Exhibit 14

NEW MARKET APARTMENTS

Tumwater, WA

TRAFFIC IMPACT ANALYSIS (TIA)
June 22, 2023

HEATH & ASSOCIATES
Transportation Planning & Engineering

NEW MARKET APARTMENTS
TRAFFIC IMPACT ANALYSIS

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NEW MARKET APARTMENTS
TRAFFIC IMPACT ANALYSIS

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NEW MARKET APARTMENTS
TRAFFIC IMPACT ANALYSIS

1. INTRODUCTION

The main goals of this study focus on the analysis of existing roadway conditions and forecasts of newly generated project traffic. The first task includes the review of general roadway information on the adjacent street system, baseline vehicular volumes, and entering sight distance data. Forecasts of future traffic and dispersion patterns on the street system are then determined using established trip generation and distribution techniques. As a final step, appropriate conclusions and mitigation measures are defined.

2. PROJECT DESCRIPTION

The New Market Apartments project is a proposed mixed-use development comprised of approximately 416 multi-family dwelling units, a 5,500 square foot day care, a 4,890 square foot fitness center, a 3,600 square foot deli, 1,700 square feet of office space, and a 4,300 square foot club house located within the city of Tumwater. The subject site is situated on 9.58-acres of undeveloped land within tax parcel #: 82701500000 (see Figure 1 for vicinity map). The project is planned for construction in three phases.

Phase 1 will consist of Residential Building 1and is located along the western portion of the site. Phase 1 consists of 139 residential units along with a day care, fitness center, deli, office space, and clubhouse. Phase 1 will include construction of a portion of New Markets Street SW across the project frontage that will connect the roadway from Israel Road SW to Tumwater Boulevard SW. One driveway access will be provided along the western frontage onto New Market Street SW.

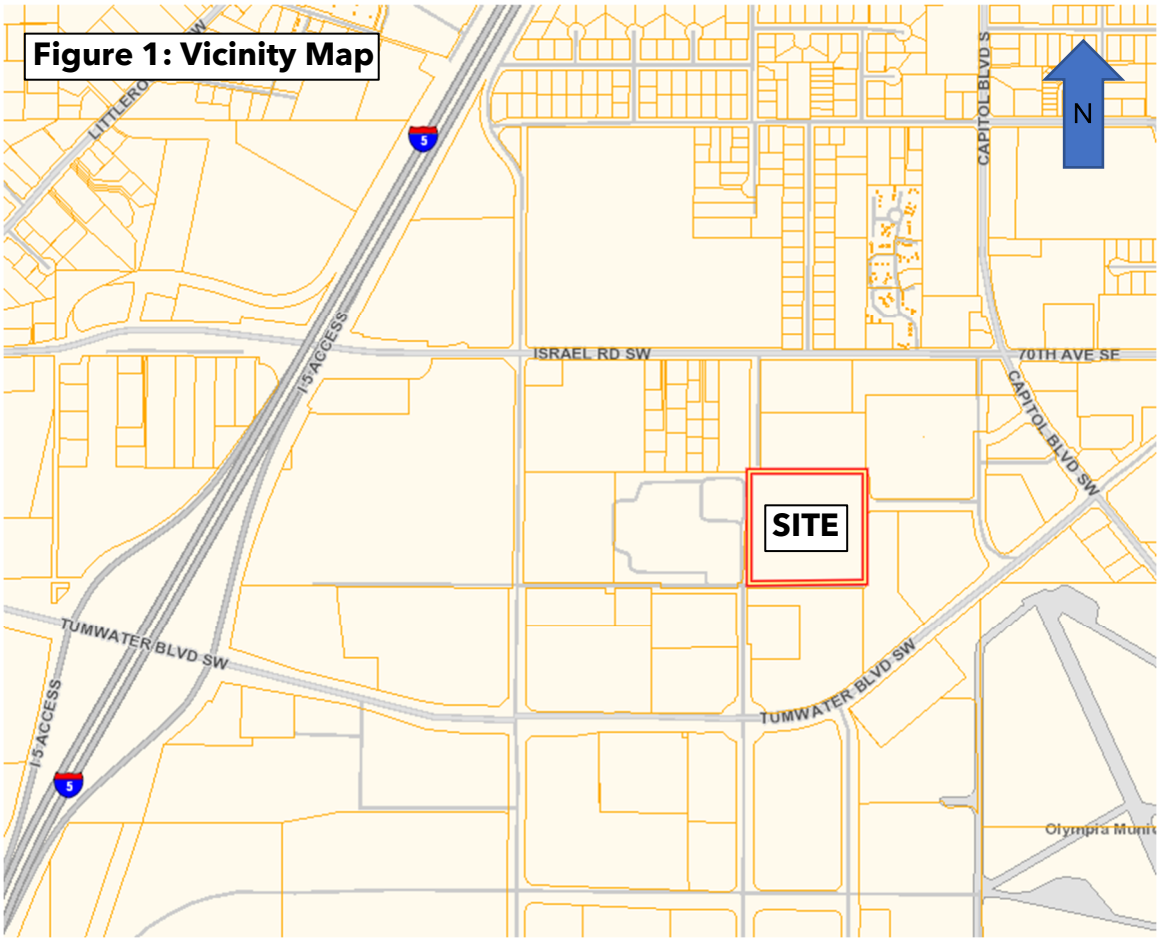
Phase 2 will consist of Residential Building 2 that will have 130 residential units and is located on the northeastern portion of the property.

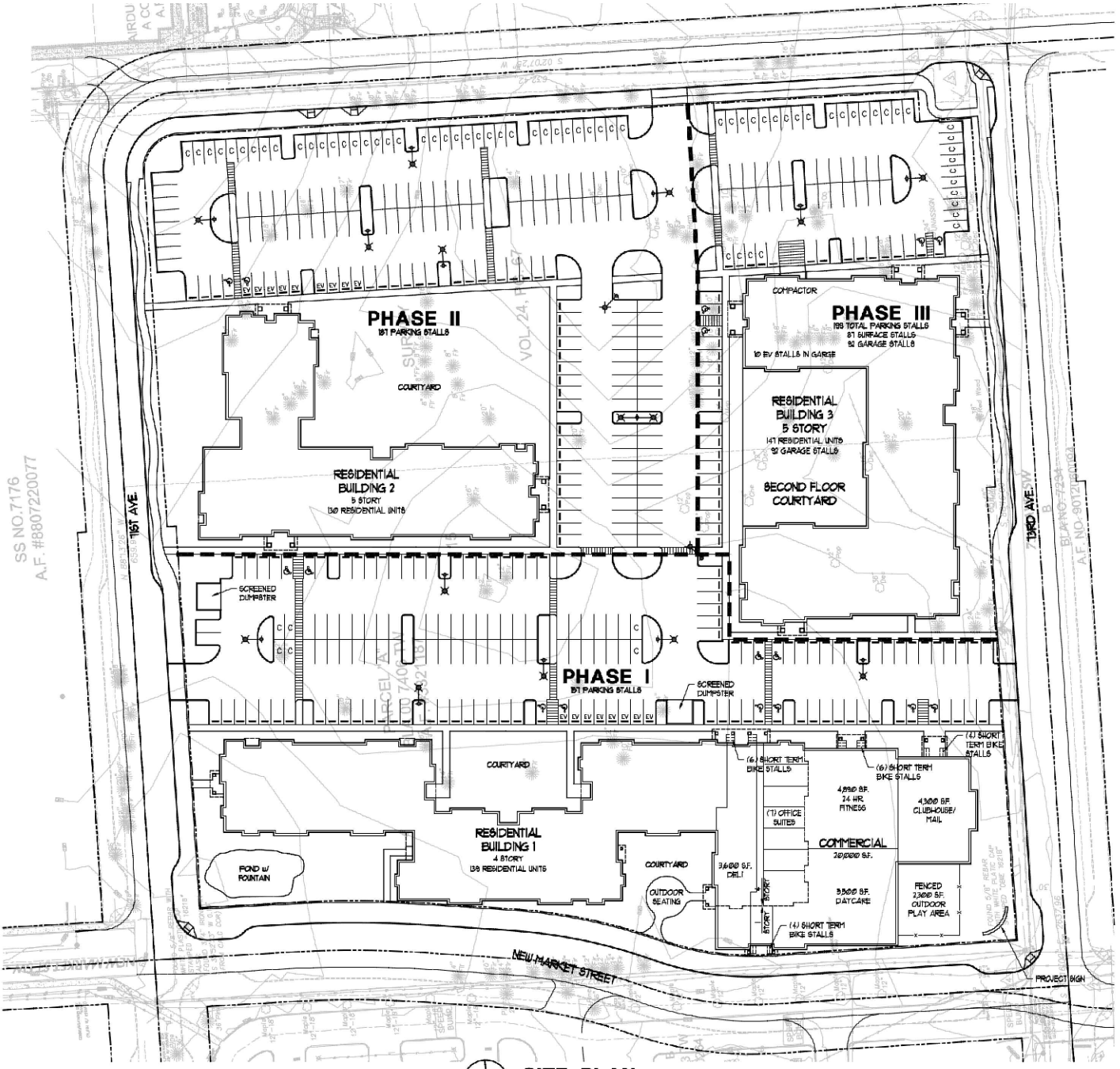
Phase 3 will construct the final Residential Building 3 that will house the remaining 147 dwelling units. This report assumes full buildout of the site for analysis with a forecast year of 2028. See Figure 2 on page 6 for the overall site layout and the access/new roadway construction serving the site that is described below.

The site will be bordered to the south by 73rd Avenue SW, which will wrap around the southeast portion of the property supporting a project driveway along the eastern frontage. East of the site allows for connection to the major roadway of Capitol Boulevard SE via 71st Avenue SW, which then connects to Cleanwater Drive SW, and eventually the portion of 71st Avenue SW that borders the property.

The northside of the site will construct a new portion of 71st Avenue SW and support one project driveway. 71st Avenue SW will continue to the eastern side of the property where it will transition north/south along the eastern project frontage. The northern segment of 73rd Avenue SW will support one driveway access.

In total the site would have three access connections. Refer to Figure 2 (full-size site plan available in the appendix).





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SITE PLAN

SCALE: 1"=40'

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SITE PLAN
FIGURE 2

3. EXISTING CONDITIONS

3.1 Existing Street System

The major roadways serving the subject site are listed and described in Table 1 below. The project will construct new portions of New Market Street SW, 71st Avenue SW, and 73rd Avenue SW. Section 4.3 of this report shows the cross-section plans for each of these roadways.

Table 1: Roadway Network

Functional Classification	Roadway	Speed Limit	Lanes	Street Parking	Sidewalk	Bike Facilities
Principal Arterial	Tumwater Blvd SW	35 mph	Multi	No	Yes	Yes
	Capitol Blvd SW	35 mph	Multi	No	Yes	No
Urban Collector	Israel Rd SW	25 mph	3	In Areas	Yes	Yes
Commercial Collector	New Market St SW	25 mph	2	No	No	No
	71st Avenue SW	Not Posted	2	No	Yes	No
Residential	73rd Avenue SW (w/o New Market St)	Not Posted	2	In Areas	North Side	No

3.2 Roadway Improvements

A review of the City of Tumwater's Six Year Transportation Improvement Program 2023-2028 indicates that improvement projects are planned in the vicinity. Descriptions and summaries of each project are provided in Table 2 below.

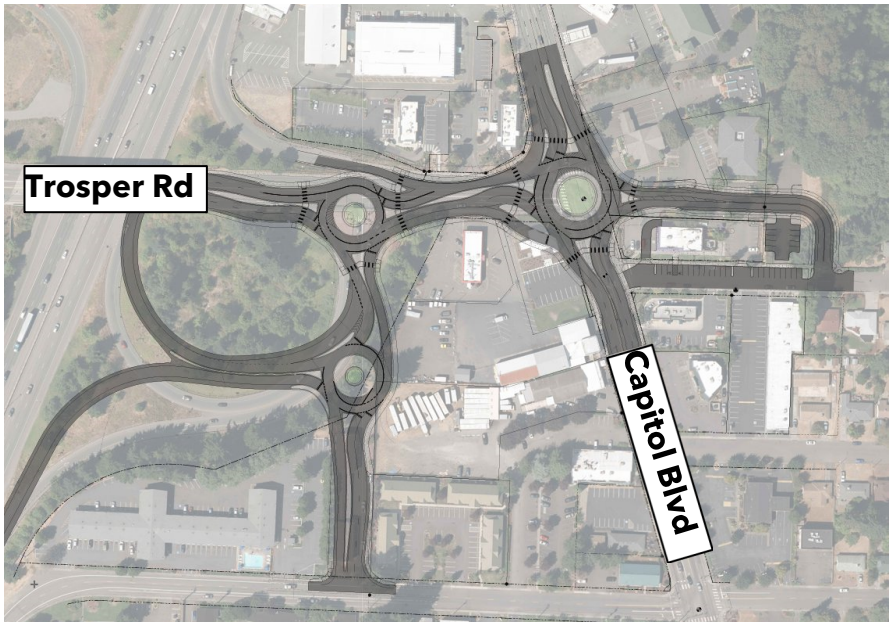
Table 2: Transportation Improvement Projects

Name	Location	Improvement	Cost
I-5/Trosper Rd/Capitol Blvd Reconfiguration (Map ID #1)	I-5 Interchange at Trosper Rd	Realign northbound I-5 on/off ramp, construct new extension of 6th Avenue between Trosper Road and Lee Street, and construct three roundabouts This project is fully funded and under construction. This project was assumed complete for the horizon year analysis.	$6,000,000
Tumwater Boulevard Interchange (Map ID #7)	I-5 Interchange at Tumwater Blvd	Design, acquire ROW, and construct improvements to the Tumwater Blvd/I-5 Interchange. Phased project with an interim signal followed by a roundabout, a second roundabout and overpass widening. Funds shown are for a temporary signal and one roundabout. *This project is being coordinated with WSDOT.* This project is not funded. This project was not assumed complete for horizon year analysis.	$13,950,000
Capitol Blvd Corridor Plan (Map ID# 9)	Linda St to Ruby St	ROW acquisition for properties on Capitol Blvd between Linda and Ruby Streets along with design and construction of select ADA and neighborhood improvements per the Capitol Boulevard Corridor Plan. This project is not fully funded.	$955,000
Tumwater Town Center Connector Rd (Map ID# 10)	Israel Road to Tumwater Blvd	Portion of new street derived from the Town Center Plan in partnership with the Port of Olympia or their tenants in order to provide additional access for the Town Center area. This project is not fully funded.	$380,000

Table 2 Continued: Transportation Improvement Projects

Name	Location	Improvement	Cost
X Street Roundabout (Map ID# 14)	Capitol Blvd & X St	Construction of a roundabout at the intersection of Capitol Boulevard and X Street as proposed in the Capitol Boulevard Corridor Plan. This project is partially funded and a roundabout analysis, along with existing conditions, was included in the horizon year analysis.	$6,100,000
Capitol Boulevard and Dennis Street Roundabout (Map ID #16)	Capitol Blvd & Dennis St	Construction of a roundabout at the intersection of Capitol Boulevard and Dennis Street as proposed in the Capitol Boulevard Corridor Plan. This project is not funded and a roundabout analysis, along with existing conditions, was included in the horizon year analysis.	$3,500,000
Israel Rd & Linderson Way Ped/Bicycle Improvements (Map ID# 25)	Israel Rd & Linderson Way	Roadway and multi-modal improvements: refuge island, reconstruction of sidewalk, curb ramps, bike lanes, signal improvements, etc. This project is fully funded.	$1,985,000

The I-5/Trosper Rd/Capitol Blvd Interchange is currently under construction. An aerial of the planned configuration is included below. Future horizon year analysis used the below roundabout geometry.



3.3 Existing Peak Hour Volumes and Travel Patterns

Vehicular turning movement counts were obtained from the City, our firm, and SCJ Alliance at the intersections listed in Table 3 to determine existing roadway operations and capacity analysis.

Table 3: Analysis Intersection List

Ref. #	Intersection	Data Source	Collection Date
1	Tumwater Blvd SW & SB I-5 Ramps	SCJ & City	AM-7/26/2022 PM-6/24/2015
2	Tumwater Blvd SW & NB I-5 Ramps	SCJ & City	AM-7/26/2022 PM-6/24/2015
3	Tumwater Blvd SW & Linderson Way SW	SCJ & City	AM-7/26/2022 PM-3/3/2015
4	Tumwater Blvd SW & New Market St SW	Heath	AM & PM-3/21/2023
5	New Market St SW & 73rd Ave SW	Heath	AM & PM-3/21/2023
6	New Market St SW & Israel Rd SW	Heath	AM & PM-3/21/2023
7	73rd Ave SW & 71st Ave SW	Heath	PM-3/21/2023
8	71st Ave SW & Cleanwater Dr SW	Heath	PM-3/21/2023
9	Cleanwater Dr SW & 71st Ave SW	Heath	PM-3/21/2023
10	Tumwater Blvd SW & Cleanwater DR SW	Heath	PM-3/21/2023
11	Tumwater Blvd SW & Capitol Blvd SE	SCJ	PM-6/24/2015
12	Tumwater Blvd SE & Bonniewood Dr SE	Heath	PM-3/21/2023
13	Tumwater Blvd SE & Henderson Blvd SE	City	PM-11/13/2014
14	Capitol Blvd SE & 71st Ave SW	Heath	PM-3/21/2023
15	Capitol Blvd SE & Israel Rd SW	SCJ	PM-6/24/2015
16	Capitol Blvd SE & Dennis St SW	SCJ	PM-3/5/2014
17	Capitol Blvd SE & Z St SW	Heath	PM-3/21/2023
18	Capitol Blvd SE & X St SW	SCJ	PM-3/5/2014
19	Capitol Blvd SE & Lee St SW	SCJ	PM-3/5/2014
20	Capitol Blvd SE & Trosper Rd SW	SCJ	PM-3/5/2014

Intersection Data Adjustments

Discussions with the city indicated a preference to utilize pre-COVID data. As such, historic counts captured by the city or SCJ Alliance were primarily utilized for analysis. All field data was gathered from 7:00 AM – 9:00 AM and 4:00 PM - 6:00 PM, with the peak hour then being derived and for analysis to identify operations at peak congestion. Per discussions with the city, historic turning movement counts were grossed up by a compound annual growth rate of 2.0 percent to establish baseline 2023 AM and PM peak hour conditions.

Current 2023 counts that are listed above in Table 3 were adjusted based on the nearest intersection with historic data. The existing peak hour figures (Figure 3 for the AM peak hour and Figure 4 for the PM peak hour) show historic counts labeled in red and current counts labeled in blue.

An example of adjusting current volumes based on historic data can be shown using the Tumwater Boulevard SW & Linderson Way SW intersection (Intersection 3). The PM peak hour count is based on historic data with a growth rate applied. Data for Tumwater Boulevard SW & New Market Street SW (Intersection 4) was collected in 2023. This intersection is neighboring Intersection 3. Its volumes were adjusted based on volumes it shares with Intersection 3. All volumes to and from the east for Intersection 3 and all volumes to and from the west for Intersection 4 are shared. This found a 36% adjustment factor was required for Intersection 4 for the PM peak hour. All adjustment factors and reference intersections based on historic data can be found in the appendix. Adjustment ranges of 1% to 85% were calculated. Full count sheets have been attached in the appendix.

AM Peak Hour Analysis

All field data was gathered from 7:00 AM - 9:00 AM. The one-hour which reflects the highest volumes from each field count, known as the peak hour, is then used for analysis to identify operations at peak congestion. Previous accepted AM adjustments, which include a 30% increase for all turning movements to account for travel pattern skews associated with COVID-19, were performed by SCJ Alliance for the intersections of Tumwater Boulevard SW & Southbound I-5 Ramps, Tumwater Boulevard SW & Northbound I-5 Ramps, and Tumwater Blvd SW & Linderson Way SW/Center Street SW. This established adjusted 2022 AM peak hour volumes. Baseline 2023 AM peak hour volumes were established with an additional 2% growth rate which was identified during the scoping process with the city.

3.4 Existing Level of Service

Baseline intersection delays were determined through the use of the *Highway Capacity Manual,* 6th Edition. Capacity analysis is used to determine level of service (LOS) which is an established measure of congestion for transportation facilities. The range[1] for intersection level of service is LOS A to LOS F with the former indicating the best operating conditions with low control delays and the latter indicating the worst conditions with heavy control delays. Detailed descriptions of intersection LOS are given in the Highway Capacity Manual.

Level of service calculations were made through the use of the *Synchro 11* analysis program for stop-controlled and signalized intersections. *SIDRA* was used for roundabout analysis. Delays presented represent overall weighted average delays for roundabout and signalized control. For side-street, stop-controlled intersections, LOS is determined by the approach with the highest delay. Table 3, on page 14, shows baseline 2023 AM and PM peak hour LOS delays for the key intersections of study.

[1] *Signalized Intersections - Level of Service*

Level of Service	Control Delay per Vehicle (sec)
A	≤10
B	> 10 and ≤20
C	> 20 and ≤35
D	> 35 and ≤55
E	> 55 and ≤80
F	> 80

Stop Controlled Intersections – Level of Service

Level of Service	Control Delay per Vehicle (sec)
A	≤10
B	> 10 and ≤15
C	> 15 and ≤25
D	> 25 and ≤35
E	> 35 and ≤50
F	> 50

Highway Capacity Manual, 6th Edition

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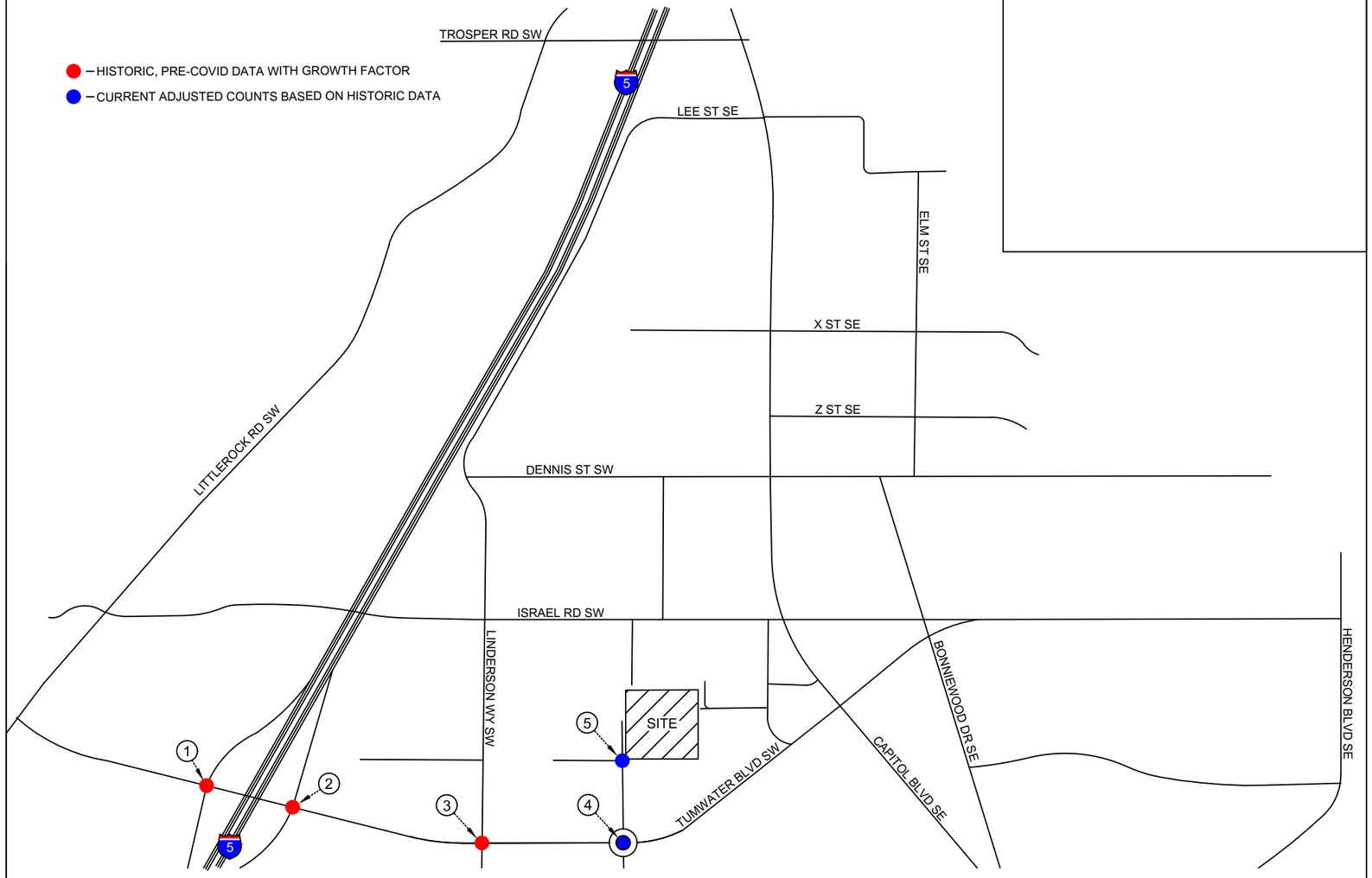
– HISTORIC, PRE-COVID DATA WITH GROWTH FACTOR

