 | 06 | 0 | N | DAY | INJ | PSNGR CAR | | | | | | | | | | | | | | 038 | 27 |
| N | 46 11 | 20.7 | -123 50 | | | | | | | | | | 02 NONE | 0 | TURN-L | | | | | | | | | | | | 006 | 00 |
| | | | | | | | | | | | | | PRVTE | | N -E | | | | | | | | | | | | 000 | 00 |
| | | | | | | | | | | | | | PSNGR CAR | | | | 01 | DRVR | NONE | 73 | F | OTH-Y | N-RES | 000 | | 000 | 00 | |
| | | | | | | | | | | | | | 02 NONE | 0 | TURN-L | | | | | | | | | | | | 006 | 00 |
| | | | | | | | | | | | | | PRVTE | | N -E | | | | | | | | | | | | 000 | 00 |
| | | | | | | | | | | | | | PSNGR CAR | | | | 02 | PSNG | INJB | 83 | M | | | 000 | | 000 | 00 | |
| 00280 | Y Y N | N N N | N | 07/07/2012 | 14 | | COMMERCIAL ST | INTER | CROSS | N | Y | UNK | FIX OBJ | 01 | NONE | 0 | TURN-L | | | | | | | | | | 040,054 | 33,01 |
| CITY | SA | 8TH ST | | | | | | E | STOP SIGN | N | UNK | FIX | PRVTE | | N -E | | | | | | | | | | | | 001 | 040,054 |
| N | 6P | 46 11 | -123 50 | | | | 009200200800 | 05 | 0 | N | DAY | PDO | PSNGR CAR | | | | | | | | | | | | | | 051,047,080 | 088 |
| N | 20.7036242 | 4.9542359 | | | | | | | | | | | 02 NONE | 0 | TURN-L | | | | | | | | | | | | 088 | 33,01 |
| 00612 | N N N | N N N | N | 12/16/2014 | 14 | | COMMERCIAL ST | INTER | CROSS | N | CLR | O-OTHER | 01 | NONE | 1 | TURN-L | | | | | | | | | | | | 08 |
| CITY | TU | 8TH ST | | | | | | E | FLASHBCN-R | N | DRY | TURN | PRVTE | | N -E | | | | | | | | | | | | 000 | 00 |
| N | 3P | 46 11 | -123 50 | | | | 009200200800 | 05 | 0 | N | DAY | PDO | SEMI TOW | | | | | | | | | | | | | | 007 | 008 |
| N | 46 11 | 20.7 | -123 50 | | | | | | | | | | 02 NONE | 0 | TURN-R | | | | | | | | | | | | 015 | 00 |
| | | | | | | | | | | | | | PRVTE | | S -E | | | | | | | | | | | | 000 | 00 |
| | | | | | | | | | | | | | PSNGR CAR | | | | 01 | DRVR | NONE | 59 | M | OTH-Y | N-RES | 000 | | 000 | 00 | |
| 00730 | N N N | N N N | N | 12/23/2016 | 14 | | COMMERCIAL ST | INTER | CROSS | N | Y | RAIN | FIX OBJ | 01 | NONE | 9 | TURN-L | | | | | | | | | | 054 | 10 |
| CITY | FR | 8TH ST | | | | | | E | FLASHBCN-R | N | WET | FIX | N/A | | N -E | | | | | | | | | | | | 000 | 00 |
| N | 6A | 46 11 | -123 50 | | | | 009200200800 | 05 | 0 | N | DAMN | PDO | TRUCK | | | | | | | | | | | | | | 000 | 00 |
| N | 46 11 | 20.7 | -123 50 | | | | | | | | | | 01 | DRVR | NONE | 00 | UNK | UNK | UNK | UNK | UNK | UNK | UNK | 000 | | 000 | 000 | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | UNK | UNK |

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CDS380
11/19/2018

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

8TH ST at COMMERCIAL ST, City of Astoria, Clatsop County, 01/01/2012 to 12/31/2015
6 - 9 of 14 Crash records shown.

CITY OF ASTORIA, CLATSOP COUNTY

| SER# | P R S W DATE | CLASS | CITY STREET | RD CHAR | INT-TYPE (MEDIAN) | INT-REL | OFFRD | WTHR | CRASH | SPLC USE | TRLR QTY | OWNER | MOVE | A S | PRTC | INJ | G E LICNS | FED | P# TYPE | SVRTY | E X RES | LOC | ERROR | ACT. EVENT | CAUSE |
|--------|--------------------|-----------|---------------|---------|-------------------|---------|-------|-------|---------|-----------|-----------|--------|---------|---------|------|------|-----------|---------|---------|-------|------------|-------|-------|------------|-------|
| UNLOC7 | D C S L K LAT | LONG | FRS | SEC | LEGS | TRAFF | DRVWY | LIGHT | SVRTY | VH TYPE | TO | FROM | TO | FROM | PH | TYPE | SVRTY | E X RES | LOC | ERROR | ACT. EVENT | CAUSE | | | |
| 00062 | N N N N 02/12/2013 | 16 | COMMERCIAL ST | INTER | CROSS | N | N | CLR | S-1STOP | 01 NONE | 0 | STRGHT | N -S | 01 DRVR | NONE | 25 F | OR-Y | OR<25 | 016 | 000 | 000 | 00 | 00 | 27 | |
| CITY | TU | 0 | 8TH ST | S | 0 | NONE | N | DRY | REAR | PRVTE | PSNGR CAR | N -S | 016 | 000 | 000 | 00 | 00 | 000 | 000 | 000 | 00 | 00 | 00 | 00 | |
| N | 46 11 | -123 50 | | 05 | 0 | N | N | DAY | INJ | PSNGR CAR | | N -S | 016 | 000 | 000 | 00 | 00 | 000 | 000 | 000 | 00 | 00 | 00 | 00 | |
| N | 20.703624 | 4.9542359 | | | | | | | | | | | | | | | | | | | | | | | |
| 00064 | N N N N 02/13/2013 | 14 | COMMERCIAL ST | INTER | CROSS | N | N | CLD | S-OTHER | 01 NONE | 1 | TURN-L | N -E | 01 DRVR | NONE | 49 M | OR-Y | OR<25 | 080 | 000 | 000 | 00 | 00 | 10 | |
| CITY | WE | | 8TH ST | CN | FLASHBCN-A | N | N | DRY | TURN | PRVTE | SEMI TOW | N -E | 080 | 000 | 000 | 00 | 00 | 000 | 000 | 000 | 00 | 00 | 00 | 00 | |
| N | 46 11 | -123 50 | | 02 | 0 | N | N | DAY | PDO | PSNGR CAR | | N -E | 080 | 000 | 000 | 00 | 00 | 000 | 000 | 000 | 00 | 00 | 00 | 00 | |
| N | 20.703624 | 4.9542359 | | | | | | | | | | | | | | | | | | | | | | | |
| 00346 | N N N N 08/06/2013 | 14 | COMMERCIAL ST | INTER | CROSS | N | N | CLR | S-1TURN | 01 NONE | 0 | STRGHT | N -E | 01 DRVR | NONE | 36 M | OTH-Y | N-RES | 000 | 000 | 000 | 00 | 00 | 10 | |
| CITY | TU | | 8TH ST | CN | L-GRN-SIG | N | N | DRY | TURN | PRVTE | | N -E | 000 | 000 | 000 | 00 | 00 | 000 | 000 | 000 | 00 | 00 | 00 | 00 | |
| N | 46 11 | -123 50 | | 04 | 0 | N | N | DAY | INJ | PSNGR CAR | | N -E | 003,080 | 000 | 000 | 00 | 00 | 000 | 000 | 000 | 00 | 00 | 00 | 00 | |
| N | 20.703624 | 4.9542359 | | | | | | | | | | | | | | | | | | | | | | | |
| 00409 | N N N N 09/01/2013 | 14 | COMMERCIAL ST | INTER | CROSS | N | N | CLR | S-OTHER | 01 NONE | 0 | TURN-L | N -E | 01 DRVR | NONE | 26 M | OR-Y | OR<25 | 000 | 000 | 000 | 00 | 00 | 08 | |
| CITY | SU | | 8TH ST | CN | FLASHBCN-A | N | N | DRY | TURN | PRVTE | | N -E | 000 | 000 | 000 | 00 | 00 | 000 | 000 | 000 | 00 | 00 | 00 | 00 | |
| N | 46 11 | -123 50 | | 04 | 0 | N | N | DAY | PDO | PSNGR CAR | | N -E | 001,080 | 000 | 000 | 00 | 00 | 000 | 000 | 000 | 00 | 00 | 00 | 00 | |
| N | 20.703624 | 4.9542359 | | | | | | | | | | | | | | | | | | | | | | | |
| 00444 | N N N N 08/27/2015 | 14 | COMMERCIAL ST | INTER | CROSS | N | N | CLR | S-OTHER | 01 NONE | 0 | TURN-L | N -E | 01 DRVR | NONE | 36 F | OTH-Y | N-RES | 007 | 000 | 000 | 00 | 00 | 08 | |
| CITY | TH | | 8TH ST | CN | FLASHBCN-A | N | N | DRY | TURN | PRVTE | | N -E | 000 | 000 | 000 | 00 | 00 | 000 | 000 | 000 | 00 | 00 | 00 | 00 | |
| N | 46 11 | 20.7 | 009200200500 | 04 | 0 | N | N | DUSK | INJ | PSNGR CAR | | N -E | 007 | 000 | 000 | 00 | 00 | 000 | 000 | 000 | 00 | 00 | 00 | 00 | |
| N | 46 11 | -123 50 | | | | | | | | | | | | | | | | | | | | | | | |
| N | 20.703624 | 4.9542359 | | | | | | | | | | | | | | | | | | | | | | | |

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CDS380
11/19/2018

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

8TH ST at COMMERCIAL ST, City of Astoria, Clatsop County, 01/01/2012 to 12/31/2015
10 - 14 of 14 Crash records shown.

CITY OF ASTORIA, CLATSOP COUNTY

| SER# | P | R | S | W | DATE | CLASS | CITY STREET | RD CHAR | INT-TYPE | INT-REL | OFFRD | WTHR | CRASH | SPCL USE | TRLR QTY | OWNER | MOVE | PH TYPE | SVRTY | E | X | RES | LOC | ERROR | ACT. EVENT | CAUSE |
|--------|---|---|---|---|------------|---------|---------------|---------|------------|---------|-------|-------|----------|-----------|----------|--------|---------|---------|--------|------|---------|-------|------|-------|------------|-------|
| INVEST | E | A | U | C | O | DAY | FIRST STREET | DIRECT | (MEDIAN) | TRAF- | LEGS | TRAF- | CONTL | DRVWY | LIGHT | SVRTY | 01 NONE | 0 | TURN-L | N -E | 03 PSNG | NO<5 | 03 F | 000 | 000 | 00 |
| RD DPT | E | L | G | H | R | TIME | SECOND STREET | LOCNT | (#LANES) | CONTL | DRVWY | LIGHT | SVRTY | 01 NONE | 0 | TURN-L | N -E | 03 PSNG | NO<5 | 03 F | 000 | 000 | 000 | 000 | 00 | |
| UNLOC? | D | C | S | L | K | LAT | LONG | LR | LR | LR | LR | LR | LR | LR | LR | LR | LR | LR | LR | LR | LR | LR | LR | LR | LR | LR |
| 00009 | N | N | N | N | 01/15/2015 | 14 | COMMERCIAL ST | INTER | CROSS | N | N | CLR | S-OTHER | 01 NONE | 1 | TURN-L | N -E | 03 PSNG | NO<5 | 03 F | 000 | 000 | 000 | 000 | 00 | |
| CITY | | | | | TH | | 8TH ST | CN | FLASHBCN-A | N | N | DRY | TURN | PRVTE | N -E | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 00 | | |
| N | | | | | 8A | | 0092.00200500 | 02 | 0 | N | N | DAY | POO | SEMI TOW | 07 | 007 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 08 | | |
| N | | | | | 46 11 20.7 | -123 50 | 4.95 | | | | | | | | | | | | | | | | | | | |
| 00519 | N | N | N | N | 10/09/2015 | 14 | COMMERCIAL ST | INTER | CROSS | N | N | CLR | ANGL-OTH | 01 NONE | 0 | TURN-L | N -E | 01 DRVR | NONE | 47 M | OR-Y | OR<25 | 000 | 000 | 00 | |
| CITY | | | | | FR | | 8TH ST | CN | FLASHBCN-R | N | N | DRY | TURN | PRVTE | N -E | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 00 | | |
| N | | | | | 3P | | 0092.00200500 | 03 | 0 | N | N | DAY | POO | PSNGR CAR | 00 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 00 | | |
| N | | | | | 46 11 20.7 | -123 50 | 4.95 | | | | | | | | | | | | | | | | | | | |
| 00299 | N | N | N | N | 06/14/2016 | 14 | COMMERCIAL ST | INTER | CROSS | N | N | RAIN | S-1TURN | 01 NONE | 9 | STRGHT | W -E | 01 DRVR | NONE | 36 F | OTH-Y | N-RES | 028 | 015 | 00 | |
| CITY | | | | | TU | | 8TH ST | CN | L-GRN-SIG | N | N | WET | TURN | N/A | N -S | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 00 | | |
| N | | | | | 1P | | 0092.00200500 | 04 | 0 | N | N | DAY | POO | PSNGR CAR | 00 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 00 | | |
| N | | | | | 46 11 20.7 | -123 50 | 4.95 | | | | | | | | | | | | | | | | | | | |
| 00558 | N | N | N | N | 10/17/2016 | 14 | COMMERCIAL ST | INTER | CROSS | N | N | CLD | S-1TURN | 01 NONE | 9 | STRGHT | N -E | 01 DRVR | NONE | 00 | Unk | Unk | 000 | 000 | 00 | |
| CITY | | | | | MO | | 8TH ST | CN | R-GRN-SIG | N | N | WET | TURN | N/A | N -S | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 00 | | |
| N | | | | | 4P | | 0092.00200500 | 04 | 0 | N | N | DAY | POO | PSNGR CAR | 00 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 00 | | |
| N | | | | | 46 11 20.7 | -123 50 | 4.95 | | | | | | | | | | | | | | | | | | | |

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9TH ST at COMMERCIAL ST, City of Astoria, Clatsop County, 01/01/2012 to 12/31/2016

| COLLISION TYPE | FATAL CRASHES | NON-FATAL CRASHES | PROPERTY DAMAGE ONLY | TOTAL CRASHES | PEOPLE KILLED | PEOPLE INJURED | TRUCKS | DRY SURF | WET SURF | DAY | DARK | INTER-SECTION RELATED | INTER-SECTION RELATED | OFF-ROAD |
|-------------------|---------------|-------------------|----------------------|---------------|---------------|----------------|--------|----------|----------|-----|------|-----------------------|-----------------------|----------|
| | | | | | | | | | | | | | | |
| YEAR: 2016 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ANGLE | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| YEAR 2016 TOTAL | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| YEAR: 2015 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| TURNING MOVEMENTS | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| YEAR 2015 TOTAL | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| YEAR: 2014 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| ANGLE | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| YEAR 2014 TOTAL | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| YEAR: 2013 | 0 | 2 | 0 | 2 | 0 | 4 | 1 | 1 | 1 | 0 | 2 | 2 | 0 | 0 |
| ANGLE | 0 | 2 | 0 | 2 | 0 | 4 | 1 | 1 | 1 | 0 | 2 | 2 | 0 | 0 |
| YEAR 2013 TOTAL | 0 | 2 | 0 | 2 | 0 | 4 | 1 | 1 | 1 | 0 | 2 | 2 | 0 | 0 |
| FINAL TOTAL | 0 | 3 | 2 | 5 | 0 | 6 | 1 | 2 | 3 | 3 | 2 | 5 | 0 | 0 |

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CDS380
11/19/2018

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

9TH ST at COMMERCIAL ST, City of Astoria, Clatsop County, 01/01/2012 to 12/31/2015
1 - 4 of 5 Crash records shown.

CITY OF ASTORIA, CLATSOP COUNTY

| SER# | INVEST | RD DPT | UNLOC# | S D P R S W DATE | CLASS | CITY STREET | RD CHAR | INT-TYPE | INT-REL | OFFRD | WTHR | CRASH | SPCL USE | TRLR QTY | OWNER | MOVE | PH TYPE | SVRTY | E X RES | LOC | ERROR | ACT. EVENT | CAUSE |
|------|--------|--------|--------|------------------|----------|---------------|---------|----------|------------|-------|-------|----------|-----------|----------|-----------|---------|---------|-------|---------|-------|---------|------------|-------|
| N | N | N | N | U | D | F | D | (M | TRAF- | RDDET | SURF | COLL | TRUCK | FROM | TO | | | | | | | | |
| N | N | N | N | C | FROM | SECOND STREET | DIRECT | LEGS | CONTL | DRVWY | LIGHT | SVRTY | 01 NONE | 0 | STRGHT | W -E | | | | | | | |
| N | N | N | N | O | DIST | FIRST STREET | INTER | CROSS | N | N | RAIN | ANGL-OTH | 01 NONE | 0 | STRGHT | W -E | | | | | | | |
| N | N | N | N | 0 | LONG | 9TH ST | CN | 0 | TRF SIGNAL | N | WET | ANGL | PRVTE | | PSNGR CAR | 01 DRVR | INJC | 67 F | OR-Y | OR<25 | 020 | 000 | 04 |
| N | N | N | N | 20.672124 | 1.408272 | 009200200500 | 01 | 0 | | N | DUSK | INJ | PSNGR CAR | | | | | | | | | | |
| N | N | N | N | 12/01/2013 | 14 | COMMERCIAL ST | INTER | CROSS | N | N | CLR | ANGL-OTH | 01 AMELN | 0 | STRGHT | W -E | | | | | | | |
| N | N | N | N | 12/11/2013 | 14 | COMMERCIAL ST | INTER | CROSS | N | N | CLR | ANGL-OTH | 01 AMELN | 0 | STRGHT | W -E | | | | | | | |
| N | N | N | N | WE | | 9TH ST | CN | 0 | TRF SIGNAL | N | DRY | ANGL | PRVTE | | PSNGR CAR | 01 DRVR | INJC | 22 M | OR-Y | OR<25 | 000 | 006 | 00 |
| N | N | N | N | 6P | | 009200200500 | 03 | 0 | | N | DLIT | INJ | TRUCK | | | | | | | | | | |
| N | N | N | N | 46.11 | -123.50 | 009200200500 | 01 | 0 | | N | PSNG | INJB | 34 M | | | | | | | | | | |
| N | N | N | N | 20.672124 | 1.408272 | | | | | N | PSNG | INJB | 46 F | | | | | | | | | | |
| N | N | N | N | 20.672124 | 1.408272 | | | | | N | PSNG | INJB | 46 F | | | | | | | | | | |
| N | N | N | N | 12/01/2014 | 14 | COMMERCIAL ST | INTER | CROSS | N | N | CLR | ANGL-OTH | 01 NONE | 0 | STRGHT | S -N | | | | | | | |
| N | N | N | N | MO | | 9TH ST | CN | 0 | TRF SIGNAL | N | DRY | ANGL | PRVTE | | PSNGR CAR | 01 DRVR | INJC | 76 M | OR-Y | OR<25 | 000 | 000 | 00 |
| N | N | N | N | 9A | | 009200200500 | 03 | 0 | | N | DAY | POO | PSNGR CAR | | | | | | | | | | |
| N | N | N | N | 46.11 | 20.67 | -123.50 | 01 | 0 | | N | DAY | POO | 02 NONE | 0 | STRGHT | W -E | | | | | | | |
| N | N | N | N | 1.41 | | | | | | N | DAY | POO | PRVTE | | PSNGR CAR | 01 DRVR | INJC | 66 M | OR-Y | OR<25 | 020,016 | 038 | 04,27 |
| N | N | N | N | 11/12/2015 | 14 | COMMERCIAL ST | INTER | CROSS | N | N | RAIN | S-1TURN | 01 NONE | 0 | PARKNG | | | | | | | | |
| N | N | N | N | TH | | 9TH ST | CN | 0 | ONE-WAY | N | WET | TURN | PRVTE | | PSNGR CAR | 01 DRVR | INJC | 38 M | OR-Y | OR<25 | 028 | 000 | 02 |
| N | N | N | N | 12P | | 009200200500 | 01 | 0 | | N | DAY | POO | 02 NONE | 0 | TURN-L | W -N | | | | | | | |
| N | N | N | N | 46.11 | 20.67 | -123.50 | | | | N | DAY | POO | PRVTE | | PSNGR CAR | 01 DRVR | INJC | 64 M | OR-Y | OR<25 | 000 | 006 | 00 |
| N | N | N | N | 1.41 | | | | | | N | DAY | POO | PSNGR CAR | | | | | | | | | | |

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

10TH ST at COMMERCIAL ST, City of Astoria, Clatsop County, 01/01/2012 to 12/31/2016

| COLLISION TYPE | FATAL CRASHES | NON-PROPERTY | | TOTAL CRASHES | PEOPLE KILLED | PEOPLE INJURED | TRUCKS | DRY SURF | WET SURF | DAY | DARK | INTER- SECTION RELATED | INTER- SECTION RELATED | OFF- ROAD |
|-----------------|------------------|------------------|----------------------------|------------------|------------------|-------------------|--------|-------------|-------------|-----|------|------------------------------|------------------------------|--------------|
| | | FATAL CRASHES | PROPERTY DAMAGE ONLY | | | | | | | | | | | |
| YEAR: 2016 | | | | | | | | | | | | | | |
| REAR-END | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| YEAR 2016 TOTAL | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| YEAR: 2015 | | | | | | | | | | | | | | |
| REAR-END | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| YEAR 2015 TOTAL | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| FINAL TOTAL | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 0 |

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirements, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

URBAN NON-SYSTEM CRASH LISTING
10TH ST at COMMERCIAL ST, City of Astoria, Clatsop County, 01/01/2012 to 12/31/2016

1 - 2 of 2 Crash records shown.

| SER# | P | R | S | W | DATE | CLASS | CITY STREET | RD CHAR | INT-TYPE | INT-REL | OFFRD | WTHR | CRASH | SPCL USE | TRLR QTY | MOVE | A | S | CAUSE | | | |
|--------|---|---|---|---|------|-------------|--------------------------------|------------|------------|----------------|----------|----------|-----------------|------------------|----------------|---------------|------------|--------------|---------------|------------|----------------|----------|
| UNLOC? | D | C | S | L | K | LAT | LONG | LOCN | DRVWY | LIGHT | SVRTY | P# | TYP | SVRTY | E | X | RES | LOC | ERROR | ACT. EVENT | | |
| 00301 | N | N | N | N | N | 06/20/2015 | 14 COMMERCIAL ST 10TH ST | INTER W | CROSS N | STOP SIGN N | DAY N | CLR N | S-1STOP REAR | 01 NONE PRVTE | 0 PSNGR CAR | STRGHT W-E | 01 DRVR | NONE 50 M | SUSP OR<25 | 004 000 | 004 00 | 07 00 |
| | N | | | | | 2P | | 06 | 0 | | | DAY | PDO | | | | | | | 043 | 000 | 07 |
| | | | | | | 46 11 20.63 | -123.49 57.85 | | | | | | | 02 NONE PRVTE | 0 PSNGR CAR | STOP W-E | 01 DRVR | NONE 64 F | OR-Y OR<25 | 000 000 | 011 004 000 | 00 00 |
| 00377 | N | N | N | N | N | 07/29/2016 | 14 COMMERCIAL ST 10TH ST | INTER W | CROSS N | STOP SIGN N | DAY N | CLR N | S-1TURN REAR | 01 NONE N/A | 9 PSNGR CAR | STRGHT W-E | 01 DRVR | NONE 00 | UNK UNK | 004 000 | 004 000 | 07 00 |
| | N | | | | | 4P | | 06 | 0 | | | DAY | PDO | | | | | | | 000 | 000 | 00 |
| | | | | | | 46 11 20.63 | -123.49 57.85 | | | | | | | 02 NONE N/A | 9 PSNGR CAR | TURN-R W-S | 01 DRVR | NONE 00 | UNK UNK | 000 000 | 013 000 | 00 00 |

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assure that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.



TURNING MOVEMENT ANALYSIS
 Parking Lot Ingress & Egress
 "P" Design Vehicle

FIGURE A

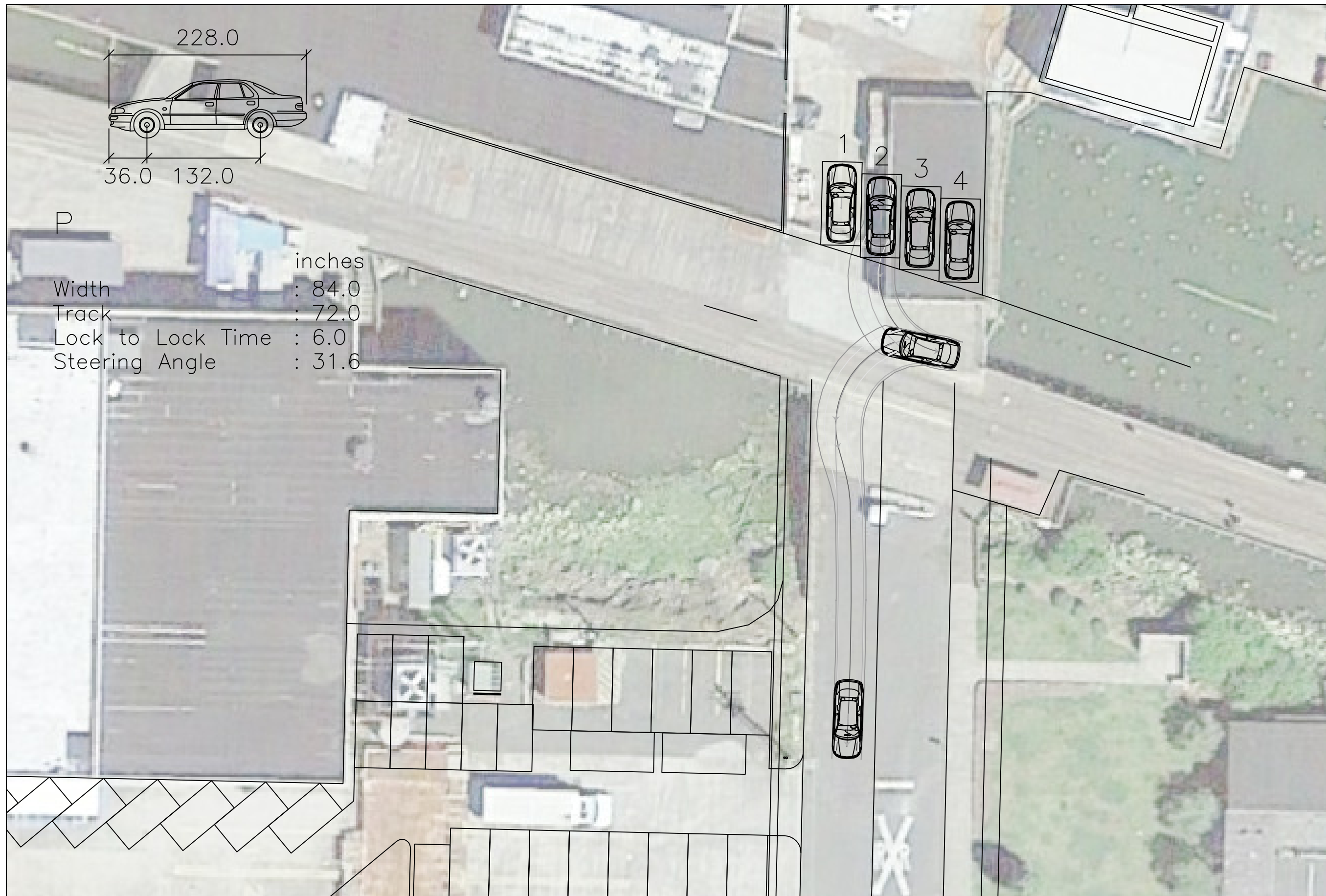




TURNING MOVEMENT ANALYSIS
 Egress from Parking Stall 1
 "P" Design Vehicle

FIGURE B

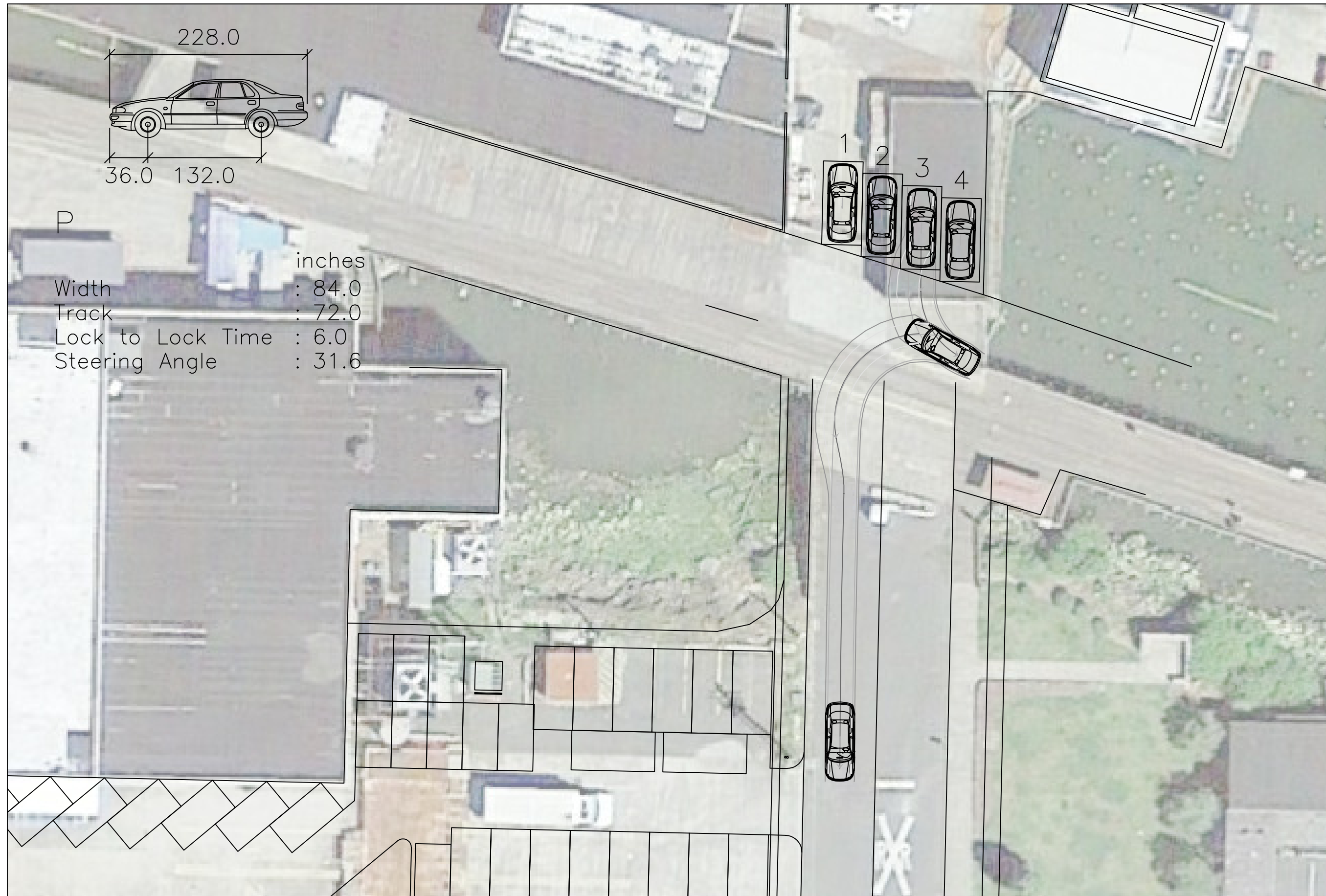




TURNING MOVEMENT ANALYSIS
 Egress from Parking Stall 2
 "P" Design Vehicle

FIGURE C

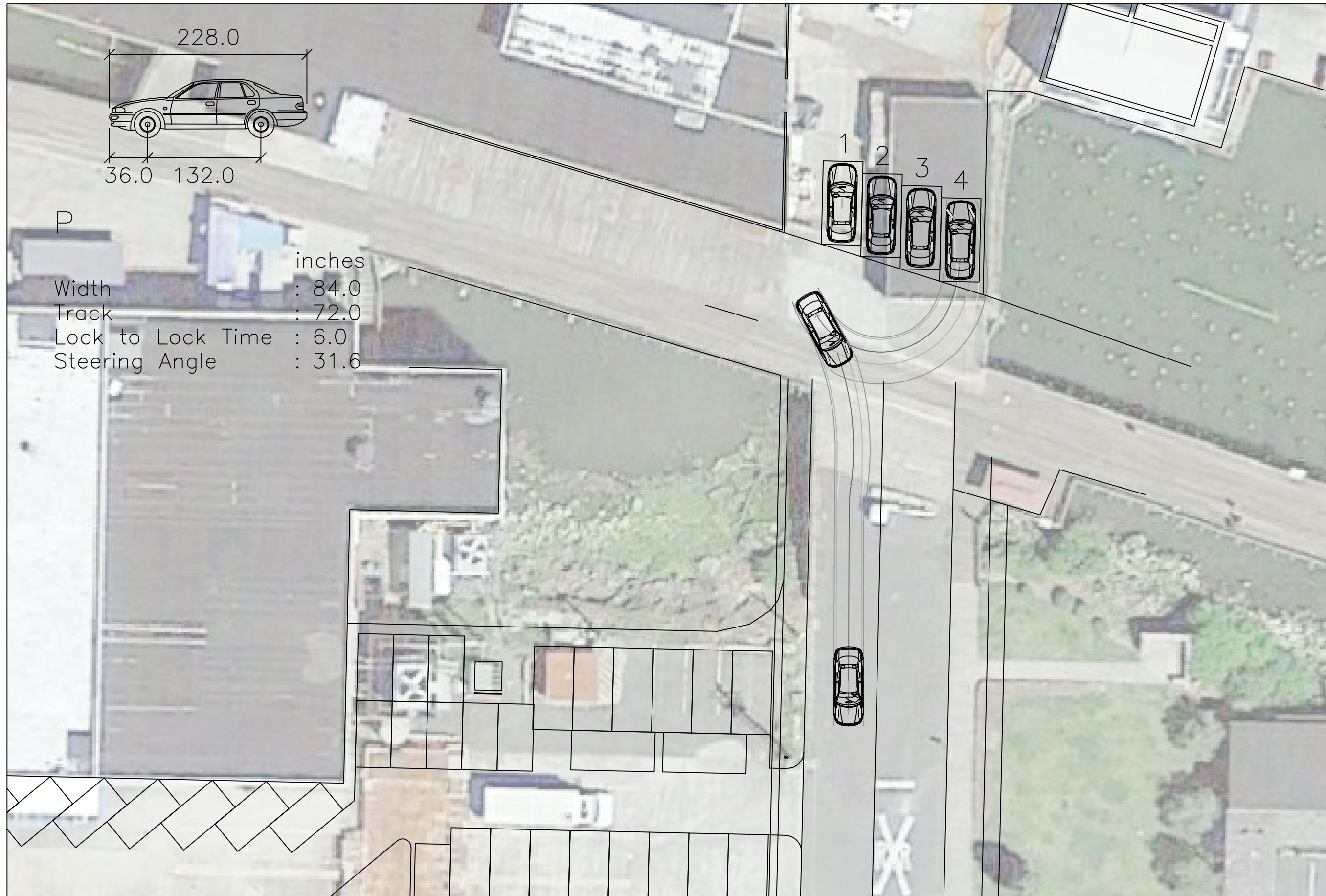




TURNING MOVEMENT ANALYSIS
 Egress from Parking Stall 3
 "P" Design Vehicle

FIGURE D



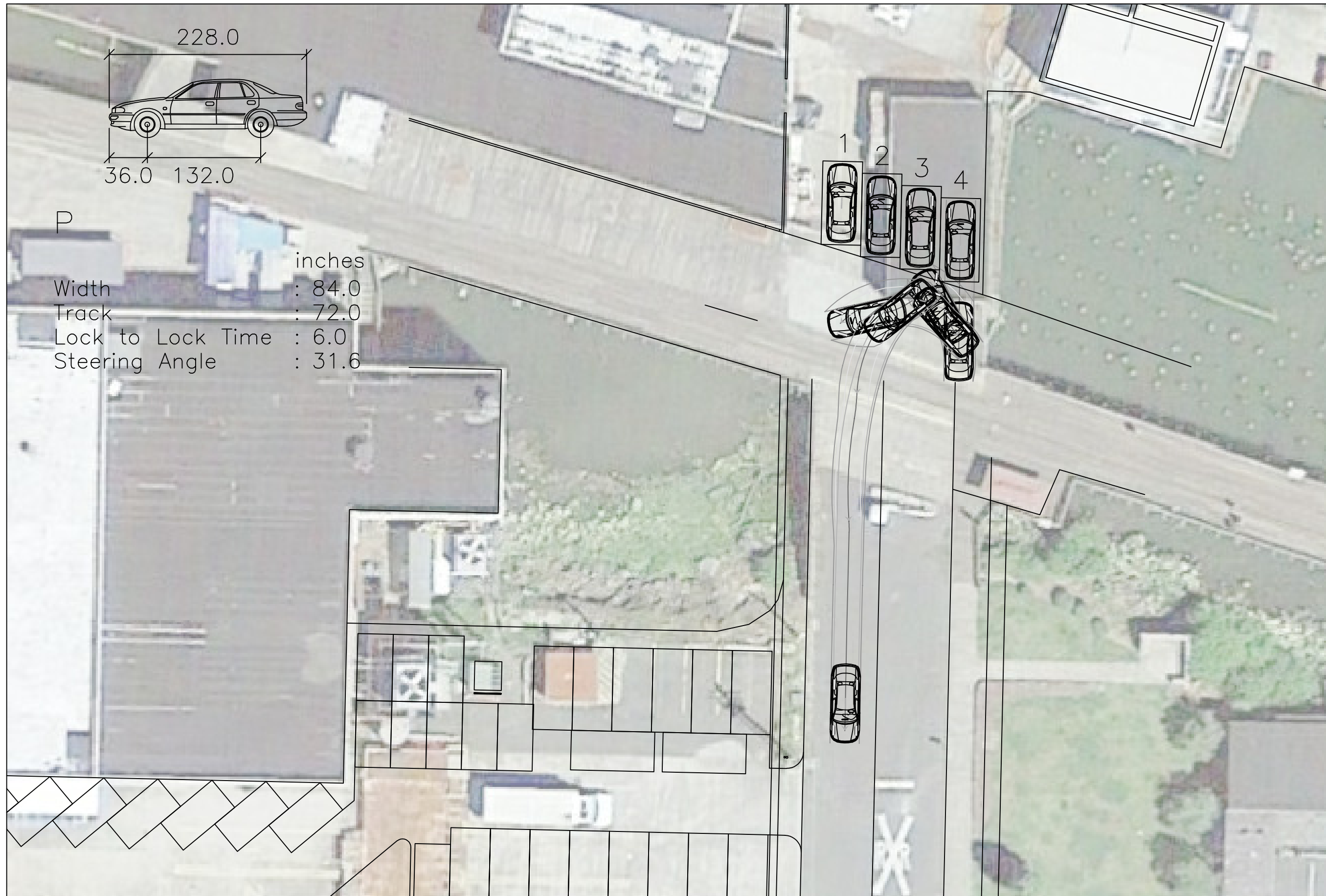


TURNING MOVEMENT ANALYSIS

Egress from Parking Stall 4 – Single Motion
"P" Design Vehicle



FIGURE E1



TURNING MOVEMENT ANALYSIS

Egress from Parking Stall 4 – Jockeying
 "P" Design Vehicle

FIGURE E2



Traffic Signal Warrant Analysis



Project: Adrift Hotel
 Date: 11/28/2018
 Scenario: Year 2021 Buildout Conditions

| | | | |
|-----------------------|--------------|-----------------------|-------------------------|
| Major Street: | Marine Drive | Minor Street: | Astor Street/7th Street |
| Number of Lanes: | 2 | Number of Lanes: | 1 |
| PM Peak Hour Volumes: | 2507 | PM Peak Hour Volumes: | 9 |

Warrant Used:

 X 100 percent of standard warrants used
 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

| Number of Lanes for Moving Traffic on Each Approach: | | ADT on Major St. (total of both approaches) | ADT on Minor St. (higher-volume approach) |
|--|-----------|---|---|
| WARRANT 1, CONDITION A | | 100% <u>Warrants</u> | 70% <u>Warrants</u> |
| Major St. | Minor St. | | |
| 1 | 1 | 8,850 | 6,200 |
| 2 or more | 1 | 10,600 | 7,400 |
| 2 or more | 2 or more | 10,600 | 7,400 |
| 1 | 2 or more | 8,850 | 6,200 |
| WARRANT 1, CONDITION B | | 100% <u>Warrants</u> | 70% <u>Warrants</u> |
| 1 | 1 | 13,300 | 9,300 |
| 2 or more | 1 | 15,900 | 11,100 |
| 2 or more | 2 or more | 15,900 | 11,100 |
| 1 | 2 or more | 13,300 | 9,300 |

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

| | Approach Volumes | Minimum Volumes | Is Signal Warrant Met? |
|--|------------------|-----------------|------------------------|
| <i>Warrant 1</i> | | | |
| <i>Condition A: Minimum Vehicular Volume</i> | | | |
| Major Street | 25,070 | 10,600 | |
| Minor Street* | 90 | 2,650 | No |
| <i>Condition B: Interruption of Continuous Traffic</i> | | | |
| Major Street | 25,070 | 15,900 | |
| Minor Street* | 90 | 1,350 | No |
| <i>Combination Warrant</i> | | | |
| Major Street | 25,070 | 12,720 | |
| Minor Street* | 90 | 2,120 | No |

Note: Minor street right-turning traffic volumes reduced by 85% of the right-turn capacity (ODOT Facility).

Traffic Signal Warrant Analysis



Project: Adrift Hotel
 Date: 11/28/2018
 Scenario: Year 2021 Buildout Conditions

| | | | |
|-----------------------|------------|-----------------------|--------------------------|
| Major Street: | 8th Street | Minor Street: | Bond Street/Marine Drive |
| Number of Lanes: | 2 | Number of Lanes: | 2 |
| PM Peak Hour Volumes: | 1222 | PM Peak Hour Volumes: | 213 |

Warrant Used:
 X 100 percent of standard warrants used
 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

| Number of Lanes for Moving Traffic on Each Approach: | | ADT on Major St. (total of both approaches) | | ADT on Minor St. (higher-volume approach) | |
|--|-----------|---|--------------|---|--------------|
| Major St. | Minor St. | 100% Warrants | 70% Warrants | 100% Warrants | 70% Warrants |
| WARRANT 1, CONDITION A | | | | | |
| 1 | 1 | 8,850 | 6,200 | 2,650 | 1,850 |
| 2 or more | 1 | 10,600 | 7,400 | 2,650 | 1,850 |
| 2 or more | 2 or more | 10,600 | 7,400 | 3,550 | 2,500 |
| 1 | 2 or more | 8,850 | 6,200 | 3,550 | 2,500 |
| WARRANT 1, CONDITION B | | | | | |
| 1 | 1 | 13,300 | 9,300 | 1,350 | 950 |
| 2 or more | 1 | 15,900 | 11,100 | 1,350 | 950 |
| 2 or more | 2 or more | 15,900 | 11,100 | 1,750 | 1,250 |
| 1 | 2 or more | 13,300 | 9,300 | 1,750 | 1,250 |

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

| | Approach Volumes | Minimum Volumes | Is Signal Warrant Met? |
|--|------------------|-----------------|------------------------|
| <i>Warrant 1</i> | | | |
| <i>Condition A: Minimum Vehicular Volume</i> | | | |
| Major Street | 12,220 | 10,600 | |
| Minor Street* | 2,130 | 3,550 | No |
| <i>Condition B: Interruption of Continuous Traffic</i> | | | |
| Major Street | 12,220 | 15,900 | |
| Minor Street* | 2,130 | 1,750 | No |
| <i>Combination Warrant</i> | | | |
| Major Street | 12,220 | 12,720 | |
| Minor Street* | 2,130 | 2,840 | No |

Note: Minor street right-turning traffic volumes reduced by 85% of the right-turn capacity (ODOT Facility).

Traffic Signal Warrant Analysis



Project: Adrift Hotel
 Date: 11/28/2018
 Scenario: Year 2021 Buildout Conditions

| | | | |
|-----------------------|--------------|-----------------------|-------------|
| Major Street: | Marine Drive | Minor Street: | 10th Street |
| Number of Lanes: | 2 | Number of Lanes: | 1 |
| PM Peak Hour Volumes: | 1345 | PM Peak Hour Volumes: | 42 |

Warrant Used:
 X 100 percent of standard warrants used
 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

| Number of Lanes for Moving Traffic on Each Approach: | | ADT on Major St. (total of both approaches) | | ADT on Minor St. (higher-volume approach) | |
|--|-----------|---|--------------|---|--------------|
| Major St. | Minor St. | 100% Warrants | 70% Warrants | 100% Warrants | 70% Warrants |
| WARRANT 1, CONDITION A | | | | | |
| 1 | 1 | 8,850 | 6,200 | 2,650 | 1,850 |
| 2 or more | 1 | 10,600 | 7,400 | 2,650 | 1,850 |
| 2 or more | 2 or more | 10,600 | 7,400 | 3,550 | 2,500 |
| 1 | 2 or more | 8,850 | 6,200 | 3,550 | 2,500 |
| WARRANT 1, CONDITION B | | | | | |
| 1 | 1 | 13,300 | 9,300 | 1,350 | 950 |
| 2 or more | 1 | 15,900 | 11,100 | 1,350 | 950 |
| 2 or more | 2 or more | 15,900 | 11,100 | 1,750 | 1,250 |
| 1 | 2 or more | 13,300 | 9,300 | 1,750 | 1,250 |

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

| | Approach Volumes | Minimum Volumes | Is Signal Warrant Met? |
|--|------------------|-----------------|------------------------|
| <i>Warrant 1</i> | | | |
| <i>Condition A: Minimum Vehicular Volume</i> | | | |
| Major Street | 13,450 | 10,600 | |
| Minor Street* | 420 | 2,650 | No |
| <i>Condition B: Interruption of Continuous Traffic</i> | | | |
| Major Street | 13,450 | 15,900 | |
| Minor Street* | 420 | 1,350 | No |
| <i>Combination Warrant</i> | | | |
| Major Street | 13,450 | 12,720 | |
| Minor Street* | 420 | 2,120 | No |

Note: Minor street right-turning traffic volumes reduced by 85% of the right-turn capacity (ODOT Facility).

Traffic Signal Warrant Analysis



Project: Adrift Hotel
 Date: 11/28/2018
 Scenario: Year 2021 Buildout Conditions

| | | | |
|-----------------------|------------|-----------------------|-------------------|
| Major Street: | 8th Street | Minor Street: | Commercial Street |
| Number of Lanes: | 2 | Number of Lanes: | 2 |
| PM Peak Hour Volumes: | 1339 | PM Peak Hour Volumes: | 57 |

Warrant Used:
 X 100 percent of standard warrants used
 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

| Number of Lanes for Moving Traffic on Each Approach: | | ADT on Major St. (total of both approaches) | | ADT on Minor St. (higher-volume approach) | |
|--|-----------|---|--------------|---|--------------|
| Major St. | Minor St. | 100% Warrants | 70% Warrants | 100% Warrants | 70% Warrants |
| WARRANT 1, CONDITION A | | | | | |
| 1 | 1 | 8,850 | 6,200 | 2,650 | 1,850 |
| 2 or more | 1 | 10,600 | 7,400 | 2,650 | 1,850 |
| 2 or more | 2 or more | 10,600 | 7,400 | 3,550 | 2,500 |
| 1 | 2 or more | 8,850 | 6,200 | 3,550 | 2,500 |
| WARRANT 1, CONDITION B | | | | | |
| 1 | 1 | 13,300 | 9,300 | 1,350 | 950 |
| 2 or more | 1 | 15,900 | 11,100 | 1,350 | 950 |
| 2 or more | 2 or more | 15,900 | 11,100 | 1,750 | 1,250 |
| 1 | 2 or more | 13,300 | 9,300 | 1,750 | 1,250 |

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

| | Approach Volumes | Minimum Volumes | Is Signal Warrant Met? |
|--|------------------|-----------------|------------------------|
| <i>Warrant 1</i> | | | |
| <i>Condition A: Minimum Vehicular Volume</i> | | | |
| Major Street | 13,390 | 10,600 | |
| Minor Street* | 570 | 3,550 | No |
| <i>Condition B: Interruption of Continuous Traffic</i> | | | |
| Major Street | 13,390 | 15,900 | |
| Minor Street* | 570 | 1,750 | No |
| <i>Combination Warrant</i> | | | |
| Major Street | 13,390 | 12,720 | |
| Minor Street* | 570 | 2,840 | No |

Note: Minor street right-turning traffic volumes reduced by 85% of the right-turn capacity (ODOT Facility).

Traffic Signal Warrant Analysis



Project: Adrift Hotel
 Date: 11/28/2018
 Scenario: Year 2021 Buildout Conditions

| | | | |
|-----------------------|-------------------|-----------------------|-------------|
| Major Street: | Commercial Street | Minor Street: | 10th Street |
| Number of Lanes: | 2 | Number of Lanes: | 2 |
| PM Peak Hour Volumes: | 1111 | PM Peak Hour Volumes: | 26 |

Warrant Used:
 X 100 percent of standard warrants used
 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

| Number of Lanes for Moving Traffic on Each Approach: | | ADT on Major St. (total of both approaches) | | ADT on Minor St. (higher-volume approach) | |
|--|-----------|---|--------------|---|--------------|
| Major St. | Minor St. | 100% Warrants | 70% Warrants | 100% Warrants | 70% Warrants |
| WARRANT 1, CONDITION A | | | | | |
| 1 | 1 | 8,850 | 6,200 | 2,650 | 1,850 |
| 2 or more | 1 | 10,600 | 7,400 | 2,650 | 1,850 |
| 2 or more | 2 or more | 10,600 | 7,400 | 3,550 | 2,500 |
| 1 | 2 or more | 8,850 | 6,200 | 3,550 | 2,500 |
| WARRANT 1, CONDITION B | | | | | |
| 1 | 1 | 13,300 | 9,300 | 1,350 | 950 |
| 2 or more | 1 | 15,900 | 11,100 | 1,350 | 950 |
| 2 or more | 2 or more | 15,900 | 11,100 | 1,750 | 1,250 |
| 1 | 2 or more | 13,300 | 9,300 | 1,750 | 1,250 |

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

| | Approach Volumes | Minimum Volumes | Is Signal Warrant Met? |
|--|------------------|-----------------|------------------------|
| <i>Warrant 1</i> | | | |
| <i>Condition A: Minimum Vehicular Volume</i> | | | |
| Major Street | 11,110 | 10,600 | |
| Minor Street* | 260 | 3,550 | No |
| <i>Condition B: Interruption of Continuous Traffic</i> | | | |
| Major Street | 11,110 | 15,900 | |
| Minor Street* | 260 | 1,750 | No |
| <i>Combination Warrant</i> | | | |
| Major Street | 11,110 | 12,720 | |
| Minor Street* | 260 | 2,840 | No |

Note: Minor street right-turning traffic volumes reduced by 85% of the right-turn capacity (ODOT Facility).



LEVEL OF SERVICE

Level of service is used to describe the quality of traffic flow. Levels of service A to C are considered good, and rural roads are usually designed for level of service C. Urban streets and signalized intersections are typically designed for level of service D. Level of service E is considered to be the limit of acceptable delay. For unsignalized intersections, level of service E is generally considered acceptable. Here is a more complete description of levels of service:

Level of service A: Very low delay at intersections, with all traffic signal cycles clearing and no vehicles waiting through more than one signal cycle. On highways, low volume and high speeds, with speeds not restricted by other vehicles.

Level of service B: Operating speeds beginning to be affected by other traffic; short traffic delays at intersections. Higher average intersection delay than for level of service A resulting from more vehicles stopping.

Level of service C: Operating speeds and maneuverability closely controlled by other traffic; higher delays at intersections than for level of service B due to a significant number of vehicles stopping. Not all signal cycles clear the waiting vehicles. This is the recommended design standard for rural highways.

Level of service D: Tolerable operating speeds; long traffic delays occur at intersections. The influence of congestion is noticeable. At traffic signals many vehicles stop, and the proportion of vehicles not stopping declines. The number of signal cycle failures, for which vehicles must wait through more than one signal cycle, are noticeable. This is typically the design level for urban signalized intersections.

Level of service E: Restricted speeds, very long traffic delays at traffic signals, and traffic volumes near capacity. Flow is unstable so that any interruption, no matter how minor, will cause queues to form and service to deteriorate to level of service F. Traffic signal cycle failures are frequent occurrences. For unsignalized intersections, level of service E or better is generally considered acceptable.

Level of service F: Extreme delays, resulting in long queues which may interfere with other traffic movements. There may be stoppages of long duration, and speeds may drop to zero. There may be frequent signal cycle failures. Level of service F will typically result when vehicle arrival rates are greater than capacity. It is considered unacceptable by most drivers.