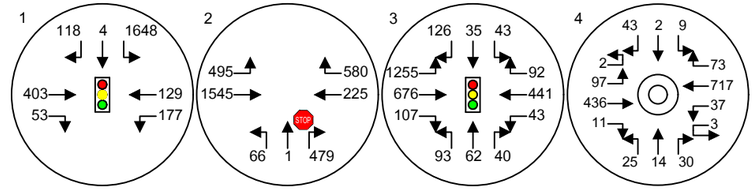
– CURRENT ADJUSTED COUNTS BASED ON HISTORIC DATA

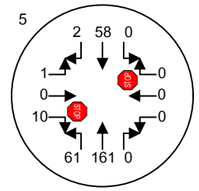


OUTLYING INTERSECTIONS OF STUDY

1. TUMWATER BLVD SW & SB I-5 RAMPS
2. TUMWATER BLVD SW & NB I-5 RAMPS
3. TUMWATER BLVD SW & LINDERSON WY SW
4. TUMWATER BLVD SW & NEW MARKET ST SW
5. NEW MARKET ST SW & 73RD AVE SW

OUTLYING STUDY INTERSECTIONS





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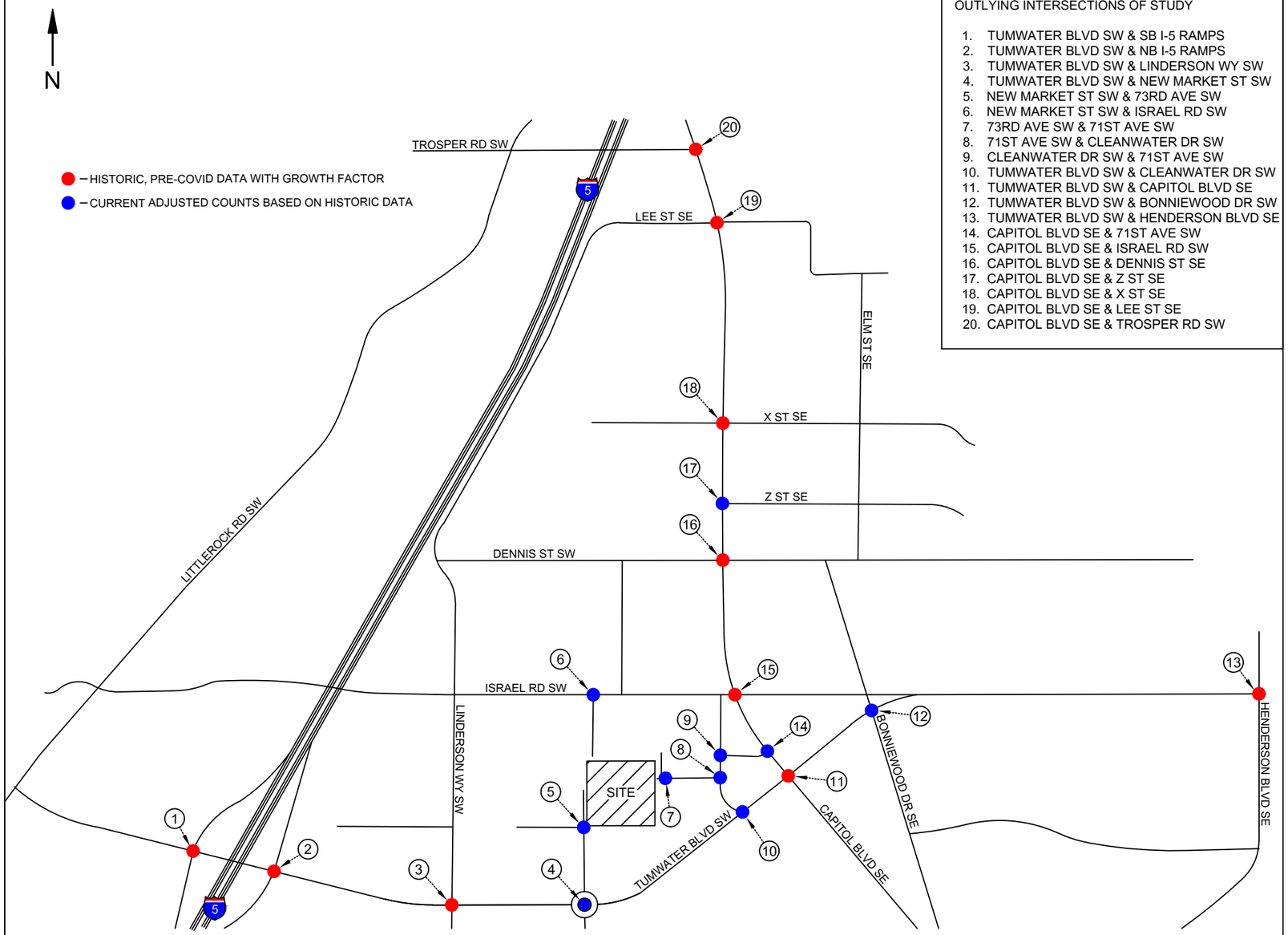
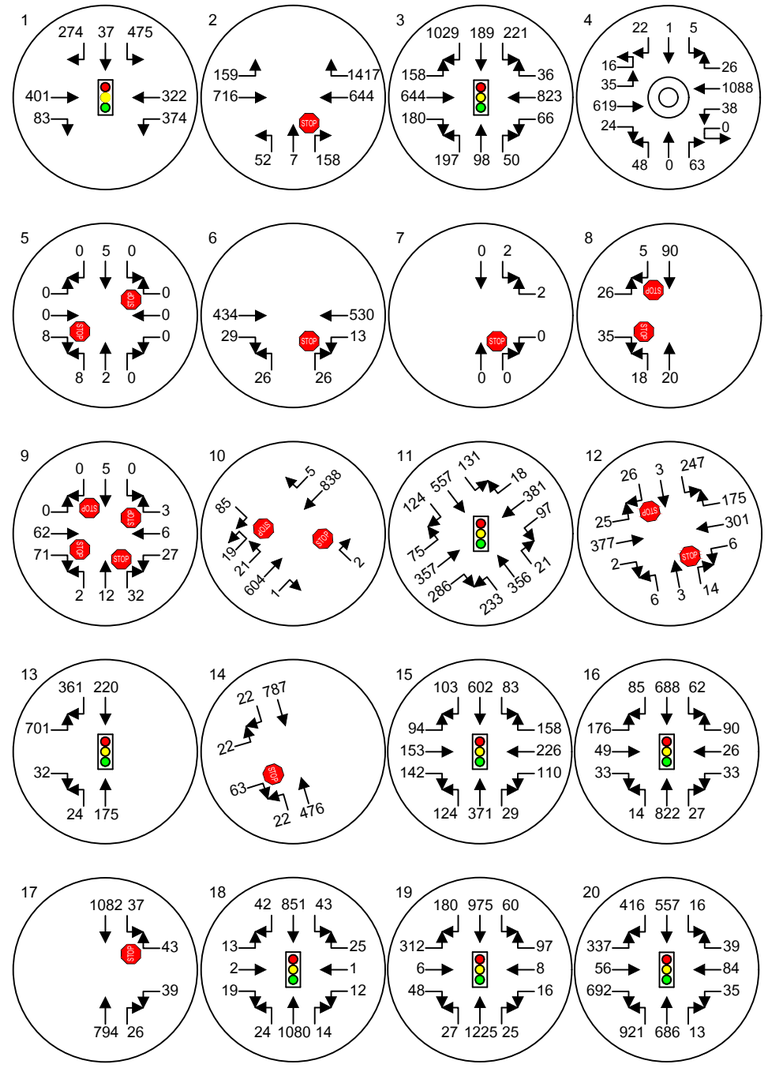
BASELINE 2023 AM PEAK HOUR VOLUMES
FIGURE 3



OUTLYING INTERSECTIONS OF STUDY

1. TUMWATER BLVD SW & SB I-5 RAMPS
2. TUMWATER BLVD SW & NB I-5 RAMPS
3. TUMWATER BLVD SW & LINDERSON WY SW
4. TUMWATER BLVD SW & NEW MARKET ST SW
5. NEW MARKET ST SW & 73RD AVE SW
6. NEW MARKET ST SW & ISRAEL RD SW
7. 73RD AVE SW & 71ST AVE SW
8. 71ST AVE SW & CLEANWATER DR SW
9. CLEANWATER DR SW & 71ST AVE SW
10. TUMWATER BLVD SW & CLEANWATER DR SW
11. TUMWATER BLVD SW & CAPITOL BLVD SE
12. TUMWATER BLVD SW & BONNIEWOOD DR SW
13. TUMWATER BLVD SW & HENDERSON BLVD SE
14. CAPITOL BLVD SE & 71ST AVE SW
15. CAPITOL BLVD SE & ISRAEL RD SW
16. CAPITOL BLVD SE & DENNIS ST SE
17. CAPITOL BLVD SE & Z ST SE
18. CAPITOL BLVD SE & X ST SE
19. CAPITOL BLVD SE & LEE ST SE
20. CAPITOL BLVD SE & TROSPER RD SW

OUTLYING STUDY INTERSECTIONS



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BASELINE 2023 PM PEAK HOUR VOLUMES
FIGURE 4

Table 4: Baseline 2023 Peak Hour Level of Service

Delays given in seconds per vehicle

			AM Peak Hour		PM Peak Hour	
Ref. #	**Intersection**	**Control**	**LOS**	**Delay**	**LOS**	**Delay**
1	Tumwater Blvd SW & SB I-5 Ramps	Signal	F	100+	C	33.1
2	Tumwater Blvd SW & NB I-5 Ramps	TWSC	F	100+	F	100+
3	Tumwater Blvd SW & Linderson Way SW	Signal	C	30.5	C	25.8
4	Tumwater Blvd SW & New Market St SW	RAB	A	4.8	A	4.5
5	New Market St SW & 73rd Ave SW	TWSC	A	9.1	A	8.4
6	New Market St SW & Israel Rd SW	TWSC	--	--	B	14.2
7	73rd Ave SW & 71st Ave SW	AWSC	--	--	A	6.7
8	71st Ave SW & Cleanwater Dr SW	TWSC	--	--	B	10.1
9	Cleanwater Dr SW & 71st Ave SW	AWSC	--	--	A	8.0
10	Tumwater Blvd SW & Cleanwater DR SW	TWSC	--	--	B	13.2
11	Tumwater Blvd SW & Capitol Blvd SE	Signal	--	--	D	37.0
12	Tumwater Blvd SE & Bonniewood Dr SE	TWSC	--	--	F	100+
13	Tumwater Blvd SE & Henderson Blvd SE	Signal	--	--	C	34.2
14	Capitol Blvd SE & 71st Ave SW	TWSC	--	--	C	15.0
15	Capitol Blvd SE & Israel Rd SW	Signal	--	--	C	31.1
16	Capitol Blvd SE & Dennis St SW	Signal	--	--	B	14.6
17	Capitol Blvd SE & Z St SW	TWSC	--	--	C	20.1
18	Capitol Blvd SE & X St SW	Signal	--	--	A	6.7
19	Capitol Blvd SE & Lee St SW	Signal	--	--	C	21.6
20	Capitol Blvd SE & Trosper Rd SW	Signal	--	--	E	67.7

TWSC: Two-Way Stop Control; AWSC: All-Way Stop Control; RAB: Roundabout

The city of Tumwater maintains a level of service standard of LOS D or better. Exceptions are made for the Urban Core Areas, which allows for up to LOS E delays. Intersections 16 – 20 are located within the designated Urban Core Area. The city also identifies the Tumwater Strategy Corridors. These areas maintain the local standard of LOS D applies, but it is acknowledged intersections within these designated areas may experience periods of increased delays. Intersections 3, 4, 10, 11, 14, and 15 are located within the Tumwater Strategy Corridors.

Except for Tumwater Boulevard SW's intersections with the I-5 Ramps and the intersection of Tumwater Boulevard SW & Bonniewood Drive SE, baseline 2023 peak hour delays are all shown to fall within LOS standards. It should be noted that significant and conservative adjustment factors were added to the I-5 ramps on Tumwater Boulevard SW and the eastbound left-turn movement at Linderson Way SW & Israel Road SW to account for commercial-related traffic volumes returning subsequent to COVID-19's travel impacts. As such, existing delays may not be as substantial as reported.

The intersection of Tumwater Boulevard SW & Bonniewood Drive SE was collected in March of 2023 and was adjusted based on shared volumes with Tumwater Boulevard SW & Henderson Boulevard SE. During this time construction was taking place on Capitol Boulevard SE near Trosper Road SW. The large number of southbound lefts (247 vph) appear high when compared to southbound lefts (131 vph) at Tumwater Boulevard SW & Capitol Boulevard SE. This suggests construction may have impacted travel patterns along Bonniewood Drive SE at Tumwater Boulevard SW. No historical data for this intersection could be found for reference.

3.5 Non-Motorist Infrastructure

Non-motorist activity was observed at the time of field counts. The area does not have existing pedestrian infrastructure along the site frontage. Frontage improvements will include new sidewalks that will provide connection to major pedestrian facilities on Israel Road SW, Capitol Boulevard SE, and Tumwater Boulevard SW.

Israel Road SW is fronted by Tumwater High School located about 500 feet west of New Market Street SW. Israel Road SW has a marked 20 mph school zone. It also has a refuge island crossing at the main school entrance. The western crosswalk at Israel Road SW & New Market Street SW has a designated marked crossing that provides pedestrian crossing flags. Overall, non-motorist infrastructure is provided outside the site frontage to support alternative modes of transportation.

3.6 Transit Service

A review of Intercity Transit and Twin Transit service systems indicates that Routes 12, 13 and the Green Line are within walking distance of the proposed New Market Apartments development. Specifications of these service lines are summarized in Table 4 below.

Table 5: Bus Routes

Route	Description	Weekday Service	Saturday	Sunday	Nearest Stop
12	West Tumwater: Olympia TC to L&I Building	6:00 AM – 9:09 PM (every ~30 min.)	7:30 AM – 9:09 PM (every ~30 min.)	7:30 AM – 7:39 PM (every ~30 min.)	~850′
13	East Tumwater: Olympia TC to L&I Building	6:15 AM – 9:09 PM (every ~30 min.)	7:45 AM – 9:09 PM (every ~30 min.)	7:45 AM – 9:09 PM (every ~30 min.)	~850′
Green Line	Olympia: Mellen St e-Transit Station to Olympia TC	7:00 AM – 6:00 PM (every ~120 min.)	8:00 AM – 3:00 PM (every ~120 min.)	8:00 AM – 3:00 PM (every ~120 min.)	~3,000′

Given the proximity to frequent transit service, use can be expected from the incoming project. Continuous walking paths will be available by way of 71st Avenue SW to Cleanwater Drive SW and then Tumwater Boulevard SW for access to Route 12 and Route 13. Refer to the Intercity Transit and Twin Transit service schedules for more detailed information.

4. FORECAST TRAFFIC DEMAND & ANALYSIS

4.1 Project Trip Generation

Trip generation is defined as the number of vehicle movements that enter or exit the respective project site during a designated time period such as the PM peak hour or an entire day. The magnitude of the anticipated vehicle trip generation for the proposed project was derived from the Institute of Transportation Engineers (ITE) publication, Trip Generation Manual, 11th Edition. The proposed uses for subject site are defined under the following Land Use Codes (LUCs) outlined below. Average rates were applied to determine trip ends for all other land uses. Also outlined are the independent variables used to derive trip ends:

- 221 – Multi-Family (Mid-Rise) (416 dwelling units)
- 565 – Day Care Center (5,500 square feet)
- 492 – Health/Fitness Club (4,890 square feet)
- 930 – Fast Casual Restaurant (3,600 square feet)
- 712 – Small Office Building (1,710 square feet)

It should be noted that the proposed project is anticipated to generate trips from internal capture (i.e., customers already on-site) and pass-by (i.e., customers already on the adjacent street system) in addition to new trips. Concerning internal capture, a single trip entering the site for one establishment may subsequently use a variety of other services offered on-site. Moreover, residents of the proposed multi-family buildings would have immediate, walkable access to other onsite uses. The complimentary uses on-site in addition to the immediate non-motorist accessibility available to project residents is anticipated to generate an internal trip capture reduction of 1% in the AM peak hour and 6% in the PM peak hour as derived via the NCHRP 8-51 Internal Trip Capture Estimation Tool. A weighted average of 4% for the AM and PM peak hours was used to estimate the internal capture rate for average daily trips.

Also considered are pass-by trips, or motorists already passing by the site who decide to make an intermediate stop before proceeding to their primary destination. Of the proposed uses, ITE data is only provided for Day Care Center, which has a PM peak hour pass-by rate of 44 percent. Fast Casual Restaurant would be expected to support pass-by trips, but with no data available no trip reductions were made. The similar land use High-Turnover (Sit-Down) Restaurant (LUC 932) has a PM peak hour pass-by rate of 43%. Pass-by trips are not considered as new trips but will impact the site's access points. For a conservative analysis all trips associated with the site were modeled as new trips.

Table 6 summarizes the estimated project trip generation for the site. Included are the average weekday daily traffic (AWDT) and the AM and PM peak hours. Available in the appendix is a use-specific breakdown including rates used for calculations.

Table 6: Project Trip Generation

Land Use	Size	Trip Type	AWDT	AM Peak-Hour Trips			PM Peak-Hour Trips		
				In	Out	Total	In	Out	Total
Multi-Family (Mid-Rise) – LUC 221	416 units	Primary	**1813**	35	117	**152**	92	59	**151**
Day Care Center – LUC 565	5,500 sq. ft.	Primary	**141**	18	16	**34**	15	17	**32**
		Pass-By	**111**	13	13	**26**	13	12	**25**
Health/Fitness Club – LUC 492	4,890 sq. ft.	Primary	**256**	3	3	**6**	9	7	**16**
Fast Casual Rest. – LUC 930	3,600 sq. ft.	Primary	**336**	3	2	**5**	23	19	**42**
Small Office Building – LUC 712	1,710 sq. ft.	Primary	**24**	2	1	**3**	1	2	**3**
	Total Project Trips		**2681**	74	152	**226**	153	116	**269**
	Primary Trips		**2570**	61	139	**200**	140	104	**244**
	Pass-By Trips		**111**	13	13	**26**	13	12	**25**

Based on ITE data, full buildout of the project is estimated to generate approximately 2681 daily weekday trips with 226 trips (74 inbound / 152 outbound) occurring in the AM peak hour and 269 trips (153 inbound / 116 outbound) in the PM peak hour.

4.2 Distribution and Assignment

Trip distribution describes the anticipated travel routes for inbound and outbound project traffic during the peak hour study period. Peak hour trips are primarily comprised of AM and PM commuter-based and recreational-based trips. New trips generated by the project are expected to follow the general distribution pattern as shown in Figure 5 for the AM peak hour and Figure 6 for the PM peak hour. Distribution percentages are based on Thurston Regional Planning Council's (TRPC) Transportation Analysis Zone (TAZ) that was created specific for the site, which can be found in the appendix.

One adjustment was made to the TAZ map distribution. The TAZ distribution shows 21% of traffic traveling to and from the east using 71st Avenue SW to access Capitol Boulevard SE. 10% of these volumes were modeled north onto the New Market Street SW connection. This will likely be a more direct and convenient travel route for project residents.

Project-generated trips anticipated to travel through the Tumwater I-5 Interchange to the south as identified from the TAZ map are outlined in the respective trip distribution figures. 62 AM primary peak hour trips and 76 PM primary peak hour project trips are identified to travel through the I-5 interchanges.

4.3 Future Peak Hour Volumes

A 5-year horizon of 2028 is proposed for future traffic delay analysis and to present conditions assuming full project buildout. Two annual growth rates were applied per city direction. North of, and including, X Street SW, a 2% compound annual growth rate was applied to the baseline 2023 AM and PM peak hour volumes shown in Figure 3 and Figure 4. South of X Street SW a 4% annual growth rate was used.

Additionally, pipeline volumes associated with the adjacent 6501 Capitol Boulevard Apartments, Belmont Flats, L&I/WSDA Safety & Health Lab and Training Center, and Yorkshire projects were included in forecast analysis. AM and PM peak hour pipeline volumes are illustrated in Figure 7 and Figure 8. Forecast 2028 AM and PM peak hour volumes without project are shown in Figures 9 and 10, respectively. Figure 11 and Figure 12 illustrate forecast 2028 volumes with the addition of project-generated traffic.

New Market Street SW Connection

In addition to the growth rates and pipeline volumes described above the project will include new construction of New Market Street SW along the western frontage of the site. This construction will connect existing segments of New Market Street SW from Israel Road SW to Tumwater Boulevard SW. This connection will provide alternative travel options for existing commuters. A TAZ map was provided by the TRPC to account for this connection.

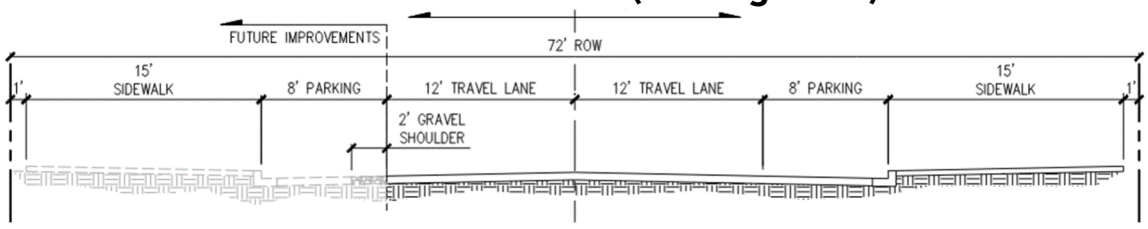
The TAZ map distribution shows around 7.5% of traffic traveling on Israel Road SW would divert south using New Market Street SW. This percentage was applied to existing volumes collected at the Israel Road SW & New Market Street SW intersection during the AM and PM peak hour volumes to estimate southbound trips that would divert onto New Market Street SW. These diverting volumes are shown in addition to pipeline volumes in Figure 7 and Figure 8.

The TAZ map shows less than 0.2% of trips traveling on Tumwater Boulevard SW would divert northbound using the New Market Street SW connection. To account for this new diverted route, 10 trips were modeled diverting northbound on New Market Street SW.

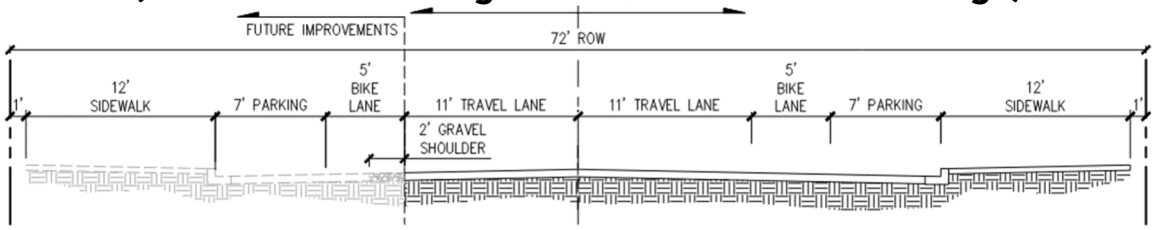
Roadway Cross-Sections

The project will construct new segments of New Market Street SW, 71st Avenue SW, and 73rd Avenue SW. The following cross-sections show the proposed geometry for each roadway.

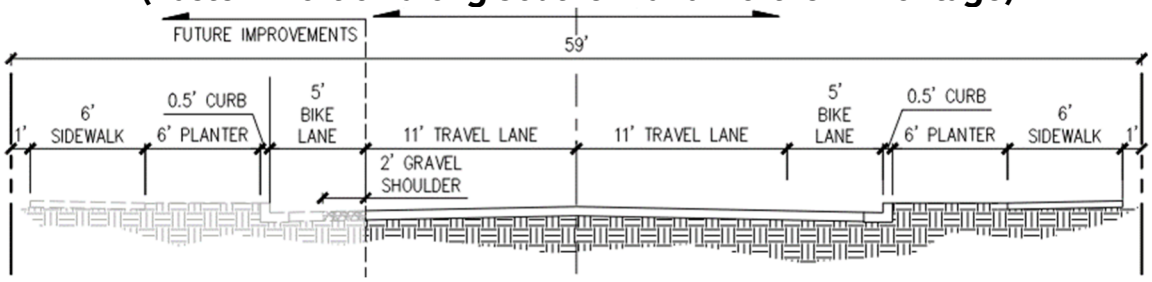
New Market Street SW (Looking North)



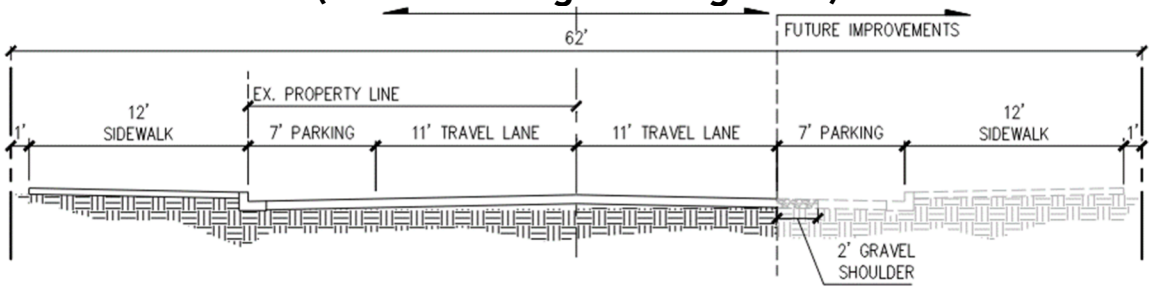
71st Avenue SW & 73rd Avenue SW
(Western Portion along Southern and Northern Frontage)



71st Avenue SW & 73rd Avenue SW
(Eastern Portion along Southern and Northern Frontage)



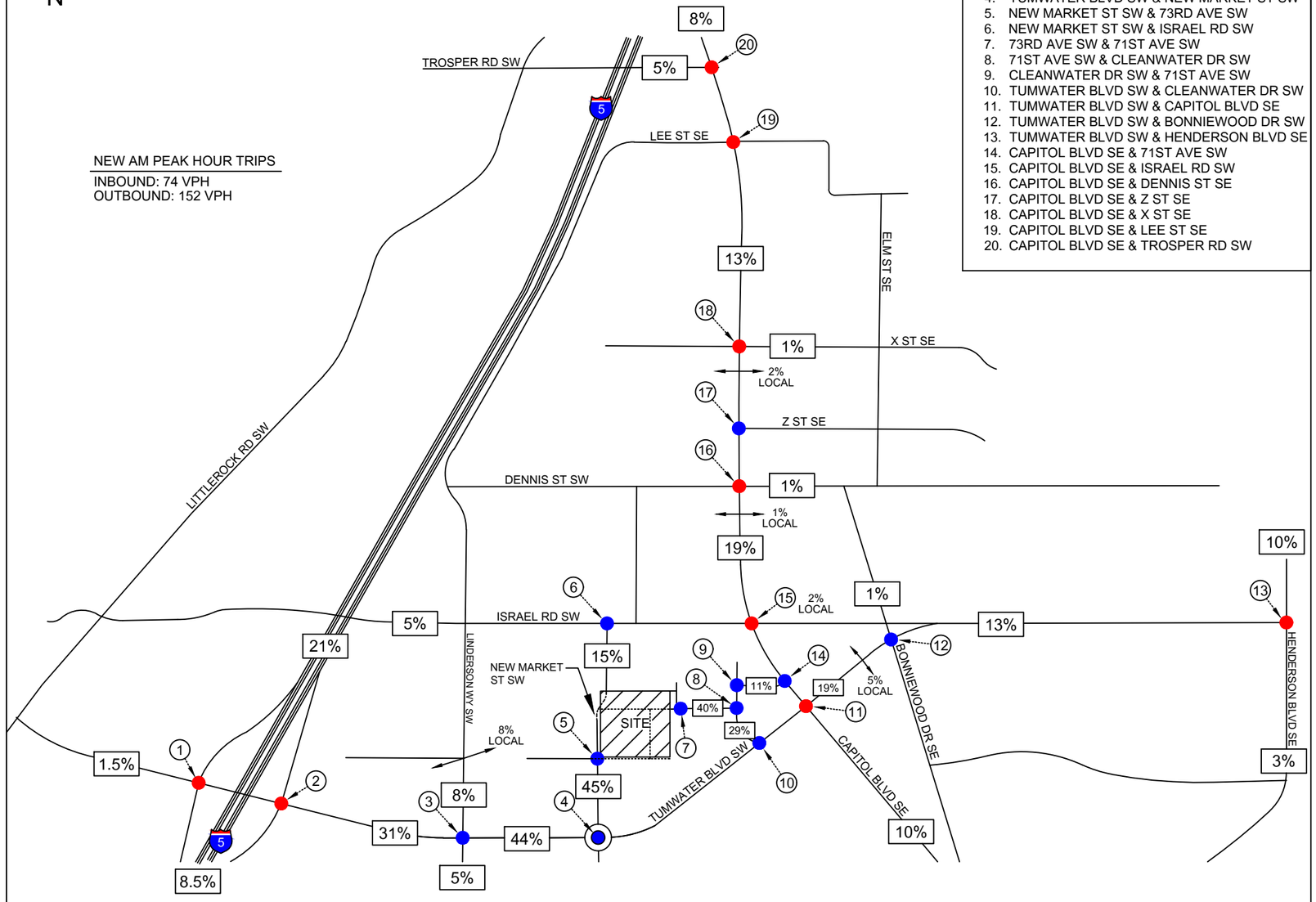
71st Avenue SW/73rd Avenue SW
(Eastern Frontage-Looking North)



N

NEW AM PEAK HOUR TRIPS

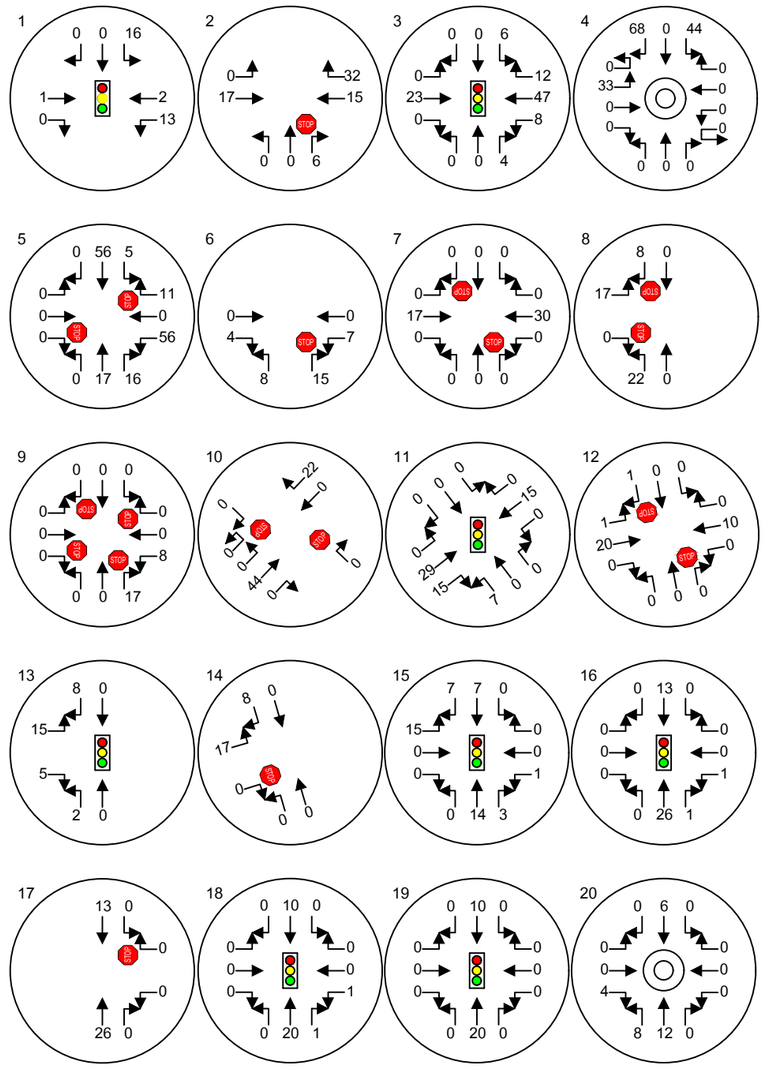
INBOUND: 74 VPH
OUTBOUND: 152 VPH



OUTLYING INTERSECTIONS OF STUDY

1. TUMWATER BLVD SW & SB I-5 RAMPS
2. TUMWATER BLVD SW & NB I-5 RAMPS
3. TUMWATER BLVD SW & LINDERSON WY SW
4. TUMWATER BLVD SW & NEW MARKET ST SW
5. NEW MARKET ST SW & 73RD AVE SW
6. NEW MARKET ST SW & ISRAEL RD SW
7. 73RD AVE SW & 71ST AVE SW
8. 71ST AVE SW & CLEANWATER DR SW
9. CLEANWATER DR SW & 71ST AVE SW
10. TUMWATER BLVD SW & CLEANWATER DR SW
11. TUMWATER BLVD SW & CAPITOL BLVD SE
12. TUMWATER BLVD SW & BONNIEWOOD DR SW
13. TUMWATER BLVD SW & HENDERSON BLVD SE
14. CAPITOL BLVD SE & 71ST AVE SW
15. CAPITOL BLVD SE & ISRAEL RD SW
16. CAPITOL BLVD SE & DENNIS ST SE
17. CAPITOL BLVD SE & Z ST SE
18. CAPITOL BLVD SE & X ST SE
19. CAPITOL BLVD SE & LEE ST SE
20. CAPITOL BLVD SE & TROSPER RD SW

OUTLYING STUDY INTERSECTIONS



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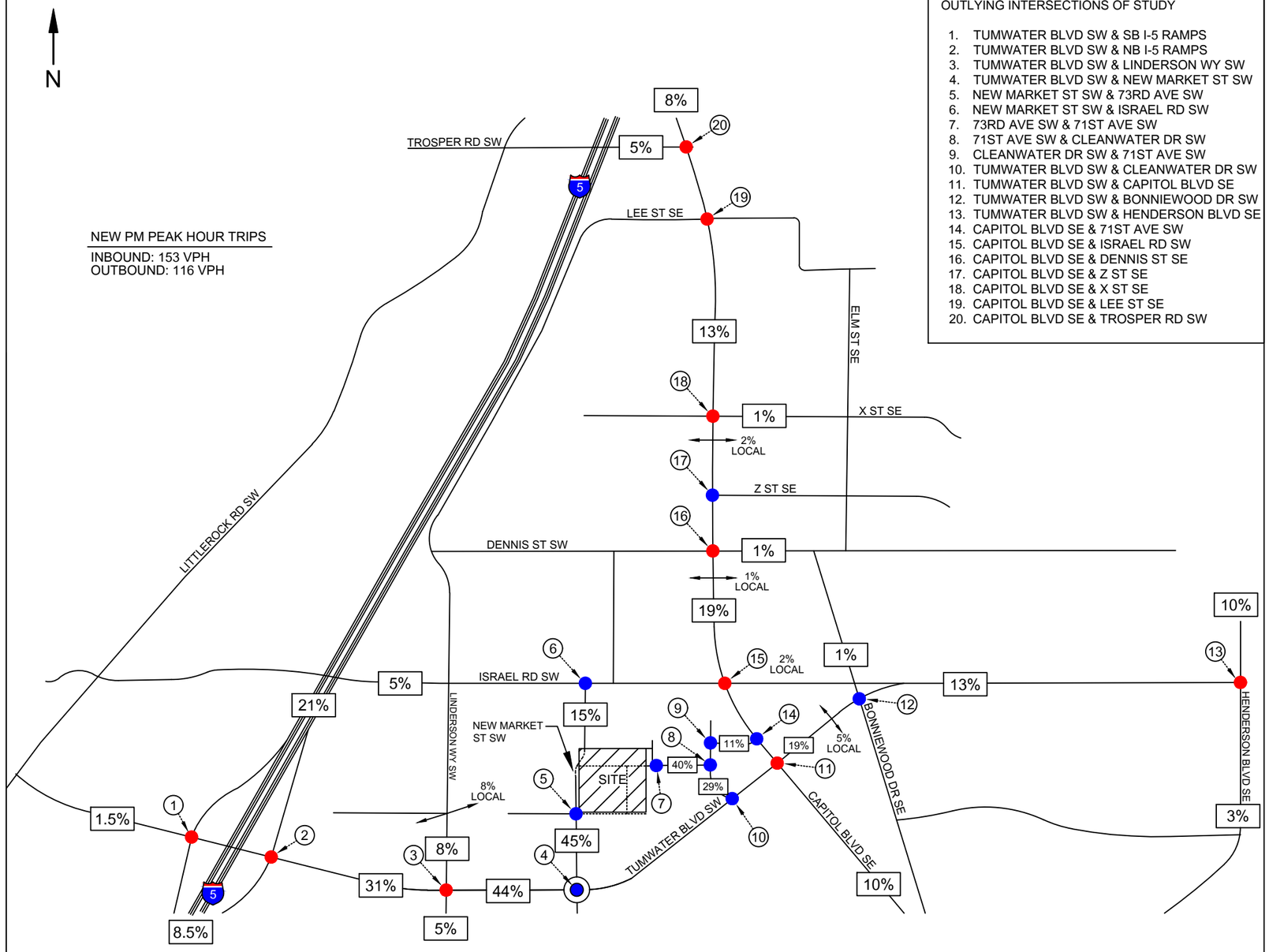
NEW MARKET APARTMENTS

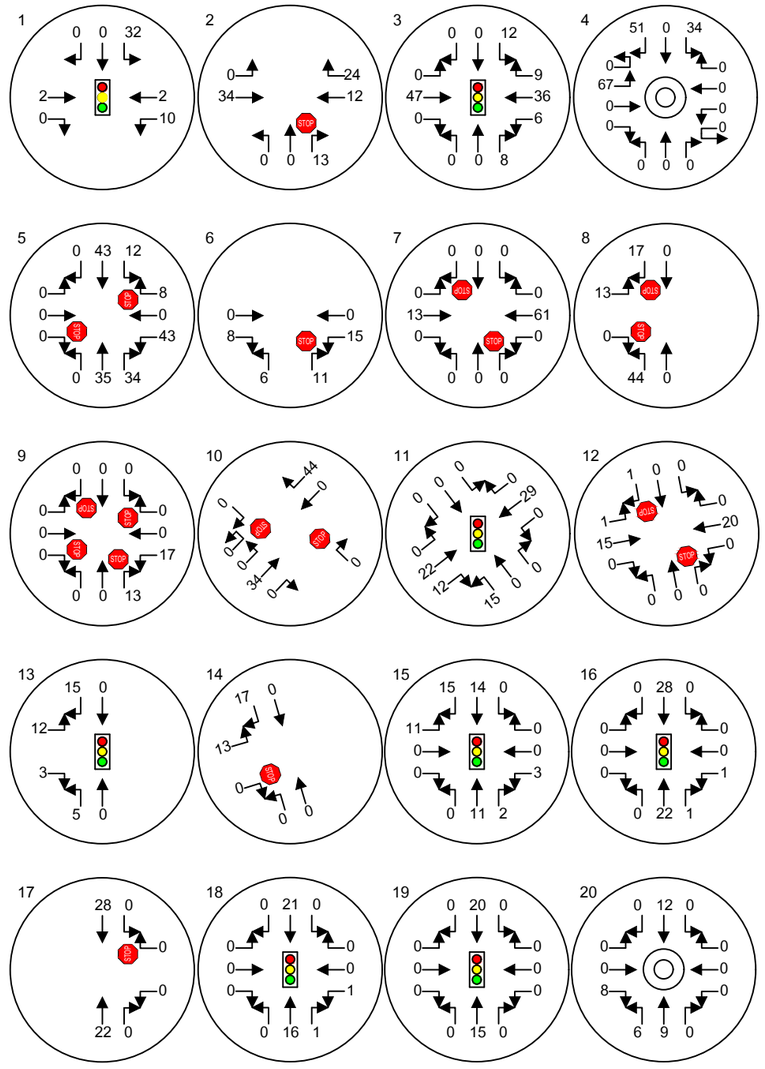
AM PEAK HOUR TRIP DISTRIBUTION & ASSIGNMENT
FIGURE 5



OUTLYING INTERSECTIONS OF STUDY

1. TUMWATER BLVD SW & SB I-5 RAMPS
2. TUMWATER BLVD SW & NB I-5 RAMPS
3. TUMWATER BLVD SW & LINDERSON WY SW
4. TUMWATER BLVD SW & NEW MARKET ST SW
5. NEW MARKET ST SW & 73RD AVE SW
6. NEW MARKET ST SW & ISRAEL RD SW
7. 73RD AVE SW & 71ST AVE SW
8. 71ST AVE SW & CLEANWATER DR SW
9. CLEANWATER DR SW & 71ST AVE SW
10. TUMWATER BLVD SW & CLEANWATER DR SW
11. TUMWATER BLVD SW & CAPITOL BLVD SE
12. TUMWATER BLVD SW & BONNIEWOOD DR SW
13. TUMWATER BLVD SW & HENDERSON BLVD SE
14. CAPITOL BLVD SE & 71ST AVE SW
15. CAPITOL BLVD SE & ISRAEL RD SW
16. CAPITOL BLVD SE & DENNIS ST SE
17. CAPITOL BLVD SE & Z ST SE
18. CAPITOL BLVD SE & X ST SE
19. CAPITOL BLVD SE & LEE ST SE
20. CAPITOL BLVD SE & TROSPER RD SW

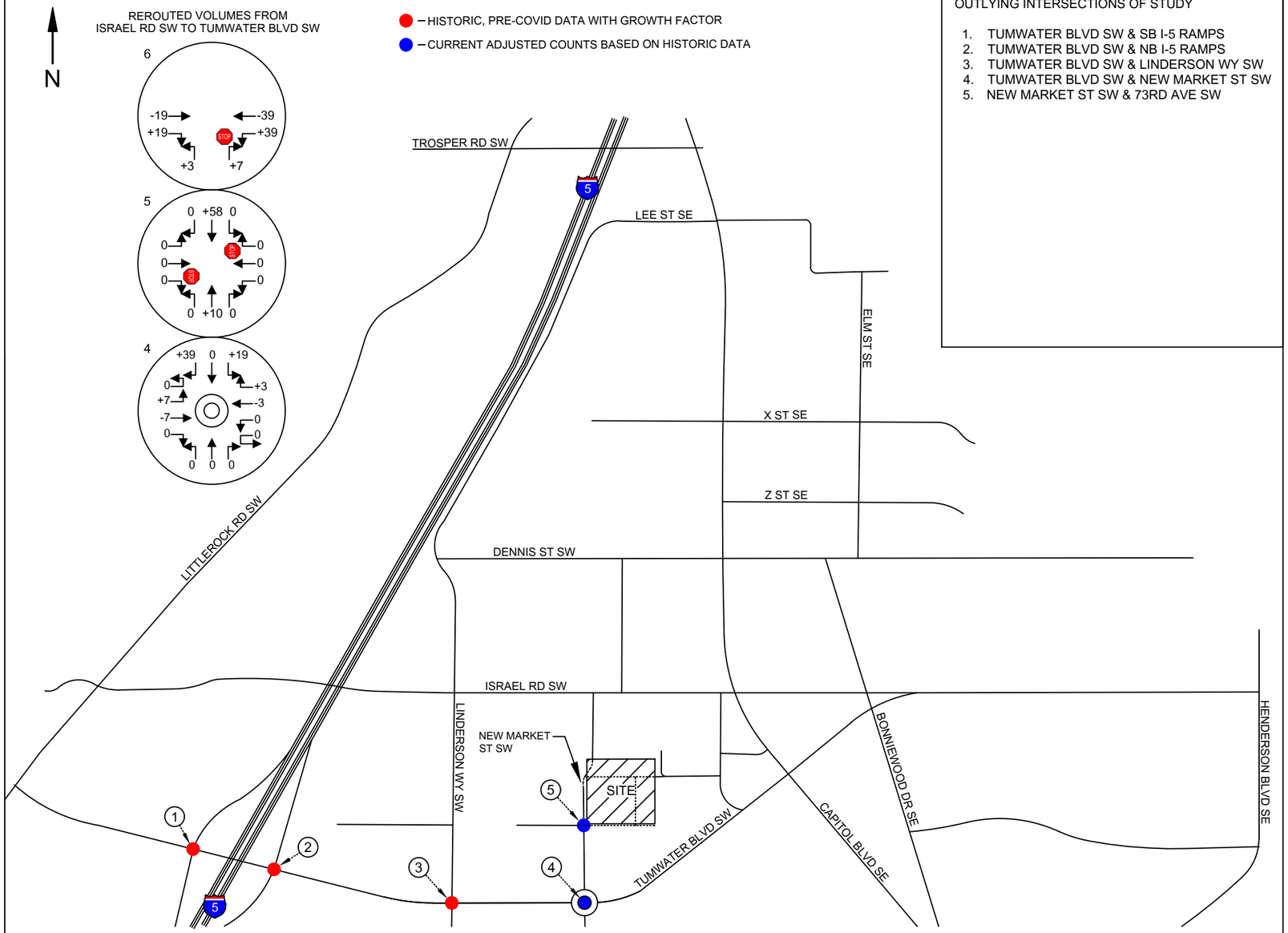
OUTLYING STUDY INTERSECTIONS



REROUTED VOLUMES FROM
ISRAEL RD SW TO TUMWATER BLVD SW

● – HISTORIC, PRE-COVID DATA WITH GROWTH FACTOR

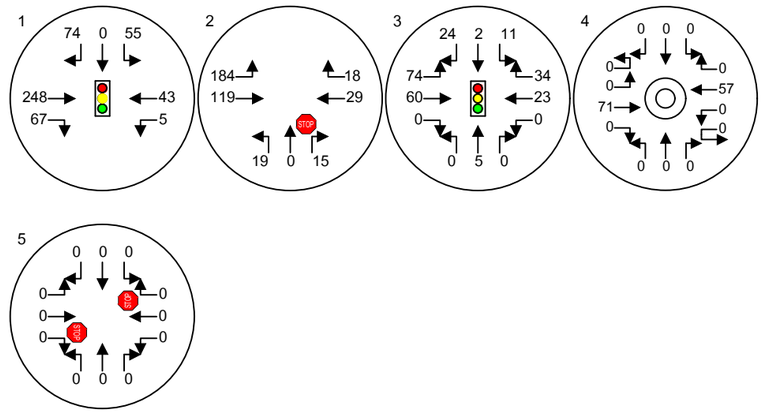
● – CURRENT ADJUSTED COUNTS BASED ON HISTORIC DATA



OUTLYING INTERSECTIONS OF STUDY

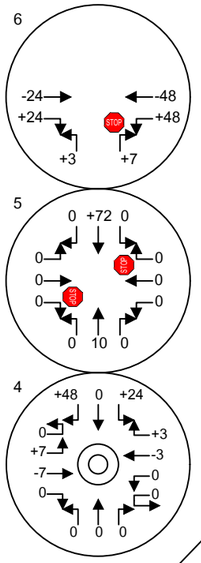
1. TUMWATER BLVD SW & SB I-5 RAMPS
2. TUMWATER BLVD SW & NB I-5 RAMPS
3. TUMWATER BLVD SW & LINDERSON WY SW
4. TUMWATER BLVD SW & NEW MARKET ST SW
5. NEW MARKET ST SW & 73RD AVE SW

OUTLYING STUDY INTERSECTIONS



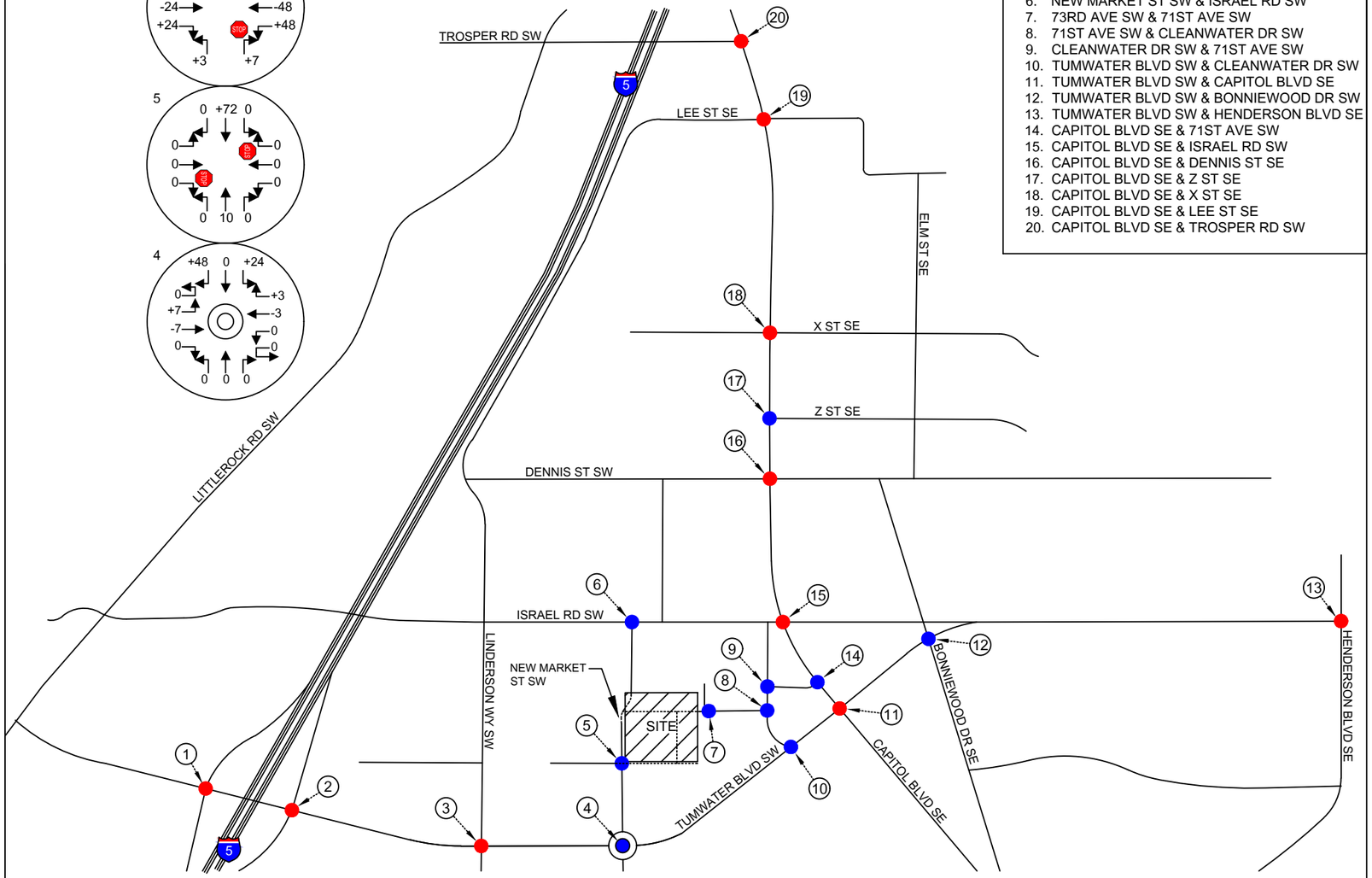
N

REROUTED VOLUMES FROM
ISRAEL RD SW TO TUMWATER BLVD SW



● – HISTORIC, PRE-COVID DATA WITH GROWTH FACTOR

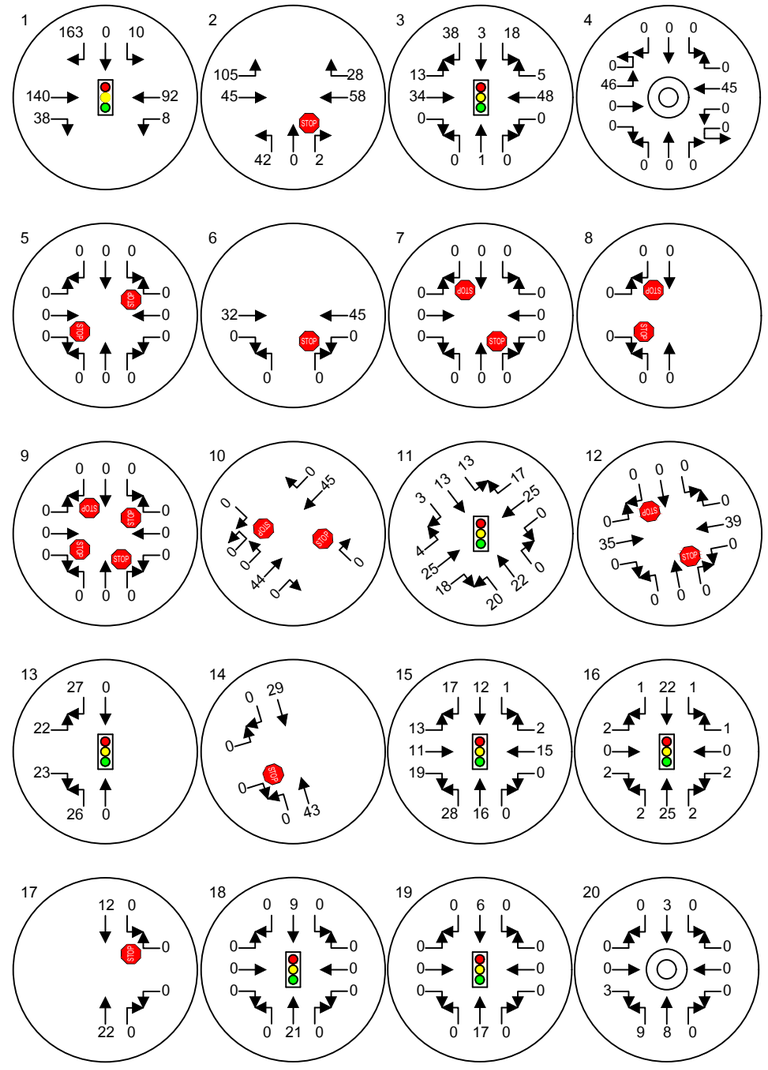
● – CURRENT ADJUSTED COUNTS BASED ON HISTORIC DATA



OUTLYING INTERSECTIONS OF STUDY

1. TUMWATER BLVD SW & SB I-5 RAMPS
2. TUMWATER BLVD SW & NB I-5 RAMPS
3. TUMWATER BLVD SW & LINDERSON WY SW
4. TUMWATER BLVD SW & NEW MARKET ST SW
5. NEW MARKET ST SW & 73RD AVE SW
6. NEW MARKET ST SW & ISRAEL RD SW
7. 73RD AVE SW & 71ST AVE SW
8. 71ST AVE SW & CLEANWATER DR SW
9. CLEANWATER DR SW & 71ST AVE SW
10. TUMWATER BLVD SW & CLEANWATER DR SW
11. TUMWATER BLVD SW & CAPITOL BLVD SE
12. TUMWATER BLVD SW & BONNIEWOOD DR SW
13. TUMWATER BLVD SW & HENDERSON BLVD SE
14. CAPITOL BLVD SE & 71ST AVE SW
15. CAPITOL BLVD SE & ISRAEL RD SW
16. CAPITOL BLVD SE & DENNIS ST SE
17. CAPITOL BLVD SE & Z ST SE
18. CAPITOL BLVD SE & X ST SE
19. CAPITOL BLVD SE & LEE ST SE
20. CAPITOL BLVD SE & TROSPER RD SW

OUTLYING STUDY INTERSECTIONS



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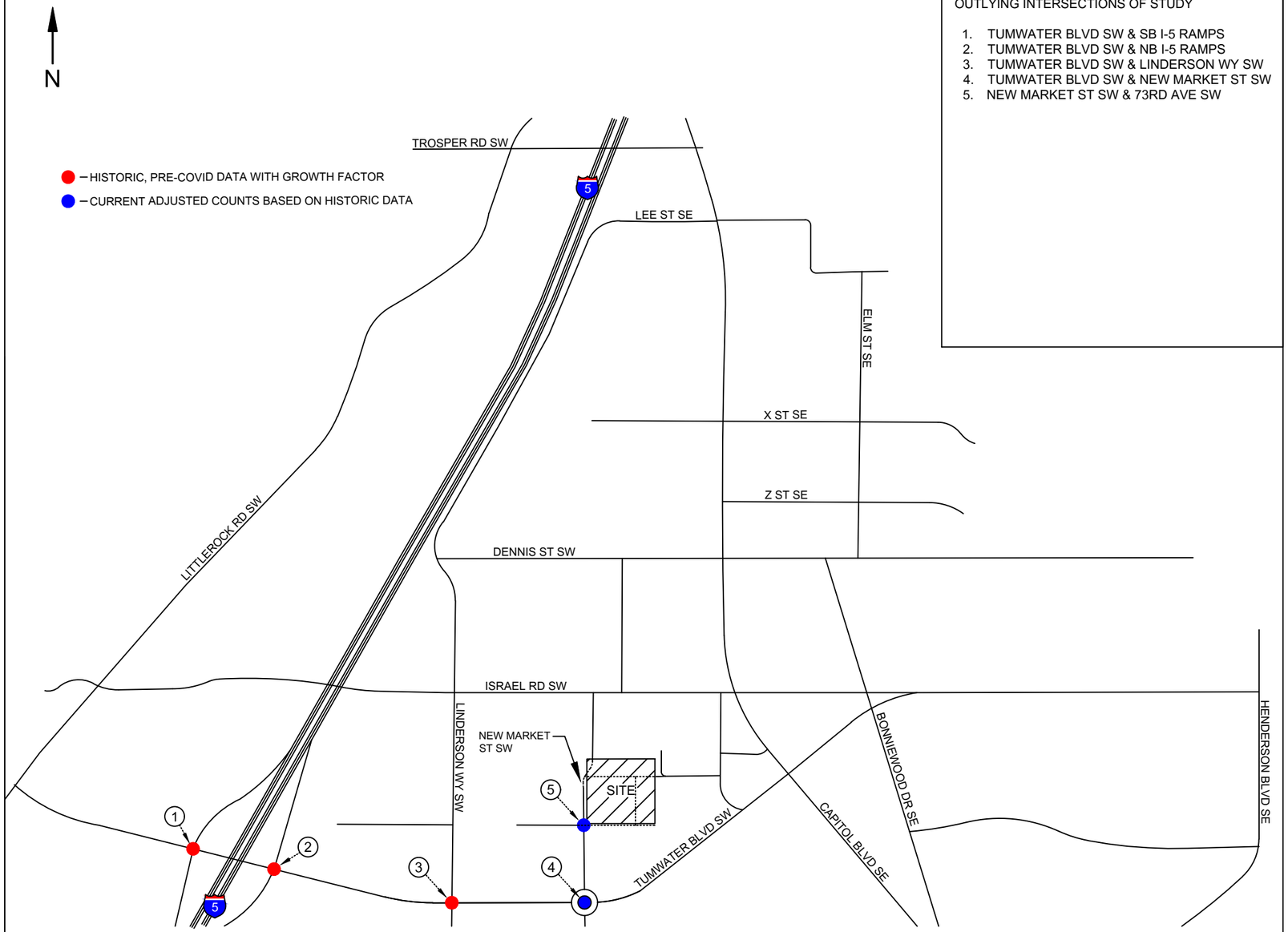
NEW MARKET APARTMENTS

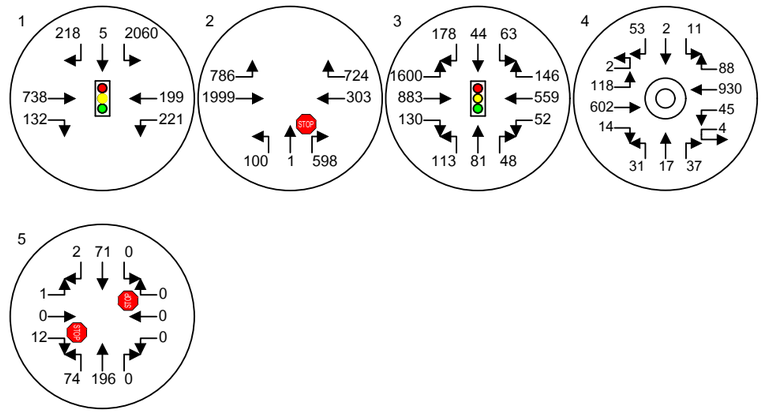
PM PEAK HOUR PIPELINE & REROUTED NEW MARKET ST SW VOLUMES
FIGURE 8



OUTLYING INTERSECTIONS OF STUDY

1. TUMWATER BLVD SW & SB I-5 RAMPS
2. TUMWATER BLVD SW & NB I-5 RAMPS
3. TUMWATER BLVD SW & LINDERSON WY SW
4. TUMWATER BLVD SW & NEW MARKET ST SW
5. NEW MARKET ST SW & 73RD AVE SW

OUTLYING STUDY INTERSECTIONS



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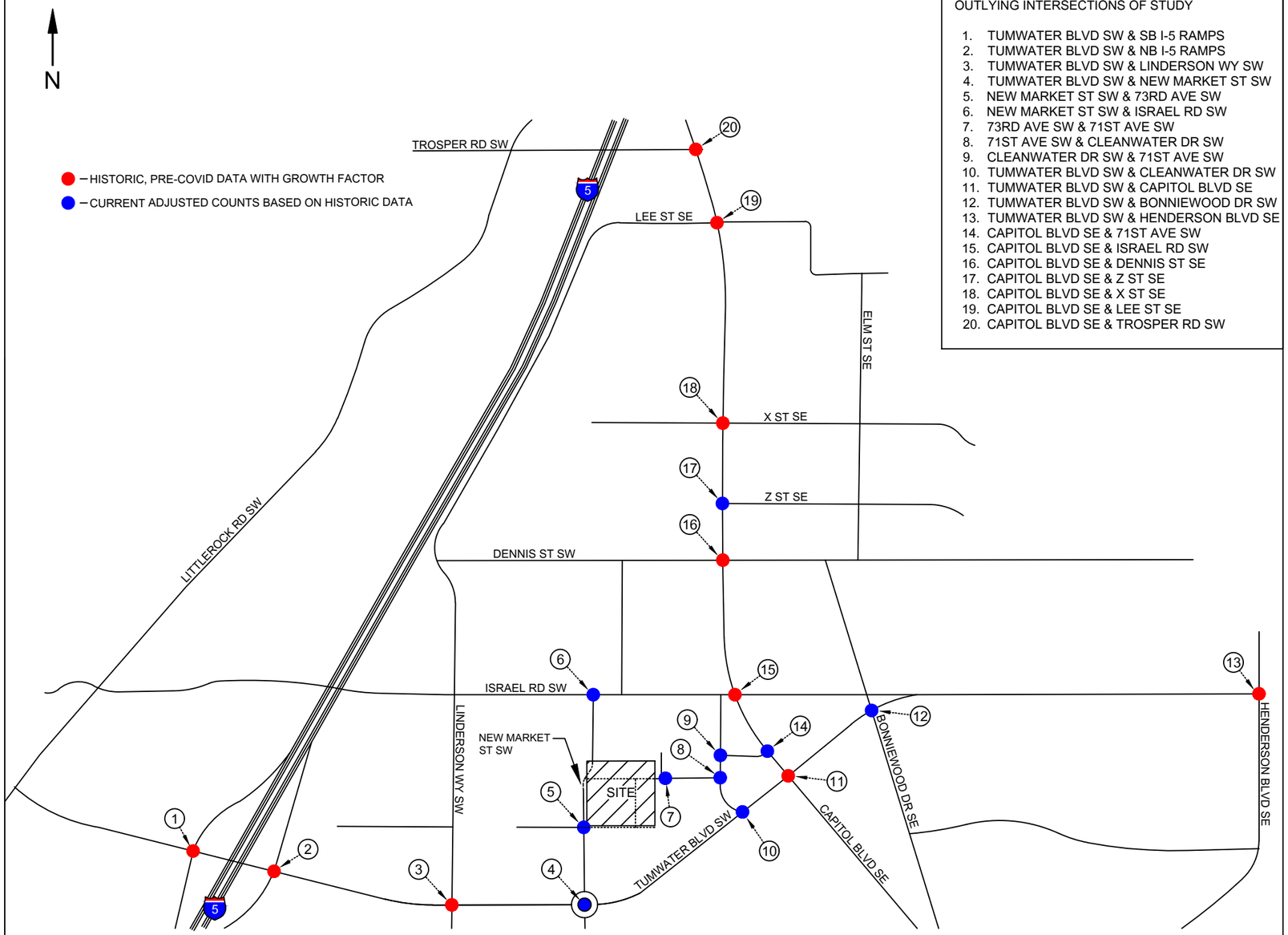
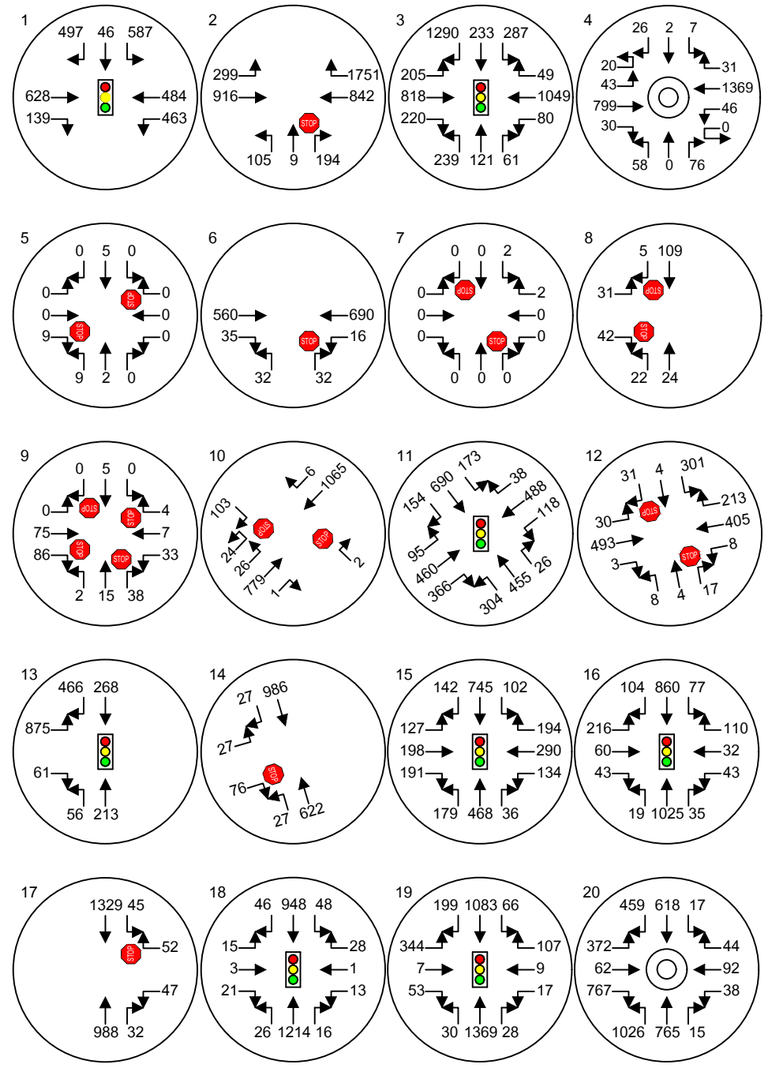
NEW MARKET APARTMENTS
FORECAST 2028 AM PEAK HOUR BACKGROUND VOLUMES
FIGURE 9



OUTLYING INTERSECTIONS OF STUDY

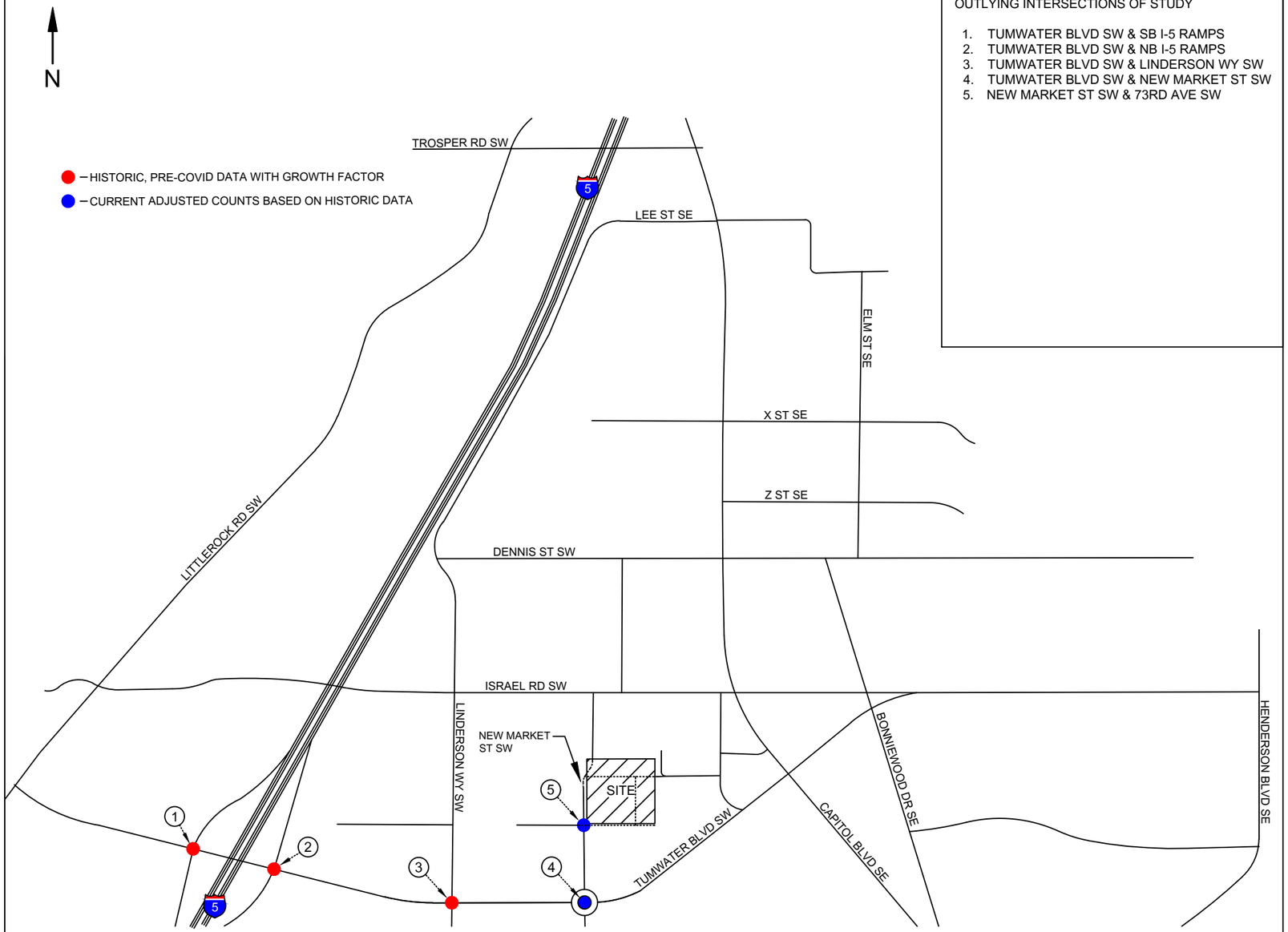
1. TUMWATER BLVD SW & SB I-5 RAMPS
2. TUMWATER BLVD SW & NB I-5 RAMPS
3. TUMWATER BLVD SW & LINDERSON WY SW
4. TUMWATER BLVD SW & NEW MARKET ST SW
5. NEW MARKET ST SW & 73RD AVE SW
6. NEW MARKET ST SW & ISRAEL RD SW
7. 73RD AVE SW & 71ST AVE SW
8. 71ST AVE SW & CLEANWATER DR SW
9. CLEANWATER DR SW & 71ST AVE SW
10. TUMWATER BLVD SW & CLEANWATER DR SW
11. TUMWATER BLVD SW & CAPITOL BLVD SE
12. TUMWATER BLVD SW & BONNIEWOOD DR SW
13. TUMWATER BLVD SW & HENDERSON BLVD SE
14. CAPITOL BLVD SE & 71ST AVE SW
15. CAPITOL BLVD SE & ISRAEL RD SW
16. CAPITOL BLVD SE & DENNIS ST SE
17. CAPITOL BLVD SE & Z ST SE
18. CAPITOL BLVD SE & X ST SE
19. CAPITOL BLVD SE & LEE ST SE
20. CAPITOL BLVD SE & TROSPER RD SW

OUTLYING STUDY INTERSECTIONS



NEW MARKET APARTMENTS

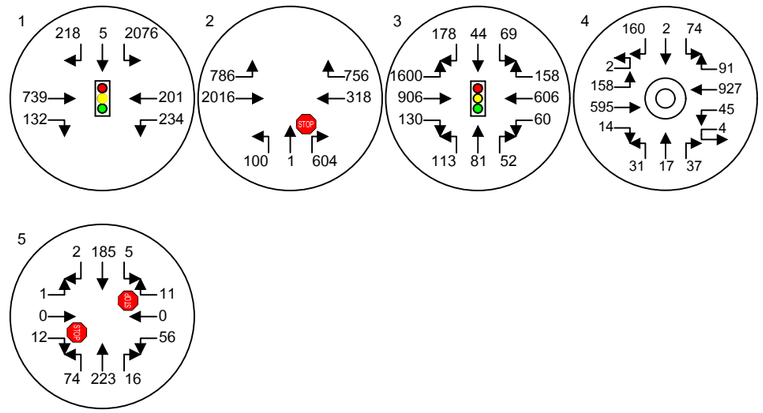
FORECAST 2028 PM PEAK HOUR BACKGROUND VOLUMES
FIGURE 10



OUTLYING INTERSECTIONS OF STUDY

1. TUMWATER BLVD SW & SB I-5 RAMPS
2. TUMWATER BLVD SW & NB I-5 RAMPS
3. TUMWATER BLVD SW & LINDERSON WY SW
4. TUMWATER BLVD SW & NEW MARKET ST SW
5. NEW MARKET ST SW & 73RD AVE SW

OUTLYING STUDY INTERSECTIONS



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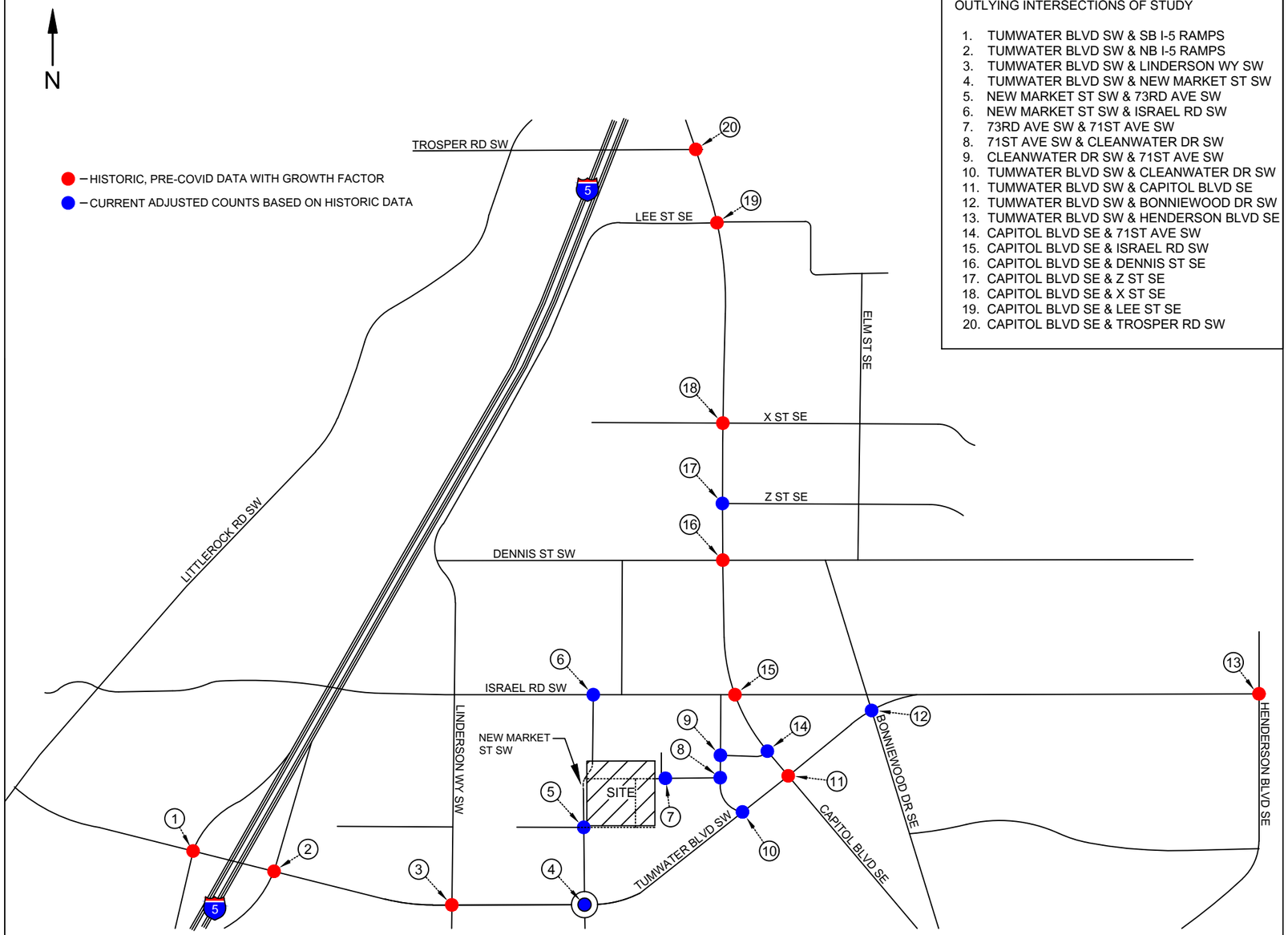
NEW MARKET APARTMENTS

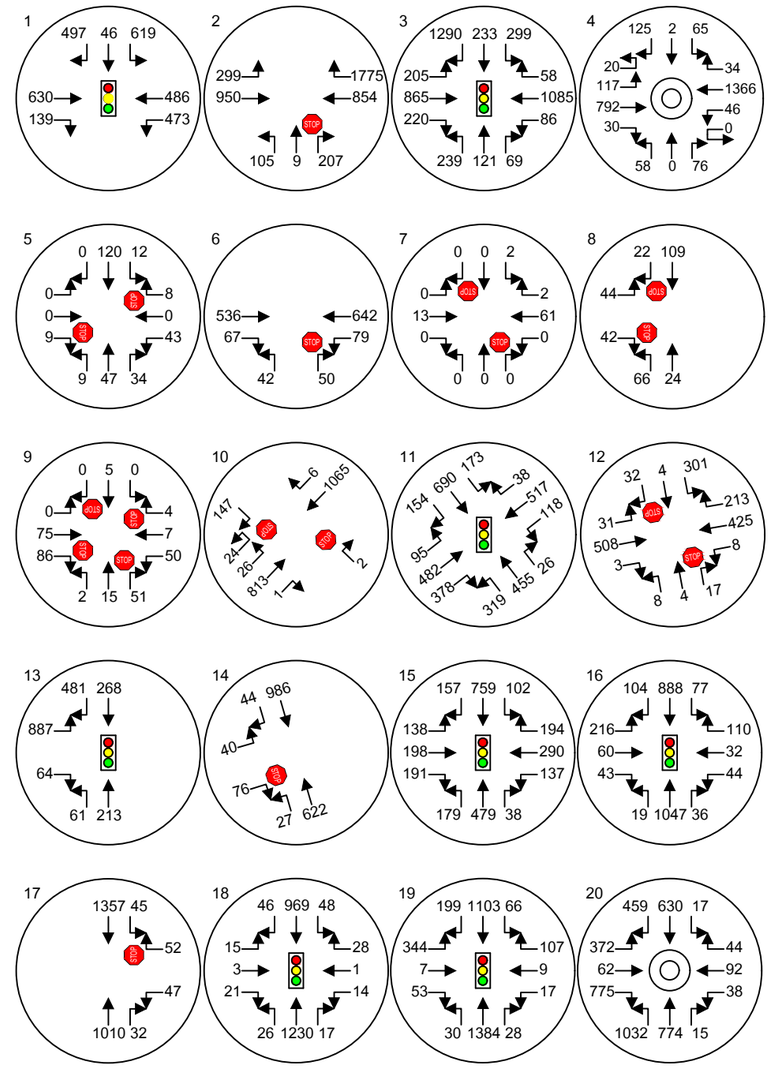
FORECAST 2028 AM PEAK HOUR VOLUMES WITH PROJECT
FIGURE 11



OUTLYING INTERSECTIONS OF STUDY

1. TUMWATER BLVD SW & SB I-5 RAMPS
2. TUMWATER BLVD SW & NB I-5 RAMPS
3. TUMWATER BLVD SW & LINDERSON WY SW
4. TUMWATER BLVD SW & NEW MARKET ST SW
5. NEW MARKET ST SW & 73RD AVE SW
6. NEW MARKET ST SW & ISRAEL RD SW
7. 73RD AVE SW & 71ST AVE SW
8. 71ST AVE SW & CLEANWATER DR SW
9. CLEANWATER DR SW & 71ST AVE SW
10. TUMWATER BLVD SW & CLEANWATER DR SW
11. TUMWATER BLVD SW & CAPITOL BLVD SE
12. TUMWATER BLVD SW & BONNIEWOOD DR SW
13. TUMWATER BLVD SW & HENDERSON BLVD SE
14. CAPITOL BLVD SE & 71ST AVE SW
15. CAPITOL BLVD SE & ISRAEL RD SW
16. CAPITOL BLVD SE & DENNIS ST SE
17. CAPITOL BLVD SE & Z ST SE
18. CAPITOL BLVD SE & X ST SE
19. CAPITOL BLVD SE & LEE ST SE
20. CAPITOL BLVD SE & TROSPER RD SW

OUTLYING STUDY INTERSECTIONS



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NEW MARKET APARTMENTS
FORECAST 2028 PM PEAK HOUR VOLUMES WITH PROJECT
FIGURE 12

4.4 Future Level of Service

A level of service analysis was made of the forecast 2028 AM and PM peak hour volumes without (background) and with project-generated trips. Results for intersection delay conditions were again determined using the *Synchro 11* and *SIDRA* analysis programs. Summaries are provided below in Table 7.

Table 7: Forecast 2028 Peak Hour Level of Service

Delays given in seconds per vehicle

				Without Project		With Project: Full Build-Out	
Ref. #	Intersection	Control	Peak Hour	LOS	Delay	LOS	Delay
1	Tumwater Blvd SW & SB I-5 Ramps	Signal	AM PM	F E	100+ 64.5	F E	100+ 69.8
2	Tumwater Blvd SW & NB I-5 Ramps	TWSC	AM PM	F F	100+ 100+	F F	100+1 00+
3	Tumwater Blvd SW & Linderson Way SW	Signal	AM PM	E D	66.5 39.2	E D	71.6 41.7
4	Tumwater Blvd SW & New Market St SW	RAB	AM PM	A A	5.0 4.7	A A	5.8 6.0
5	New Market St SW & 73rd Ave SW	TWSC	AM PM	A A	9.2 8.4	C B	21.7 13.5
6	New Market St SW & Israel Rd SW	TWSC	PM	C	17.3	C	18.9
7	73rd Ave SW & 71st Ave SW	STOP	PM	A	6.7	A	9.0
8	71st Ave SW & Cleanwater Dr SW	TWSC	PM	B	10.6	B	12.3
9	Cleanwater Dr SW & 71st Ave SW	AWSC	PM	A	8.4	A	8.6
10	Tumwater Blvd SW & Cleanwater Dr SW	TWSC	PM	C	16.1	C	18.1
11	Tumwater Blvd SW & Capitol Blvd SE	Signal	PM	D	46.2	D	47.5
12	Tumwater Blvd SE & Bonniewood Dr SE	TWSC	PM	F	100+	F	100+
13	Tumwater Blvd SE & Henderson Blvd SE	Signal	PM	E	56.3	E	58.7

Table 7 Continued: Forecast 2028 Peak Hour Level of Service

Delays given in seconds per vehicle

				Without Project		*With Project: Full Build-Out*	
Ref. #	**Intersection**	**Control**	**Peak Hour**	**LOS**	**Delay**	**LOS**	**Delay**
14	Capitol Blvd SE & 71st Ave SW	TWSC	PM	C	18.9	C	21.3
15	Capitol Blvd SE & Israel Rd SW	Signal	PM	D	46.6	D	48.9
16	Capitol Blvd SE & Dennis St SW	Signal	PM	B	19.4	B	19.6
17	Capitol Blvd SE & Z Street SW	TWSC	PM	D	29.4	D	30.6
18	Capitol Blvd SE & X St SW	Signal	PM	A	6.7	A	6.7
19	Capitol Blvd SE & Lee St SW	Signal	PM	C	26.5	C	26.9
20	Capitol Blvd SE & Trosper Rd SW	RAB	PM	D	46.0	D	47.9

TWSC: Two-Way Stop Control; AWSC: All-Way Stop Control; RAB: Roundabout

#1: Tumwater Boulevard SW & I-5 Ramps were found to operate with LOS F conditions both without and with the proposed development under forecast peak hour conditions. It should be noted that the City's Transportation Improvement Program and the Tumwater City Plan 2036 Transportation Master Plan (TMP) outline that roundabout improvements are planned for construction at the I-5 NB and SB Ramp Interchanges on Tumwater Boulevard SW. Moreover, SEPA mitigation fees are currently being collected to fund said projects. With said intersection improvements, Tumwater's TMP outlines that the Tumwater I-5 interchange intersections will operate with LOS A conditions under forecast 2040 conditions. As such, no additional mitigation on behalf of the development is recommended beyond SEPA mitigation fee payment.

#3: Tumwater Boulevard SW & Linderson Way SW/Center Street was found to operate with LOS E conditions both without and with the proposed development under forecast AM peak hour conditions. A significant amount of traffic volumes were added to the eastbound left-turn movement to account for commercial-related traffic returning subsequent to COVID-19's travel impacts. As such, delays at the intersection may be lower than reported. This intersection is identified as being in the Tumwater Strategy Corridor, which

acknowledges that delays during periods of the day may exceed LOS D standards.

#12: Tumwater Boulevard SE & Bonniewood Drive SW is shown to have significant delays at LOS F. As noted previously in Section 3.4 of this report the count for this intersection was collected in March of 2023 when construction near Capitol Boulevard SE and Trosper Road SW was in progress and may have impacted the traffic count. The city may consider monitoring this intersection subsequent to construction and determine whether this intersection needs future improvements.

#13: Tumwater Boulevard SE & Henderson Boulevard SE was found to operate with LOS E conditions both without and with the proposed development during the PM peak hour. A 4% annual growth rate was used to estimate 2028 horizon year traffic. SCJ data (included in the appendix) for this intersection taken from the Comprehensive Plan used less than a 1% growth rate at this location to estimate projected 2040 volumes. This intersection is outside any designated urban or commercial growth areas and may not be expected to experience the 4% growth rate used for horizon year estimations. As such, future delays may be lower than reported above. The Comprehensive Plan shows LOS D under future 2040 No-Build conditions, which further supports delays may be overestimated.

#16 & 18: Capitol Boulevard SE & X Street SW and Capitol Boulevard SE & Dennis Street SE are both identified in the 2023-2028 Six-Year Transportation Improvement Program as being locations planned for roundabouts. Both intersections were analyzed as roundabout controlled. SIDRA results show both would operate at LOS A during the 2028 PM peak hour. Results are included in the appendix.

5. CONCLUSIONS & MITIGATION

The New Market Apartments project is a mixed-use development that proposes to construct approximately 416 multi-family dwelling units, a 5,500 square foot day care, a 4,890 square foot fitness center, a 3,600 square foot deli, 1,700 square feet of office space, and a 4,300 square foot club house. The subject site is located in the city of Tumwater within tax parcel #: 82701500000. Refer to Figure 2 for the proposed access/roadway configuration and multi-family structure layout. This report analyzed the project at full buildout. Construction of the site planned in three phases as follows:

Phase 1 will consist of Residential Building 1 and is located along the western portion of the site. Phase 1 consists of 139 residential units along with a day care, fitness center, deli, office space, and clubhouse.

Phase 2 will consist of Residential Building 2 that will have 130 residential units and is located on the northeastern portion of the property.

Phase 3 will construct Residential Building 3 that will house the remaining 147 dwelling units.

Based on ITE data the site is anticipated to generate 2,681 new average weekday daily trips with 226 AM peak hour trips and 269 new PM peak hour trips. Of these trips, 111 average daily trips, 26 AM peak hour trips, and 25 PM peak hour trips will be in the form of pass-by trips and not impact the local roadway system outside the project frontage roadways. Refer to Figure 2 for the proposed access/roadway configuration and multi-family structure layout.

Baseline 2023 weekday peak hour level of service (LOS) is summarized in Table 4. With the exception of the I-5 NB and SB Ramps on Tumwater Boulevard SW and the Tumwater Boulevard SE & Bonniewood Drive SE intersection, all intersections of study are shown to operate within city standards.

Forecast 2028 analysis included a compound annual growth rate of 4% south of X Street SW and 2% north of X Street SW and the addition of pipeline volumes. Forecast 2028 AM and PM peak hour level of service without and with the addition of project-generated traffic under both noted scenarios is provided in Table 7. The I-5 ramps on Tumwater Boulevard SW show LOS F

delays. This interchange is identified for improvement per the 2023-2028 Six Year TIP and SEPA mitigation fees for the project will contribute to these improvements.

Two other intersections show horizon year delays outside of accepted city Standards. Tumwater Boulevard SE & Bonniewood Dr SE and Tumwater Boulevard SE & Henderson Boulevard SE show LOS F and LOS E delays, respectively. As mentioned in this report, lower growth rates (less than 1%) in this area were previously used in the Comprehensive Plan than the 4% used to estimate forecast 2028 volumes. Also, Capitol Boulevard construction may have impacted the Tumwater Boulevard SE & Bonniewood DR SE traffic count. The city may want to reexamine these locations subsequent to construction activity and re-occupancy of the several government buildings near I-5.

Based on the analysis above, the following mitigation is required for New Market Apartments project.

1. All frontage improvements and roadway connections shall confirm to City Standards. Final design shall coordinate and be approved by the city.

2. Pay Traffic Impact Fees (TIF) as required by the city of Tumwater and per SEPA mitigation fee requirements. TIF will be assessed based on full buildout of the site. A summary of the expected TIF as well as the City's SEPA Mitigation Fee for trips entering the Tumwater Blvd/I-5 Interchange at a per PM peak hour trip fee of $4,219.00 are included.

Table 8: Impact Fees

Land Use	Size	TIF	Total TIF	Tumwater Blvd PM Trips	SEPA Fee	Total SEPA Fee
Multifamily Housing	416 Units	$2,774.35 per dwelling unit	$385,634.65			
Day Care Center	5,500 s.f.	$30.16 per s.f.	$165,880.00			
Health/Fitness Club	4,890 s.f.	$17.81 per s.f.	$87,090.90	76 trips	$4,219.00 per trip	$320,644.00
Restaurant	3,600 s.f.	$17.25 per s.f. (per LUC 931)	$62,100			
Small Office Building	1,710 s.f.	$9.19 per s.f.	$15,714.90			
	Total Transportation Impact Fee		**$716,420.45**		**Total SEPA Fee**	**$320,644.00**

No other mitigation is identified at this time.

NEW MARKET APARTMENTS
TRAFFIC IMPACT ANALYSIS

APPENDIX: AM PEAK HOUR COUNT DATA

Prepared for: **SCJ Alliance**

Traffic Count Consultants, Inc.

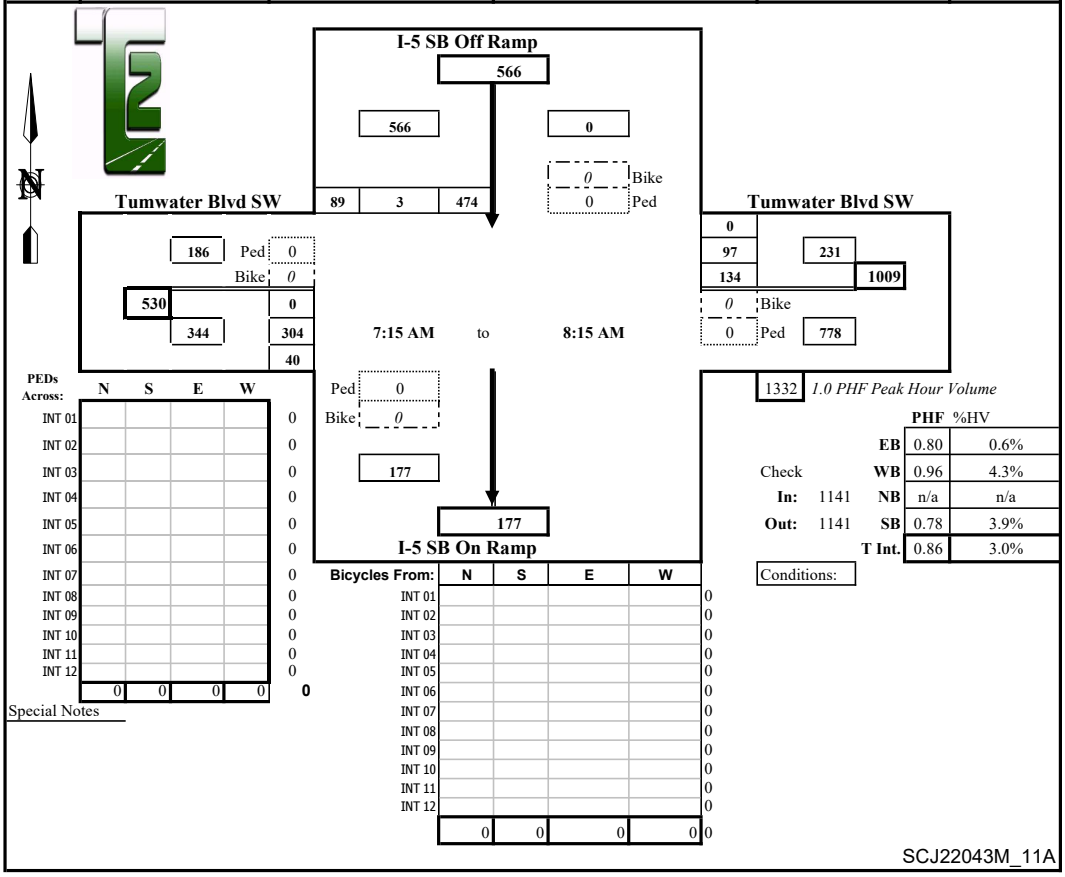
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: I-5 SB Ramps & Tumwater Blvd SW **Date of Count:** Tue 07/26/2022

Location: Tumwater, Washington **Checked By:** Jen

Time Interval Ending at	From North on (SB) I-5 SB Off Ramp				From South on (NB) I-5 SB On Ramp				From East on (WB) Tumwater Blvd SW				From West on (EB) Tumwater Blvd SW				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
7:15 A	1	68	1	13	0	0	0	0	2	28	14	0	1	0	60	10	194
7:30 A	5	87	1	17	0	0	0	0	3	41	17	0	0	0	60	7	230
7:45 A	5	135	1	21	0	0	0	0	3	39	20	0	1	0	95	12	323
8:00 A	7	153	0	28	0	0	0	0	2	28	32	0	0	0	80	12	333
8:15 A	5	99	1	23	0	0	0	0	2	26	28	0	1	0	69	9	255
8:30 A	6	73	0	22	0	0	0	0	2	24	30	0	0	0	51	7	207
8:45 A	11	70	1	17	0	0	0	0	1	34	25	0	1	0	59	8	214
9:00 A	5	74	0	22	0	0	0	0	3	31	39	0	1	0	65	6	237
9:15 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	45	759	5	163	0	0	0	0	18	251	205	0	5	0	539	71	1993
Peak Hour: 7:15 AM to 8:15 AM																	
Total	22	474	3	89	0	0	0	0	10	134	97	0	2	0	304	40	1141
Approach	566				0				231				344				1141
%HV	3.9%				n/a				4.3%				0.6%				3.0%
PHF	0.78				n/a				0.96				0.80				0.86



SCJ22043M_11A

Prepared for: **SCJ Alliance**

Traffic Count Consultants, Inc.

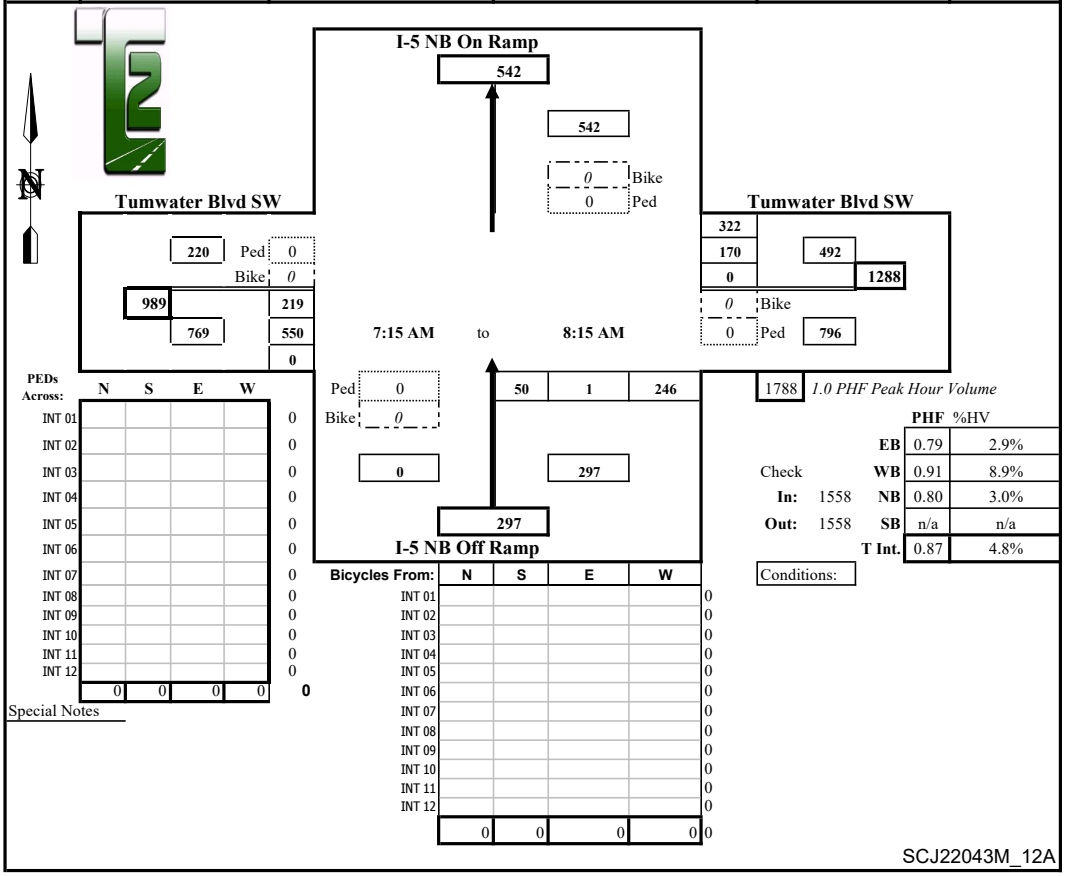
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: I-5 NB Ramps & Tumwater Blvd SW **Date of Count:** Tue 07/26/2022

Location: Tumwater, Washington **Checked By:** Jen

Time Interval	From North on (SB) I-5 NB On Ramp				From South on (NB) I-5 NB Off Ramp				From East on (WB) Tumwater Blvd SW				From West on (EB) Tumwater Blvd SW				Interval Total
Ending at	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
7:15 A	0	0	0	0	4	10	0	33	10	0	36	67	1	44	87	0	277
7:30 A	0	0	0	0	2	12	0	81	14	0	48	81	4	49	104	0	375
7:45 A	0	0	0	0	3	11	1	60	13	0	42	93	6	66	158	0	431
8:00 A	0	0	0	0	3	12	0	69	8	0	46	78	6	60	182	0	447
8:15 A	0	0	0	0	1	15	0	36	9	0	34	70	6	44	106	0	305
8:30 A	0	0	0	0	1	13	1	36	7	0	40	68	4	43	83	0	284
8:45 A	0	0	0	0	4	11	2	24	11	0	55	61	9	41	87	0	281
9:00 A	0	0	0	0	3	16	0	27	9	0	50	80	8	51	93	0	317
9:15 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	0	0	0	21	100	4	366	81	0	351	598	44	398	900	0	2717
Peak Hour: 7:15 AM to 8:15 AM																	
Total	0	0	0	0	9	50	1	246	44	0	170	322	22	219	550	0	1558
Approach	0				297				492				769				1558
%HV	n/a				3.0%				8.9%				2.9%				4.8%
PHF	n/a				0.80				0.91				0.79				0.87



SCJ22043M_12A

Prepared for: **SCJ Alliance**

Traffic Count Consultants, Inc.

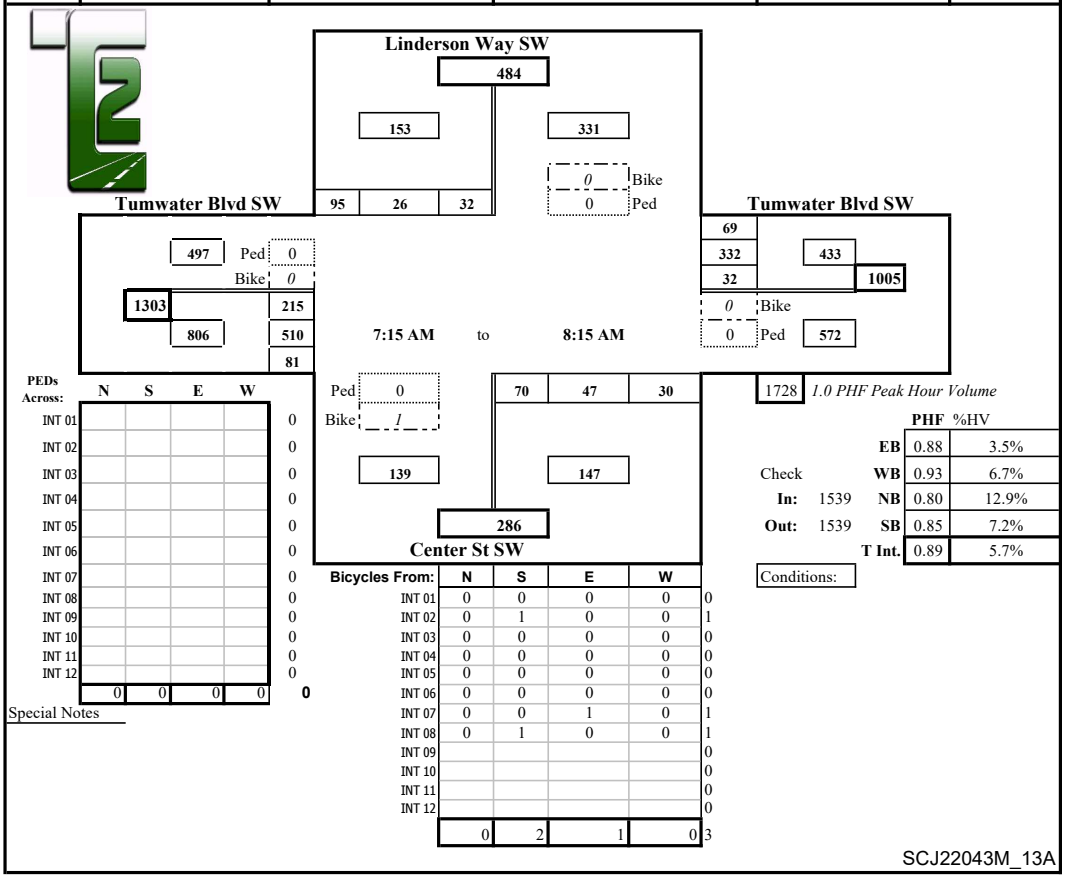
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Linderson Way SW/Center St SW & Tumwater Blvd SW **Date of Count:** Tue 07/26/2022

Location: Tumwater, Washington **Checked By:** Jen

Time Interval	From North on (SB) Linderson Way SW				From South on (NB) Center St SW				From East on (WB) Tumwater Blvd SW				From West on (EB) Tumwater Blvd SW				Interval Total
Ending at	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
7:15 A	4	4	5	17	4	17	12	6	7	3	68	8	4	26	57	18	241
7:30 A	1	6	7	23	7	22	14	10	9	10	83	17	5	55	112	20	379
7:45 A	3	9	7	29	7	19	13	10	5	9	91	15	8	72	134	24	432
8:00 A	1	10	8	25	3	15	10	7	8	9	84	23	8	56	152	21	420
8:15 A	6	7	4	18	2	14	10	3	7	4	74	14	7	32	112	16	308
8:30 A	0	5	7	17	6	22	12	13	5	10	75	8	5	28	91	12	300
8:45 A	3	13	5	15	3	18	10	5	7	8	78	5	10	22	74	14	267
9:00 A	0	6	4	24	5	22	13	11	5	9	81	4	8	19	78	19	290
9:15 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	18	60	47	168	37	149	94	65	53	62	634	94	55	310	810	144	2637
	Peak Hour: 7:15 AM to 8:15 AM																
Total	11	32	26	95	19	70	47	30	29	32	332	69	28	215	510	81	1539
Approach	153				147				433				806				1539
%HV	7.2%				12.9%				6.7%				3.5%				5.7%
PHF	0.85				0.80				0.93				0.88				0.89



PEDs Across:

	N	S	E	W	
INT 01					0
INT 02					0
INT 03					0
INT 04					0
INT 05					0
INT 06					0
INT 07					0
INT 08					0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	0	0	0	0	0

Special Notes

Bicycles From:

	N	S	E	W	
INT 01	0	0	0	0	0
INT 02	0	1	0	0	1
INT 03	0	0	0	0	0
INT 04	0	0	0	0	0
INT 05	0	0	0	0	0
INT 06	0	0	0	0	0
INT 07	0	0	1	0	1
INT 08	0	1	0	0	1
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	0	2	1	0	3

SCJ22043M_13A

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5003s
Site Code : 00005003
Start Date : 3/21/2023
Page No : 1

Groups Printed- Passenger + - Heavy

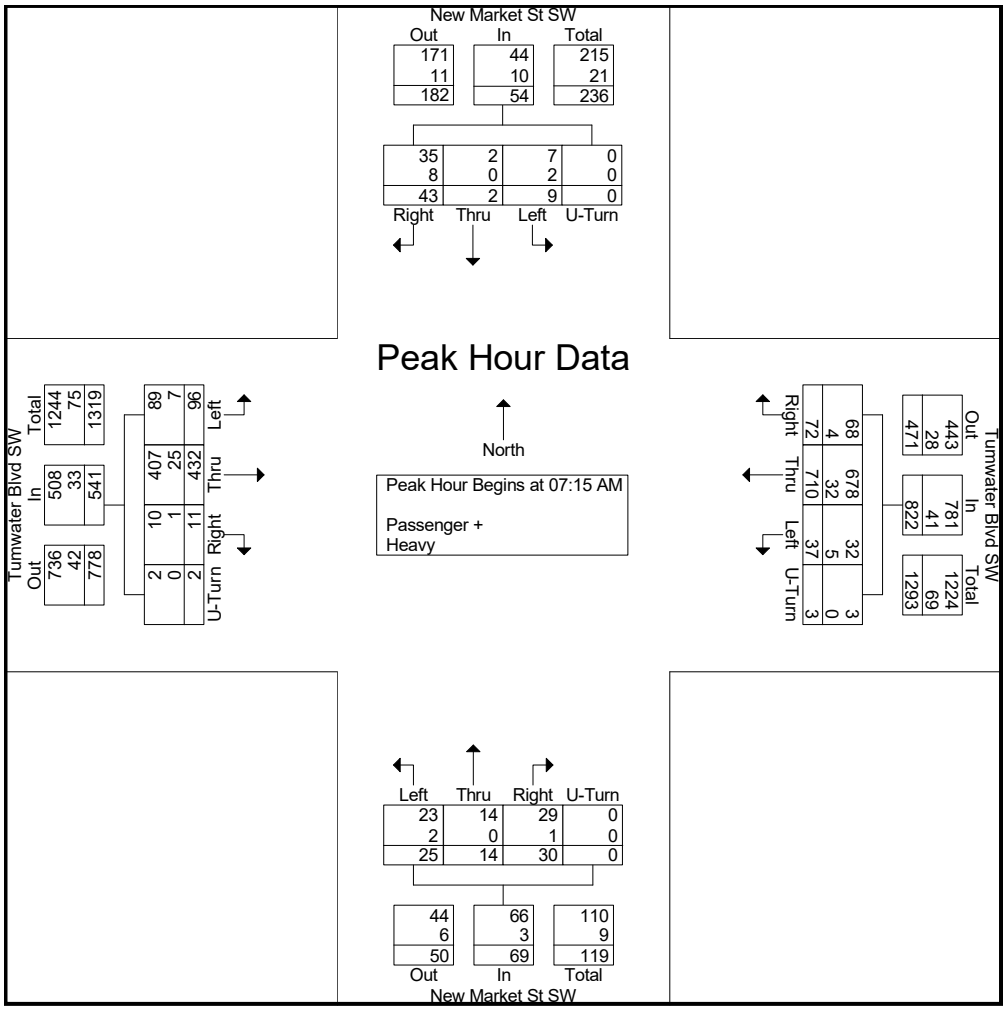
	New Market St SW Southbound					Tumwater Blvd SW Westbound					New Market St SW Northbound					Tumwater Blvd SW Eastbound					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
07:00 AM	2	0	1	0	3	5	97	5	0	107	9	1	4	0	14	5	56	10	1	72	196
07:15 AM	6	0	1	0	7	13	212	14	0	239	4	4	3	0	11	2	85	14	0	101	358
07:30 AM	11	1	3	0	15	26	179	9	2	216	9	5	8	0	22	5	127	35	0	167	420
07:45 AM	14	1	3	0	18	21	180	6	1	208	13	1	13	0	27	2	130	33	1	166	419
Total	33	2	8	0	43	65	668	34	3	770	35	11	28	0	74	14	398	92	2	506	1393
08:00 AM	12	0	2	0	14	12	139	8	0	159	4	4	1	0	9	2	90	14	1	107	289
08:15 AM	8	1	1	0	10	7	125	5	2	139	5	0	2	0	7	4	101	15	0	120	276
08:30 AM	5	0	2	0	7	10	129	12	0	151	2	0	3	0	5	0	91	16	2	109	272
08:45 AM	3	1	4	0	8	8	95	7	0	110	4	1	1	0	6	0	70	14	2	86	210
Total	28	2	9	0	39	37	488	32	2	559	15	5	7	0	27	6	352	59	5	422	1047
Grand Total	61	4	17	0	82	102	1156	66	5	1329	50	16	35	0	101	20	750	151	7	928	2440
Apprch %	74.4	4.9	20.7	0		7.7	87	5	0.4		49.5	15.8	34.7	0		2.2	80.8	16.3	0.8		
Total %	2.5	0.2	0.7	0	3.4	4.2	47.4	2.7	0.2	54.5	2	0.7	1.4	0	4.1	0.8	30.7	6.2	0.3	38	
Passenger +	49	4	14	0	67	97	1091	55	3	1246	47	15	32	0	94	18	703	139	6	866	2273
% Passenger +	80.3	100	82.4	0	81.7	95.1	94.4	83.3	60	93.8	94	93.8	91.4	0	93.1	90	93.7	92.1	85.7	93.3	93.2
Heavy	12	0	3	0	15	5	65	11	2	83	3	1	3	0	7	2	47	12	1	62	167
% Heavy	19.7	0	17.6	0	18.3	4.9	5.6	16.7	40	6.2	6	6.2	8.6	0	6.9	10	6.3	7.9	14.3	6.7	6.8

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5003s
Site Code : 00005003
Start Date : 3/21/2023
Page No : 2

	New Market St SW Southbound					Tumwater Blvd SW Westbound					New Market St SW Northbound					Tumwater Blvd SW Eastbound					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	6	0	1	0	7	13	**212**	**14**	0	**239**	4	4	3	0	11	2	85	14	0	101	358
07:30 AM	11	**1**	**3**	0	15	**26**	179	9	**2**	216	9	**5**	8	0	22	**5**	127	**35**	0	**167**	**420**
07:45 AM	**14**	1	3	0	**18**	21	180	6	1	208	**13**	1	**13**	0	**27**	2	**130**	33	**1**	166	419
08:00 AM	12	0	2	0	14	12	139	8	0	159	4	4	1	0	9	2	90	14	1	107	289
Total Volume	43	2	9	0	54	72	710	37	3	822	30	14	25	0	69	11	432	96	2	541	1486
% App. Total	79.6	3.7	16.7	0		8.8	86.4	4.5	0.4		43.5	20.3	36.2	0		2	79.9	17.7	0.4		
PHF	.768	.500	.750	.000	.750	.692	.837	.661	.375	.860	.577	.700	.481	.000	.639	.550	.831	.686	.500	.810	.885
Passenger +	35	2	7	0	44	68	678	32	3	781	29	14	23	0	66	10	407	89	2	508	1399
% Passenger +	81.4	100	77.8	0	81.5	94.4	95.5	86.5	100	95.0	96.7	100	92.0	0	95.7	90.9	94.2	92.7	100	93.9	94.1
Heavy	8	0	2	0	10	4	32	5	0	41	1	0	2	0	3	1	25	7	0	33	87
% Heavy	18.6	0	22.2	0	18.5	5.6	4.5	13.5	0	5.0	3.3	0	8.0	0	4.3	9.1	5.8	7.3	0	6.1	5.9



Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5003q
Site Code : 00005003
Start Date : 3/21/2023
Page No : 1

Groups Printed- Passenger + - Heavy

	New Market St SW Southbound				73rd Ave SW Westbound				New Market St SW Northbound				73rd Ave SW Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	7	5	12	0	0	0	0	13
07:15 AM	0	7	0	7	0	0	0	0	0	24	15	39	0	0	0	0	46
07:30 AM	0	21	0	21	0	0	0	0	0	59	18	77	2	0	0	2	100
07:45 AM	0	20	0	20	0	0	0	0	0	51	20	71	6	0	0	6	97
Total	0	49	0	49	0	0	0	0	0	141	58	199	8	0	0	8	256
08:00 AM	2	10	0	12	0	0	0	0	0	27	8	35	2	0	1	3	50
08:15 AM	0	6	0	6	0	0	0	0	0	7	9	16	0	0	0	0	22
08:30 AM	0	5	0	5	0	0	0	0	0	3	21	24	1	0	2	3	32
08:45 AM	1	1	0	2	0	0	0	0	0	5	8	13	5	0	0	5	20
Total	3	22	0	25	0	0	0	0	0	42	46	88	8	0	3	11	124
Grand Total	3	71	0	74	0	0	0	0	0	183	104	287	16	0	3	19	380
Apprch %	4.1	95.9	0		0	0	0		0	63.8	36.2		84.2	0	15.8		
Total %	0.8	18.7	0	19.5	0	0	0	0	0	48.2	27.4	75.5	4.2	0	0.8	5	
Passenger +	3	62	0	65	0	0	0	0	0	171	103	274	14	0	3	17	356
% Passenger +	100	87.3	0	87.8	0	0	0	0	0	93.4	99	95.5	87.5	0	100	89.5	93.7
Heavy	0	9	0	9	0	0	0	0	0	12	1	13	2	0	0	2	24
% Heavy	0	12.7	0	12.2	0	0	0	0	0	6.6	1	4.5	12.5	0	0	10.5	6.3

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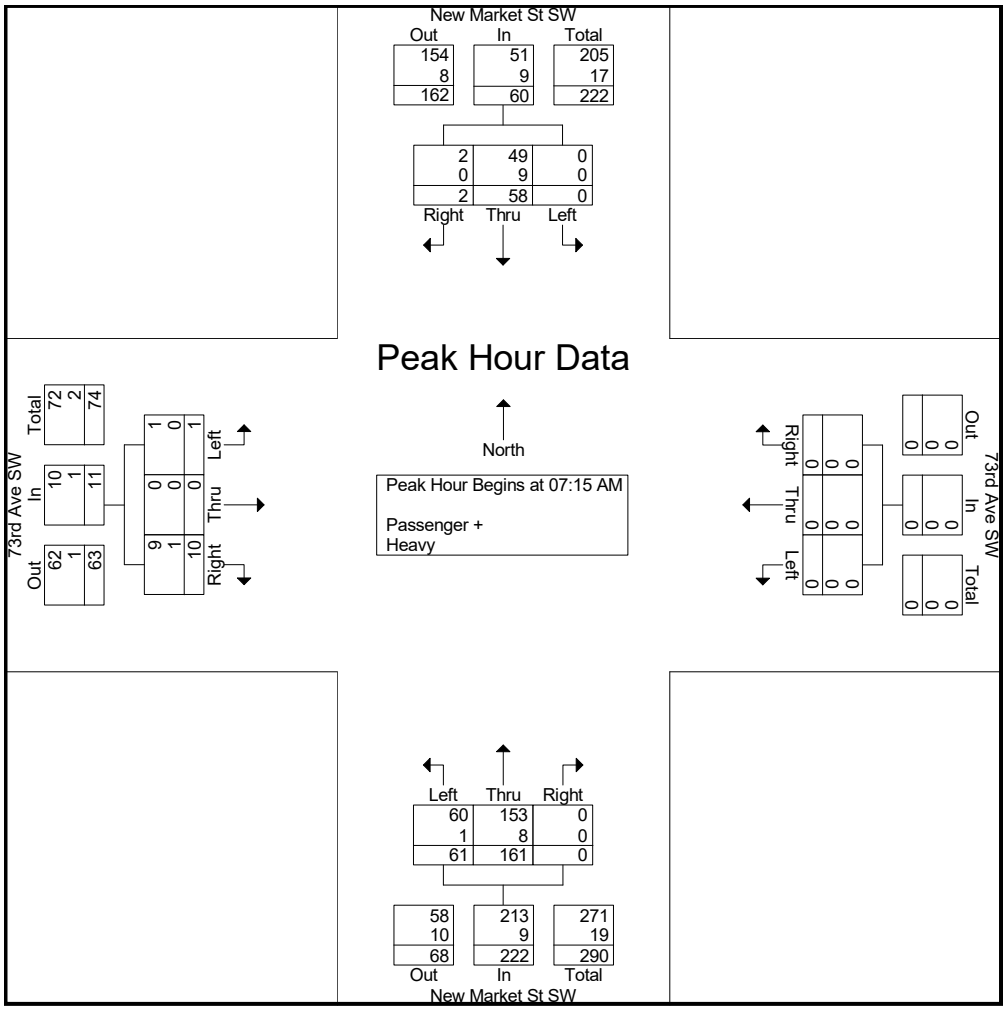
PO Box 397 Puyallup, WA 98371

File Name : 5003q
Site Code : 00005003
Start Date : 3/21/2023
Page No : 2

	New Market St SW Southbound				73rd Ave SW Westbound				New Market St SW Northbound				73rd Ave SW Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	7	0	7	0	0	0	0	0	24	15	39	0	0	0	0	46
07:30 AM	0	**21**	0	**21**	0	0	0	0	0	**59**	18	**77**	2	0	0	2	**100**
07:45 AM	0	20	0	20	0	0	0	0	0	51	**20**	71	**6**	0	0	**6**	97
08:00 AM	**2**	10	0	12	0	0	0	0	0	27	8	35	2	0	**1**	3	50
Total Volume	2	58	0	60	0	0	0	0	0	161	61	222	10	0	1	11	293
% App. Total	3.3	96.7	0		0	0	0		0	72.5	27.5		90.9	0	9.1		
PHF	.250	.690	.000	.714	.000	.000	.000	.000	.000	.682	.763	.721	.417	.000	.250	.458	.733
Passenger +	2	49	0	51	0	0	0	0	0	153	60	213	9	0	1	10	274
% Passenger +	100	84.5	0	85.0	0	0	0	0	0	95.0	98.4	95.9	90.0	0	100	90.9	93.5
Heavy	0	9	0	9	0	0	0	0	0	8	1	9	1	0	0	1	19
% Heavy	0	15.5	0	15.0	0	0	0	0	0	5.0	1.6	4.1	10.0	0	0	9.1	6.5



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PO Box 397 Puyallup, WA 98371

File Name : 5003o
Site Code : 00005003
Start Date : 3/21/2023
Page No : 1

Groups Printed- Passenger + - Heavy

	Israel Rd SW Westbound			New Market St SW Northbound			Israel Rd SW Eastbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
07:00 AM	84	1	85	0	3	3	3	34	37	125
07:15 AM	161	0	161	6	2	8	2	49	51	220
07:30 AM	178	0	178	8	0	8	3	78	81	267
07:45 AM	87	2	89	2	3	5	3	93	96	190
Total	510	3	513	16	8	24	11	254	265	802
08:00 AM	57	1	58	5	1	6	6	65	71	135
08:15 AM	75	5	80	2	5	7	4	48	52	139
08:30 AM	69	6	75	3	3	6	3	48	51	132
08:45 AM	90	2	92	4	1	5	5	39	44	141
Total	291	14	305	14	10	24	18	200	218	547
Grand Total	801	17	818	30	18	48	29	454	483	1349
Apprch %	97.9	2.1		62.5	37.5		6	94		
Total %	59.4	1.3	60.6	2.2	1.3	3.6	2.1	33.7	35.8	
Passenger +	756	17	773	28	17	45	29	444	473	1291
% Passenger +	94.4	100	94.5	93.3	94.4	93.8	100	97.8	97.9	95.7
Heavy	45	0	45	2	1	3	0	10	10	58
% Heavy	5.6	0	5.5	6.7	5.6	6.2	0	2.2	2.1	4.3

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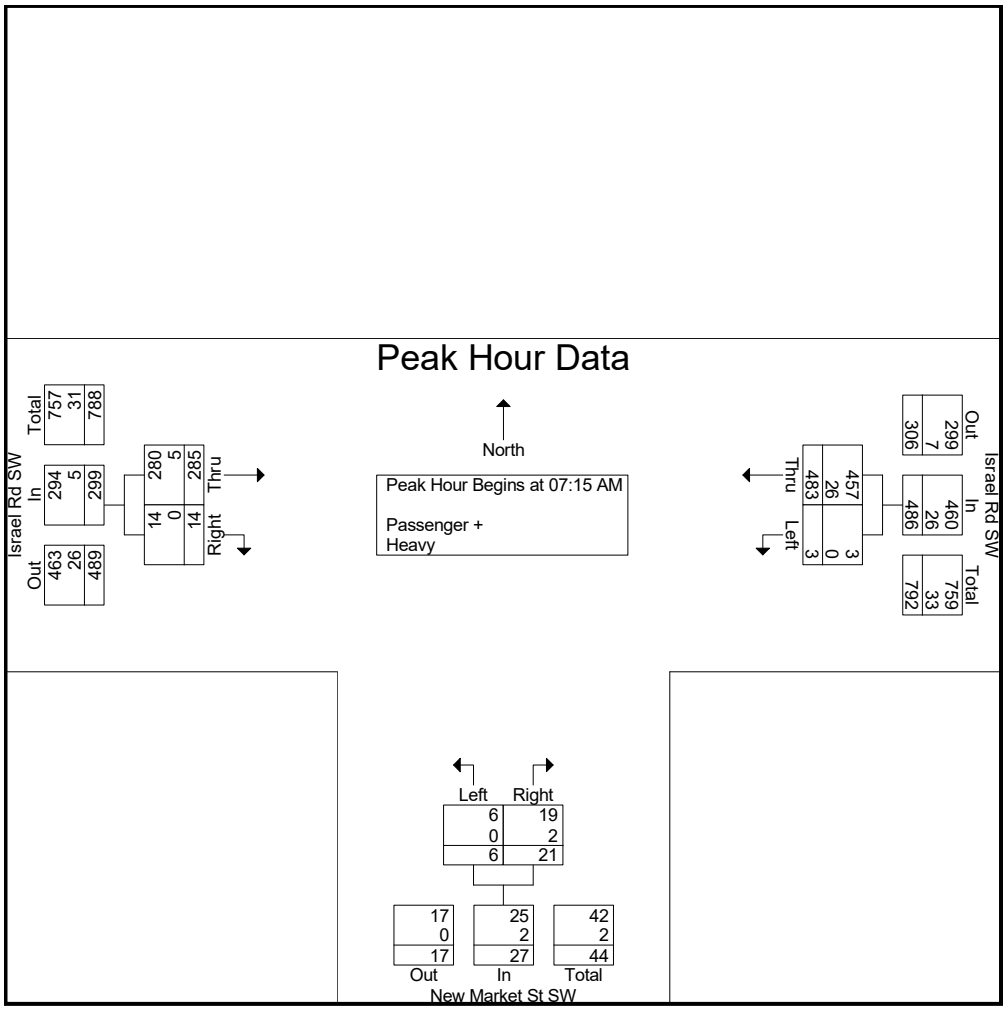
PO Box 397 Puyallup, WA 98371

File Name : 5003o
Site Code : 00005003
Start Date : 3/21/2023
Page No : 2

	Israel Rd SW Westbound			New Market St SW Northbound			Israel Rd SW Eastbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	161	0	161	6	2	**8**	2	49	51	220
07:30 AM	**178**	0	**178**	**8**	0	8	3	78	81	**267**
07:45 AM	87	**2**	89	2	**3**	5	3	**93**	**96**	190
08:00 AM	57	1	58	5	1	6	**6**	65	71	135
Total Volume	483	3	486	21	6	27	14	285	299	812
% App. Total	99.4	0.6		77.8	22.2		4.7	95.3		
PHF	.678	.375	.683	.656	.500	.844	.583	.766	.779	.760
Passenger +	457	3	460	19	6	25	14	280	294	779
% Passenger +	94.6	100	94.7	90.5	100	92.6	100	98.2	98.3	95.9
Heavy	26	0	26	2	0	2	0	5	5	33
% Heavy	5.4	0	5.3	9.5	0	7.4	0	1.8	1.7	4.1



SCJ ALLIANCE
CONSULTING SERVICES

The Belmont Flats

AM Peak Hour Volumes

Covid Adjustment	30%
Growth Rate:	4%

Intersection	Movement		Existing 2022 Volumes	Covid Adjustments	Adjusted 2022 Volumes	Background 2024 Growth	Total Pipeline Volumes	Yorkshire Pipeline Volume	Baseline 2024 Volumes	Site Generated Pass-By	Site Generated Primary	Site Generated Total	Projected 2024 Volumes
		L	39	12	51	4	0	3	58	0	4	4	62
	EB	T	169	51	220	18	1	53	292	0	18	18	310
		R	49	15	64	5	10	20	99	0	16	16	115
4		L	93	28	121	10	1	0	132	0	0	0	132
11th Ave/Linderson Way	WB	T	148	44	192	15	2	18	227	0	8	8	235
Israel Rd		R	18	5	23	2	0	0	25	0	0	0	25
		L	43	13	56	4	4	7	71	0	7	7	78
TMC Date: 07/26/2022	NB	T	44	13	57	5	3	0	65	0	0	0	65
		R	61	18	79	6	1	0	86	0	0	0	86
7:15 - 8:15		L	9	3	12	1	0	0	13	0	0	0	13
PHF: 0.78	SB	T	35	11	46	4	10	0	60	0	0	0	60
		R	23	7	30	2	0	1	33	0	2	2	35
			731		950				1,160				1,215
		L	0	0	0	0	0	0	0	0	0	0	0
	EB	T	304	91	395	32	5	136	568	0	108	108	676
		R	40	12	52	4	1	40	97	0	25	25	122
10		L	134	40	174	14	5	0	193	0	0	0	193
I-5 SB Ramps	WB	T	97	29	126	10	2	18	156	0	24	24	180
Tumwater Blvd		R	0	0	0	0	0	0	0	0	0	0	0
		L	0	0	0	0	0	0	0	0	0	0	0
TMC Date: 07/26/2022	NB	T	0	0	0	0	0	0	0	0	0	0	0
		R	0	0	0	0	0	0	0	0	0	0	0
7:15 - 8:15		L	474	1,142	1,616	129	55	0	1,800	0	0	0	1,800
PHF: 0.86	SB	T	3	1	4	0	0	0	4	0	0	0	4
		R	89	27	116	9	0	42	167	0	32	32	199
			1,141		2,483				2,985				3,174
		L	219	266	485	39	0	110	634	0	74	74	708
	EB	T	550	965	1,515	121	60	26	1,722	0	34	34	1,756
		R	0	0	0	0	0	0	0	0	0	0	0
11		L	0	0	0	0	0	0	0	0	0	0	0
I-5 NB Ramps	WB	T	170	51	221	18	7	9	255	0	14	14	269
Tumwater Blvd		R	322	247	569	45	19	0	633	0	0	0	633
		L	50	15	65	5	1	9	80	0	10	10	90
TMC Date: 07/26/2022	NB	T	1	0	1	0	0	0	1	0	0	0	1
		R	246	224	470	38	15	0	523	0	0	0	523
7:15 - 8:15		L	0	0	0	0	0	0	0	0	0	0	0
PHF: 0.87	SB	T	0	0	0	0	0	0	0	0	0	0	0
		R	0	0	0	0	0	0	0	0	0	0	0
			1,558		3,325				3,847				3,979
		L	215	1,015	1,230	98	74	0	1,402	0	0	0	1,402
	EB	T	510	153	663	53	0	26	742	0	34	34	776
		R	81	24	105	8	0	0	113	0	0	0	113
12		L	32	10	42	3	0	0	45	0	0	0	45
Linderson Way/Center St	WB	T	332	100	432	35	0	9	476	0	14	14	490
Tumwater Blvd		R	69	21	90	7	34	0	131	0	0	0	131
		L	70	21	91	7	0	0	98	0	0	0	98
TMC Date: 07/26/2022	NB	T	47	14	61	5	5	0	71	0	0	0	71
		R	30	9	39	3	0	0	42	0	0	0	42
7:15 - 8:15		L	32	10	42	3	11	0	56	0	0	0	56
PHF: 0.89	SB	T	26	8	34	3	2	0	39	0	0	0	39
		R	95	29	124	10	24	0	158	0	0	0	158
			1,539		2,951				3,371				3,419

NEW MARKET APARTMENTS
TRAFFIC IMPACT ANALYSIS

APPENDIX: PM PEAK HOUR COUNT DATA

Prepared for: **SCJ Alliance**

Traffic Count Consultants, Inc.

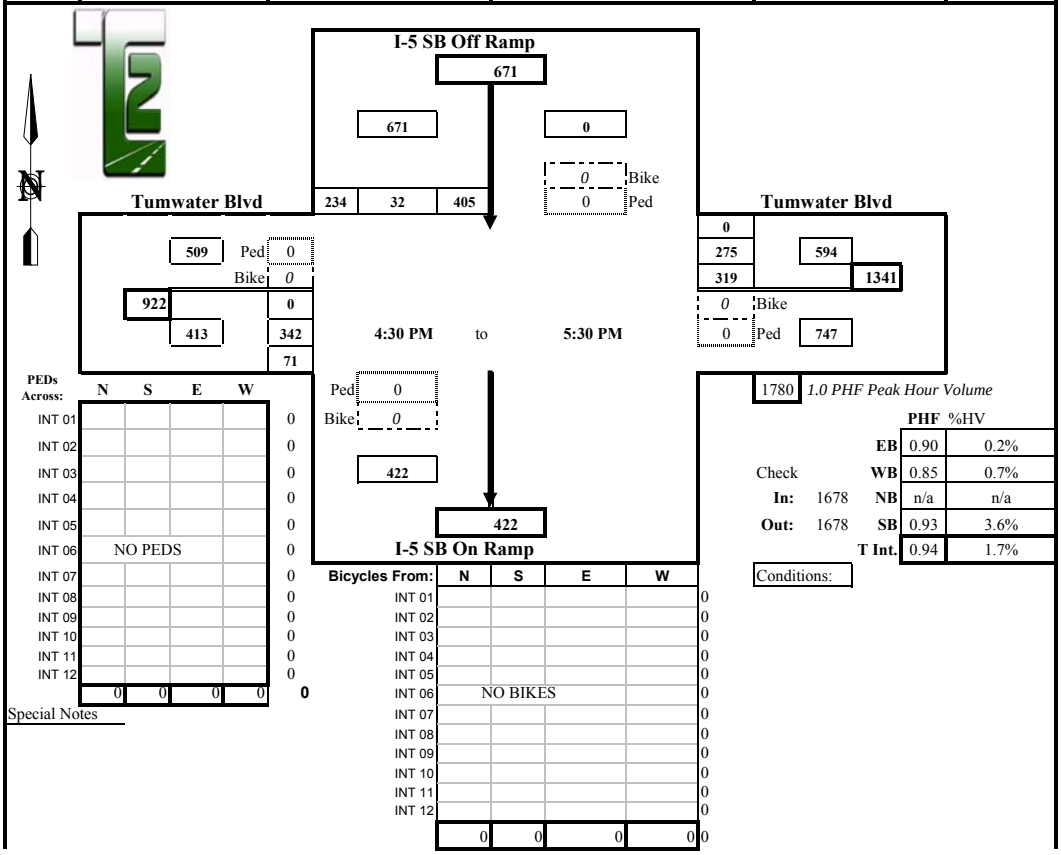
Phone: (253) 926-6009 FAX: (253) 922-7211 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: I-5 SB Ramps & Tumwater Blvd **Date of Count:** Wed 6/24/2015

Location: Tumwater, Washington **Checked By:** Jess

Time Interval Ending at	From North (SB) I-5 SB Off Ramp				From South on (NB) I-5 SB On Ramp				From East on (WB) Tumwater Blvd				From West on (EB) Tumwater Blvd				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	5	119	9	50	0	0	0	0	1	69	53	0	1	0	60	19	379
4:30 P	5	96	6	46	0	0	0	0	0	60	60	0	0	0	79	12	359
4:45 P	3	101	6	60	0	0	0	0	2	77	89	0	0	0	92	11	436
5:00 P	8	102	10	46	0	0	0	0	0	62	58	0	1	0	90	15	383
5:15 P	7	104	8	68	0	0	0	0	0	112	63	0	0	0	64	26	445
5:30 P	6	98	8	60	0	0	0	0	2	68	65	0	0	0	96	19	414
5:45 P	3	94	3	42	0	0	0	0	0	58	66	0	0	0	70	10	343
6:00 P	7	83	9	51	0	0	0	0	0	35	56	0	2	0	85	18	337
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	44	797	59	423	0	0	0	0	5	541	510	0	4	0	636	130	3096
Peak Hour: 4:30 PM to 5:30 PM																	
Total	24	405	32	234	0	0	0	0	4	319	275	0	1	0	342	71	1678
Approach	671				0				594				413				1678
%HV	3.6%				n/a				0.7%				0.2%				1.7%
PHF	0.93				n/a				0.85				0.90				0.94



PEDs Across:

	N	S	E	W	
INT 01					0
INT 02					0
INT 03					0
INT 04					0
INT 05					0
INT 06	NO PEDS				0
INT 07					0
INT 08					0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	0	0	0	0	**0**

Bicycles From:

	N	S	E	W	
INT 01					0
INT 02					0
INT 03					0
INT 04					0
INT 05					0
INT 06	NO BIKES				0
INT 07					0
INT 08					0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	0	0	0	0	0

1780 *1.0 PHF Peak Hour Volume*

		PHF	%HV
	EB	0.90	0.2%
Check	WB	0.85	0.7%
In: 1678	NB	n/a	n/a
Out: 1678	SB	0.93	3.6%
	T Int.	0.94	1.7%

Conditions:

Special Notes

Prepared for: **SCJ Alliance**

Traffic Count Consultants, Inc.

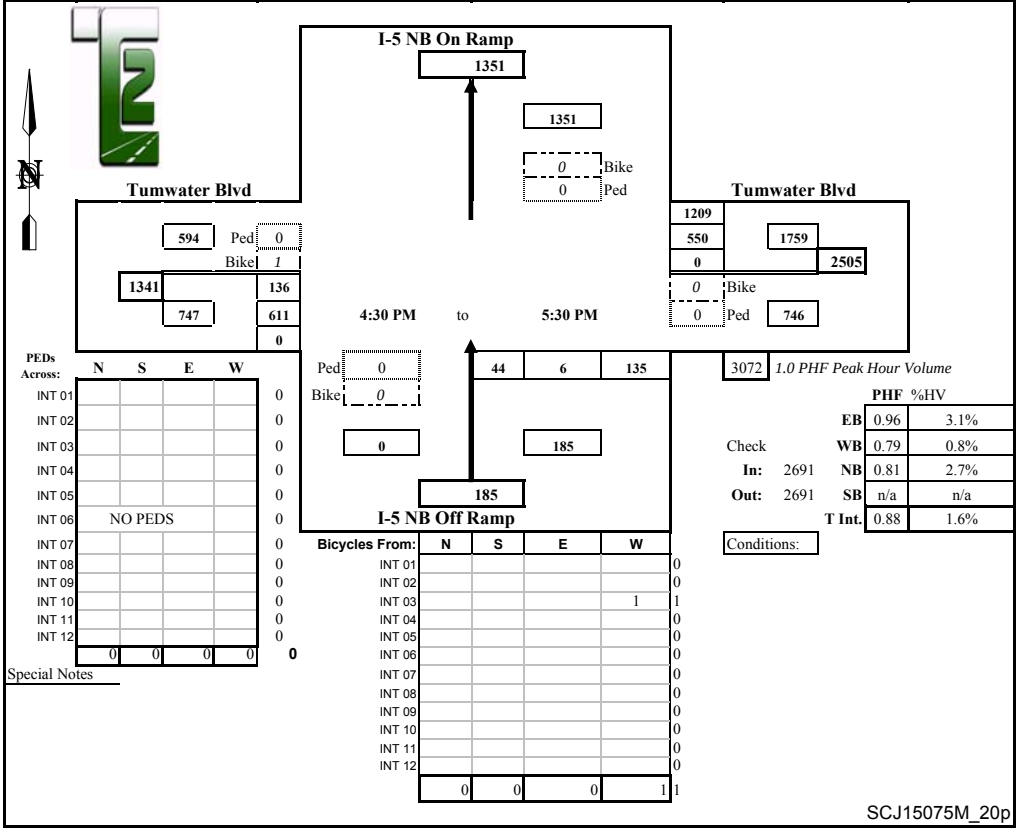
Phone: (253) 926-6009 FAX: (253) 922-7211 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: I-5 NB Ramps & Tumwater Blvd **Date of Count:** Wed 6/24/2015

Location: Tumwater, Washington **Checked By:** Jess

Time Interval	From North on (SB) I-5 NB On Ramp				From South on (NB) I-5 NB Off Ramp				From East on (WB) Tumwater Blvd				From West on (EB) Tumwater Blvd				Interval Total
Ending at	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	0	0	0	0	1	10	1	21	3	0	112	253	7	19	161	0	577
4:30 P	0	0	0	0	4	13	5	23	3	0	107	197	4	38	137	0	520
4:45 P	0	0	0	0	1	16	1	34	6	0	150	359	1	44	149	0	753
5:00 P	0	0	0	0	2	6	2	29	3	0	114	252	10	28	164	0	595
5:15 P	0	0	0	0	1	5	2	33	1	0	177	383	6	25	143	0	768
5:30 P	0	0	0	0	1	17	1	39	4	0	109	215	6	39	155	0	575
5:45 P	0	0	0	0	1	9	2	31	4	0	116	191	2	40	134	0	523
6:00 P	0	0	0	0	1	12	1	25	2	0	79	131	9	41	129	0	418
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	0	0	0	12	88	15	235	26	0	964	1981	45	274	1172	0	4729
Peak Hour: 4:30 PM to 5:30 PM																	
Total	0	0	0	0	5	44	6	135	14	0	550	1209	23	136	611	0	2691
Approach	0				185				1759				747				2691
%HV	n/a				2.7%				0.8%				3.1%				1.6%
PHF	n/a				0.81				0.79				0.96				0.88



Special Notes

SCJ15075M_20p

Prepared for: **SCJ Alliance**

Traffic Count Consultants, Inc.

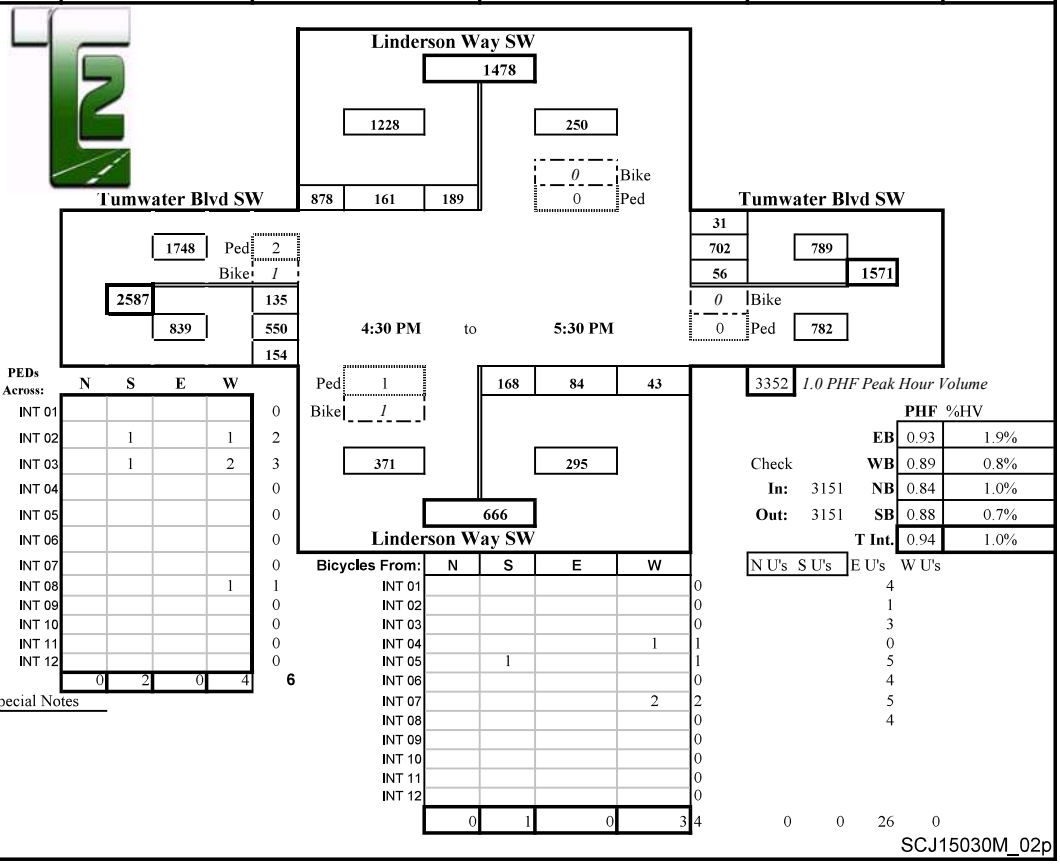
Phone: (253) 926-6009 FAX: (253) 922-7211 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Linderson Way SW & Tumwater Blvd SW **Date of Count:** Tues 3/03/2015

Location: Tumwater, Washington **Checked By:** Jess

Time Interval	From North on (SB) Linderson Way SW				From South on (NB) Linderson Way SW				From East on (WB) Tumwater Blvd SW				From West on (EB) Tumwater Blvd SW				Interval Total
Ending at	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	6	41	27	138	0	34	9	13	1	11	164	12	9	28	133	30	640
4:30 P	2	32	18	125	1	19	11	11	4	5	128	7	13	39	129	47	571
4:45 P	4	55	27	268	2	49	20	13	0	16	185	9	4	23	131	29	825
5:00 P	1	39	38	171	1	48	28	12	2	10	141	8	6	41	138	46	720
5:15 P	1	61	27	261	0	42	13	8	2	15	196	10	3	36	128	41	838
5:30 P	2	34	69	178	0	29	23	10	2	15	180	4	3	35	153	38	768
5:45 P	2	40	23	136	3	48	28	14	0	13	170	8	1	21	127	23	651
6:00 P	1	16	13	63	1	21	11	12	0	12	119	3	3	24	128	27	449
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	19	318	242	1340	8	290	143	93	11	97	1283	61	42	247	1067	281	5462
Peak Hour: 4:30 PM to 5:30 PM																	
Total	8	189	161	878	3	168	84	43	6	56	702	31	16	135	550	154	3151
Approach	1228				295				789				839				3151
%HV	0.7%				1.0%				0.8%				1.9%				1.0%
PHF	0.88				0.84				0.89				0.93				0.94



PEDs Across:	N	S	E	W	
INT 01					0
INT 02		1		1	2
INT 03		1		2	3
INT 04					0
INT 05					0
INT 06					0
INT 07					0
INT 08				1	1
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	0	2	0	4	6

Special Notes

Bicycles From:	N	S	E	W	
INT 01					0
INT 02					0
INT 03					0
INT 04				1	1
INT 05		1			1
INT 06					0
INT 07				2	2
INT 08					0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	0	1	0	3	4

	PHF	%HV
EB	0.93	1.9%
WB	0.89	0.8%
NB	0.84	1.0%
SB	0.88	0.7%
T Int.	0.94	1.0%

Check In: 3151 Out: 3151

N U's	S U's	E U's	W U's
		4	
		1	
		3	
		0	
		5	
		4	
		5	
		4	
0	0	26	0

SCJ15030M_02p

Heath & Associates

PO Box 397 Puyallup, WA 98371

Roundabout Configuration

File Name : 5003t
Site Code : 00005003
Start Date : 3/21/2023
Page No : 1

Groups Printed- Passenger + - Heavy

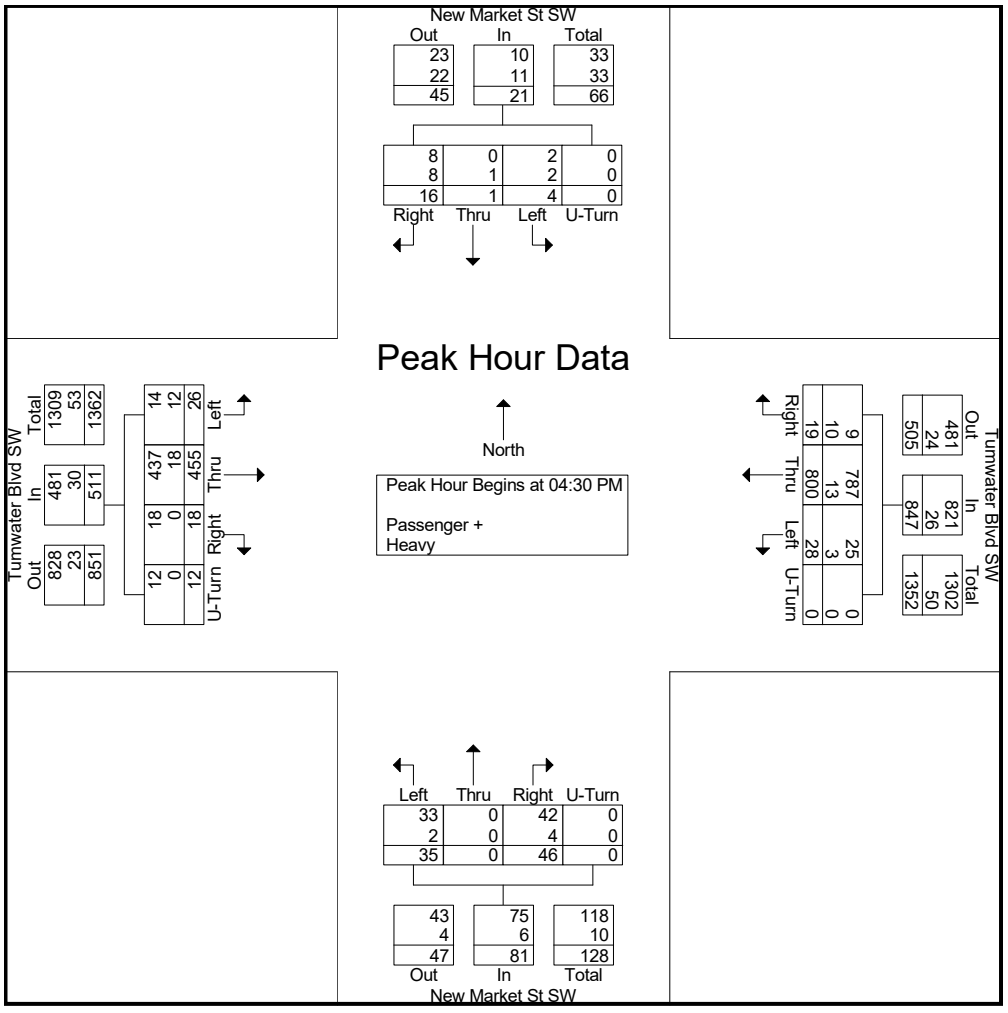
	New Market St SW Southbound					Tumwater Blvd SW Westbound					New Market St SW Northbound					Tumwater Blvd SW Eastbound					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
04:00 PM	1	0	0	0	1	2	137	36	0	175	7	0	8	0	15	1	132	3	1	137	328
04:15 PM	2	0	0	0	2	2	153	3	0	158	5	0	4	0	9	0	160	4	3	167	336
04:30 PM	2	0	1	0	3	2	194	1	0	197	11	0	12	0	23	3	125	5	9	142	365
04:45 PM	2	0	2	0	4	10	158	4	0	172	11	0	4	0	15	3	121	7	1	132	323
Total	7	0	3	0	10	16	642	44	0	702	34	0	28	0	62	7	538	19	14	578	1352
05:00 PM	6	1	1	0	8	3	253	8	0	264	14	0	8	0	22	3	96	12	0	111	405
05:15 PM	6	0	0	0	6	4	195	15	0	214	10	0	11	0	21	9	113	2	2	126	367
05:30 PM	3	0	4	0	7	2	170	6	0	178	3	1	7	0	11	10	111	3	0	124	320
05:45 PM	4	0	0	0	4	5	144	5	2	156	7	1	4	0	12	16	90	5	0	111	283
Total	19	1	5	0	25	14	762	34	2	812	34	2	30	0	66	38	410	22	2	472	1375
Grand Total	26	1	8	0	35	30	1404	78	2	1514	68	2	58	0	128	45	948	41	16	1050	2727
Apprch %	74.3	2.9	22.9	0		2	92.7	5.2	0.1		53.1	1.6	45.3	0		4.3	90.3	3.9	1.5		
Total %	1	0	0.3	0	1.3	1.1	51.5	2.9	0.1	55.5	2.5	0.1	2.1	0	4.7	1.7	34.8	1.5	0.6	38.5	
Passenger +	18	0	6	0	24	13	1380	71	2	1466	62	2	56	0	120	43	910	28	16	997	2607
% Passenger +	69.2	0	75	0	68.6	43.3	98.3	91	100	96.8	91.2	100	96.6	0	93.8	95.6	96	68.3	100	95	95.6
Heavy	8	1	2	0	11	17	24	7	0	48	6	0	2	0	8	2	38	13	0	53	120
% Heavy	30.8	100	25	0	31.4	56.7	1.7	9	0	3.2	8.8	0	3.4	0	6.2	4.4	4	31.7	0	5	4.4

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5003t
Site Code : 00005003
Start Date : 3/21/2023
Page No : 2

	New Market St SW Southbound					Tumwater Blvd SW Westbound					New Market St SW Northbound					Tumwater Blvd SW Eastbound					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	2	0	1	0	3	2	194	1	0	197	11	0	**12**	0	**23**	3	**125**	5	**9**	**142**	365
04:45 PM	2	0	**2**	0	4	**10**	158	4	0	172	11	0	4	0	15	3	121	7	1	132	323
05:00 PM	**6**	**1**	1	0	**8**	3	**253**	8	0	**264**	**14**	0	8	0	22	3	96	**12**	0	111	**405**
05:15 PM	6	0	0	0	6	4	195	**15**	0	214	10	0	11	0	21	**9**	113	2	2	126	367
Total Volume	16	1	4	0	21	19	800	28	0	847	46	0	35	0	81	18	455	26	12	511	1460
% App. Total	76.2	4.8	19	0		2.2	94.5	3.3	0		56.8	0	43.2	0		3.5	89	5.1	2.3		
PHF	.667	.250	.500	.000	.656	.475	.791	.467	.000	.802	.821	.000	.729	.000	.880	.500	.910	.542	.333	.900	.901
Passenger +	8	0	2	0	10	9	787	25	0	821	42	0	33	0	75	18	437	14	12	481	1387
% Passenger +	50.0	0	50.0	0	47.6	47.4	98.4	89.3	0	96.9	91.3	0	94.3	0	92.6	100	96.0	53.8	100	94.1	95.0
Heavy	8	1	2	0	11	10	13	3	0	26	4	0	2	0	6	0	18	12	0	30	73
% Heavy	50.0	100	50.0	0	52.4	52.6	1.6	10.7	0	3.1	8.7	0	5.7	0	7.4	0	4.0	46.2	0	5.9	5.0



Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5003r
Site Code : 00005003
Start Date : 3/21/2023
Page No : 1

Groups Printed- Passenger + - Heavy

	New Market St SW Southbound				73rd Ave SW Westbound				New Market St SW Northbound				73rd Ave SW Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	1	0	0	1	3
04:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	2
04:30 PM	0	2	0	2	0	0	0	0	0	0	2	2	0	0	0	0	4
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total	0	3	0	3	0	0	0	0	0	1	4	5	2	0	0	2	10
05:00 PM	0	1	0	1	0	0	0	0	0	1	1	2	4	0	0	4	7
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	3	0	0	3	4
Total	0	1	0	1	0	0	0	0	0	1	2	3	10	0	0	10	14
Grand Total	0	4	0	4	0	0	0	0	0	2	6	8	12	0	0	12	24
Apprch %	0	100	0		0	0	0		0	25	75		100	0	0		
Total %	0	16.7	0	16.7	0	0	0	0	0	8.3	25	33.3	50	0	0	50	
Passenger +	0	4	0	4	0	0	0	0	0	2	5	7	11	0	0	11	22
% Passenger +	0	100	0	100	0	0	0	0	0	100	83.3	87.5	91.7	0	0	91.7	91.7
Heavy	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	2
% Heavy	0	0	0	0	0	0	0	0	0	0	16.7	12.5	8.3	0	0	8.3	8.3

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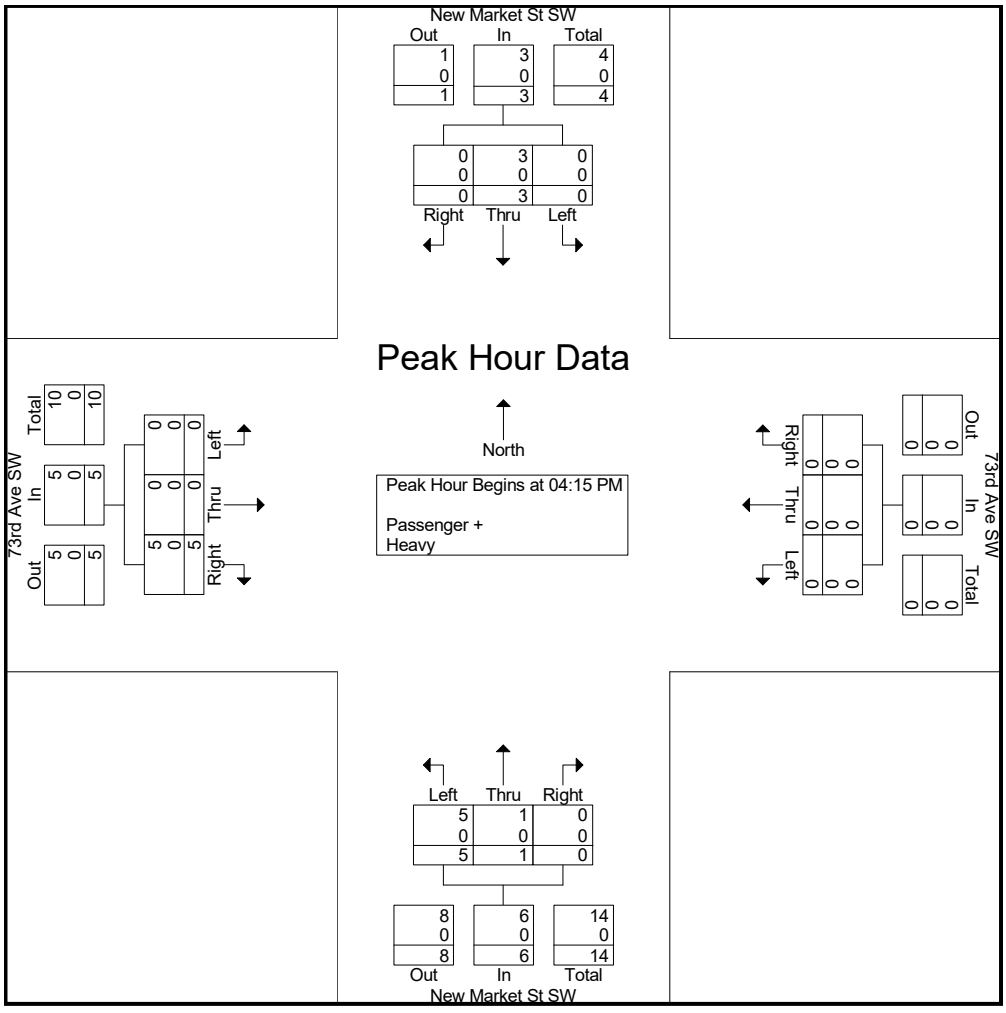
PO Box 397 Puyallup, WA 98371

File Name : 5003r
Site Code : 00005003
Start Date : 3/21/2023
Page No : 2

	New Market St SW Southbound				73rd Ave SW Westbound				New Market St SW Northbound				73rd Ave SW Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	2
04:30 PM	0	**2**	0	**2**	0	0	0	0	0	0	**2**	**2**	0	0	0	0	4
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
05:00 PM	0	1	0	1	0	0	0	0	0	**1**	1	2	**4**	0	0	**4**	**7**
Total Volume	0	3	0	3	0	0	0	0	0	1	5	6	5	0	0	5	14
% App. Total	0	100	0		0	0	0		0	16.7	83.3		100	0	0		
PHF	.000	.375	.000	.375	.000	.000	.000	.000	.000	.250	.625	.750	.313	.000	.000	.313	.500
Passenger +	0	3	0	3	0	0	0	0	0	1	5	6	5	0	0	5	14
% Passenger +	0	100	0	100	0	0	0	0	0	100	100	100	100	0	0	100	100
Heavy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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PO Box 397 Puyallup, WA 98371

File Name : 5003p
Site Code : 00005003
Start Date : 3/21/2023
Page No : 1

Groups Printed- Passenger + - Heavy

	Israel Rd SW Westbound			New Market St SW Northbound			Israel Rd SW Eastbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
04:00 PM	136	5	141	6	6	12	6	84	90	243
04:15 PM	140	4	144	10	6	16	9	112	121	281
04:30 PM	106	4	110	4	4	8	7	94	101	219
04:45 PM	122	1	123	4	6	10	6	108	114	247
Total	504	14	518	24	22	46	28	398	426	990
05:00 PM	162	4	166	8	10	18	7	120	127	311
05:15 PM	114	3	117	3	6	9	3	103	106	232
05:30 PM	106	4	110	9	18	27	3	83	86	223
05:45 PM	111	2	113	2	8	10	3	96	99	222
Total	493	13	506	22	42	64	16	402	418	988
Grand Total	997	27	1024	46	64	110	44	800	844	1978
Apprch %	97.4	2.6		41.8	58.2		5.2	94.8		
Total %	50.4	1.4	51.8	2.3	3.2	5.6	2.2	40.4	42.7	
Passenger +	986	27	1013	46	64	110	42	799	841	1964
% Passenger +	98.9	100	98.9	100	100	100	95.5	99.9	99.6	99.3
Heavy	11	0	11	0	0	0	2	1	3	14
% Heavy	1.1	0	1.1	0	0	0	4.5	0.1	0.4	0.7

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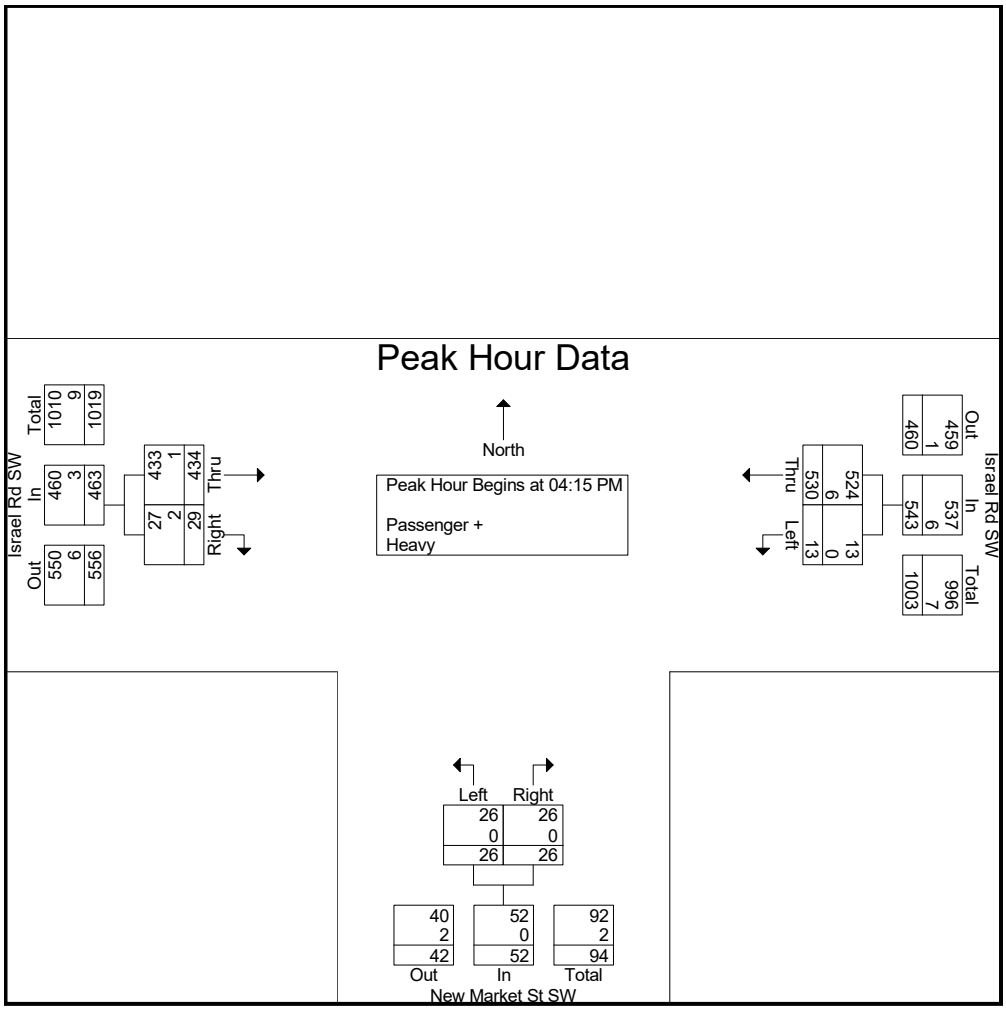
PO Box 397 Puyallup, WA 98371

File Name : 5003p
Site Code : 00005003
Start Date : 3/21/2023
Page No : 2

	Israel Rd SW Westbound			New Market St SW Northbound			Israel Rd SW Eastbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	140	**4**	144	**10**	6	16	**9**	112	121	281
04:30 PM	106	4	110	4	4	8	7	94	101	219
04:45 PM	122	1	123	4	6	10	6	108	114	247
05:00 PM	**162**	4	**166**	8	**10**	**18**	7	**120**	**127**	**311**
Total Volume	530	13	543	26	26	52	29	434	463	1058
% App. Total	97.6	2.4		50	50		6.3	93.7		
PHF	.818	.813	.818	.650	.650	.722	.806	.904	.911	.850
Passenger +	524	13	537	26	26	52	27	433	460	1049
% Passenger +	98.9	100	98.9	100	100	100	93.1	99.8	99.4	99.1
Heavy	6	0	6	0	0	0	2	1	3	9
% Heavy	1.1	0	1.1	0	0	0	6.9	0.2	0.6	0.9



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PO Box 397 Puyallup, WA 98371

File Name : 5003n
Site Code : 00005003
Start Date : 3/21/2023
Page No : 1

Groups Printed- Passenger + - Heavy

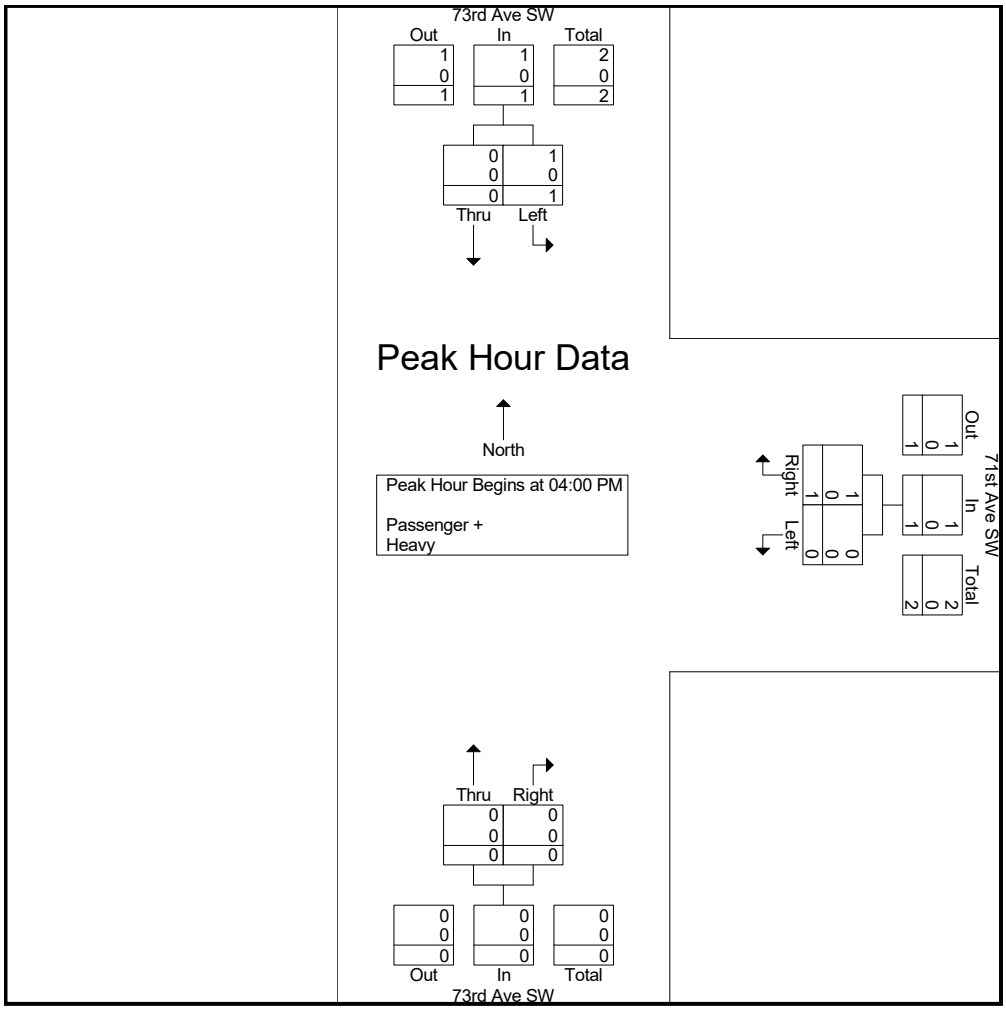
	73rd Ave SW Southbound			71st Ave SW Westbound			73rd Ave SW Northbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
04:00 PM	0	0	0	1	0	1	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	1	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	1	0	1	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	1	1	0	1	0	0	0	2
Apprch %	0	100		100	0		0	0		
Total %	0	50	50	50	0	50	0	0	0	
Passenger +	0	1	1	1	0	1	0	0	0	2
% Passenger +	0	100	100	100	0	100	0	0	0	100
Heavy	0	0	0	0	0	0	0	0	0	0
% Heavy	0	0	0	0	0	0	0	0	0	0

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5003n
Site Code : 00005003
Start Date : 3/21/2023
Page No : 2

	73rd Ave SW Southbound			71st Ave SW Westbound			73rd Ave SW Northbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	0	0	**1**	0	**1**	0	0	0	**1**
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	**1**	**1**	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	1	0	1	0	0	0	2
% App. Total	0	100		100	0		0	0		
PHF	.000	.250	.250	.250	.000	.250	.000	.000	.000	.500
Passenger +	0	1	1	1	0	1	0	0	0	2
% Passenger +	0	100	100	100	0	100	0	0	0	100
Heavy	0	0	0	0	0	0	0	0	0	0
% Heavy	0	0	0	0	0	0	0	0	0	0



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File Name : 5003j
Site Code : 00005003
Start Date : 3/21/2023
Page No : 1

Groups Printed- Passenger + - Heavy

	Cleanwater Ln SW Southbound			Cleanwater Ln SW Northbound			71st Ave SW Eastbound			
Start Time	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
04:00 PM	0	7	7	1	3	4	3	2	5	16
04:15 PM	0	7	7	2	5	7	1	1	2	16
04:30 PM	0	13	13	2	2	4	7	5	12	29
04:45 PM	2	7	9	2	6	8	1	2	3	20
Total	2	34	36	7	16	23	12	10	22	81
05:00 PM	1	28	29	6	1	7	9	8	17	53
05:15 PM	0	12	12	3	3	6	6	2	8	26
05:30 PM	0	11	11	2	2	4	1	2	3	18
05:45 PM	0	5	5	3	6	9	4	2	6	20
Total	1	56	57	14	12	26	20	14	34	117
Grand Total	3	90	93	21	28	49	32	24	56	198
Apprch %	3.2	96.8		42.