*LEVEL OF SERVICE CRITERIA
FOR SIGNALIZED INTERSECTIONS*

| LEVEL OF SERVICE | CONTROL DELAY PER VEHICLE (Seconds) |
|------------------------|---|
| A | <10 |
| B | 10-20 |
| C | 20-35 |
| D | 35-55 |
| E | 55-80 |
| F | >80 |

*LEVEL OF SERVICE CRITERIA
FOR UNSIGNALIZED INTERSECTIONS*

| LEVEL OF SERVICE | CONTROL DELAY PER VEHICLE (Seconds) |
|------------------------|---|
| A | <10 |
| B | 10-15 |
| C | 15-25 |
| D | 25-35 |
| E | 35-50 |
| F | >50 |

HCM Unsignalized Intersection Capacity Analysis

1: 7th Street & Marine Drive

12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|------|------|-------|------|----------------------|------|------|------|------|------|------|------|
| Lane Configurations | | ↔↔ | | | ↔↔ | | | ↔ | | | ↔ | |
| Traffic Volume (veh/h) | 29 | 1053 | 32 | 2 | 853 | 4 | 1 | 1 | 1 | 1 | 1 | 5 |
| Future Volume (Veh/h) | 29 | 1053 | 32 | 2 | 853 | 4 | 1 | 1 | 1 | 1 | 1 | 5 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 |
| Hourly flow rate (vph) | 36 | 1300 | 40 | 2 | 1053 | 5 | 1 | 1 | 1 | 1 | 1 | 6 |
| Pedestrians | | 2 | | | 1 | | | 13 | | | 4 | |
| Lane Width (ft) | | 12.0 | | | 12.0 | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 0 | | | 0 | | | 1 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1062 | | | 1353 | | | 1944 | 2471 | 684 | 1788 | 2488 | 535 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1062 | | | 1353 | | | 1944 | 2471 | 684 | 1788 | 2488 | 535 |
| tC, single (s) | 4.2 | | | 4.2 | | | *6.5 | 6.5 | *6.5 | *6.5 | *6.5 | *6.5 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.3 | | | *2.5 | *2.5 | *2.5 | *2.5 | *2.5 | *2.5 |
| p0 queue free % | 94 | | | 100 | | | 99 | 97 | 100 | 99 | 97 | 99 |
| cM capacity (veh/h) | 638 | | | 478 | | | 70 | 32 | 519 | 91 | 31 | 652 |
| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 | | | | | | |
| Volume Total | 686 | 690 | 528 | 532 | 3 | 8 | | | | | | |
| Volume Left | 36 | 0 | 2 | 0 | 1 | 1 | | | | | | |
| Volume Right | 0 | 40 | 0 | 5 | 1 | 6 | | | | | | |
| cSH | 638 | 1700 | 478 | 1700 | 64 | 153 | | | | | | |
| Volume to Capacity | 0.06 | 0.41 | 0.00 | 0.31 | 0.05 | 0.05 | | | | | | |
| Queue Length 95th (ft) | 4 | 0 | 0 | 0 | 4 | 4 | | | | | | |
| Control Delay (s) | 1.5 | 0.0 | 0.1 | 0.0 | 64.5 | 29.7 | | | | | | |
| Lane LOS | A | | A | | F | D | | | | | | |
| Approach Delay (s) | 0.8 | | 0.1 | | 64.5 | 29.7 | | | | | | |
| Approach LOS | | | | | F | D | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 0.6 | | | | | | | | | |
| Intersection Capacity Utilization | | | 66.1% | | ICU Level of Service | | | | C | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

* User Entered Value

HCM Unsignalized Intersection Capacity Analysis

2: 8th Street & Astor Street

12/04/2018



















| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|-------------|-------------|-------------|-------------|----------------------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Volume (veh/h) | 3 | 23 | 1 | 1 | 14 | 2 | 1 | 1 | 1 | 1 | 1 | 2 |
| Future Volume (Veh/h) | 3 | 23 | 1 | 1 | 14 | 2 | 1 | 1 | 1 | 1 | 1 | 2 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| Hourly flow rate (vph) | 4 | 34 | 1 | 1 | 21 | 3 | 1 | 1 | 1 | 1 | 1 | 3 |
| Pedestrians | | | | | 2 | | | | | | | 4 |
| Lane Width (ft) | | | | | 12.0 | | | | | | | 12.0 |
| Walking Speed (ft/s) | | | | | 3.5 | | | | | | | 3.5 |
| Percent Blockage | | | | | 0 | | | | | | | 0 |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 28 | | | 35 | | | 70 | 72 | 36 | 74 | 72 | 26 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 28 | | | 35 | | | 70 | 72 | 36 | 74 | 72 | 26 |
| tC, single (s) | 4.2 | | | 4.3 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.4 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 100 | | | 100 | 100 | 100 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1499 | | | 1473 | | | 918 | 816 | 1040 | 909 | 817 | 1051 |
| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 | | | | | | | | |
| Volume Total | 39 | 25 | 3 | 5 | | | | | | | | |
| Volume Left | 4 | 1 | 1 | 1 | | | | | | | | |
| Volume Right | 1 | 3 | 1 | 3 | | | | | | | | |
| cSH | 1499 | 1473 | 915 | 965 | | | | | | | | |
| Volume to Capacity | 0.00 | 0.00 | 0.00 | 0.01 | | | | | | | | |
| Queue Length 95th (ft) | 0 | 0 | 0 | 0 | | | | | | | | |
| Control Delay (s) | 0.8 | 0.3 | 8.9 | 8.7 | | | | | | | | |
| Lane LOS | A | A | A | A | | | | | | | | |
| Approach Delay (s) | 0.8 | 0.3 | 8.9 | 8.7 | | | | | | | | |
| Approach LOS | | | A | A | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 1.5 | | | | | | | | | |
| Intersection Capacity Utilization | | | 15.2% | | ICU Level of Service | | | | A | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis

3: 9th Street & Astor Street

12/04/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | | |  | | |  | |
| Traffic Volume (veh/h) | 4 | 17 | 7 | 1 | 6 | 1 | 12 | 1 | 3 | 1 | 1 | 1 |
| Future Volume (Veh/h) | 4 | 17 | 7 | 1 | 6 | 1 | 12 | 1 | 3 | 1 | 1 | 1 |
| Sign Control | | Free | | | Free | | | Stop | | | Yield | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 |
| Hourly flow rate (vph) | 6 | 27 | 11 | 2 | 10 | 2 | 19 | 2 | 5 | 2 | 2 | 2 |
| Pedestrians | | 5 | | | | | | 2 | | | 8 | |
| Lane Width (ft) | | 12.0 | | | | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 0 | | | | | | 0 | | | 1 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 20 | | | 40 | | | 70 | 70 | 34 | 74 | 75 | 24 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 20 | | | 40 | | | 70 | 70 | 34 | 74 | 75 | 24 |
| tC, single (s) | 4.2 | | | 4.3 | | | 7.2 | 6.6 | 6.3 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.4 | | | 3.6 | 4.1 | 3.4 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 100 | | | 98 | 100 | 100 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1528 | | | 1431 | | | 877 | 788 | 1006 | 898 | 807 | 1045 |
| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 | | | | | | | | |
| Volume Total | 44 | 14 | 26 | 6 | | | | | | | | |
| Volume Left | 6 | 2 | 19 | 2 | | | | | | | | |
| Volume Right | 11 | 2 | 5 | 2 | | | | | | | | |
| cSH | 1528 | 1431 | 891 | 907 | | | | | | | | |
| Volume to Capacity | 0.00 | 0.00 | 0.03 | 0.01 | | | | | | | | |
| Queue Length 95th (ft) | 0 | 0 | 2 | 0 | | | | | | | | |
| Control Delay (s) | 1.0 | 1.1 | 9.2 | 9.0 | | | | | | | | |
| Lane LOS | A | A | A | A | | | | | | | | |
| Approach Delay (s) | 1.0 | 1.1 | 9.2 | 9.0 | | | | | | | | |
| Approach LOS | | | A | A | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 3.9 | | | | | | | | | |
| Intersection Capacity Utilization | | | 17.2% | | ICU Level of Service | | | | A | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis
 4: 10th Street & Astor Street

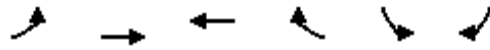
12/04/2018



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|-----------------------------------|-------|------|-------|----------------------|-------|------|
| Lane Configurations | | | | | | |
| Sign Control | Yield | | | Yield | Yield | |
| Traffic Volume (vph) | 2 | 12 | 11 | 1 | 1 | 1 |
| Future Volume (vph) | 2 | 12 | 11 | 1 | 1 | 1 |
| Peak Hour Factor | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 |
| Hourly flow rate (vph) | 4 | 22 | 20 | 2 | 2 | 2 |
| Direction, Lane # | EB 1 | NB 1 | SB 1 | | | |
| Volume Total (vph) | 26 | 22 | 4 | | | |
| Volume Left (vph) | 4 | 20 | 0 | | | |
| Volume Right (vph) | 22 | 0 | 2 | | | |
| Hadj (s) | -0.48 | 0.18 | -0.30 | | | |
| Departure Headway (s) | 3.5 | 4.1 | 3.7 | | | |
| Degree Utilization, x | 0.03 | 0.03 | 0.00 | | | |
| Capacity (veh/h) | 1019 | 853 | 967 | | | |
| Control Delay (s) | 6.6 | 7.2 | 6.7 | | | |
| Approach Delay (s) | 6.6 | 7.2 | 6.7 | | | |
| Approach LOS | A | A | A | | | |
| Intersection Summary | | | | | | |
| Delay | | | 6.9 | | | |
| Level of Service | | | A | | | |
| Intersection Capacity Utilization | | | 17.4% | ICU Level of Service | A | |
| Analysis Period (min) | | | 15 | | | |

HCM Unsignalized Intersection Capacity Analysis
5: Marine Drive & 8th Street

12/04/2018



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------------------|------|------|-------|----------------------|------|------|
| Lane Configurations | | | ↑↑ | | | ↗ |
| Traffic Volume (veh/h) | 0 | 0 | 864 | 3 | 0 | 1 |
| Future Volume (Veh/h) | 0 | 0 | 864 | 3 | 0 | 1 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |
| Hourly flow rate (vph) | 0 | 0 | 1016 | 4 | 0 | 1 |
| Pedestrians | | | 7 | | 4 | |
| Lane Width (ft) | | | 12.0 | | 12.0 | |
| Walking Speed (ft/s) | | | 3.5 | | 3.5 | |
| Percent Blockage | | | 1 | | 0 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 1024 | | | | 1029 | 514 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 1024 | | | | 1029 | 514 |
| tC, single (s) | 4.2 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 100 | | | | 100 | 100 |
| cM capacity (veh/h) | 659 | | | | 231 | 509 |
| Direction, Lane # | WB 1 | WB 2 | SB 1 | | | |
| Volume Total | 677 | 343 | 1 | | | |
| Volume Left | 0 | 0 | 0 | | | |
| Volume Right | 0 | 4 | 1 | | | |
| cSH | 1700 | 1700 | 509 | | | |
| Volume to Capacity | 0.40 | 0.20 | 0.00 | | | |
| Queue Length 95th (ft) | 0 | 0 | 0 | | | |
| Control Delay (s) | 0.0 | 0.0 | 12.1 | | | |
| Lane LOS | | | B | | | |
| Approach Delay (s) | 0.0 | | 12.1 | | | |
| Approach LOS | | | B | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 0.0 | | | |
| Intersection Capacity Utilization | | | 36.0% | ICU Level of Service | | A |
| Analysis Period (min) | | | 15 | | | |

HCM Unsignalized Intersection Capacity Analysis
 11: 8th Street & Bond Street/Marine Drive

12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | ↖ | ↗ | | | | | | ↖ | ↗ |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 43 | 33 | 0 | 0 | 0 | 0 | 0 | 1020 | 3 |
| Future Volume (Veh/h) | 0 | 0 | 0 | 43 | 33 | 0 | 0 | 0 | 0 | 0 | 1020 | 3 |
| Sign Control | Stop | | | Stop | | | Free | | | Free | | |
| Grade | 0% | | | 0% | | | 0% | | | 0% | | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 49 | 38 | 0 | 0 | 0 | 0 | 0 | 1172 | 3 |
| Pedestrians | 2 | | | | | | 1 | | | 5 | | |
| Lane Width (ft) | 0.0 | | | | | | 0.0 | | | 12.0 | | |
| Walking Speed (ft/s) | 3.5 | | | | | | 3.5 | | | 3.5 | | |
| Percent Blockage | 0 | | | | | | 0 | | | 0 | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | None | | | None | | |
| Median storage veh | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1200 | 1176 | 590 | 587 | 1177 | 5 | 1177 | | | | 0 | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1200 | 1176 | 590 | 587 | 1177 | 5 | 1177 | | | | 0 | |
| tC, single (s) | 7.5 | 6.5 | 6.9 | 7.6 | 6.6 | 7.0 | 4.1 | | | | 4.2 | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.6 | 4.1 | 3.4 | 2.2 | | | | 2.2 | |
| p0 queue free % | 100 | 100 | 100 | 87 | 79 | 100 | 100 | | | | 100 | |
| cM capacity (veh/h) | 120 | 193 | 456 | 385 | 184 | 1058 | 601 | | | | 1607 | |
| Direction, Lane # | WB 1 | WB 2 | SB 1 | SB 2 | | | | | | | | |
| Volume Total | 49 | 38 | 781 | 394 | | | | | | | | |
| Volume Left | 49 | 0 | 0 | 0 | | | | | | | | |
| Volume Right | 0 | 0 | 0 | 3 | | | | | | | | |
| cSH | 385 | 184 | 1700 | 1700 | | | | | | | | |
| Volume to Capacity | 0.13 | 0.21 | 0.46 | 0.23 | | | | | | | | |
| Queue Length 95th (ft) | 11 | 19 | 0 | 0 | | | | | | | | |
| Control Delay (s) | 15.7 | 29.6 | 0.0 | 0.0 | | | | | | | | |
| Lane LOS | C | D | | | | | | | | | | |
| Approach Delay (s) | 21.8 | 0.0 | | | | | | | | | | |
| Approach LOS | C | | | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 1.5 | | | | | | | | | |
| Intersection Capacity Utilization | | | 42.3% | ICU Level of Service | A | | | | | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

HCM Signalized Intersection Capacity Analysis

6: 9th Street & Marine Drive

12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
|-----------------------------------|------|------|-------|------|---------------------------|------|-------|------|------|------|------|------|--|
| Lane Configurations | | | | | ↑↑ | | ↑ | ↑ | | | | ↑ | |
| Traffic Volume (vph) | 0 | 0 | 0 | 0 | 842 | 6 | 68 | 7 | 0 | 0 | 0 | 4 | |
| Future Volume (vph) | 0 | 0 | 0 | 0 | 842 | 6 | 68 | 7 | 0 | 0 | 0 | 4 | |
| 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 | |
| Lane Util. Factor | | | | | 0.95 | | 1.00 | 1.00 | | | | 1.00 | |
| Frbp, ped/bikes | | | | | 1.00 | | 1.00 | 1.00 | | | | 1.00 | |
| Flpb, ped/bikes | | | | | 1.00 | | 1.00 | 1.00 | | | | 1.00 | |
| Frt | | | | | 1.00 | | 1.00 | 1.00 | | | | 0.86 | |
| Flt Protected | | | | | 1.00 | | 0.95 | 1.00 | | | | 1.00 | |
| Satd. Flow (prot) | | | | | 3133 | | 1599 | 1683 | | | | 1211 | |
| Flt Permitted | | | | | 1.00 | | 0.95 | 1.00 | | | | 1.00 | |
| Satd. Flow (perm) | | | | | 3133 | | 1599 | 1683 | | | | 1211 | |
| Peak-hour factor, PHF | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 957 | 7 | 77 | 8 | 0 | 0 | 0 | 5 | |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 1 | 0 | 51 | 0 | 0 | 0 | 0 | 3 | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 963 | 0 | 26 | 8 | 0 | 0 | 0 | 2 | |
| Confl. Peds. (#/hr) | 4 | | 1 | 1 | | 4 | | | 1 | 1 | | | |
| Heavy Vehicles (%) | 0% | 0% | 0% | 6% | 6% | 6% | 4% | 4% | 4% | 25% | 25% | 25% | |
| Turn Type | | | | | NA | | Perm | NA | | | | Perm | |
| Protected Phases | | | | | 8 | | | 2 | | | | | |
| Permitted Phases | | | | | | | 2 | | | | | 6 | |
| Actuated Green, G (s) | | | | | 30.5 | | 20.5 | 20.5 | | | | 20.5 | |
| Effective Green, g (s) | | | | | 30.5 | | 20.5 | 20.5 | | | | 20.5 | |
| Actuated g/C Ratio | | | | | 0.51 | | 0.34 | 0.34 | | | | 0.34 | |
| Clearance Time (s) | | | | | 4.5 | | 4.5 | 4.5 | | | | 4.5 | |
| Lane Grp Cap (vph) | | | | | 1592 | | 546 | 575 | | | | 413 | |
| v/s Ratio Prot | | | | | c0.31 | | | 0.00 | | | | | |
| v/s Ratio Perm | | | | | | | c0.02 | | | | | 0.00 | |
| v/c Ratio | | | | | 0.60 | | 0.05 | 0.01 | | | | 0.00 | |
| Uniform Delay, d1 | | | | | 10.5 | | 13.2 | 13.1 | | | | 13.0 | |
| Progression Factor | | | | | 1.00 | | 1.05 | 0.89 | | | | 1.00 | |
| Incremental Delay, d2 | | | | | 1.7 | | 0.2 | 0.0 | | | | 0.0 | |
| Delay (s) | | | | | 12.2 | | 14.0 | 11.6 | | | | 13.0 | |
| Level of Service | | | | | B | | B | B | | | | B | |
| Approach Delay (s) | | 0.0 | | | 12.2 | | | 13.8 | | | 13.0 | | |
| Approach LOS | | A | | | B | | | B | | | B | | |
| Intersection Summary | | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 12.3 | | HCM 2000 Level of Service | | | | | | B | | |
| HCM 2000 Volume to Capacity ratio | | | 0.38 | | | | | | | | | | |
| Actuated Cycle Length (s) | | | 60.0 | | Sum of lost time (s) | | | | | | 9.0 | | |
| Intersection Capacity Utilization | | | 48.0% | | ICU Level of Service | | | | | | A | | |
| Analysis Period (min) | | | 15 | | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis
7: 10th Street & Marine Drive





















12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | | | | | | | | | | | | |
|-----------------------------------|-------|------|------|----------------------|------|------|------|------|------|------|------|------|------|--|--|------|--|--|------|--|--|-----|--|--|
| Lane Configurations | | | | | ↔↔ | | | | | | ↔ | | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 40 | 887 | 12 | 0 | 0 | 0 | 0 | 12 | 7 | | | | | | | | | | | | |
| Future Volume (Veh/h) | 0 | 0 | 0 | 40 | 887 | 12 | 0 | 0 | 0 | 0 | 12 | 7 | | | | | | | | | | | | |
| Sign Control | Free | | | Free | | | Stop | | | Stop | | | | | | | | | | | | | | |
| Grade | 0% | | | 0% | | | 0% | | | 0% | | | | | | | | | | | | | | |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | | | | | | | | | | | | |
| Hourly flow rate (vph) | 0 | 0 | 0 | 44 | 975 | 13 | 0 | 0 | 0 | 0 | 13 | 8 | | | | | | | | | | | | |
| Pedestrians | 4 | | | 3 | | | 2 | | | 4 | | | | | | | | | | | | | | |
| Lane Width (ft) | 0.0 | | | 12.0 | | | 0.0 | | | 12.0 | | | | | | | | | | | | | | |
| Walking Speed (ft/s) | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | | | | | | | | | | | | | | |
| Percent Blockage | 0 | | | 0 | | | 0 | | | 0 | | | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | | | | | | | | | | | | | |
| Median type | None | | | None | | | | | | | | | | | | | | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | | | | | | | | | | | | | |
| Upstream signal (ft) | 252 | | | | | | | | | | | | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | | | | | | | | | | | | | |
| vC, conflicting volume | 992 | | | 2 | | | 596 | | | 1082 | | | 5 | | | 1076 | | | 1076 | | | 502 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | | | | | | | | | | | | | |
| vCu, unblocked vol | 992 | | | 2 | | | 596 | | | 1082 | | | 5 | | | 1076 | | | 1076 | | | 502 | | |
| tC, single (s) | 4.1 | | | 4.2 | | | 7.5 | | | 6.5 | | | 6.9 | | | 7.6 | | | 6.6 | | | 7.0 | | |
| tC, 2 stage (s) | | | | | | | | | | | | | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.3 | | | 3.5 | | | 4.0 | | | 3.3 | | | 3.5 | | | 4.0 | | | 3.3 | | |
| p0 queue free % | 100 | | | 97 | | | 100 | | | 100 | | | 100 | | | 100 | | | 94 | | | 98 | | |
| cM capacity (veh/h) | 702 | | | 1590 | | | 358 | | | 212 | | | 1080 | | | 164 | | | 207 | | | 505 | | |
| Direction, Lane # | WB 1 | WB 2 | SB 1 | | | | | | | | | | | | | | | | | | | | | |
| Volume Total | 532 | 500 | 21 | | | | | | | | | | | | | | | | | | | | | |
| Volume Left | 44 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | |
| Volume Right | 0 | 13 | 8 | | | | | | | | | | | | | | | | | | | | | |
| cSH | 1590 | 1700 | 267 | | | | | | | | | | | | | | | | | | | | | |
| Volume to Capacity | 0.03 | 0.29 | 0.08 | | | | | | | | | | | | | | | | | | | | | |
| Queue Length 95th (ft) | 2 | 0 | 6 | | | | | | | | | | | | | | | | | | | | | |
| Control Delay (s) | 0.9 | 0.0 | 19.7 | | | | | | | | | | | | | | | | | | | | | |
| Lane LOS | A | | C | | | | | | | | | | | | | | | | | | | | | |
| Approach Delay (s) | 0.4 | | 19.7 | | | | | | | | | | | | | | | | | | | | | |
| Approach LOS | | | C | | | | | | | | | | | | | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | | | | | | | | | | | | | |
| Average Delay | 0.8 | | | | | | | | | | | | | | | | | | | | | | | |
| Intersection Capacity Utilization | 42.9% | | | ICU Level of Service | | | A | | | | | | | | | | | | | | | | | |
| Analysis Period (min) | 15 | | | | | | | | | | | | | | | | | | | | | | | |

















HCM Unsignalized Intersection Capacity Analysis
8: 8th Street & Commercial Street

12/04/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |   | | | | | | |   |   |   | |
| Traffic Volume (veh/h) | 0 | 810 | 179 | 0 | 0 | 0 | 0 | 0 | 37 | 25 | 12 | 0 |
| Future Volume (Veh/h) | 0 | 810 | 179 | 0 | 0 | 0 | 0 | 0 | 37 | 25 | 12 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 |
| Hourly flow rate (vph) | 0 | 1000 | 221 | 0 | 0 | 0 | 0 | 0 | 46 | 31 | 15 | 0 |
| Pedestrians | | 4 | | | | | | 6 | | | | |
| Lane Width (ft) | | 12.0 | | | | | | 12.0 | | | | |
| Walking Speed (ft/s) | | 3.5 | | | | | | 3.5 | | | | |
| Percent Blockage | | 0 | | | | | | 1 | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | 246 | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 0 | | | 1227 | | | 1128 | 1116 | 616 | 546 | 1227 | 4 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 0 | | | 1227 | | | 1128 | 1116 | 616 | 546 | 1227 | 4 |
| tC, single (s) | 4.2 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.6 | 6.6 | 7.0 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 100 | | | 100 | 100 | 89 | 92 | 91 | 100 |
| cM capacity (veh/h) | 1607 | | | 572 | | | 149 | 208 | 436 | 373 | 175 | 1071 |
| Direction, Lane # | EB 1 | EB 2 | NB 1 | SB 1 | SB 2 | | | | | | | |
| Volume Total | 667 | 554 | 46 | 21 | 25 | | | | | | | |
| Volume Left | 0 | 0 | 0 | 21 | 10 | | | | | | | |
| Volume Right | 0 | 221 | 46 | 0 | 0 | | | | | | | |
| cSH | 1700 | 1700 | 436 | 373 | 223 | | | | | | | |
| Volume to Capacity | 0.39 | 0.33 | 0.11 | 0.06 | 0.11 | | | | | | | |
| Queue Length 95th (ft) | 0 | 0 | 9 | 4 | 9 | | | | | | | |
| Control Delay (s) | 0.0 | 0.0 | 14.2 | 15.2 | 23.2 | | | | | | | |
| Lane LOS | | | B | C | C | | | | | | | |
| Approach Delay (s) | 0.0 | | 14.2 | 19.6 | | | | | | | | |
| Approach LOS | | | B | C | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 1.2 | | | | | | | | | |
| Intersection Capacity Utilization | | | 42.3% | | ICU Level of Service | | | | A | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

HCM Signalized Intersection Capacity Analysis
 9: 9th Street & Commercial Street

12/04/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |   | | | | | |   | | | | |
| Traffic Volume (vph) | 38 | 813 | 0 | 0 | 0 | 0 | 0 | 35 | 20 | 0 | 0 | 0 |
| Future Volume (vph) | 38 | 813 | 0 | 0 | 0 | 0 | 0 | 35 | 20 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 |
| Total Lost time (s) | | 4.5 | | | | | | 4.5 | | | | |
| Lane Util. Factor | | 0.95 | | | | | | 0.95 | | | | |
| Frbp, ped/bikes | | 1.00 | | | | | | 1.00 | | | | |
| Flpb, ped/bikes | | 1.00 | | | | | | 1.00 | | | | |
| Frt | | 1.00 | | | | | | 0.95 | | | | |
| Flt Protected | | 1.00 | | | | | | 1.00 | | | | |
| Satd. Flow (prot) | | 3159 | | | | | | 3146 | | | | |
| Flt Permitted | | 1.00 | | | | | | 1.00 | | | | |
| Satd. Flow (perm) | | 3159 | | | | | | 3146 | | | | |
| Peak-hour factor, PHF | 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) | 46 | 991 | 0 | 0 | 0 | 0 | 0 | 43 | 24 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 1024 | 0 | 0 | 0 | 0 | 0 | 51 | 0 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | 3 | | 7 | 7 | | | 3 | 3 | | | | 3 |
| Heavy Vehicles (%) | 5% | 5% | 5% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Perm | NA | | | | | | NA | | | | |
| Protected Phases | | 4 | | | | | | 2 | | | | |
| Permitted Phases | 4 | | | | | | | | | | | |
| Actuated Green, G (s) | | 30.5 | | | | | | 20.5 | | | | |
| Effective Green, g (s) | | 30.5 | | | | | | 20.5 | | | | |
| Actuated g/C Ratio | | 0.51 | | | | | | 0.34 | | | | |
| Clearance Time (s) | | 4.5 | | | | | | 4.5 | | | | |
| Lane Grp Cap (vph) | | 1605 | | | | | | 1074 | | | | |
| v/s Ratio Prot | | | | | | | | c0.02 | | | | |
| v/s Ratio Perm | | 0.32 | | | | | | | | | | |
| v/c Ratio | | 0.64 | | | | | | 0.05 | | | | |
| Uniform Delay, d1 | | 10.7 | | | | | | 13.2 | | | | |
| Progression Factor | | 1.00 | | | | | | 1.00 | | | | |
| Incremental Delay, d2 | | 2.0 | | | | | | 0.1 | | | | |
| Delay (s) | | 12.7 | | | | | | 13.3 | | | | |
| Level of Service | | B | | | | | | B | | | | |
| Approach Delay (s) | | 12.7 | | | 0.0 | | | 13.3 | | | 0.0 | |
| Approach LOS | | B | | | A | | | B | | | A | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 12.7 | | | | | HCM 2000 Level of Service | | | B | |
| HCM 2000 Volume to Capacity ratio | | | 0.40 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 60.0 | | | | | Sum of lost time (s) | | 9.0 | | |
| Intersection Capacity Utilization | | | 48.0% | | | | | ICU Level of Service | | A | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis
 10: 10th Street & Commercial Street

12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|------|------|-------|------|----------------------|------|------|------|------|------|------|------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑ | |
| Traffic Volume (veh/h) | 0 | 892 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 18 | 0 |
| Future Volume (Veh/h) | 0 | 892 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 18 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 |
| Hourly flow rate (vph) | 0 | 1256 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 25 | 0 |
| Pedestrians | | 5 | | | 5 | | | 2 | | | 2 | |
| Lane Width (ft) | | 12.0 | | | 0.0 | | | 0.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 0 | | | 0 | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 256 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.77 | | | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | |
| vC, conflicting volume | 2 | | | 1272 | | | 1282 | 1267 | 642 | 635 | 1274 | 7 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 2 | | | 769 | | | 783 | 763 | 0 | 0 | 772 | 7 |
| tC, single (s) | 4.2 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.6 | 6.6 | 7.0 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.6 | 4.1 | 3.4 |
| p0 queue free % | 100 | | | 100 | | | 100 | 100 | 100 | 98 | 90 | 100 |
| cM capacity (veh/h) | 1587 | | | 662 | | | 204 | 260 | 845 | 779 | 247 | 1050 |
| Direction, Lane # | EB 1 | EB 2 | SB 1 | SB 2 | | | | | | | | |
| Volume Total | 837 | 433 | 26 | 17 | | | | | | | | |
| Volume Left | 0 | 0 | 18 | 0 | | | | | | | | |
| Volume Right | 0 | 14 | 0 | 0 | | | | | | | | |
| cSH | 1700 | 1700 | 463 | 247 | | | | | | | | |
| Volume to Capacity | 0.49 | 0.25 | 0.06 | 0.07 | | | | | | | | |
| Queue Length 95th (ft) | 0 | 0 | 5 | 5 | | | | | | | | |
| Control Delay (s) | 0.0 | 0.0 | 13.2 | 20.6 | | | | | | | | |
| Lane LOS | | | B | C | | | | | | | | |
| Approach Delay (s) | 0.0 | | 16.1 | | | | | | | | | |
| Approach LOS | | | C | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 0.5 | | | | | | | | | |
| Intersection Capacity Utilization | | | 42.1% | | ICU Level of Service | | | | A | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis

1: 7th Street & Marine Drive

12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|------|------|-------|------|----------------------|------|------|------|------|------|------|------|
| Lane Configurations | | ↔ | | | ↔ | | | ↔ | | | ↔ | |
| Traffic Volume (veh/h) | 26 | 1129 | 13 | 1 | 1281 | 8 | 6 | 3 | 17 | 1 | 3 | 40 |
| Future Volume (Veh/h) | 26 | 1129 | 13 | 1 | 1281 | 8 | 6 | 3 | 17 | 1 | 3 | 40 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 28 | 1227 | 14 | 1 | 1392 | 9 | 7 | 3 | 18 | 1 | 3 | 43 |
| Pedestrians | | 2 | | | 2 | | | 12 | | | 10 | |
| Lane Width (ft) | | 12.0 | | | 12.0 | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 0 | | | 0 | | | 1 | | | 1 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1411 | | | 1253 | | | 2046 | 2715 | 634 | 2100 | 2718 | 712 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1411 | | | 1253 | | | 2046 | 2715 | 634 | 2100 | 2718 | 712 |
| tC, single (s) | 4.1 | | | 4.1 | | | *6.5 | 6.5 | *6.5 | *6.5 | 6.5 | *6.5 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | *2.5 | *2.5 | *2.5 | *2.5 | *2.5 | *2.5 |
| p0 queue free % | 94 | | | 100 | | | 86 | 86 | 97 | 98 | 86 | 91 |
| cM capacity (veh/h) | 475 | | | 545 | | | 51 | 22 | 559 | 50 | 21 | 499 |
| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 | | | | | | |
| Volume Total | 642 | 628 | 697 | 705 | 28 | 47 | | | | | | |
| Volume Left | 28 | 0 | 1 | 0 | 7 | 1 | | | | | | |
| Volume Right | 0 | 14 | 0 | 9 | 18 | 43 | | | | | | |
| cSH | 475 | 1700 | 545 | 1700 | 91 | 189 | | | | | | |
| Volume to Capacity | 0.06 | 0.37 | 0.00 | 0.41 | 0.31 | 0.25 | | | | | | |
| Queue Length 95th (ft) | 5 | 0 | 0 | 0 | 29 | 24 | | | | | | |
| Control Delay (s) | 1.7 | 0.0 | 0.1 | 0.0 | 61.2 | 30.2 | | | | | | |
| Lane LOS | A | | A | | F | D | | | | | | |
| Approach Delay (s) | 0.9 | | 0.0 | | 61.2 | 30.2 | | | | | | |
| Approach LOS | | | | | F | D | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 1.6 | | | | | | | | | |
| Intersection Capacity Utilization | | | 67.2% | | ICU Level of Service | | | | C | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

* User Entered Value

HCM Unsignalized Intersection Capacity Analysis

2: 8th Street & Astor Street

12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|-------------|-------------|-------------|-------------|----------------------|------|------|------|------|------|------|------|
| Lane Configurations | | ↔ | | | ↔ | | | ↔ | | | ↔ | |
| Traffic Volume (veh/h) | 1 | 34 | 6 | 1 | 31 | 5 | 3 | 7 | 1 | 6 | 1 | 4 |
| Future Volume (Veh/h) | 1 | 34 | 6 | 1 | 31 | 5 | 3 | 7 | 1 | 6 | 1 | 4 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 |
| Hourly flow rate (vph) | 1 | 46 | 8 | 1 | 42 | 7 | 4 | 9 | 1 | 8 | 1 | 5 |
| Pedestrians | | 7 | | | 5 | | | 1 | | | 11 | |
| Lane Width (ft) | | 12.0 | | | 12.0 | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 1 | | | 0 | | | 0 | | | 1 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 60 | | | 55 | | | 113 | 115 | 56 | 121 | 116 | 64 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 60 | | | 55 | | | 113 | 115 | 56 | 121 | 116 | 64 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 100 | | | 100 | 99 | 100 | 99 | 100 | 99 |
| cM capacity (veh/h) | 1521 | | | 1530 | | | 849 | 769 | 1010 | 829 | 769 | 989 |
| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 | | | | | | | | |
| Volume Total | 55 | 50 | 14 | 14 | | | | | | | | |
| Volume Left | 1 | 1 | 4 | 8 | | | | | | | | |
| Volume Right | 8 | 7 | 1 | 5 | | | | | | | | |
| cSH | 1521 | 1530 | 804 | 875 | | | | | | | | |
| Volume to Capacity | 0.00 | 0.00 | 0.02 | 0.02 | | | | | | | | |
| Queue Length 95th (ft) | 0 | 0 | 1 | 1 | | | | | | | | |
| Control Delay (s) | 0.1 | 0.2 | 9.6 | 9.2 | | | | | | | | |
| Lane LOS | A | A | A | A | | | | | | | | |
| Approach Delay (s) | 0.1 | 0.2 | 9.6 | 9.2 | | | | | | | | |
| Approach LOS | | | A | A | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 2.1 | | | | | | | | | |
| Intersection Capacity Utilization | | | 18.5% | | ICU Level of Service | | | | A | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis

3: 9th Street & Astor Street

12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|------|------|-------|------|----------------------|------|------|------|------|------|-------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Volume (veh/h) | 1 | 29 | 17 | 12 | 16 | 1 | 18 | 1 | 11 | 1 | 1 | 1 |
| Future Volume (Veh/h) | 1 | 29 | 17 | 12 | 16 | 1 | 18 | 1 | 11 | 1 | 1 | 1 |
| Sign Control | | Free | | | Free | | | Stop | | | Yield | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| Hourly flow rate (vph) | 1 | 41 | 24 | 17 | 23 | 1 | 26 | 1 | 16 | 1 | 1 | 1 |
| Pedestrians | | 11 | | | 6 | | | 18 | | | 28 | |
| Lane Width (ft) | | 12.0 | | | 12.0 | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 1 | | | 1 | | | 2 | | | 3 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 52 | | | 83 | | | 143 | 159 | 77 | 163 | 170 | 62 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 52 | | | 83 | | | 143 | 159 | 77 | 163 | 170 | 62 |
| tC, single (s) | 4.1 | | | 4.2 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.3 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 99 | | | 97 | 100 | 98 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1513 | | | 1434 | | | 766 | 691 | 959 | 734 | 686 | 971 |
| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 | | | | | | | | |
| Volume Total | 66 | 41 | 43 | 3 | | | | | | | | |
| Volume Left | 1 | 17 | 26 | 1 | | | | | | | | |
| Volume Right | 24 | 1 | 16 | 1 | | | | | | | | |
| cSH | 1513 | 1434 | 826 | 779 | | | | | | | | |
| Volume to Capacity | 0.00 | 0.01 | 0.05 | 0.00 | | | | | | | | |
| Queue Length 95th (ft) | 0 | 1 | 4 | 0 | | | | | | | | |
| Control Delay (s) | 0.1 | 3.2 | 9.6 | 9.6 | | | | | | | | |
| Lane LOS | A | A | A | A | | | | | | | | |
| Approach Delay (s) | 0.1 | 3.2 | 9.6 | 9.6 | | | | | | | | |
| Approach LOS | | | A | A | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 3.8 | | | | | | | | | |
| Intersection Capacity Utilization | | | 24.5% | | ICU Level of Service | | | | A | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis
 4: 10th Street & Astor Street

12/04/2018

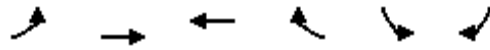


| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|-----------------------------------|-------|------|-------|----------------------|-------|------|
| Lane Configurations | | | | | | |
| Sign Control | Yield | | | Yield | Yield | |
| Traffic Volume (vph) | 5 | 35 | 14 | 4 | 7 | 5 |
| Future Volume (vph) | 5 | 35 | 14 | 4 | 7 | 5 |
| Peak Hour Factor | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 |
| Hourly flow rate (vph) | 7 | 46 | 18 | 5 | 9 | 7 |
| Direction, Lane # | EB 1 | NB 1 | SB 1 | | | |
| Volume Total (vph) | 53 | 23 | 16 | | | |
| Volume Left (vph) | 7 | 18 | 0 | | | |
| Volume Right (vph) | 46 | 0 | 7 | | | |
| Hadj (s) | -0.49 | 0.16 | -0.26 | | | |
| Departure Headway (s) | 3.5 | 4.2 | 3.8 | | | |
| Degree Utilization, x | 0.05 | 0.03 | 0.02 | | | |
| Capacity (veh/h) | 1014 | 840 | 938 | | | |
| Control Delay (s) | 6.7 | 7.3 | 6.8 | | | |
| Approach Delay (s) | 6.7 | 7.3 | 6.8 | | | |
| Approach LOS | A | A | A | | | |
| Intersection Summary | | | | | | |
| Delay | | | 6.9 | | | |
| Level of Service | | | A | | | |
| Intersection Capacity Utilization | | | 19.5% | ICU Level of Service | A | |
| Analysis Period (min) | | | 15 | | | |

HCM Unsignalized Intersection Capacity Analysis

5: Marine Drive & 8th Street

















12/04/2018



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|
| Lane Configurations | | | ↑↑ | | | ↗ |
| Traffic Volume (veh/h) | 0 | 0 | 1263 | 12 | 0 | 5 |
| Future Volume (Veh/h) | 0 | 0 | 1263 | 12 | 0 | 5 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Hourly flow rate (vph) | 0 | 0 | 1316 | 13 | 0 | 5 |
| Pedestrians | | | 24 | | 19 | |
| Lane Width (ft) | | | 12.0 | | 12.0 | |
| Walking Speed (ft/s) | | | 3.5 | | 3.5 | |
| Percent Blockage | | | 2 | | 2 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 1348 | | | | 1366 | 684 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 1348 | | | | 1366 | 684 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 100 | | | | 100 | 99 |
| cM capacity (veh/h) | 498 | | | | 135 | 389 |
| Direction, Lane # | WB 1 | WB 2 | SB 1 | | | |
| Volume Total | 877 | 452 | 5 | | | |
| Volume Left | 0 | 0 | 0 | | | |
| Volume Right | 0 | 13 | 5 | | | |
| cSH | 1700 | 1700 | 389 | | | |
| Volume to Capacity | 0.52 | 0.27 | 0.01 | | | |
| Queue Length 95th (ft) | 0 | 0 | 1 | | | |
| Control Delay (s) | 0.0 | 0.0 | 14.4 | | | |
| Lane LOS | | | B | | | |
| Approach Delay (s) | 0.0 | | 14.4 | | | |
| Approach LOS | | | B | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 0.1 | | | |
| Intersection Capacity Utilization | | | 48.3% | ICU Level of Service | | A |
| Analysis Period (min) | | | 15 | | | |

HCM Unsignalized Intersection Capacity Analysis
 11: 8th Street & Bond Street/Marine Drive

12/04/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | |  |  | | | | | |  |  |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 138 | 65 | 0 | 0 | 0 | 0 | 0 | 1178 | 24 |
| Future Volume (Veh/h) | 0 | 0 | 0 | 138 | 65 | 0 | 0 | 0 | 0 | 0 | 1178 | 24 |
| Sign Control | Stop | | | Stop | | | Free | | | Free | | |
| Grade | 0% | | | 0% | | | 0% | | | 0% | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 142 | 67 | 0 | 0 | 0 | 0 | 0 | 1214 | 25 |
| Pedestrians | 2 | | | 13 | | | 6 | | | 9 | | |
| Lane Width (ft) | 0.0 | | | 12.0 | | | 0.0 | | | 12.0 | | |
| Walking Speed (ft/s) | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | | |
| Percent Blockage | 0 | | | 1 | | | 0 | | | 1 | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | None | | | | | | None | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1271 | 1242 | 628 | 626 | 1254 | 22 | 1241 | | | 13 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1271 | 1242 | 628 | 626 | 1254 | 22 | 1241 | | | 13 | | |
| tC, single (s) | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 100 | 100 | 100 | 61 | 60 | 100 | 100 | | | 100 | | |
| cM capacity (veh/h) | 86 | 174 | 431 | 361 | 168 | 1028 | 568 | | | 1584 | | |
| Direction, Lane # | WB 1 | WB 2 | SB 1 | SB 2 | | | | | | | | |
| Volume Total | 142 | 67 | 809 | 430 | | | | | | | | |
| Volume Left | 142 | 0 | 0 | 0 | | | | | | | | |
| Volume Right | 0 | 0 | 0 | 25 | | | | | | | | |
| cSH | 361 | 168 | 1700 | 1700 | | | | | | | | |
| Volume to Capacity | 0.39 | 0.40 | 0.48 | 0.25 | | | | | | | | |
| Queue Length 95th (ft) | 46 | 44 | 0 | 0 | | | | | | | | |
| Control Delay (s) | 21.3 | 39.8 | 0.0 | 0.0 | | | | | | | | |
| Lane LOS | C | E | | | | | | | | | | |
| Approach Delay (s) | 27.3 | | 0.0 | | | | | | | | | |
| Approach LOS | D | | | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | | 3.9 | | | | | | | | |
| Intersection Capacity Utilization | | | | 54.8% | ICU Level of Service | A | | | | | | |
| Analysis Period (min) | | | | 15 | | | | | | | | |

HCM Signalized Intersection Capacity Analysis

6: 9th Street & Marine Drive

12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
|-----------------------------------|------|------|-------|------|---------------------------|------|-------|------|------|------|------|------|--|
| Lane Configurations | | | | | ↑↑ | | ↑ | ↑ | | | | ↑ | |
| Traffic Volume (vph) | 0 | 0 | 0 | 0 | 1263 | 14 | 150 | 15 | 0 | 0 | 0 | 31 | |
| Future Volume (vph) | 0 | 0 | 0 | 0 | 1263 | 14 | 150 | 15 | 0 | 0 | 0 | 31 | |
| 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 | |
| Lane Util. Factor | | | | | 0.95 | | 1.00 | 1.00 | | | | 1.00 | |
| Frbp, ped/bikes | | | | | 1.00 | | 1.00 | 1.00 | | | | 0.98 | |
| Flpb, ped/bikes | | | | | 1.00 | | 0.99 | 1.00 | | | | 1.00 | |
| Frt | | | | | 1.00 | | 1.00 | 1.00 | | | | 0.86 | |
| Flt Protected | | | | | 1.00 | | 0.95 | 1.00 | | | | 1.00 | |
| Satd. Flow (prot) | | | | | 3253 | | 1636 | 1733 | | | | 1443 | |
| Flt Permitted | | | | | 1.00 | | 0.95 | 1.00 | | | | 1.00 | |
| Satd. Flow (perm) | | | | | 3253 | | 1636 | 1733 | | | | 1443 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1373 | 15 | 163 | 16 | 0 | 0 | 0 | 34 | |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 1 | 0 | 20 | 0 | 0 | 0 | 0 | 20 | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1387 | 0 | 143 | 16 | 0 | 0 | 0 | 14 | |
| Confl. Peds. (#/hr) | 13 | | 15 | 15 | | 13 | 6 | | 5 | 5 | | 6 | |
| Confl. Bikes (#/hr) | | | | | | | | | 1 | | | | |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 2% | 2% | 1% | 1% | 1% | 3% | 3% | 3% | |
| Turn Type | | | | | NA | | Perm | NA | | | | Perm | |
| Protected Phases | | | | | 8 | | | 2 | | | | | |
| Permitted Phases | | | | | | | 2 | | | | | 6 | |
| Actuated Green, G (s) | | | | | 31.5 | | 19.5 | 19.5 | | | | 19.5 | |
| Effective Green, g (s) | | | | | 31.5 | | 19.5 | 19.5 | | | | 19.5 | |
| Actuated g/C Ratio | | | | | 0.52 | | 0.32 | 0.32 | | | | 0.32 | |
| Clearance Time (s) | | | | | 4.5 | | 4.5 | 4.5 | | | | 4.5 | |
| Lane Grp Cap (vph) | | | | | 1707 | | 531 | 563 | | | | 468 | |
| v/s Ratio Prot | | | | | c0.43 | | | 0.01 | | | | | |
| v/s Ratio Perm | | | | | | | c0.09 | | | | | 0.01 | |
| v/c Ratio | | | | | 0.81 | | 0.27 | 0.03 | | | | 0.03 | |
| Uniform Delay, d1 | | | | | 11.8 | | 15.0 | 13.8 | | | | 13.8 | |
| Progression Factor | | | | | 1.00 | | 0.74 | 0.76 | | | | 1.00 | |
| Incremental Delay, d2 | | | | | 4.3 | | 1.2 | 0.1 | | | | 0.1 | |
| Delay (s) | | | | | 16.1 | | 12.3 | 10.6 | | | | 13.9 | |
| Level of Service | | | | | B | | B | B | | | | B | |
| Approach Delay (s) | | 0.0 | | | 16.1 | | | 12.2 | | | 13.9 | | |
| Approach LOS | | A | | | B | | | B | | | B | | |
| Intersection Summary | | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 15.7 | | HCM 2000 Level of Service | | | | | B | | | |
| HCM 2000 Volume to Capacity ratio | | | 0.60 | | | | | | | | | | |
| Actuated Cycle Length (s) | | | 60.0 | | Sum of lost time (s) | | | | | 9.0 | | | |
| Intersection Capacity Utilization | | | 64.8% | | ICU Level of Service | | | | | C | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis

7: 10th Street & Marine Drive

12/04/2018




















| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | ↕↕ | | | | | | ↗ | |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 39 | 1259 | 19 | 0 | 0 | 0 | 0 | 37 | 9 |
| Future Volume (Veh/h) | 0 | 0 | 0 | 39 | 1259 | 19 | 0 | 0 | 0 | 0 | 37 | 9 |
| Sign Control | Free | | | Free | | | Stop | | | Stop | | |
| Grade | 0% | | | 0% | | | 0% | | | 0% | | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 43 | 1399 | 21 | 0 | 0 | 0 | 0 | 41 | 10 |
| Pedestrians | 11 | | | 19 | | | 9 | | | 22 | | |
| Lane Width (ft) | 0.0 | | | 12.0 | | | 0.0 | | | 12.0 | | |
| Walking Speed (ft/s) | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | | |
| Percent Blockage | 0 | | | 2 | | | 0 | | | 2 | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | None | | | None | | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | 252 | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1442 | | | 9 | | | 836 | 1537 | 28 | 1536 | 1526 | 743 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1442 | | | 9 | | | 836 | 1537 | 28 | 1536 | 1526 | 743 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | *6.5 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | *2.5 | *2.5 |
| p0 queue free % | 100 | | | 97 | | | 100 | 100 | 100 | 100 | 71 | 98 |
| cM capacity (veh/h) | 466 | | | 1609 | | | 193 | 112 | 1028 | 75 | 141 | 472 |
| Direction, Lane # | WB 1 | WB 2 | SB 1 | | | | | | | | | |
| Volume Total | 742 | 720 | 51 | | | | | | | | | |
| Volume Left | 43 | 0 | 0 | | | | | | | | | |
| Volume Right | 0 | 21 | 10 | | | | | | | | | |
| cSH | 1609 | 1700 | 164 | | | | | | | | | |
| Volume to Capacity | 0.03 | 0.42 | 0.31 | | | | | | | | | |
| Queue Length 95th (ft) | 2 | 0 | 31 | | | | | | | | | |
| Control Delay (s) | 0.7 | 0.0 | 36.6 | | | | | | | | | |
| Lane LOS | A | | E | | | | | | | | | |
| Approach Delay (s) | 0.4 | | 36.6 | | | | | | | | | |
| Approach LOS | | | E | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 1.6 | | | | | | | | | |
| Intersection Capacity Utilization | | | 56.1% | ICU Level of Service | | | | | | | | B |
| Analysis Period (min) | | | 15 | | | | | | | | | |

* User Entered Value

















HCM Unsignalized Intersection Capacity Analysis
8: 8th Street & Commercial Street

12/04/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  |  | | | | | |  |  |  | |
| Traffic Volume (veh/h) | 0 | 1057 | 201 | 0 | 0 | 0 | 0 | 0 | 46 | 56 | 36 | 0 |
| Future Volume (Veh/h) | 0 | 1057 | 201 | 0 | 0 | 0 | 0 | 0 | 46 | 56 | 36 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Hourly flow rate (vph) | 0 | 1101 | 209 | 0 | 0 | 0 | 0 | 0 | 48 | 58 | 38 | 0 |
| Pedestrians | | 27 | | | 11 | | | 11 | | | 7 | |
| Lane Width (ft) | | 12.0 | | | 0.0 | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 3 | | | 0 | | | 1 | | | 1 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | 246 | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 7 | | | 1321 | | | 1262 | 1224 | 677 | 616 | 1328 | 34 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 7 | | | 1321 | | | 1262 | 1224 | 677 | 616 | 1328 | 34 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 100 | | | 100 | 100 | 88 | 82 | 75 | 100 |
| cM capacity (veh/h) | 1601 | | | 524 | | | 99 | 178 | 396 | 323 | 151 | 998 |
| Direction, Lane # | EB 1 | EB 2 | NB 1 | SB 1 | SB 2 | | | | | | | |
| Volume Total | 734 | 576 | 48 | 39 | 57 | | | | | | | |
| Volume Left | 0 | 0 | 0 | 39 | 19 | | | | | | | |
| Volume Right | 0 | 209 | 48 | 0 | 0 | | | | | | | |
| cSH | 1700 | 1700 | 396 | 323 | 184 | | | | | | | |
| Volume to Capacity | 0.43 | 0.34 | 0.12 | 0.12 | 0.31 | | | | | | | |
| Queue Length 95th (ft) | 0 | 0 | 10 | 10 | 31 | | | | | | | |
| Control Delay (s) | 0.0 | 0.0 | 15.3 | 17.7 | 33.1 | | | | | | | |
| Lane LOS | | | C | C | D | | | | | | | |
| Approach Delay (s) | 0.0 | | 15.3 | 26.9 | | | | | | | | |
| Approach LOS | | | C | D | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 2.3 | | | | | | | | | |
| Intersection Capacity Utilization | | | 93.0% | | ICU Level of Service | | | | F | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

















HCM Signalized Intersection Capacity Analysis
 9: 9th Street & Commercial Street

12/04/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |   | | | | | |   | | | | |
| Traffic Volume (vph) | 64 | 1103 | 0 | 0 | 0 | 0 | 0 | 90 | 30 | 0 | 0 | 0 |
| Future Volume (vph) | 64 | 1103 | 0 | 0 | 0 | 0 | 0 | 90 | 30 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 |
| Total Lost time (s) | | 4.5 | | | | | | 4.5 | | | | |
| Lane Util. Factor | | 0.95 | | | | | | 0.95 | | | | |
| Frbp, ped/bikes | | 1.00 | | | | | | 0.99 | | | | |
| Flpb, ped/bikes | | 1.00 | | | | | | 1.00 | | | | |
| Frt | | 1.00 | | | | | | 0.96 | | | | |
| Flt Protected | | 1.00 | | | | | | 1.00 | | | | |
| Satd. Flow (prot) | | 3246 | | | | | | 3122 | | | | |
| Flt Permitted | | 1.00 | | | | | | 1.00 | | | | |
| Satd. Flow (perm) | | 3246 | | | | | | 3122 | | | | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 67 | 1149 | 0 | 0 | 0 | 0 | 0 | 94 | 31 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 1203 | 0 | 0 | 0 | 0 | 0 | 104 | 0 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | 25 | | 21 | 21 | | | 25 | 1 | | 9 | 9 | 1 |
| Confl. Bikes (#/hr) | | | | | | | | | | 1 | | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 0% | 2% | 2% | 2% | 0% | 0% | 0% |
| Turn Type | Perm | NA | | | | | | NA | | | | |
| Protected Phases | | 4 | | | | | | 2 | | | | |
| Permitted Phases | 4 | | | | | | | | | | | |
| Actuated Green, G (s) | | 31.5 | | | | | | 19.5 | | | | |
| Effective Green, g (s) | | 31.5 | | | | | | 19.5 | | | | |
| Actuated g/C Ratio | | 0.52 | | | | | | 0.32 | | | | |
| Clearance Time (s) | | 4.5 | | | | | | 4.5 | | | | |
| Lane Grp Cap (vph) | | 1704 | | | | | | 1014 | | | | |
| v/s Ratio Prot | | | | | | | | c0.03 | | | | |
| v/s Ratio Perm | | 0.37 | | | | | | | | | | |
| v/c Ratio | | 0.71 | | | | | | 0.10 | | | | |
| Uniform Delay, d1 | | 10.8 | | | | | | 14.1 | | | | |
| Progression Factor | | 1.00 | | | | | | 1.00 | | | | |
| Incremental Delay, d2 | | 2.5 | | | | | | 0.2 | | | | |
| Delay (s) | | 13.2 | | | | | | 14.3 | | | | |
| Level of Service | | B | | | | | | B | | | | |
| Approach Delay (s) | | 13.2 | | | 0.0 | | | 14.3 | | | 0.0 | |
| Approach LOS | | B | | | A | | | B | | | A | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 13.3 | | | | | HCM 2000 Level of Service | | | B | |
| HCM 2000 Volume to Capacity ratio | | | 0.48 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 60.0 | | | | | Sum of lost time (s) | | | 9.0 | |
| Intersection Capacity Utilization | | | 64.8% | | | | | ICU Level of Service | | | C | |
| Analysis Period (min) | | | 15 | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis
 10: 10th Street & Commercial Street

12/04/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |   | | | | | | | | |   | |
| Traffic Volume (veh/h) | 0 | 1065 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 47 | 24 | 0 |
| Future Volume (Veh/h) | 0 | 1065 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 47 | 24 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 0 | 1121 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 49 | 25 | 0 |
| Pedestrians | | 11 | | | 16 | | | 17 | | | 49 | |
| Lane Width (ft) | | 12.0 | | | 0.0 | | | 0.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 1 | | | 0 | | | 0 | | | 5 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 256 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.73 | | | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | |
| vC, conflicting volume | 49 | | | 1164 | | | 1174 | 1200 | 606 | 626 | 1213 | 60 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 49 | | | 484 | | | 498 | 533 | 0 | 0 | 551 | 60 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 100 | | | 100 | 100 | 100 | 93 | 92 | 100 |
| cM capacity (veh/h) | 1483 | | | 795 | | | 300 | 317 | 796 | 690 | 310 | 943 |
| Direction, Lane # | EB 1 | EB 2 | SB 1 | SB 2 | | | | | | | | |
| Volume Total | 747 | 400 | 57 | 17 | | | | | | | | |
| Volume Left | 0 | 0 | 49 | 0 | | | | | | | | |
| Volume Right | 0 | 26 | 0 | 0 | | | | | | | | |
| cSH | 1700 | 1700 | 585 | 310 | | | | | | | | |
| Volume to Capacity | 0.44 | 0.24 | 0.10 | 0.05 | | | | | | | | |
| Queue Length 95th (ft) | 0 | 0 | 8 | 4 | | | | | | | | |
| Control Delay (s) | 0.0 | 0.0 | 11.8 | 17.3 | | | | | | | | |
| Lane LOS | | | B | C | | | | | | | | |
| Approach Delay (s) | 0.0 | | 13.0 | | | | | | | | | |
| Approach LOS | | | B | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 0.8 | | | | | | | | | |
| Intersection Capacity Utilization | | | 50.2% | | ICU Level of Service | | | | A | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis

1: 7th Street & Marine Drive

12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|------|------|-------|------|----------------------|------|------|------|------|------|------|------|
| Lane Configurations | | ↔↔ | | | ↔↔ | | | ↔ | | | ↔ | |
| Traffic Volume (veh/h) | 31 | 1070 | 34 | 2 | 867 | 4 | 1 | 1 | 1 | 1 | 1 | 5 |
| Future Volume (Veh/h) | 31 | 1070 | 34 | 2 | 867 | 4 | 1 | 1 | 1 | 1 | 1 | 5 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 |
| Hourly flow rate (vph) | 38 | 1321 | 42 | 2 | 1070 | 5 | 1 | 1 | 1 | 1 | 1 | 6 |
| Pedestrians | | 2 | | | 1 | | | 13 | | | 4 | |
| Lane Width (ft) | | 12.0 | | | 12.0 | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 0 | | | 0 | | | 1 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1079 | | | 1376 | | | 1978 | 2514 | 696 | 1820 | 2532 | 544 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1079 | | | 1376 | | | 1978 | 2514 | 696 | 1820 | 2532 | 544 |
| tC, single (s) | 4.2 | | | 4.2 | | | *6.5 | 6.5 | *6.5 | *6.5 | *6.5 | *6.5 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.3 | | | *2.5 | *2.5 | *2.5 | *2.5 | *2.5 | *2.5 |
| p0 queue free % | 94 | | | 100 | | | 98 | 97 | 100 | 99 | 97 | 99 |
| cM capacity (veh/h) | 628 | | | 468 | | | 66 | 30 | 510 | 86 | 29 | 644 |
| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 | | | | | | |
| Volume Total | 698 | 702 | 537 | 540 | 3 | 8 | | | | | | |
| Volume Left | 38 | 0 | 2 | 0 | 1 | 1 | | | | | | |
| Volume Right | 0 | 42 | 0 | 5 | 1 | 6 | | | | | | |
| cSH | 628 | 1700 | 468 | 1700 | 60 | 145 | | | | | | |
| Volume to Capacity | 0.06 | 0.41 | 0.00 | 0.32 | 0.05 | 0.06 | | | | | | |
| Queue Length 95th (ft) | 5 | 0 | 0 | 0 | 4 | 4 | | | | | | |
| Control Delay (s) | 1.6 | 0.0 | 0.1 | 0.0 | 68.7 | 31.3 | | | | | | |
| Lane LOS | A | | A | | F | D | | | | | | |
| Approach Delay (s) | 0.8 | | 0.1 | | 68.7 | 31.3 | | | | | | |
| Approach LOS | | | | | F | D | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 0.7 | | | | | | | | | |
| Intersection Capacity Utilization | | | 68.3% | | ICU Level of Service | | | | C | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

* User Entered Value

HCM Unsignalized Intersection Capacity Analysis

2: 8th Street & Astor Street

12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|-------------|-------------|-------------|-------------|----------------------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Volume (veh/h) | 3 | 24 | 1 | 1 | 15 | 2 | 1 | 1 | 1 | 1 | 1 | 2 |
| Future Volume (Veh/h) | 3 | 24 | 1 | 1 | 15 | 2 | 1 | 1 | 1 | 1 | 1 | 2 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| Hourly flow rate (vph) | 4 | 35 | 1 | 1 | 22 | 3 | 1 | 1 | 1 | 1 | 1 | 3 |
| Pedestrians | | | | | 2 | | | | | | 4 | |
| Lane Width (ft) | | | | | 12.0 | | | | | | 12.0 | |
| Walking Speed (ft/s) | | | | | 3.5 | | | | | | 3.5 | |
| Percent Blockage | | | | | 0 | | | | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 29 | | | 36 | | | 72 | 74 | 38 | 76 | 74 | 28 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 29 | | | 36 | | | 72 | 74 | 38 | 76 | 74 | 28 |
| tC, single (s) | 4.2 | | | 4.3 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.4 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 100 | | | 100 | 100 | 100 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1498 | | | 1472 | | | 915 | 814 | 1038 | 906 | 815 | 1050 |
| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 | | | | | | | | |
| Volume Total | 40 | 26 | 3 | 5 | | | | | | | | |
| Volume Left | 4 | 1 | 1 | 1 | | | | | | | | |
| Volume Right | 1 | 3 | 1 | 3 | | | | | | | | |
| cSH | 1498 | 1472 | 913 | 964 | | | | | | | | |
| Volume to Capacity | 0.00 | 0.00 | 0.00 | 0.01 | | | | | | | | |
| Queue Length 95th (ft) | 0 | 0 | 0 | 0 | | | | | | | | |
| Control Delay (s) | 0.8 | 0.3 | 9.0 | 8.8 | | | | | | | | |
| Lane LOS | A | A | A | A | | | | | | | | |
| Approach Delay (s) | 0.8 | 0.3 | 9.0 | 8.8 | | | | | | | | |
| Approach LOS | | | A | A | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 1.5 | | | | | | | | | |
| Intersection Capacity Utilization | | | 15.2% | | ICU Level of Service | | | | A | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis

3: 9th Street & Astor Street

12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|-------------|-------------|-------------|-------------|----------------------|------|------|------|------|------|-------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Volume (veh/h) | 4 | 18 | 7 | 1 | 6 | 1 | 13 | 1 | 3 | 1 | 1 | 1 |
| Future Volume (Veh/h) | 4 | 18 | 7 | 1 | 6 | 1 | 13 | 1 | 3 | 1 | 1 | 1 |
| Sign Control | | Free | | | Free | | | Stop | | | Yield | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 |
| Hourly flow rate (vph) | 6 | 29 | 11 | 2 | 10 | 2 | 21 | 2 | 5 | 2 | 2 | 2 |
| Pedestrians | | 5 | | | | | | 2 | | | 8 | |
| Lane Width (ft) | | 12.0 | | | | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 0 | | | | | | 0 | | | 1 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 20 | | | 42 | | | 72 | 72 | 36 | 76 | 77 | 24 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 20 | | | 42 | | | 72 | 72 | 36 | 76 | 77 | 24 |
| tC, single (s) | 4.2 | | | 4.3 | | | 7.2 | 6.6 | 6.3 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.4 | | | 3.6 | 4.1 | 3.4 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 100 | | | 98 | 100 | 100 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1528 | | | 1428 | | | 874 | 786 | 1003 | 896 | 805 | 1045 |
| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 | | | | | | | | |
| Volume Total | 46 | 14 | 28 | 6 | | | | | | | | |
| Volume Left | 6 | 2 | 21 | 2 | | | | | | | | |
| Volume Right | 11 | 2 | 5 | 2 | | | | | | | | |
| cSH | 1528 | 1428 | 887 | 905 | | | | | | | | |
| Volume to Capacity | 0.00 | 0.00 | 0.03 | 0.01 | | | | | | | | |
| Queue Length 95th (ft) | 0 | 0 | 2 | 1 | | | | | | | | |
| Control Delay (s) | 1.0 | 1.1 | 9.2 | 9.0 | | | | | | | | |
| Lane LOS | A | A | A | A | | | | | | | | |
| Approach Delay (s) | 1.0 | 1.1 | 9.2 | 9.0 | | | | | | | | |
| Approach LOS | | | A | A | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 4.0 | | | | | | | | | |
| Intersection Capacity Utilization | | | 17.2% | | ICU Level of Service | | | | A | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis
 4: 10th Street & Astor Street

12/04/2018



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|-----------------------------------|-------|------|-------|----------------------|-------|------|
| Lane Configurations | | | | | | |
| Sign Control | Yield | | | Yield | Yield | |
| Traffic Volume (vph) | 2 | 13 | 12 | 1 | 1 | 1 |
| Future Volume (vph) | 2 | 13 | 12 | 1 | 1 | 1 |
| Peak Hour Factor | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 |
| Hourly flow rate (vph) | 4 | 24 | 22 | 2 | 2 | 2 |
| Direction, Lane # | EB 1 | NB 1 | SB 1 | | | |
| Volume Total (vph) | 28 | 24 | 4 | | | |
| Volume Left (vph) | 4 | 22 | 0 | | | |
| Volume Right (vph) | 24 | 0 | 2 | | | |
| Hadj (s) | -0.49 | 0.18 | -0.30 | | | |
| Departure Headway (s) | 3.5 | 4.1 | 3.7 | | | |
| Degree Utilization, x | 0.03 | 0.03 | 0.00 | | | |
| Capacity (veh/h) | 1020 | 851 | 965 | | | |
| Control Delay (s) | 6.6 | 7.3 | 6.7 | | | |
| Approach Delay (s) | 6.6 | 7.3 | 6.7 | | | |
| Approach LOS | A | A | A | | | |
| Intersection Summary | | | | | | |
| Delay | | | 6.9 | | | |
| Level of Service | | | A | | | |
| Intersection Capacity Utilization | | | 17.4% | ICU Level of Service | | A |
| Analysis Period (min) | | | 15 | | | |

HCM Unsignalized Intersection Capacity Analysis

5: Marine Drive & 8th Street

















12/04/2018



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|
| Lane Configurations | | | ↑↑ | | | ↗ |
| Traffic Volume (veh/h) | 0 | 0 | 878 | 3 | 0 | 1 |
| Future Volume (Veh/h) | 0 | 0 | 878 | 3 | 0 | 1 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |
| Hourly flow rate (vph) | 0 | 0 | 1033 | 4 | 0 | 1 |
| Pedestrians | | | 7 | | 4 | |
| Lane Width (ft) | | | 12.0 | | 12.0 | |
| Walking Speed (ft/s) | | | 3.5 | | 3.5 | |
| Percent Blockage | | | 1 | | 0 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 1041 | | | | 1046 | 522 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 1041 | | | | 1046 | 522 |
| tC, single (s) | 4.2 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 100 | | | | 100 | 100 |
| cM capacity (veh/h) | 649 | | | | 225 | 502 |
| Direction, Lane # | WB 1 | WB 2 | SB 1 | | | |
| Volume Total | 689 | 348 | 1 | | | |
| Volume Left | 0 | 0 | 0 | | | |
| Volume Right | 0 | 4 | 1 | | | |
| cSH | 1700 | 1700 | 502 | | | |
| Volume to Capacity | 0.41 | 0.20 | 0.00 | | | |
| Queue Length 95th (ft) | 0 | 0 | 0 | | | |
| Control Delay (s) | 0.0 | 0.0 | 12.2 | | | |
| Lane LOS | | | B | | | |
| Approach Delay (s) | 0.0 | | 12.2 | | | |
| Approach LOS | | | B | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 0.0 | | | |
| Intersection Capacity Utilization | | | 36.5% | ICU Level of Service | | A |
| Analysis Period (min) | | | 15 | | | |

HCM Unsignalized Intersection Capacity Analysis
 11: 8th Street & Bond Street/Marine Drive

12/04/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | |  |  | | | | | |  |  |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 44 | 35 | 0 | 0 | 0 | 0 | 0 | 1036 | 3 |
| Future Volume (Veh/h) | 0 | 0 | 0 | 44 | 35 | 0 | 0 | 0 | 0 | 0 | 1036 | 3 |
| Sign Control | Stop | | | Stop | | | Free | | | Free | | |
| Grade | 0% | | | 0% | | | 0% | | | 0% | | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 51 | 40 | 0 | 0 | 0 | 0 | 0 | 1191 | 3 |
| Pedestrians | 2 | | | | | | 1 | | | 5 | | |
| Lane Width (ft) | 0.0 | | | | | | 0.0 | | | 12.0 | | |
| Walking Speed (ft/s) | 3.5 | | | | | | 3.5 | | | 3.5 | | |
| Percent Blockage | 0 | | | | | | 0 | | | 0 | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | None | | | None | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1220 | 1194 | 600 | 596 | 1196 | 5 | 1196 | | | | 0 | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1220 | 1194 | 600 | 596 | 1196 | 5 | 1196 | | | | 0 | |
| tC, single (s) | 7.5 | 6.5 | 6.9 | 7.6 | 6.6 | 7.0 | 4.1 | | | | 4.2 | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.6 | 4.1 | 3.4 | 2.2 | | | | 2.2 | |
| p0 queue free % | 100 | 100 | 100 | 87 | 78 | 100 | 100 | | | | 100 | |
| cM capacity (veh/h) | 114 | 188 | 449 | 379 | 179 | 1058 | 591 | | | | 1607 | |
| Direction, Lane # | WB 1 | WB 2 | SB 1 | SB 2 | | | | | | | | |
| Volume Total | 51 | 40 | 794 | 400 | | | | | | | | |
| Volume Left | 51 | 0 | 0 | 0 | | | | | | | | |
| Volume Right | 0 | 0 | 0 | 3 | | | | | | | | |
| cSH | 379 | 179 | 1700 | 1700 | | | | | | | | |
| Volume to Capacity | 0.13 | 0.22 | 0.47 | 0.24 | | | | | | | | |
| Queue Length 95th (ft) | 12 | 21 | 0 | 0 | | | | | | | | |
| Control Delay (s) | 16.0 | 30.8 | 0.0 | 0.0 | | | | | | | | |
| Lane LOS | C | D | | | | | | | | | | |
| Approach Delay (s) | 22.5 | 0.0 | | | | | | | | | | |
| Approach LOS | C | | | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 1.6 | | | | | | | | | |
| Intersection Capacity Utilization | | | 43.8% | ICU Level of Service | A | | | | | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

HCM Signalized Intersection Capacity Analysis

6: 9th Street & Marine Drive

12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
|-----------------------------------|------|------|-------|------|---------------------------|------|-------|------|------|------|------|------|--|
| Lane Configurations | | | | | ↑↑ | | ↑ | ↑ | | | | ↑ | |
| Traffic Volume (vph) | 0 | 0 | 0 | 0 | 856 | 6 | 72 | 7 | 0 | 0 | 0 | 4 | |
| Future Volume (vph) | 0 | 0 | 0 | 0 | 856 | 6 | 72 | 7 | 0 | 0 | 0 | 4 | |
| 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 | |
| Lane Util. Factor | | | | | 0.95 | | 1.00 | 1.00 | | | | 1.00 | |
| Frbp, ped/bikes | | | | | 1.00 | | 1.00 | 1.00 | | | | 1.00 | |
| Flpb, ped/bikes | | | | | 1.00 | | 1.00 | 1.00 | | | | 1.00 | |
| Frt | | | | | 1.00 | | 1.00 | 1.00 | | | | 0.86 | |
| Flt Protected | | | | | 1.00 | | 0.95 | 1.00 | | | | 1.00 | |
| Satd. Flow (prot) | | | | | 3133 | | 1599 | 1683 | | | | 1211 | |
| Flt Permitted | | | | | 1.00 | | 0.95 | 1.00 | | | | 1.00 | |
| Satd. Flow (perm) | | | | | 3133 | | 1599 | 1683 | | | | 1211 | |
| Peak-hour factor, PHF | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 973 | 7 | 82 | 8 | 0 | 0 | 0 | 5 | |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 1 | 0 | 54 | 0 | 0 | 0 | 0 | 3 | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 979 | 0 | 28 | 8 | 0 | 0 | 0 | 2 | |
| Confl. Peds. (#/hr) | 4 | | 1 | 1 | | 4 | | | 1 | 1 | | | |
| Heavy Vehicles (%) | 0% | 0% | 0% | 6% | 6% | 6% | 4% | 4% | 4% | 25% | 25% | 25% | |
| Turn Type | | | | | NA | | Perm | NA | | | | Perm | |
| Protected Phases | | | | | 8 | | | 2 | | | | | |
| Permitted Phases | | | | | | | 2 | | | | | 6 | |
| Actuated Green, G (s) | | | | | 30.5 | | 20.5 | 20.5 | | | | 20.5 | |
| Effective Green, g (s) | | | | | 30.5 | | 20.5 | 20.5 | | | | 20.5 | |
| Actuated g/C Ratio | | | | | 0.51 | | 0.34 | 0.34 | | | | 0.34 | |
| Clearance Time (s) | | | | | 4.5 | | 4.5 | 4.5 | | | | 4.5 | |
| Lane Grp Cap (vph) | | | | | 1592 | | 546 | 575 | | | | 413 | |
| v/s Ratio Prot | | | | | c0.31 | | | 0.00 | | | | | |
| v/s Ratio Perm | | | | | | | c0.02 | | | | | 0.00 | |
| v/c Ratio | | | | | 0.61 | | 0.05 | 0.01 | | | | 0.00 | |
| Uniform Delay, d1 | | | | | 10.6 | | 13.2 | 13.1 | | | | 13.0 | |
| Progression Factor | | | | | 1.00 | | 1.06 | 0.88 | | | | 1.00 | |
| Incremental Delay, d2 | | | | | 1.8 | | 0.2 | 0.0 | | | | 0.0 | |
| Delay (s) | | | | | 12.3 | | 14.1 | 11.5 | | | | 13.0 | |
| Level of Service | | | | | B | | B | B | | | | B | |
| Approach Delay (s) | | 0.0 | | | 12.3 | | | 13.9 | | | 13.0 | | |
| Approach LOS | | A | | | B | | | B | | | B | | |
| Intersection Summary | | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 12.5 | | HCM 2000 Level of Service | | | | | | B | | |
| HCM 2000 Volume to Capacity ratio | | | 0.39 | | | | | | | | | | |
| Actuated Cycle Length (s) | | | 60.0 | | Sum of lost time (s) | | | | | | 9.0 | | |
| Intersection Capacity Utilization | | | 48.4% | | ICU Level of Service | | | | | | A | | |
| Analysis Period (min) | | | 15 | | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis

7: 10th Street & Marine Drive













12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | ↕↕ | | | | | | ↕ | |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 42 | 901 | 13 | 0 | 0 | 0 | 0 | 13 | 7 |
| Future Volume (Veh/h) | 0 | 0 | 0 | 42 | 901 | 13 | 0 | 0 | 0 | 0 | 13 | 7 |
| Sign Control | Free | | | Free | | | Stop | | | Stop | | |
| Grade | 0% | | | 0% | | | 0% | | | 0% | | |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 46 | 990 | 14 | 0 | 0 | 0 | 0 | 14 | 8 |
| Pedestrians | 4 | | | 3 | | | 2 | | | 4 | | |
| Lane Width (ft) | 0.0 | | | 12.0 | | | 0.0 | | | 12.0 | | |
| Walking Speed (ft/s) | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | | |
| Percent Blockage | 0 | | | 0 | | | 0 | | | 0 | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | None | | | None | | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | 252 | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1008 | | | 2 | | | 608 | 1102 | 5 | 1096 | 1095 | 510 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1008 | | | 2 | | | 608 | 1102 | 5 | 1096 | 1095 | 510 |
| tC, single (s) | 4.1 | | | 4.2 | | | 7.5 | 6.5 | 6.9 | 7.6 | 6.6 | 7.0 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.3 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 97 | | | 100 | 100 | 100 | 100 | 93 | 98 |
| cM capacity (veh/h) | 693 | | | 1590 | | | 349 | 206 | 1080 | 159 | 201 | 499 |
| Direction, Lane # | WB 1 | WB 2 | SB 1 | | | | | | | | | |
| Volume Total | 541 | 509 | 22 | | | | | | | | | |
| Volume Left | 46 | 0 | 0 | | | | | | | | | |
| Volume Right | 0 | 14 | 8 | | | | | | | | | |
| cSH | 1590 | 1700 | 257 | | | | | | | | | |
| Volume to Capacity | 0.03 | 0.30 | 0.09 | | | | | | | | | |
| Queue Length 95th (ft) | 2 | 0 | 7 | | | | | | | | | |
| Control Delay (s) | 0.9 | 0.0 | 20.3 | | | | | | | | | |
| Lane LOS | A | | C | | | | | | | | | |
| Approach Delay (s) | 0.5 | | 20.3 | | | | | | | | | |
| Approach LOS | | | C | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 0.9 | | | | | | | | | |
| Intersection Capacity Utilization | | | 43.4% | ICU Level of Service | | | | | | | | A |
| Analysis Period (min) | | | 15 | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis
 8: 8th Street & Commercial Street

















12/04/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↑↑ | | | | | | | ↑ | ↑ | ↑ | |
| Traffic Volume (veh/h) | 0 | 860 | 190 | 0 | 0 | 0 | 0 | 0 | 39 | 25 | 13 | 0 |
| Future Volume (Veh/h) | 0 | 860 | 190 | 0 | 0 | 0 | 0 | 0 | 39 | 25 | 13 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 |
| Hourly flow rate (vph) | 0 | 1062 | 235 | 0 | 0 | 0 | 0 | 0 | 48 | 31 | 16 | 0 |
| Pedestrians | | 4 | | | | | | 6 | | | | |
| Lane Width (ft) | | 12.0 | | | | | | 12.0 | | | | |
| Walking Speed (ft/s) | | 3.5 | | | | | | 3.5 | | | | |
| Percent Blockage | | 0 | | | | | | 1 | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | 246 | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 0 | | | 1303 | | | 1198 | 1186 | 654 | 579 | 1303 | 4 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 0 | | | 1303 | | | 1198 | 1186 | 654 | 579 | 1303 | 4 |
| tC, single (s) | 4.2 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.6 | 6.6 | 7.0 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 100 | | | 100 | 100 | 88 | 91 | 90 | 100 |
| cM capacity (veh/h) | 1607 | | | 535 | | | 131 | 189 | 411 | 348 | 157 | 1071 |
| Direction, Lane # | EB 1 | EB 2 | NB 1 | SB 1 | SB 2 | | | | | | | |
| Volume Total | 708 | 589 | 48 | 21 | 26 | | | | | | | |
| Volume Left | 0 | 0 | 0 | 21 | 10 | | | | | | | |
| Volume Right | 0 | 235 | 48 | 0 | 0 | | | | | | | |
| cSH | 1700 | 1700 | 411 | 348 | 200 | | | | | | | |
| Volume to Capacity | 0.42 | 0.35 | 0.12 | 0.06 | 0.13 | | | | | | | |
| Queue Length 95th (ft) | 0 | 0 | 10 | 5 | 11 | | | | | | | |
| Control Delay (s) | 0.0 | 0.0 | 14.9 | 16.0 | 25.7 | | | | | | | |
| Lane LOS | | | B | C | D | | | | | | | |
| Approach Delay (s) | 0.0 | | 14.9 | 21.4 | | | | | | | | |
| Approach LOS | | | B | C | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 1.2 | | | | | | | | | |
| Intersection Capacity Utilization | | | 43.8% | | ICU Level of Service | | | | A | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

HCM Signalized Intersection Capacity Analysis

9: 9th Street & Commercial Street

12/04/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |   | | | | | |   | | | | |
| Traffic Volume (vph) | 40 | 826 | 0 | 0 | 0 | 0 | 0 | 37 | 21 | 0 | 0 | 0 |
| Future Volume (vph) | 40 | 826 | 0 | 0 | 0 | 0 | 0 | 37 | 21 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 |
| Total Lost time (s) | | 4.5 | | | | | | 4.5 | | | | |
| Lane Util. Factor | | 0.95 | | | | | | 0.95 | | | | |
| Frbp, ped/bikes | | 1.00 | | | | | | 1.00 | | | | |
| Flpb, ped/bikes | | 1.00 | | | | | | 1.00 | | | | |
| Frt | | 1.00 | | | | | | 0.95 | | | | |
| Flt Protected | | 1.00 | | | | | | 1.00 | | | | |
| Satd. Flow (prot) | | 3159 | | | | | | 3142 | | | | |
| Flt Permitted | | 1.00 | | | | | | 1.00 | | | | |
| Satd. Flow (perm) | | 3159 | | | | | | 3142 | | | | |
| Peak-hour factor, PHF | 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) | 49 | 1007 | 0 | 0 | 0 | 0 | 0 | 45 | 26 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 1043 | 0 | 0 | 0 | 0 | 0 | 54 | 0 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | 3 | | 7 | 7 | | | 3 | 3 | | | | 3 |
| Heavy Vehicles (%) | 5% | 5% | 5% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Perm | NA | | | | | | NA | | | | |
| Protected Phases | | 4 | | | | | | 2 | | | | |
| Permitted Phases | 4 | | | | | | | | | | | |
| Actuated Green, G (s) | | 30.5 | | | | | | 20.5 | | | | |
| Effective Green, g (s) | | 30.5 | | | | | | 20.5 | | | | |
| Actuated g/C Ratio | | 0.51 | | | | | | 0.34 | | | | |
| Clearance Time (s) | | 4.5 | | | | | | 4.5 | | | | |
| Lane Grp Cap (vph) | | 1605 | | | | | | 1073 | | | | |
| v/s Ratio Prot | | | | | | | | c0.02 | | | | |
| v/s Ratio Perm | | 0.33 | | | | | | | | | | |
| v/c Ratio | | 0.65 | | | | | | 0.05 | | | | |
| Uniform Delay, d1 | | 10.8 | | | | | | 13.2 | | | | |
| Progression Factor | | 1.00 | | | | | | 1.00 | | | | |
| Incremental Delay, d2 | | 2.1 | | | | | | 0.1 | | | | |
| Delay (s) | | 12.9 | | | | | | 13.3 | | | | |
| Level of Service | | B | | | | | | B | | | | |
| Approach Delay (s) | | 12.9 | | | 0.0 | | | 13.3 | | | 0.0 | |
| Approach LOS | | B | | | A | | | B | | | A | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 12.9 | | | | | HCM 2000 Level of Service | | | B | |
| HCM 2000 Volume to Capacity ratio | | | 0.41 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 60.0 | | | | | Sum of lost time (s) | | 9.0 | | |
| Intersection Capacity Utilization | | | 48.4% | | | | | ICU Level of Service | | A | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis
 10: 10th Street & Commercial Street

12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|-------------|-------------|-------------|-------------|----------------------|------|------|------|------|------|------|------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑ | |
| Traffic Volume (veh/h) | 0 | 906 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 19 | 0 |
| Future Volume (Veh/h) | 0 | 906 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 19 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 |
| Hourly flow rate (vph) | 0 | 1276 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 27 | 0 |
| Pedestrians | | 5 | | | 5 | | | 2 | | | 2 | |
| Lane Width (ft) | | 12.0 | | | 0.0 | | | 0.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 0 | | | 0 | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 256 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.77 | | | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | |
| vC, conflicting volume | 2 | | | 1293 | | | 1304 | 1288 | 652 | 645 | 1295 | 7 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 2 | | | 777 | | | 792 | 770 | 0 | 0 | 780 | 7 |
| tC, single (s) | 4.2 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.6 | 6.6 | 7.0 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.6 | 4.1 | 3.4 |
| p0 queue free % | 100 | | | 100 | | | 100 | 100 | 100 | 97 | 89 | 100 |
| cM capacity (veh/h) | 1587 | | | 651 | | | 198 | 256 | 838 | 772 | 242 | 1050 |
| Direction, Lane # | EB 1 | EB 2 | SB 1 | SB 2 | | | | | | | | |
| Volume Total | 851 | 440 | 29 | 18 | | | | | | | | |
| Volume Left | 0 | 0 | 20 | 0 | | | | | | | | |
| Volume Right | 0 | 15 | 0 | 0 | | | | | | | | |
| cSH | 1700 | 1700 | 460 | 242 | | | | | | | | |
| Volume to Capacity | 0.50 | 0.26 | 0.06 | 0.07 | | | | | | | | |
| Queue Length 95th (ft) | 0 | 0 | 5 | 6 | | | | | | | | |
| Control Delay (s) | 0.0 | 0.0 | 13.4 | 21.1 | | | | | | | | |
| Lane LOS | | | B | C | | | | | | | | |
| Approach Delay (s) | 0.0 | | 16.3 | | | | | | | | | |
| Approach LOS | | | C | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 0.6 | | | | | | | | | |
| Intersection Capacity Utilization | | | 42.6% | | ICU Level of Service | | | | A | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis

1: 7th Street & Marine Drive

12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|------|------|-------|------|----------------------|------|------|------|------|------|------|------|
| Lane Configurations | | ↔ | | | ↔ | | | ↔ | | | ↔ | |
| Traffic Volume (veh/h) | 28 | 1147 | 14 | 1 | 1302 | 8 | 6 | 3 | 18 | 1 | 3 | 42 |
| Future Volume (Veh/h) | 28 | 1147 | 14 | 1 | 1302 | 8 | 6 | 3 | 18 | 1 | 3 | 42 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 30 | 1247 | 15 | 1 | 1415 | 9 | 7 | 3 | 20 | 1 | 3 | 46 |
| Pedestrians | | 2 | | | 2 | | | 12 | | | 10 | |
| Lane Width (ft) | | 12.0 | | | 12.0 | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 0 | | | 0 | | | 1 | | | 1 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1434 | | | 1274 | | | 2086 | 2762 | 645 | 2138 | 2766 | 724 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1434 | | | 1274 | | | 2086 | 2762 | 645 | 2138 | 2766 | 724 |
| tC, single (s) | 4.1 | | | 4.1 | | | *6.5 | 6.5 | *6.5 | *6.5 | 6.5 | *6.5 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | *2.5 | *2.5 | *2.5 | *2.5 | *2.5 | *2.5 |
| p0 queue free % | 94 | | | 100 | | | 85 | 85 | 96 | 98 | 85 | 91 |
| cM capacity (veh/h) | 465 | | | 535 | | | 47 | 20 | 550 | 46 | 19 | 490 |
| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 | | | | | | |
| Volume Total | 654 | 638 | 708 | 716 | 30 | 50 | | | | | | |
| Volume Left | 30 | 0 | 1 | 0 | 7 | 1 | | | | | | |
| Volume Right | 0 | 15 | 0 | 9 | 20 | 46 | | | | | | |
| cSH | 465 | 1700 | 535 | 1700 | 90 | 185 | | | | | | |
| Volume to Capacity | 0.06 | 0.38 | 0.00 | 0.42 | 0.34 | 0.27 | | | | | | |
| Queue Length 95th (ft) | 5 | 0 | 0 | 0 | 32 | 26 | | | | | | |
| Control Delay (s) | 1.9 | 0.0 | 0.1 | 0.0 | 64.3 | 31.4 | | | | | | |
| Lane LOS | A | | A | | F | D | | | | | | |
| Approach Delay (s) | 1.0 | | 0.0 | | 64.3 | 31.4 | | | | | | |
| Approach LOS | | | | | F | D | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 1.7 | | | | | | | | | |
| Intersection Capacity Utilization | | | 69.5% | | ICU Level of Service | | | | C | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

* User Entered Value

HCM Unsignalized Intersection Capacity Analysis

2: 8th Street & Astor Street

12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|-------------|-------------|-------------|-------------|----------------------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Volume (veh/h) | 1 | 36 | 6 | 1 | 33 | 5 | 3 | 7 | 1 | 6 | 1 | 4 |
| Future Volume (Veh/h) | 1 | 36 | 6 | 1 | 33 | 5 | 3 | 7 | 1 | 6 | 1 | 4 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 |
| Hourly flow rate (vph) | 1 | 49 | 8 | 1 | 45 | 7 | 4 | 9 | 1 | 8 | 1 | 5 |
| Pedestrians | | 7 | | | 5 | | | 1 | | | 11 | |
| Lane Width (ft) | | 12.0 | | | 12.0 | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 1 | | | 0 | | | 0 | | | 1 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 63 | | | 58 | | | 119 | 121 | 59 | 127 | 122 | 66 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 63 | | | 58 | | | 119 | 121 | 59 | 127 | 122 | 66 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 100 | | | 100 | 99 | 100 | 99 | 100 | 99 |
| cM capacity (veh/h) | 1517 | | | 1526 | | | 841 | 763 | 1007 | 822 | 763 | 986 |
| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 | | | | | | | | |
| Volume Total | 58 | 53 | 14 | 14 | | | | | | | | |
| Volume Left | 1 | 1 | 4 | 8 | | | | | | | | |
| Volume Right | 8 | 7 | 1 | 5 | | | | | | | | |
| cSH | 1517 | 1526 | 798 | 869 | | | | | | | | |
| Volume to Capacity | 0.00 | 0.00 | 0.02 | 0.02 | | | | | | | | |
| Queue Length 95th (ft) | 0 | 0 | 1 | 1 | | | | | | | | |
| Control Delay (s) | 0.1 | 0.1 | 9.6 | 9.2 | | | | | | | | |
| Lane LOS | A | A | A | A | | | | | | | | |
| Approach Delay (s) | 0.1 | 0.1 | 9.6 | 9.2 | | | | | | | | |
| Approach LOS | | | A | A | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 2.0 | | | | | | | | | |
| Intersection Capacity Utilization | | | 18.5% | | ICU Level of Service | | | | A | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis
 3: 9th Street & Astor Street

12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|------|------|-------|------|----------------------|------|------|------|------|------|-------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Volume (veh/h) | 1 | 31 | 18 | 13 | 17 | 1 | 19 | 1 | 12 | 1 | 1 | 1 |
| Future Volume (Veh/h) | 1 | 31 | 18 | 13 | 17 | 1 | 19 | 1 | 12 | 1 | 1 | 1 |
| Sign Control | | Free | | | Free | | | Stop | | | Yield | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| Hourly flow rate (vph) | 1 | 44 | 26 | 19 | 24 | 1 | 27 | 1 | 17 | 1 | 1 | 1 |
| Pedestrians | | 11 | | | 6 | | | 18 | | | 28 | |
| Lane Width (ft) | | 12.0 | | | 12.0 | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 1 | | | 1 | | | 2 | | | 3 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 53 | | | 88 | | | 152 | 168 | 81 | 173 | 180 | 64 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 53 | | | 88 | | | 152 | 168 | 81 | 173 | 180 | 64 |
| tC, single (s) | 4.1 | | | 4.2 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.3 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 99 | | | 96 | 100 | 98 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1511 | | | 1428 | | | 755 | 682 | 954 | 722 | 676 | 970 |
| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 | | | | | | | | |
| Volume Total | 71 | 44 | 45 | 3 | | | | | | | | |
| Volume Left | 1 | 19 | 27 | 1 | | | | | | | | |
| Volume Right | 26 | 1 | 17 | 1 | | | | | | | | |
| cSH | 1511 | 1428 | 817 | 770 | | | | | | | | |
| Volume to Capacity | 0.00 | 0.01 | 0.06 | 0.00 | | | | | | | | |
| Queue Length 95th (ft) | 0 | 1 | 4 | 0 | | | | | | | | |
| Control Delay (s) | 0.1 | 3.3 | 9.7 | 9.7 | | | | | | | | |
| Lane LOS | A | A | A | A | | | | | | | | |
| Approach Delay (s) | 0.1 | 3.3 | 9.7 | 9.7 | | | | | | | | |
| Approach LOS | | | A | A | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 3.8 | | | | | | | | | |
| Intersection Capacity Utilization | | | 24.5% | | ICU Level of Service | | | | A | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis

4: 10th Street & Astor Street

12/04/2018



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|-----------------------------------|-------|------|-------|----------------------|-------|------|
| Lane Configurations | | | | | | |
| Sign Control | Yield | | | Yield | Yield | |
| Traffic Volume (vph) | 5 | 37 | 15 | 4 | 7 | 5 |
| Future Volume (vph) | 5 | 37 | 15 | 4 | 7 | 5 |
| Peak Hour Factor | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 |
| Hourly flow rate (vph) | 7 | 49 | 20 | 5 | 9 | 7 |
| Direction, Lane # | EB 1 | NB 1 | SB 1 | | | |
| Volume Total (vph) | 56 | 25 | 16 | | | |
| Volume Left (vph) | 7 | 20 | 0 | | | |
| Volume Right (vph) | 49 | 0 | 7 | | | |
| Hadj (s) | -0.50 | 0.16 | -0.26 | | | |
| Departure Headway (s) | 3.5 | 4.2 | 3.8 | | | |
| Degree Utilization, x | 0.05 | 0.03 | 0.02 | | | |
| Capacity (veh/h) | 1014 | 838 | 935 | | | |
| Control Delay (s) | 6.7 | 7.3 | 6.8 | | | |
| Approach Delay (s) | 6.7 | 7.3 | 6.8 | | | |
| Approach LOS | A | A | A | | | |
| Intersection Summary | | | | | | |
| Delay | | | 6.9 | | | |
| Level of Service | | | A | | | |
| Intersection Capacity Utilization | | | 19.6% | ICU Level of Service | A | |
| Analysis Period (min) | | | 15 | | | |

HCM Unsignalized Intersection Capacity Analysis

5: Marine Drive & 8th Street

















12/04/2018



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|
| Lane Configurations | | | ↑↑ | | | ↗ |
| Traffic Volume (veh/h) | 0 | 0 | 1283 | 13 | 0 | 5 |
| Future Volume (Veh/h) | 0 | 0 | 1283 | 13 | 0 | 5 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Hourly flow rate (vph) | 0 | 0 | 1336 | 14 | 0 | 5 |
| Pedestrians | | | 24 | | 19 | |
| Lane Width (ft) | | | 12.0 | | 12.0 | |
| Walking Speed (ft/s) | | | 3.5 | | 3.5 | |
| Percent Blockage | | | 2 | | 2 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 1369 | | | | 1386 | 694 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 1369 | | | | 1386 | 694 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 100 | | | | 100 | 99 |
| cM capacity (veh/h) | 488 | | | | 131 | 383 |
| Direction, Lane # | WB 1 | WB 2 | SB 1 | | | |
| Volume Total | 891 | 459 | 5 | | | |
| Volume Left | 0 | 0 | 0 | | | |
| Volume Right | 0 | 14 | 5 | | | |
| cSH | 1700 | 1700 | 383 | | | |
| Volume to Capacity | 0.52 | 0.27 | 0.01 | | | |
| Queue Length 95th (ft) | 0 | 0 | 1 | | | |
| Control Delay (s) | 0.0 | 0.0 | 14.5 | | | |
| Lane LOS | | | B | | | |
| Approach Delay (s) | 0.0 | | 14.5 | | | |
| Approach LOS | | | B | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 0.1 | | | |
| Intersection Capacity Utilization | | | 49.0% | ICU Level of Service | | A |
| Analysis Period (min) | | | 15 | | | |


















HCM Unsignalized Intersection Capacity Analysis
 11: 8th Street & Bond Street/Marine Drive

12/04/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | |  |  | | | | | |  |  |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 140 | 69 | 0 | 0 | 0 | 0 | 0 | 1197 | 25 |
| Future Volume (Veh/h) | 0 | 0 | 0 | 140 | 69 | 0 | 0 | 0 | 0 | 0 | 1197 | 25 |
| Sign Control | Stop | | | Stop | | | Free | | | Free | | |
| Grade | 0% | | | 0% | | | 0% | | | 0% | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 144 | 71 | 0 | 0 | 0 | 0 | 0 | 1234 | 26 |
| Pedestrians | 2 | | | 13 | | | 6 | | | 9 | | |
| Lane Width (ft) | 0.0 | | | 12.0 | | | 0.0 | | | 12.0 | | |
| Walking Speed (ft/s) | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | | |
| Percent Blockage | 0 | | | 1 | | | 0 | | | 1 | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | None | | | | | | None | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1294 | 1262 | 638 | 636 | 1275 | 22 | 1262 | | | 13 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1294 | 1262 | 638 | 636 | 1275 | 22 | 1262 | | | 13 | | |
| tC, single (s) | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 100 | 100 | 100 | 59 | 57 | 100 | 100 | | | 100 | | |
| cM capacity (veh/h) | 79 | 169 | 424 | 355 | 164 | 1028 | 558 | | | 1584 | | |
| Direction, Lane # | WB 1 | WB 2 | SB 1 | SB 2 | | | | | | | | |
| Volume Total | 144 | 71 | 823 | 437 | | | | | | | | |
| Volume Left | 144 | 0 | 0 | 0 | | | | | | | | |
| Volume Right | 0 | 0 | 0 | 26 | | | | | | | | |
| cSH | 355 | 164 | 1700 | 1700 | | | | | | | | |
| Volume to Capacity | 0.41 | 0.43 | 0.48 | 0.26 | | | | | | | | |
| Queue Length 95th (ft) | 48 | 49 | 0 | 0 | | | | | | | | |
| Control Delay (s) | 21.9 | 42.9 | 0.0 | 0.0 | | | | | | | | |
| Lane LOS | C | E | | | | | | | | | | |
| Approach Delay (s) | 28.8 | | 0.0 | | | | | | | | | |
| Approach LOS | D | | | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | | 4.2 | | | | | | | | |
| Intersection Capacity Utilization | | | | 57.2% | ICU Level of Service | B | | | | | | |
| Analysis Period (min) | | | | 15 | | | | | | | | |

HCM Signalized Intersection Capacity Analysis
6: 9th Street & Marine Drive

12/04/2018

| |  |  |  |  |  |  |  |  |  |  |  |  | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations | | | | |   | |  |  | | | |  | |
| Traffic Volume (vph) | 0 | 0 | 0 | 0 | 1283 | 15 | 159 | 16 | 0 | 0 | 0 | 33 | |
| Future Volume (vph) | 0 | 0 | 0 | 0 | 1283 | 15 | 159 | 16 | 0 | 0 | 0 | 33 | |
| 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 | |
| Lane Util. Factor | | | | | 0.95 | | 1.00 | 1.00 | | | | 1.00 | |
| Frbp, ped/bikes | | | | | 1.00 | | 1.00 | 1.00 | | | | 0.98 | |
| Flpb, ped/bikes | | | | | 1.00 | | 0.99 | 1.00 | | | | 1.00 | |
| Frt | | | | | 1.00 | | 1.00 | 1.00 | | | | 0.86 | |
| Flt Protected | | | | | 1.00 | | 0.95 | 1.00 | | | | 1.00 | |
| Satd. Flow (prot) | | | | | 3253 | | 1636 | 1733 | | | | 1443 | |
| Flt Permitted | | | | | 1.00 | | 0.95 | 1.00 | | | | 1.00 | |
| Satd. Flow (perm) | | | | | 3253 | | 1636 | 1733 | | | | 1443 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1395 | 16 | 173 | 17 | 0 | 0 | 0 | 36 | |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 1 | 0 | 19 | 0 | 0 | 0 | 0 | 19 | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1410 | 0 | 154 | 17 | 0 | 0 | 0 | 17 | |
| Confl. Peds. (#/hr) | 13 | | 15 | 15 | | 13 | 6 | | 5 | 5 | | 6 | |
| Confl. Bikes (#/hr) | | | | | | | | | 1 | | | | |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 2% | 2% | 1% | 1% | 1% | 3% | 3% | 3% | |
| Turn Type | | | | | NA | | Perm | NA | | | | Perm | |
| Protected Phases | | | | | 8 | | | 2 | | | | | |
| Permitted Phases | | | | | | | 2 | | | | | 6 | |
| Actuated Green, G (s) | | | | | 31.5 | | 19.5 | 19.5 | | | | 19.5 | |
| Effective Green, g (s) | | | | | 31.5 | | 19.5 | 19.5 | | | | 19.5 | |
| Actuated g/C Ratio | | | | | 0.52 | | 0.32 | 0.32 | | | | 0.32 | |
| Clearance Time (s) | | | | | 4.5 | | 4.5 | 4.5 | | | | 4.5 | |
| Lane Grp Cap (vph) | | | | | 1707 | | 531 | 563 | | | | 468 | |
| v/s Ratio Prot | | | | | c0.43 | | | 0.01 | | | | | |
| v/s Ratio Perm | | | | | | | c0.09 | | | | | 0.01 | |
| v/c Ratio | | | | | 0.83 | | 0.29 | 0.03 | | | | 0.04 | |
| Uniform Delay, d1 | | | | | 11.9 | | 15.1 | 13.8 | | | | 13.8 | |
| Progression Factor | | | | | 1.00 | | 0.74 | 0.75 | | | | 1.00 | |
| Incremental Delay, d2 | | | | | 4.7 | | 1.3 | 0.1 | | | | 0.1 | |
| Delay (s) | | | | | 16.7 | | 12.4 | 10.5 | | | | 14.0 | |
| Level of Service | | | | | B | | B | B | | | | B | |
| Approach Delay (s) | | 0.0 | | | 16.7 | | | 12.3 | | | 14.0 | | |
| Approach LOS | | A | | | B | | | B | | | B | | |
| Intersection Summary | | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 16.1 | | HCM 2000 Level of Service | | | | | | B | | |
| HCM 2000 Volume to Capacity ratio | | | 0.62 | | | | | | | | | | |
| Actuated Cycle Length (s) | | | 60.0 | | Sum of lost time (s) | | | | | | 9.0 | | |
| Intersection Capacity Utilization | | | 66.0% | | ICU Level of Service | | | | | | C | | |
| Analysis Period (min) | | | 15 | | | | | | | | | | |

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis

7: 10th Street & Marine Drive

12/04/2018




















| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
|-----------------------------------|------|------|-------|----------------------|------|------|------|------|------|------|------|------|--|
| Lane Configurations | | | | | ↔ | | | | | | ↔ | | |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 41 | 1279 | 20 | 0 | 0 | 0 | 0 | 39 | 10 | |
| Future Volume (Veh/h) | 0 | 0 | 0 | 41 | 1279 | 20 | 0 | 0 | 0 | 0 | 39 | 10 | |
| Sign Control | Free | | | Free | | | Stop | | | Stop | | | |
| Grade | 0% | | | 0% | | | 0% | | | 0% | | | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | |
| Hourly flow rate (vph) | 0 | 0 | 0 | 46 | 1421 | 22 | 0 | 0 | 0 | 0 | 43 | 11 | |
| Pedestrians | 11 | | | 19 | | | 9 | | | 22 | | | |
| Lane Width (ft) | 0.0 | | | 12.0 | | | 0.0 | | | 12.0 | | | |
| Walking Speed (ft/s) | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | | | |
| Percent Blockage | 0 | | | 2 | | | 0 | | | 2 | | | |
| Right turn flare (veh) | | | | | | | | | | | | | |
| Median type | None | | | None | | | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | | |
| Upstream signal (ft) | 252 | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | | |
| vC, conflicting volume | 1465 | | | 9 | | | 855 | 1566 | 28 | 1565 | 1555 | 754 | |
| vC1, stage 1 conf vol | | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | | |
| vCu, unblocked vol | 1465 | | | 9 | | | 855 | 1566 | 28 | 1565 | 1555 | 754 | |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | *6.5 | |
| tC, 2 stage (s) | | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | *2.5 | *2.5 | |
| p0 queue free % | 100 | | | 97 | | | 100 | 100 | 100 | 100 | 68 | 98 | |
| cM capacity (veh/h) | 457 | | | 1609 | | | 181 | 107 | 1028 | 71 | 135 | 464 | |
| Direction, Lane # | WB 1 | WB 2 | SB 1 | | | | | | | | | | |
| Volume Total | 756 | 732 | 54 | | | | | | | | | | |
| Volume Left | 46 | 0 | 0 | | | | | | | | | | |
| Volume Right | 0 | 22 | 11 | | | | | | | | | | |
| cSH | 1609 | 1700 | 158 | | | | | | | | | | |
| Volume to Capacity | 0.03 | 0.43 | 0.34 | | | | | | | | | | |
| Queue Length 95th (ft) | 2 | 0 | 35 | | | | | | | | | | |
| Control Delay (s) | 0.8 | 0.0 | 39.2 | | | | | | | | | | |
| Lane LOS | A | | E | | | | | | | | | | |
| Approach Delay (s) | 0.4 | | 39.2 | | | | | | | | | | |
| Approach LOS | | | E | | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | | |
| Average Delay | | | 1.8 | | | | | | | | | | |
| Intersection Capacity Utilization | | | 56.8% | ICU Level of Service | | | | B | | | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | | |

* User Entered Value

















HCM Unsignalized Intersection Capacity Analysis
8: 8th Street & Commercial Street

12/04/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  |  | | | | | |  |  |  | |
| Traffic Volume (veh/h) | 0 | 1122 | 213 | 0 | 0 | 0 | 0 | 0 | 49 | 57 | 38 | 0 |
| Future Volume (Veh/h) | 0 | 1122 | 213 | 0 | 0 | 0 | 0 | 0 | 49 | 57 | 38 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Hourly flow rate (vph) | 0 | 1169 | 222 | 0 | 0 | 0 | 0 | 0 | 51 | 59 | 40 | 0 |
| Pedestrians | | 27 | | | 11 | | | 11 | | | 7 | |
| Lane Width (ft) | | 12.0 | | | 0.0 | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 3 | | | 0 | | | 1 | | | 1 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 246 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 7 | | | 1402 | | | 1338 | 1298 | 718 | 654 | 1409 | 34 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 7 | | | 1402 | | | 1338 | 1298 | 718 | 654 | 1409 | 34 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 100 | | | 100 | 100 | 86 | 80 | 70 | 100 |
| cM capacity (veh/h) | 1601 | | | 488 | | | 83 | 160 | 372 | 298 | 135 | 998 |
| Direction, Lane # | EB 1 | EB 2 | NB 1 | SB 1 | SB 2 | | | | | | | |
| Volume Total | 779 | 612 | 51 | 39 | 60 | | | | | | | |
| Volume Left | 0 | 0 | 0 | 39 | 20 | | | | | | | |
| Volume Right | 0 | 222 | 51 | 0 | 0 | | | | | | | |
| cSH | 1700 | 1700 | 372 | 298 | 165 | | | | | | | |
| Volume to Capacity | 0.46 | 0.36 | 0.14 | 0.13 | 0.36 | | | | | | | |
| Queue Length 95th (ft) | 0 | 0 | 12 | 11 | 38 | | | | | | | |
| Control Delay (s) | 0.0 | 0.0 | 16.2 | 18.9 | 38.7 | | | | | | | |
| Lane LOS | | | C | C | E | | | | | | | |
| Approach Delay (s) | 0.0 | | 16.2 | 30.9 | | | | | | | | |
| Approach LOS | | | C | D | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 2.5 | | | | | | | | | |
| Intersection Capacity Utilization | | | 96.3% | | ICU Level of Service | | F | | | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

HCM Signalized Intersection Capacity Analysis
 9: 9th Street & Commercial Street

















12/04/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |   | | | | | |   | | | | |
| Traffic Volume (vph) | 68 | 1121 | 0 | 0 | 0 | 0 | 0 | 96 | 32 | 0 | 0 | 0 |
| Future Volume (vph) | 68 | 1121 | 0 | 0 | 0 | 0 | 0 | 96 | 32 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 |
| Total Lost time (s) | | 4.5 | | | | | | 4.5 | | | | |
| Lane Util. Factor | | 0.95 | | | | | | 0.95 | | | | |
| Frbp, ped/bikes | | 1.00 | | | | | | 0.99 | | | | |
| Flpb, ped/bikes | | 1.00 | | | | | | 1.00 | | | | |
| Frt | | 1.00 | | | | | | 0.96 | | | | |
| Flt Protected | | 1.00 | | | | | | 1.00 | | | | |
| Satd. Flow (prot) | | 3246 | | | | | | 3122 | | | | |
| Flt Permitted | | 1.00 | | | | | | 1.00 | | | | |
| Satd. Flow (perm) | | 3246 | | | | | | 3122 | | | | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 71 | 1168 | 0 | 0 | 0 | 0 | 0 | 100 | 33 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 22 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 1226 | 0 | 0 | 0 | 0 | 0 | 111 | 0 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | 25 | | 21 | 21 | | | 25 | 1 | | 9 | 9 | 1 |
| Confl. Bikes (#/hr) | | | | | | | | | | 1 | | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 0% | 2% | 2% | 2% | 0% | 0% | 0% |
| Turn Type | Perm | NA | | | | | | NA | | | | |
| Protected Phases | | 4 | | | | | | 2 | | | | |
| Permitted Phases | 4 | | | | | | | | | | | |
| Actuated Green, G (s) | | 31.5 | | | | | | 19.5 | | | | |
| Effective Green, g (s) | | 31.5 | | | | | | 19.5 | | | | |
| Actuated g/C Ratio | | 0.52 | | | | | | 0.32 | | | | |
| Clearance Time (s) | | 4.5 | | | | | | 4.5 | | | | |
| Lane Grp Cap (vph) | | 1704 | | | | | | 1014 | | | | |
| v/s Ratio Prot | | | | | | | | c0.04 | | | | |
| v/s Ratio Perm | | 0.38 | | | | | | | | | | |
| v/c Ratio | | 0.72 | | | | | | 0.11 | | | | |
| Uniform Delay, d1 | | 10.9 | | | | | | 14.2 | | | | |
| Progression Factor | | 1.00 | | | | | | 1.00 | | | | |
| Incremental Delay, d2 | | 2.7 | | | | | | 0.2 | | | | |
| Delay (s) | | 13.5 | | | | | | 14.4 | | | | |
| Level of Service | | B | | | | | | B | | | | |
| Approach Delay (s) | | 13.5 | | | 0.0 | | | 14.4 | | | 0.0 | |
| Approach LOS | | B | | | A | | | B | | | A | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 13.6 | | | | | HCM 2000 Level of Service | | B | | |
| HCM 2000 Volume to Capacity ratio | | | 0.49 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 60.0 | | | | | Sum of lost time (s) | | 9.0 | | |
| Intersection Capacity Utilization | | | 66.0% | | | | | ICU Level of Service | | C | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
 10: 10th Street & Commercial Street

12/04/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |   | | | | | | | | |   | |
| Traffic Volume (veh/h) | 0 | 1082 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 50 | 25 | 0 |
| Future Volume (Veh/h) | 0 | 1082 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 50 | 25 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 0 | 1139 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 53 | 26 | 0 |
| Pedestrians | | 11 | | | 16 | | | 17 | | | 49 | |
| Lane Width (ft) | | 12.0 | | | 0.0 | | | 0.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 1 | | | 0 | | | 0 | | | 5 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 256 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.72 | | | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 | |
| vC, conflicting volume | 49 | | | 1184 | | | 1194 | 1219 | 616 | 634 | 1233 | 60 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 49 | | | 481 | | | 495 | 530 | 0 | 0 | 549 | 60 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 100 | | | 100 | 100 | 100 | 92 | 92 | 100 |
| cM capacity (veh/h) | 1483 | | | 787 | | | 297 | 314 | 787 | 682 | 307 | 943 |
| Direction, Lane # | EB 1 | EB 2 | SB 1 | SB 2 | | | | | | | | |
| Volume Total | 759 | 408 | 62 | 17 | | | | | | | | |
| Volume Left | 0 | 0 | 53 | 0 | | | | | | | | |
| Volume Right | 0 | 28 | 0 | 0 | | | | | | | | |
| cSH | 1700 | 1700 | 582 | 307 | | | | | | | | |
| Volume to Capacity | 0.45 | 0.24 | 0.11 | 0.06 | | | | | | | | |
| Queue Length 95th (ft) | 0 | 0 | 9 | 4 | | | | | | | | |
| Control Delay (s) | 0.0 | 0.0 | 11.9 | 17.4 | | | | | | | | |
| Lane LOS | | | B | C | | | | | | | | |
| Approach Delay (s) | 0.0 | | 13.1 | | | | | | | | | |
| Approach LOS | | | B | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 0.8 | | | | | | | | | |
| Intersection Capacity Utilization | | | 50.9% | | ICU Level of Service | | | | A | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis

1: 7th Street & Marine Drive

12/04/2018



















| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|------|------|-------|------|----------------------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕↕ | | | ↕↕ | | | ↕ | | | ↕ | |
| Traffic Volume (veh/h) | 35 | 1070 | 34 | 2 | 869 | 4 | 1 | 1 | 1 | 1 | 1 | 6 |
| Future Volume (Veh/h) | 35 | 1070 | 34 | 2 | 869 | 4 | 1 | 1 | 1 | 1 | 1 | 6 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 |
| Hourly flow rate (vph) | 43 | 1321 | 42 | 2 | 1073 | 5 | 1 | 1 | 1 | 1 | 1 | 7 |
| Pedestrians | | 2 | | | 1 | | | 13 | | | 4 | |
| Lane Width (ft) | | 12.0 | | | 12.0 | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 0 | | | 0 | | | 1 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1082 | | | 1376 | | | 1991 | 2527 | 696 | 1832 | 2546 | 545 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1082 | | | 1376 | | | 1991 | 2527 | 696 | 1832 | 2546 | 545 |
| tC, single (s) | 4.2 | | | 4.2 | | | *6.5 | 6.5 | *6.5 | *6.5 | *6.5 | *6.5 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.3 | | | *2.5 | *2.5 | *2.5 | *2.5 | *2.5 | *2.5 |
| p0 queue free % | 93 | | | 100 | | | 98 | 97 | 100 | 99 | 96 | 99 |
| cM capacity (veh/h) | 626 | | | 468 | | | 65 | 29 | 510 | 84 | 28 | 643 |
| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 | | | | | | |
| Volume Total | 704 | 702 | 538 | 542 | 3 | 9 | | | | | | |
| Volume Left | 43 | 0 | 2 | 0 | 1 | 1 | | | | | | |
| Volume Right | 0 | 42 | 0 | 5 | 1 | 7 | | | | | | |
| cSH | 626 | 1700 | 468 | 1700 | 58 | 155 | | | | | | |
| Volume to Capacity | 0.07 | 0.41 | 0.00 | 0.32 | 0.05 | 0.06 | | | | | | |
| Queue Length 95th (ft) | 6 | 0 | 0 | 0 | 4 | 5 | | | | | | |
| Control Delay (s) | 1.9 | 0.0 | 0.1 | 0.0 | 70.5 | 29.7 | | | | | | |
| Lane LOS | A | | A | | F | D | | | | | | |
| Approach Delay (s) | 0.9 | | 0.1 | | 70.5 | 29.7 | | | | | | |
| Approach LOS | | | | | F | D | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 0.7 | | | | | | | | | |
| Intersection Capacity Utilization | | | 71.6% | | ICU Level of Service | | | | C | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

* User Entered Value

HCM Unsignalized Intersection Capacity Analysis
2: 8th Street & Astor Street

12/04/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | | |  | | |  | |
| Traffic Volume (veh/h) | 6 | 25 | 1 | 1 | 16 | 4 | 1 | 3 | 1 | 1 | 1 | 2 |
| Future Volume (Veh/h) | 6 | 25 | 1 | 1 | 16 | 4 | 1 | 3 | 1 | 1 | 1 | 2 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| Hourly flow rate (vph) | 9 | 37 | 1 | 1 | 24 | 6 | 1 | 4 | 1 | 1 | 1 | 3 |
| Pedestrians | | | | | 2 | | | | | | 4 | |
| Lane Width (ft) | | | | | 12.0 | | | | | | 12.0 | |
| Walking Speed (ft/s) | | | | | 3.5 | | | | | | 3.5 | |
| Percent Blockage | | | | | 0 | | | | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 34 | | | 38 | | | 88 | 92 | 40 | 94 | 89 | 31 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 34 | | | 38 | | | 88 | 92 | 40 | 94 | 89 | 31 |
| tC, single (s) | 4.2 | | | 4.3 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.4 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 99 | | | 100 | | | 100 | 99 | 100 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1492 | | | 1469 | | | 892 | 794 | 1036 | 878 | 796 | 1045 |
| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 | | | | | | | | |
| Volume Total | 47 | 31 | 6 | 5 | | | | | | | | |
| Volume Left | 9 | 1 | 1 | 1 | | | | | | | | |
| Volume Right | 1 | 6 | 1 | 3 | | | | | | | | |
| cSH | 1492 | 1469 | 842 | 950 | | | | | | | | |
| Volume to Capacity | 0.01 | 0.00 | 0.01 | 0.01 | | | | | | | | |
| Queue Length 95th (ft) | 0 | 0 | 1 | 0 | | | | | | | | |
| Control Delay (s) | 1.5 | 0.2 | 9.3 | 8.8 | | | | | | | | |
| Lane LOS | A | A | A | A | | | | | | | | |
| Approach Delay (s) | 1.5 | 0.2 | 9.3 | 8.8 | | | | | | | | |
| Approach LOS | | | A | A | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 2.0 | | | | | | | | | |
| Intersection Capacity Utilization | | | 15.2% | | ICU Level of Service | | | | A | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis

3: 9th Street & Astor Street

12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|------|------|-------|------|----------------------|------|------|------|------|------|-------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Volume (veh/h) | 5 | 18 | 7 | 1 | 6 | 1 | 15 | 2 | 3 | 3 | 4 | 2 |
| Future Volume (Veh/h) | 5 | 18 | 7 | 1 | 6 | 1 | 15 | 2 | 3 | 3 | 4 | 2 |
| Sign Control | | Free | | | Free | | | Stop | | | Yield | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 |
| Hourly flow rate (vph) | 8 | 29 | 11 | 2 | 10 | 2 | 24 | 3 | 5 | 5 | 6 | 3 |
| Pedestrians | | 5 | | | | | | 2 | | | 8 | |
| Lane Width (ft) | | 12.0 | | | | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 0 | | | | | | 0 | | | 1 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 20 | | | 42 | | | 78 | 76 | 36 | 80 | 81 | 24 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 20 | | | 42 | | | 78 | 76 | 36 | 80 | 81 | 24 |
| tC, single (s) | 4.2 | | | 4.3 | | | 7.2 | 6.6 | 6.3 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.4 | | | 3.6 | 4.1 | 3.4 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 99 | | | 100 | | | 97 | 100 | 100 | 99 | 99 | 100 |
| cM capacity (veh/h) | 1528 | | | 1428 | | | 860 | 780 | 1003 | 888 | 800 | 1045 |
| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 | | | | | | | | |
| Volume Total | 48 | 14 | 32 | 14 | | | | | | | | |
| Volume Left | 8 | 2 | 24 | 5 | | | | | | | | |
| Volume Right | 11 | 2 | 5 | 3 | | | | | | | | |
| cSH | 1528 | 1428 | 871 | 875 | | | | | | | | |
| Volume to Capacity | 0.01 | 0.00 | 0.04 | 0.02 | | | | | | | | |
| Queue Length 95th (ft) | 0 | 0 | 3 | 1 | | | | | | | | |
| Control Delay (s) | 1.3 | 1.1 | 9.3 | 9.2 | | | | | | | | |
| Lane LOS | A | A | A | A | | | | | | | | |
| Approach Delay (s) | 1.3 | 1.1 | 9.3 | 9.2 | | | | | | | | |
| Approach LOS | | | A | A | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 4.6 | | | | | | | | | |
| Intersection Capacity Utilization | | | 17.2% | | ICU Level of Service | | | | A | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis

4: 10th Street & Astor Street

12/04/2018

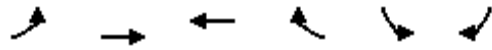


| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|-----------------------------------|-------|-------|-------|----------------------|-------|------|
| Lane Configurations | | | | | | |
| Sign Control | Yield | | | Yield | Yield | |
| Traffic Volume (vph) | 2 | 15 | 12 | 1 | 1 | 1 |
| Future Volume (vph) | 2 | 15 | 12 | 1 | 1 | 1 |
| Peak Hour Factor | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 |
| Hourly flow rate (vph) | 4 | 28 | 22 | 2 | 2 | 2 |
| Direction, Lane # | EB 1 | NB 1 | SB 1 | | | |
| Volume Total (vph) | 32 | 24 | 4 | | | |
| Volume Left (vph) | 4 | 22 | 0 | | | |
| Volume Right (vph) | 28 | 0 | 2 | | | |
| Hadj (s) | -0.50 | 0.18 | -0.30 | | | |
| Departure Headway (s) | 3.5 | 4.1 | 3.7 | | | |
| Degree Utilization, x | 0.03 | 0.03 | 0.00 | | | |
| Capacity (veh/h) | 1024 | 849 | 962 | | | |
| Control Delay (s) | 6.6 | 7.3 | 6.7 | | | |
| Approach Delay (s) | 6.6 | 7.3 | 6.7 | | | |
| Approach LOS | A | A | A | | | |
| Intersection Summary | | | | | | |
| Delay | | | 6.9 | | | |
| Level of Service | | | A | | | |
| Intersection Capacity Utilization | | 17.4% | | ICU Level of Service | | A |
| Analysis Period (min) | | | 15 | | | |

HCM Unsignalized Intersection Capacity Analysis

5: Marine Drive & 8th Street

12/04/2018



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|
| Lane Configurations | | | ↑↑ | | | ↗ |
| Traffic Volume (veh/h) | 0 | 0 | 879 | 6 | 0 | 1 |
| Future Volume (Veh/h) | 0 | 0 | 879 | 6 | 0 | 1 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |
| Hourly flow rate (vph) | 0 | 0 | 1034 | 7 | 0 | 1 |
| Pedestrians | | | 7 | | 4 | |
| Lane Width (ft) | | | 12.0 | | 12.0 | |
| Walking Speed (ft/s) | | | 3.5 | | 3.5 | |
| Percent Blockage | | | 1 | | 0 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 1045 | | | | 1048 | 524 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 1045 | | | | 1048 | 524 |
| tC, single (s) | 4.2 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 100 | | | | 100 | 100 |
| cM capacity (veh/h) | 647 | | | | 224 | 501 |
| Direction, Lane # | WB 1 | WB 2 | SB 1 | | | |
| Volume Total | 689 | 352 | 1 | | | |
| Volume Left | 0 | 0 | 0 | | | |
| Volume Right | 0 | 7 | 1 | | | |
| cSH | 1700 | 1700 | 501 | | | |
| Volume to Capacity | 0.41 | 0.21 | 0.00 | | | |
| Queue Length 95th (ft) | 0 | 0 | 0 | | | |
| Control Delay (s) | 0.0 | 0.0 | 12.2 | | | |
| Lane LOS | | | B | | | |
| Approach Delay (s) | 0.0 | | 12.2 | | | |
| Approach LOS | | | B | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 0.0 | | | |
| Intersection Capacity Utilization | | | 36.6% | ICU Level of Service | | A |
| Analysis Period (min) | | | 15 | | | |

HCM Unsignalized Intersection Capacity Analysis
 11: 8th Street & Bond Street/Marine Drive

12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|-------|------|----------------------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | ↖ | ↗ | | | | | | ↕ | ↘ |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 46 | 35 | 0 | 0 | 0 | 0 | 0 | 1036 | 3 |
| Future Volume (Veh/h) | 0 | 0 | 0 | 46 | 35 | 0 | 0 | 0 | 0 | 0 | 1036 | 3 |
| Sign Control | Stop | | | Stop | | Free | | | Free | | | |
| Grade | 0% | | | 0% | | 0% | | | 0% | | | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 53 | 40 | 0 | 0 | 0 | 0 | 0 | 1191 | 3 |
| Pedestrians | 2 | | | | | 1 | | | 5 | | | |
| Lane Width (ft) | 0.0 | | | | | 0.0 | | | 12.0 | | | |
| Walking Speed (ft/s) | 3.5 | | | | | 3.5 | | | 3.5 | | | |
| Percent Blockage | 0 | | | | | 0 | | | 0 | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | None | | | None | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1220 | 1194 | 600 | 596 | 1196 | 5 | 1196 | | | | 0 | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1220 | 1194 | 600 | 596 | 1196 | 5 | 1196 | | | | 0 | |
| tC, single (s) | 7.5 | 6.5 | 6.9 | 7.6 | 6.6 | 7.0 | 4.1 | | | | 4.2 | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.6 | 4.1 | 3.4 | 2.2 | | | | 2.2 | |
| p0 queue free % | 100 | 100 | 100 | 86 | 78 | 100 | 100 | | | | 100 | |
| cM capacity (veh/h) | 114 | 188 | 449 | 379 | 179 | 1058 | 591 | | | | 1607 | |
| Direction, Lane # | WB 1 | WB 2 | SB 1 | SB 2 | | | | | | | | |
| Volume Total | 53 | 40 | 794 | 400 | | | | | | | | |
| Volume Left | 53 | 0 | 0 | 0 | | | | | | | | |
| Volume Right | 0 | 0 | 0 | 3 | | | | | | | | |
| cSH | 379 | 179 | 1700 | 1700 | | | | | | | | |
| Volume to Capacity | 0.14 | 0.22 | 0.47 | 0.24 | | | | | | | | |
| Queue Length 95th (ft) | 12 | 21 | 0 | 0 | | | | | | | | |
| Control Delay (s) | 16.0 | 30.8 | 0.0 | 0.0 | | | | | | | | |
| Lane LOS | C | D | | | | | | | | | | |
| Approach Delay (s) | 22.4 | 0.0 | | | | | | | | | | |
| Approach LOS | C | | | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | 1.6 | | | | | | | | | | | |
| Intersection Capacity Utilization | 43.8% | | ICU Level of Service | | | | A | | | | | |
| Analysis Period (min) | 15 | | | | | | | | | | | |

HCM Signalized Intersection Capacity Analysis

6: 9th Street & Marine Drive

12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
|-----------------------------------|------|------|-------|------|---------------------------|------|-------|------|------|------|------|------|--|
| Lane Configurations | | | | | ↑↑ | | ↑ | ↑ | | | | ↑ | |
| Traffic Volume (vph) | 0 | 0 | 0 | 0 | 859 | 7 | 72 | 10 | 0 | 0 | 0 | 7 | |
| Future Volume (vph) | 0 | 0 | 0 | 0 | 859 | 7 | 72 | 10 | 0 | 0 | 0 | 7 | |
| 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 | |
| Lane Util. Factor | | | | | 0.95 | | 1.00 | 1.00 | | | | 1.00 | |
| Frbp, ped/bikes | | | | | 1.00 | | 1.00 | 1.00 | | | | 1.00 | |
| Flpb, ped/bikes | | | | | 1.00 | | 1.00 | 1.00 | | | | 1.00 | |
| Frt | | | | | 1.00 | | 1.00 | 1.00 | | | | 0.86 | |
| Flt Protected | | | | | 1.00 | | 0.95 | 1.00 | | | | 1.00 | |
| Satd. Flow (prot) | | | | | 3132 | | 1599 | 1683 | | | | 1211 | |
| Flt Permitted | | | | | 1.00 | | 0.95 | 1.00 | | | | 1.00 | |
| Satd. Flow (perm) | | | | | 3132 | | 1599 | 1683 | | | | 1211 | |
| Peak-hour factor, PHF | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 976 | 8 | 82 | 11 | 0 | 0 | 0 | 8 | |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 1 | 0 | 54 | 0 | 0 | 0 | 0 | 5 | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 983 | 0 | 28 | 11 | 0 | 0 | 0 | 3 | |
| Confl. Peds. (#/hr) | 4 | | 1 | 1 | | 4 | | | 1 | 1 | | | |
| Heavy Vehicles (%) | 0% | 0% | 0% | 6% | 6% | 6% | 4% | 4% | 4% | 25% | 25% | 25% | |
| Turn Type | | | | | NA | | Perm | NA | | | | Perm | |
| Protected Phases | | | | | 8 | | | 2 | | | | | |
| Permitted Phases | | | | | | | 2 | | | | | 6 | |
| Actuated Green, G (s) | | | | | 30.5 | | 20.5 | 20.5 | | | | 20.5 | |
| Effective Green, g (s) | | | | | 30.5 | | 20.5 | 20.5 | | | | 20.5 | |
| Actuated g/C Ratio | | | | | 0.51 | | 0.34 | 0.34 | | | | 0.34 | |
| Clearance Time (s) | | | | | 4.5 | | 4.5 | 4.5 | | | | 4.5 | |
| Lane Grp Cap (vph) | | | | | 1592 | | 546 | 575 | | | | 413 | |
| v/s Ratio Prot | | | | | c0.31 | | | 0.01 | | | | | |
| v/s Ratio Perm | | | | | | | c0.02 | | | | | 0.00 | |
| v/c Ratio | | | | | 0.62 | | 0.05 | 0.02 | | | | 0.01 | |
| Uniform Delay, d1 | | | | | 10.6 | | 13.2 | 13.1 | | | | 13.0 | |
| Progression Factor | | | | | 1.00 | | 1.07 | 0.87 | | | | 1.00 | |
| Incremental Delay, d2 | | | | | 1.8 | | 0.2 | 0.1 | | | | 0.0 | |
| Delay (s) | | | | | 12.4 | | 14.4 | 11.4 | | | | 13.1 | |
| Level of Service | | | | | B | | B | B | | | | B | |
| Approach Delay (s) | | 0.0 | | | 12.4 | | | 14.0 | | | 13.1 | | |
| Approach LOS | | A | | | B | | | B | | | B | | |
| Intersection Summary | | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 12.5 | | HCM 2000 Level of Service | | | | | | B | | |
| HCM 2000 Volume to Capacity ratio | | | 0.39 | | | | | | | | | | |
| Actuated Cycle Length (s) | | | 60.0 | | Sum of lost time (s) | | | | | | 9.0 | | |
| Intersection Capacity Utilization | | | 48.5% | | ICU Level of Service | | | | | | A | | |
| Analysis Period (min) | | | 15 | | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis

7: 10th Street & Marine Drive













12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|------|------|-------|------|----------------------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | ↕↕ | | | | | | ↗ | |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 42 | 905 | 13 | 0 | 0 | 0 | 0 | 15 | 7 |
| Future Volume (Veh/h) | 0 | 0 | 0 | 42 | 905 | 13 | 0 | 0 | 0 | 0 | 15 | 7 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 46 | 995 | 14 | 0 | 0 | 0 | 0 | 16 | 8 |
| Pedestrians | | 4 | | | 3 | | | 2 | | | 4 | |
| Lane Width (ft) | | 0.0 | | | 12.0 | | | 0.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 0 | | | 0 | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 252 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1013 | | | 2 | | | 612 | 1107 | 5 | 1101 | 1100 | 512 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1013 | | | 2 | | | 612 | 1107 | 5 | 1101 | 1100 | 512 |
| tC, single (s) | 4.1 | | | 4.2 | | | 7.5 | 6.5 | 6.9 | 7.6 | 6.6 | 7.0 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.3 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 97 | | | 100 | 100 | 100 | 100 | 92 | 98 |
| cM capacity (veh/h) | 690 | | | 1590 | | | 344 | 205 | 1080 | 158 | 200 | 497 |
| Direction, Lane # | WB 1 | WB 2 | SB 1 | | | | | | | | | |
| Volume Total | 544 | 512 | 24 | | | | | | | | | |
| Volume Left | 46 | 0 | 0 | | | | | | | | | |
| Volume Right | 0 | 14 | 8 | | | | | | | | | |
| cSH | 1590 | 1700 | 249 | | | | | | | | | |
| Volume to Capacity | 0.03 | 0.30 | 0.10 | | | | | | | | | |
| Queue Length 95th (ft) | 2 | 0 | 8 | | | | | | | | | |
| Control Delay (s) | 0.9 | 0.0 | 21.0 | | | | | | | | | |
| Lane LOS | A | | C | | | | | | | | | |
| Approach Delay (s) | 0.5 | | 21.0 | | | | | | | | | |
| Approach LOS | | | C | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 0.9 | | | | | | | | | |
| Intersection Capacity Utilization | | | 43.5% | | ICU Level of Service | | | | A | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

















HCM Unsignalized Intersection Capacity Analysis
 8: 8th Street & Commercial Street

12/04/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↑↑ | | | | | | | ↑ | ↑ | ↑ | |
| Traffic Volume (veh/h) | 0 | 862 | 190 | 0 | 0 | 0 | 0 | 0 | 41 | 25 | 13 | 0 |
| Future Volume (Veh/h) | 0 | 862 | 190 | 0 | 0 | 0 | 0 | 0 | 41 | 25 | 13 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 |
| Hourly flow rate (vph) | 0 | 1064 | 235 | 0 | 0 | 0 | 0 | 0 | 51 | 31 | 16 | 0 |
| Pedestrians | | 4 | | | | | | 6 | | | | |
| Lane Width (ft) | | 12.0 | | | | | | 12.0 | | | | |
| Walking Speed (ft/s) | | 3.5 | | | | | | 3.5 | | | | |
| Percent Blockage | | 0 | | | | | | 1 | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | 246 | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 0 | | | 1305 | | | 1200 | 1188 | 656 | 583 | 1305 | 4 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 0 | | | 1305 | | | 1200 | 1188 | 656 | 583 | 1305 | 4 |
| tC, single (s) | 4.2 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.6 | 6.6 | 7.0 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 100 | | | 100 | 100 | 88 | 91 | 90 | 100 |
| cM capacity (veh/h) | 1607 | | | 534 | | | 130 | 189 | 411 | 343 | 157 | 1071 |
| Direction, Lane # | EB 1 | EB 2 | NB 1 | SB 1 | SB 2 | | | | | | | |
| Volume Total | 709 | 590 | 51 | 21 | 26 | | | | | | | |
| Volume Left | 0 | 0 | 0 | 21 | 10 | | | | | | | |
| Volume Right | 0 | 235 | 51 | 0 | 0 | | | | | | | |
| cSH | 1700 | 1700 | 411 | 343 | 199 | | | | | | | |
| Volume to Capacity | 0.42 | 0.35 | 0.12 | 0.06 | 0.13 | | | | | | | |
| Queue Length 95th (ft) | 0 | 0 | 11 | 5 | 11 | | | | | | | |
| Control Delay (s) | 0.0 | 0.0 | 15.0 | 16.2 | 25.8 | | | | | | | |
| Lane LOS | | | C | C | D | | | | | | | |
| Approach Delay (s) | 0.0 | | 15.0 | 21.6 | | | | | | | | |
| Approach LOS | | | C | C | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 1.3 | | | | | | | | | |
| Intersection Capacity Utilization | | | 43.8% | | ICU Level of Service | | | | A | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

















HCM Signalized Intersection Capacity Analysis
 9: 9th Street & Commercial Street

12/04/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |   | | | | | |   | | | | |
| Traffic Volume (vph) | 42 | 828 | 0 | 0 | 0 | 0 | 0 | 38 | 21 | 0 | 0 | 0 |
| Future Volume (vph) | 42 | 828 | 0 | 0 | 0 | 0 | 0 | 38 | 21 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 |
| Total Lost time (s) | | 4.5 | | | | | | 4.5 | | | | |
| Lane Util. Factor | | 0.95 | | | | | | 0.95 | | | | |
| Frbp, ped/bikes | | 1.00 | | | | | | 1.00 | | | | |
| Flpb, ped/bikes | | 1.00 | | | | | | 1.00 | | | | |
| Frt | | 1.00 | | | | | | 0.95 | | | | |
| Flt Protected | | 1.00 | | | | | | 1.00 | | | | |
| Satd. Flow (prot) | | 3159 | | | | | | 3145 | | | | |
| Flt Permitted | | 1.00 | | | | | | 1.00 | | | | |
| Satd. Flow (perm) | | 3159 | | | | | | 3145 | | | | |
| Peak-hour factor, PHF | 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) | 51 | 1010 | 0 | 0 | 0 | 0 | 0 | 46 | 26 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 1048 | 0 | 0 | 0 | 0 | 0 | 55 | 0 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | 3 | | 7 | 7 | | | 3 | 3 | | | | 3 |
| Heavy Vehicles (%) | 5% | 5% | 5% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Perm | NA | | | | | | NA | | | | |
| Protected Phases | | 4 | | | | | | 2 | | | | |
| Permitted Phases | 4 | | | | | | | | | | | |
| Actuated Green, G (s) | | 30.5 | | | | | | 20.5 | | | | |
| Effective Green, g (s) | | 30.5 | | | | | | 20.5 | | | | |
| Actuated g/C Ratio | | 0.51 | | | | | | 0.34 | | | | |
| Clearance Time (s) | | 4.5 | | | | | | 4.5 | | | | |
| Lane Grp Cap (vph) | | 1605 | | | | | | 1074 | | | | |
| v/s Ratio Prot | | | | | | | | c0.02 | | | | |
| v/s Ratio Perm | | 0.33 | | | | | | | | | | |
| v/c Ratio | | 0.65 | | | | | | 0.05 | | | | |
| Uniform Delay, d1 | | 10.9 | | | | | | 13.2 | | | | |
| Progression Factor | | 1.00 | | | | | | 1.00 | | | | |
| Incremental Delay, d2 | | 2.1 | | | | | | 0.1 | | | | |
| Delay (s) | | 12.9 | | | | | | 13.3 | | | | |
| Level of Service | | B | | | | | | B | | | | |
| Approach Delay (s) | | 12.9 | | | 0.0 | | | 13.3 | | | 0.0 | |
| Approach LOS | | B | | | A | | | B | | | A | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 13.0 | | | | | HCM 2000 Level of Service | | | B | |
| HCM 2000 Volume to Capacity ratio | | | 0.41 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 60.0 | | | | | Sum of lost time (s) | | | 9.0 | |
| Intersection Capacity Utilization | | | 48.5% | | | | | ICU Level of Service | | | A | |
| Analysis Period (min) | | | 15 | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis
 10: 10th Street & Commercial Street

12/04/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |   | | | | | | | | |   | |
| Traffic Volume (veh/h) | 0 | 908 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 20 | 0 |
| Future Volume (Veh/h) | 0 | 908 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 20 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 |
| Hourly flow rate (vph) | 0 | 1279 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 28 | 0 |
| Pedestrians | | 5 | | | 5 | | | 2 | | | 2 | |
| Lane Width (ft) | | 12.0 | | | 0.0 | | | 0.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 0 | | | 0 | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 256 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.77 | | | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 |
| vC, conflicting volume | 2 | | | 1296 | | | 1308 | 1290 | 654 | 646 | 1298 | 7 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 2 | | | 777 | | | 792 | 769 | 0 | 0 | 779 | 7 |
| tC, single (s) | 4.2 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.6 | 6.6 | 7.0 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.6 | 4.1 | 3.4 |
| p0 queue free % | 100 | | | 100 | | | 100 | 100 | 100 | 97 | 88 | 100 |
| cM capacity (veh/h) | 1587 | | | 650 | | | 197 | 255 | 836 | 770 | 242 | 1050 |
| Direction, Lane # | EB 1 | EB 2 | SB 1 | SB 2 | | | | | | | | |
| Volume Total | 853 | 441 | 30 | 19 | | | | | | | | |
| Volume Left | 0 | 0 | 21 | 0 | | | | | | | | |
| Volume Right | 0 | 15 | 0 | 0 | | | | | | | | |
| cSH | 1700 | 1700 | 461 | 242 | | | | | | | | |
| Volume to Capacity | 0.50 | 0.26 | 0.07 | 0.08 | | | | | | | | |
| Queue Length 95th (ft) | 0 | 0 | 5 | 6 | | | | | | | | |
| Control Delay (s) | 0.0 | 0.0 | 13.4 | 21.1 | | | | | | | | |
| Lane LOS | | | B | C | | | | | | | | |
| Approach Delay (s) | 0.0 | | 16.3 | | | | | | | | | |
| Approach LOS | | | C | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 0.6 | | | | | | | | | |
| Intersection Capacity Utilization | | | 42.8% | | ICU Level of Service | | | | A | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis

1: 7th Street & Marine Drive

12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|------|------|-------|------|----------------------|------|------|------|------|------|------|------|
| Lane Configurations | | ↔↔ | | | ↔↔ | | | ↔ | | | ↔ | |
| Traffic Volume (veh/h) | 33 | 1147 | 14 | 1 | 1304 | 8 | 6 | 3 | 18 | 1 | 3 | 44 |
| Future Volume (Veh/h) | 33 | 1147 | 14 | 1 | 1304 | 8 | 6 | 3 | 18 | 1 | 3 | 44 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 36 | 1247 | 15 | 1 | 1417 | 9 | 7 | 3 | 20 | 1 | 3 | 48 |
| Pedestrians | | 2 | | | 2 | | | 12 | | | 10 | |
| Lane Width (ft) | | 12.0 | | | 12.0 | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 0 | | | 0 | | | 1 | | | 1 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1436 | | | 1274 | | | 2100 | 2776 | 645 | 2152 | 2780 | 725 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1436 | | | 1274 | | | 2100 | 2776 | 645 | 2152 | 2780 | 725 |
| tC, single (s) | 4.1 | | | 4.1 | | | *6.5 | 6.5 | *6.5 | *6.5 | 6.5 | *6.5 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | *2.5 | *2.5 | *2.5 | *2.5 | *2.5 | *2.5 |
| p0 queue free % | 92 | | | 100 | | | 84 | 85 | 96 | 98 | 84 | 90 |
| cM capacity (veh/h) | 464 | | | 535 | | | 45 | 19 | 550 | 44 | 19 | 489 |
| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 | | | | | | |
| Volume Total | 660 | 638 | 710 | 718 | 30 | 52 | | | | | | |
| Volume Left | 36 | 0 | 1 | 0 | 7 | 1 | | | | | | |
| Volume Right | 0 | 15 | 0 | 9 | 20 | 48 | | | | | | |
| cSH | 464 | 1700 | 535 | 1700 | 86 | 186 | | | | | | |
| Volume to Capacity | 0.08 | 0.38 | 0.00 | 0.42 | 0.35 | 0.28 | | | | | | |
| Queue Length 95th (ft) | 6 | 0 | 0 | 0 | 34 | 27 | | | | | | |
| Control Delay (s) | 2.3 | 0.0 | 0.1 | 0.0 | 67.4 | 31.8 | | | | | | |
| Lane LOS | A | | A | | F | D | | | | | | |
| Approach Delay (s) | 1.2 | | 0.0 | | 67.4 | 31.8 | | | | | | |
| Approach LOS | | | | | F | D | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 1.9 | | | | | | | | | |
| Intersection Capacity Utilization | | | 73.6% | | ICU Level of Service | | | | D | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

* User Entered Value

HCM Unsignalized Intersection Capacity Analysis

2: 8th Street & Astor Street

12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|-------------|-------------|-------------|-------------|----------------------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Volume (veh/h) | 4 | 37 | 6 | 2 | 35 | 6 | 3 | 11 | 1 | 6 | 1 | 4 |
| Future Volume (Veh/h) | 4 | 37 | 6 | 2 | 35 | 6 | 3 | 11 | 1 | 6 | 1 | 4 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 |
| Hourly flow rate (vph) | 5 | 50 | 8 | 3 | 47 | 8 | 4 | 15 | 1 | 8 | 1 | 5 |
| Pedestrians | | 7 | | | 5 | | | 1 | | | 11 | |
| Lane Width (ft) | | 12.0 | | | 12.0 | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 1 | | | 0 | | | 0 | | | 1 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 66 | | | 59 | | | 134 | 137 | 60 | 146 | 137 | 69 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 66 | | | 59 | | | 134 | 137 | 60 | 146 | 137 | 69 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 100 | | | 100 | 98 | 100 | 99 | 100 | 99 |
| cM capacity (veh/h) | 1513 | | | 1524 | | | 820 | 745 | 1005 | 792 | 745 | 983 |
| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 | | | | | | | | |
| Volume Total | 63 | 58 | 20 | 14 | | | | | | | | |
| Volume Left | 5 | 3 | 4 | 8 | | | | | | | | |
| Volume Right | 8 | 8 | 1 | 5 | | | | | | | | |
| cSH | 1513 | 1524 | 769 | 847 | | | | | | | | |
| Volume to Capacity | 0.00 | 0.00 | 0.03 | 0.02 | | | | | | | | |
| Queue Length 95th (ft) | 0 | 0 | 2 | 1 | | | | | | | | |
| Control Delay (s) | 0.6 | 0.4 | 9.8 | 9.3 | | | | | | | | |
| Lane LOS | A | A | A | A | | | | | | | | |
| Approach Delay (s) | 0.6 | 0.4 | 9.8 | 9.3 | | | | | | | | |
| Approach LOS | | | A | A | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 2.5 | | | | | | | | | |
| Intersection Capacity Utilization | | | 18.5% | | ICU Level of Service | | | | A | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis

3: 9th Street & Astor Street

12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|------|------|-------|------|----------------------|------|------|------|------|------|-------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Volume (veh/h) | 1 | 31 | 18 | 13 | 17 | 1 | 20 | 2 | 12 | 3 | 6 | 3 |
| Future Volume (Veh/h) | 1 | 31 | 18 | 13 | 17 | 1 | 20 | 2 | 12 | 3 | 6 | 3 |
| Sign Control | | Free | | | Free | | | Stop | | | Yield | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| Hourly flow rate (vph) | 1 | 44 | 26 | 19 | 24 | 1 | 29 | 3 | 17 | 4 | 9 | 4 |
| Pedestrians | | 11 | | | 6 | | | 18 | | | 28 | |
| Lane Width (ft) | | 12.0 | | | 12.0 | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 1 | | | 1 | | | 2 | | | 3 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 53 | | | 88 | | | 159 | 168 | 81 | 174 | 180 | 64 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 53 | | | 88 | | | 159 | 168 | 81 | 174 | 180 | 64 |
| tC, single (s) | 4.1 | | | 4.2 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.3 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 99 | | | 96 | 100 | 98 | 99 | 99 | 100 |
| cM capacity (veh/h) | 1511 | | | 1428 | | | 738 | 682 | 954 | 719 | 676 | 970 |
| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 | | | | | | | | |
| Volume Total | 71 | 44 | 49 | 17 | | | | | | | | |
| Volume Left | 1 | 19 | 29 | 4 | | | | | | | | |
| Volume Right | 26 | 1 | 17 | 4 | | | | | | | | |
| cSH | 1511 | 1428 | 797 | 739 | | | | | | | | |
| Volume to Capacity | 0.00 | 0.01 | 0.06 | 0.02 | | | | | | | | |
| Queue Length 95th (ft) | 0 | 1 | 5 | 2 | | | | | | | | |
| Control Delay (s) | 0.1 | 3.3 | 9.8 | 10.0 | | | | | | | | |
| Lane LOS | A | A | A | A | | | | | | | | |
| Approach Delay (s) | 0.1 | 3.3 | 9.8 | 10.0 | | | | | | | | |
| Approach LOS | | | A | A | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 4.4 | | | | | | | | | |
| Intersection Capacity Utilization | | | 24.5% | | ICU Level of Service | | | | A | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis

4: 10th Street & Astor Street

12/04/2018



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|-----------------------------------|-------|------|-------|----------------------|-------|------|
| Lane Configurations | Y | | | T | T | |
| Sign Control | Yield | | | Yield | Yield | |
| Traffic Volume (vph) | 5 | 40 | 15 | 4 | 7 | 5 |
| Future Volume (vph) | 5 | 40 | 15 | 4 | 7 | 5 |
| Peak Hour Factor | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 |
| Hourly flow rate (vph) | 7 | 53 | 20 | 5 | 9 | 7 |
| Direction, Lane # | EB 1 | NB 1 | SB 1 | | | |
| Volume Total (vph) | 60 | 25 | 16 | | | |
| Volume Left (vph) | 7 | 20 | 0 | | | |
| Volume Right (vph) | 53 | 0 | 7 | | | |
| Hadj (s) | -0.51 | 0.16 | -0.26 | | | |
| Departure Headway (s) | 3.5 | 4.2 | 3.8 | | | |
| Degree Utilization, x | 0.06 | 0.03 | 0.02 | | | |
| Capacity (veh/h) | 1016 | 836 | 932 | | | |
| Control Delay (s) | 6.7 | 7.3 | 6.8 | | | |
| Approach Delay (s) | 6.7 | 7.3 | 6.8 | | | |
| Approach LOS | A | A | A | | | |
| Intersection Summary | | | | | | |
| Delay | | | 6.9 | | | |
| Level of Service | | | A | | | |
| Intersection Capacity Utilization | | | 19.8% | ICU Level of Service | A | |
| Analysis Period (min) | | | 15 | | | |

HCM Unsignalized Intersection Capacity Analysis

5: Marine Drive & 8th Street

12/04/2018



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|
| Lane Configurations | | | ↑↑ | | | ↗ |
| Traffic Volume (veh/h) | 0 | 0 | 1284 | 17 | 0 | 6 |
| Future Volume (Veh/h) | 0 | 0 | 1284 | 17 | 0 | 6 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Hourly flow rate (vph) | 0 | 0 | 1338 | 18 | 0 | 6 |
| Pedestrians | | | 24 | | 19 | |
| Lane Width (ft) | | | 12.0 | | 12.0 | |
| Walking Speed (ft/s) | | | 3.5 | | 3.5 | |
| Percent Blockage | | | 2 | | 2 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 1375 | | | | 1390 | 697 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 1375 | | | | 1390 | 697 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 100 | | | | 100 | 98 |
| cM capacity (veh/h) | 486 | | | | 130 | 381 |
| Direction, Lane # | WB 1 | WB 2 | SB 1 | | | |
| Volume Total | 892 | 464 | 6 | | | |
| Volume Left | 0 | 0 | 0 | | | |
| Volume Right | 0 | 18 | 6 | | | |
| cSH | 1700 | 1700 | 381 | | | |
| Volume to Capacity | 0.52 | 0.27 | 0.02 | | | |
| Queue Length 95th (ft) | 0 | 0 | 1 | | | |
| Control Delay (s) | 0.0 | 0.0 | 14.6 | | | |
| Lane LOS | | | B | | | |
| Approach Delay (s) | 0.0 | | 14.6 | | | |
| Approach LOS | | | B | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 0.1 | | | |
| Intersection Capacity Utilization | | | 49.1% | ICU Level of Service | | A |
| Analysis Period (min) | | | 15 | | | |

HCM Unsignalized Intersection Capacity Analysis

11: 8th Street & Bond Street/Marine Drive

12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|------|------|-------|----------------------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | ↖ | ↗ | | | | | | ↖ | ↗ |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 144 | 69 | 0 | 0 | 0 | 0 | 0 | 1197 | 25 |
| Future Volume (Veh/h) | 0 | 0 | 0 | 144 | 69 | 0 | 0 | 0 | 0 | 0 | 1197 | 25 |
| Sign Control | Stop | | | Stop | | | Free | | | Free | | |
| Grade | 0% | | | 0% | | | 0% | | | 0% | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 148 | 71 | 0 | 0 | 0 | 0 | 0 | 1234 | 26 |
| Pedestrians | 2 | | | 13 | | | 6 | | | 9 | | |
| Lane Width (ft) | 0.0 | | | 12.0 | | | 0.0 | | | 12.0 | | |
| Walking Speed (ft/s) | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | | |
| Percent Blockage | 0 | | | 1 | | | 0 | | | 1 | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | None | | | | | | None | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1294 | 1262 | 638 | 636 | 1275 | 22 | 1262 | | | 13 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1294 | 1262 | 638 | 636 | 1275 | 22 | 1262 | | | 13 | | |
| tC, single (s) | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 100 | 100 | 100 | 58 | 57 | 100 | 100 | | | 100 | | |
| cM capacity (veh/h) | 79 | 169 | 424 | 355 | 164 | 1028 | 558 | | | 1584 | | |
| Direction, Lane # | WB 1 | WB 2 | SB 1 | SB 2 | | | | | | | | |
| Volume Total | 148 | 71 | 823 | 437 | | | | | | | | |
| Volume Left | 148 | 0 | 0 | 0 | | | | | | | | |
| Volume Right | 0 | 0 | 0 | 26 | | | | | | | | |
| cSH | 355 | 164 | 1700 | 1700 | | | | | | | | |
| Volume to Capacity | 0.42 | 0.43 | 0.48 | 0.26 | | | | | | | | |
| Queue Length 95th (ft) | 50 | 49 | 0 | 0 | | | | | | | | |
| Control Delay (s) | 22.2 | 42.9 | 0.0 | 0.0 | | | | | | | | |
| Lane LOS | C | E | | | | | | | | | | |
| Approach Delay (s) | 28.9 | | 0.0 | | | | | | | | | |
| Approach LOS | D | | | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 4.3 | | | | | | | | | |
| Intersection Capacity Utilization | | | 57.3% | ICU Level of Service | B | | | | | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

HCM Signalized Intersection Capacity Analysis

6: 9th Street & Marine Drive

12/04/2018



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|------|------|-------|------|---------------------------|------|-------|------|------|------|------|------|
| Lane Configurations | | | | | ↑↑ | | ↑ | ↑ | | | | ↑ |
| Traffic Volume (vph) | 0 | 0 | 0 | 0 | 1287 | 16 | 159 | 18 | 0 | 0 | 0 | 38 |
| Future Volume (vph) | 0 | 0 | 0 | 0 | 1287 | 16 | 159 | 18 | 0 | 0 | 0 | 38 |
| 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 |
| Lane Util. Factor | | | | | 0.95 | | 1.00 | 1.00 | | | | 1.00 |
| Frbp, ped/bikes | | | | | 1.00 | | 1.00 | 1.00 | | | | 0.98 |
| Flpb, ped/bikes | | | | | 1.00 | | 0.99 | 1.00 | | | | 1.00 |
| Frt | | | | | 1.00 | | 1.00 | 1.00 | | | | 0.86 |
| Flt Protected | | | | | 1.00 | | 0.95 | 1.00 | | | | 1.00 |
| Satd. Flow (prot) | | | | | 3252 | | 1636 | 1733 | | | | 1443 |
| Flt Permitted | | | | | 1.00 | | 0.95 | 1.00 | | | | 1.00 |
| Satd. Flow (perm) | | | | | 3252 | | 1636 | 1733 | | | | 1443 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1399 | 17 | 173 | 20 | 0 | 0 | 0 | 41 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 1 | 0 | 18 | 0 | 0 | 0 | 0 | 19 |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1415 | 0 | 155 | 20 | 0 | 0 | 0 | 22 |
| Confl. Peds. (#/hr) | 13 | | 15 | 15 | | 13 | 6 | | 5 | 5 | | 6 |
| Confl. Bikes (#/hr) | | | | | | | | | 1 | | | |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 2% | 2% | 1% | 1% | 1% | 3% | 3% | 3% |
| Turn Type | | | | | NA | | Perm | NA | | | | Perm |
| Protected Phases | | | | | 8 | | | 2 | | | | |
| Permitted Phases | | | | | | | 2 | | | | | 6 |
| Actuated Green, G (s) | | | | | 31.5 | | 19.5 | 19.5 | | | | 19.5 |
| Effective Green, g (s) | | | | | 31.5 | | 19.5 | 19.5 | | | | 19.5 |
| Actuated g/C Ratio | | | | | 0.52 | | 0.32 | 0.32 | | | | 0.32 |
| Clearance Time (s) | | | | | 4.5 | | 4.5 | 4.5 | | | | 4.5 |
| Lane Grp Cap (vph) | | | | | 1707 | | 531 | 563 | | | | 468 |
| v/s Ratio Prot | | | | | c0.43 | | | 0.01 | | | | |
| v/s Ratio Perm | | | | | | | c0.09 | | | | | 0.02 |
| v/c Ratio | | | | | 0.83 | | 0.29 | 0.04 | | | | 0.05 |
| Uniform Delay, d1 | | | | | 12.0 | | 15.1 | 13.8 | | | | 13.9 |
| Progression Factor | | | | | 1.00 | | 0.74 | 0.75 | | | | 1.00 |
| Incremental Delay, d2 | | | | | 4.8 | | 1.3 | 0.1 | | | | 0.2 |
| Delay (s) | | | | | 16.8 | | 12.5 | 10.5 | | | | 14.1 |
| Level of Service | | | | | B | | B | B | | | | B |
| Approach Delay (s) | | 0.0 | | | 16.8 | | | 12.3 | | | 14.1 | |
| Approach LOS | | A | | | B | | | B | | | B | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 16.2 | | HCM 2000 Level of Service | | | | | B | | |
| HCM 2000 Volume to Capacity ratio | | | 0.62 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 60.0 | | Sum of lost time (s) | | | | | 9.0 | | |
| Intersection Capacity Utilization | | | 66.1% | | ICU Level of Service | | | | | C | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis

7: 10th Street & Marine Drive

12/04/2018




















| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|------|------|-------|----------------------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 41 | 1284 | 20 | 0 | 0 | 0 | 0 | 42 | 10 |
| Future Volume (Veh/h) | 0 | 0 | 0 | 41 | 1284 | 20 | 0 | 0 | 0 | 0 | 42 | 10 |
| Sign Control | Free | | | Free | | | Stop | | | Stop | | |
| Grade | 0% | | | 0% | | | 0% | | | 0% | | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 46 | 1427 | 22 | 0 | 0 | 0 | 0 | 47 | 11 |
| Pedestrians | 11 | | | 19 | | | 9 | | | 22 | | |
| Lane Width (ft) | 0.0 | | | 12.0 | | | 0.0 | | | 12.0 | | |
| Walking Speed (ft/s) | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | | |
| Percent Blockage | 0 | | | 2 | | | 0 | | | 2 | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | None | | | None | | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | 252 | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1471 | | | 9 | | | 860 | 1572 | 28 | 1571 | 1561 | 758 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1471 | | | 9 | | | 860 | 1572 | 28 | 1571 | 1561 | 758 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | *6.5 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | *2.5 | *2.5 |
| p0 queue free % | 100 | | | 97 | | | 100 | 100 | 100 | 100 | 65 | 98 |
| cM capacity (veh/h) | 455 | | | 1609 | | | 173 | 106 | 1028 | 70 | 134 | 462 |
| Direction, Lane # | WB 1 | WB 2 | SB 1 | | | | | | | | | |
| Volume Total | 760 | 736 | 58 | | | | | | | | | |
| Volume Left | 46 | 0 | 0 | | | | | | | | | |
| Volume Right | 0 | 22 | 11 | | | | | | | | | |
| cSH | 1609 | 1700 | 155 | | | | | | | | | |
| Volume to Capacity | 0.03 | 0.43 | 0.37 | | | | | | | | | |
| Queue Length 95th (ft) | 2 | 0 | 40 | | | | | | | | | |
| Control Delay (s) | 0.8 | 0.0 | 41.6 | | | | | | | | | |
| Lane LOS | A | | E | | | | | | | | | |
| Approach Delay (s) | 0.4 | | 41.6 | | | | | | | | | |
| Approach LOS | | | E | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 1.9 | | | | | | | | | |
| Intersection Capacity Utilization | | | 56.9% | ICU Level of Service | | | | | | | | B |
| Analysis Period (min) | | | 15 | | | | | | | | | |

* User Entered Value

















HCM Unsignalized Intersection Capacity Analysis
 8: 8th Street & Commercial Street

12/04/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  |  | | | | | |  |  |  | |
| Traffic Volume (veh/h) | 0 | 1124 | 215 | 0 | 0 | 0 | 0 | 0 | 50 | 57 | 38 | 0 |
| Future Volume (Veh/h) | 0 | 1124 | 215 | 0 | 0 | 0 | 0 | 0 | 50 | 57 | 38 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Hourly flow rate (vph) | 0 | 1171 | 224 | 0 | 0 | 0 | 0 | 0 | 52 | 59 | 40 | 0 |
| Pedestrians | | 27 | | | 11 | | | 11 | | | 7 | |
| Lane Width (ft) | | 12.0 | | | 0.0 | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 3 | | | 0 | | | 1 | | | 1 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | 246 | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 7 | | | 1406 | | | 1341 | 1301 | 720 | 656 | 1413 | 34 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 7 | | | 1406 | | | 1341 | 1301 | 720 | 656 | 1413 | 34 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 100 | | | 100 | 100 | 86 | 80 | 70 | 100 |
| cM capacity (veh/h) | 1601 | | | 487 | | | 83 | 160 | 371 | 296 | 134 | 998 |
| Direction, Lane # | EB 1 | EB 2 | NB 1 | SB 1 | SB 2 | | | | | | | |
| Volume Total | 781 | 614 | 52 | 39 | 60 | | | | | | | |
| Volume Left | 0 | 0 | 0 | 39 | 20 | | | | | | | |
| Volume Right | 0 | 224 | 52 | 0 | 0 | | | | | | | |
| cSH | 1700 | 1700 | 371 | 296 | 164 | | | | | | | |
| Volume to Capacity | 0.46 | 0.36 | 0.14 | 0.13 | 0.36 | | | | | | | |
| Queue Length 95th (ft) | 0 | 0 | 12 | 11 | 38 | | | | | | | |
| Control Delay (s) | 0.0 | 0.0 | 16.3 | 19.0 | 39.0 | | | | | | | |
| Lane LOS | | | C | C | E | | | | | | | |
| Approach Delay (s) | 0.0 | | 16.3 | 31.1 | | | | | | | | |
| Approach LOS | | | C | D | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 2.5 | | | | | | | | | |
| Intersection Capacity Utilization | | | 96.7% | | ICU Level of Service | | | | F | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |













HCM Signalized Intersection Capacity Analysis
 9: 9th Street & Commercial Street

12/04/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |   | | | | | |   | | | | |
| Traffic Volume (vph) | 69 | 1123 | 0 | 0 | 0 | 0 | 0 | 97 | 32 | 0 | 0 | 0 |
| Future Volume (vph) | 69 | 1123 | 0 | 0 | 0 | 0 | 0 | 97 | 32 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 |
| Total Lost time (s) | | 4.5 | | | | | | 4.5 | | | | |
| Lane Util. Factor | | 0.95 | | | | | | 0.95 | | | | |
| Frbp, ped/bikes | | 1.00 | | | | | | 0.99 | | | | |
| Flpb, ped/bikes | | 1.00 | | | | | | 1.00 | | | | |
| Frt | | 1.00 | | | | | | 0.96 | | | | |
| Flt Protected | | 1.00 | | | | | | 1.00 | | | | |
| Satd. Flow (prot) | | 3246 | | | | | | 3123 | | | | |
| Flt Permitted | | 1.00 | | | | | | 1.00 | | | | |
| Satd. Flow (perm) | | 3246 | | | | | | 3123 | | | | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 72 | 1170 | 0 | 0 | 0 | 0 | 0 | 101 | 33 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 22 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 1229 | 0 | 0 | 0 | 0 | 0 | 112 | 0 | 0 | 0 | 0 |
| Confl. Peds. (#/hr) | 25 | | 21 | 21 | | | 25 | 1 | | 9 | 9 | 1 |
| Confl. Bikes (#/hr) | | | | | | | | | | 1 | | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 0% | 2% | 2% | 2% | 0% | 0% | 0% |
| Turn Type | Perm | NA | | | | | | NA | | | | |
| Protected Phases | | 4 | | | | | | 2 | | | | |
| Permitted Phases | 4 | | | | | | | | | | | |
| Actuated Green, G (s) | | 31.5 | | | | | | 19.5 | | | | |
| Effective Green, g (s) | | 31.5 | | | | | | 19.5 | | | | |
| Actuated g/C Ratio | | 0.52 | | | | | | 0.32 | | | | |
| Clearance Time (s) | | 4.5 | | | | | | 4.5 | | | | |
| Lane Grp Cap (vph) | | 1704 | | | | | | 1014 | | | | |
| v/s Ratio Prot | | | | | | | | c0.04 | | | | |
| v/s Ratio Perm | | 0.38 | | | | | | | | | | |
| v/c Ratio | | 0.72 | | | | | | 0.11 | | | | |
| Uniform Delay, d1 | | 10.9 | | | | | | 14.2 | | | | |
| Progression Factor | | 1.00 | | | | | | 1.00 | | | | |
| Incremental Delay, d2 | | 2.7 | | | | | | 0.2 | | | | |
| Delay (s) | | 13.6 | | | | | | 14.4 | | | | |
| Level of Service | | B | | | | | | B | | | | |
| Approach Delay (s) | | 13.6 | | | 0.0 | | | 14.4 | | | 0.0 | |
| Approach LOS | | B | | | A | | | B | | | A | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 13.7 | | | | | HCM 2000 Level of Service | | B | | |
| HCM 2000 Volume to Capacity ratio | | | 0.49 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 60.0 | | | | | Sum of lost time (s) | | 9.0 | | |
| Intersection Capacity Utilization | | | 66.1% | | | | | ICU Level of Service | | C | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | |

HCM Unsignalized Intersection Capacity Analysis
 10: 10th Street & Commercial Street

12/04/2018

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑ | |
| Traffic Volume (veh/h) | 0 | 1084 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 52 | 26 | 0 |
| Future Volume (Veh/h) | 0 | 1084 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 52 | 26 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 0 | 1141 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 55 | 27 | 0 |
| Pedestrians | | 11 | | | 16 | | | 17 | | | 49 | |
| Lane Width (ft) | | 12.0 | | | 0.0 | | | 0.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | 3.5 | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 1 | | | 0 | | | 0 | | | 5 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 256 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.72 | | | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| vC, conflicting volume | 49 | | | 1186 | | | 1196 | 1221 | 618 | 636 | 1235 | 60 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 49 | | | 480 | | | 495 | 529 | 0 | 0 | 548 | 60 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 100 | | | 100 | 100 | 100 | 92 | 91 | 100 |
| cM capacity (veh/h) | 1483 | | | 787 | | | 296 | 314 | 785 | 681 | 307 | 943 |
| Direction, Lane # | EB 1 | EB 2 | SB 1 | SB 2 | | | | | | | | |
| Volume Total | 761 | 408 | 64 | 18 | | | | | | | | |
| Volume Left | 0 | 0 | 55 | 0 | | | | | | | | |
| Volume Right | 0 | 28 | 0 | 0 | | | | | | | | |
| cSH | 1700 | 1700 | 581 | 307 | | | | | | | | |
| Volume to Capacity | 0.45 | 0.24 | 0.11 | 0.06 | | | | | | | | |
| Queue Length 95th (ft) | 0 | 0 | 9 | 5 | | | | | | | | |
| Control Delay (s) | 0.0 | 0.0 | 12.0 | 17.5 | | | | | | | | |
| Lane LOS | | | B | C | | | | | | | | |
| Approach Delay (s) | 0.0 | | 13.2 | | | | | | | | | |
| Approach LOS | | | B | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 0.9 | | | | | | | | | |
| Intersection Capacity Utilization | | | 51.1% | | ICU Level of Service | | | | A | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |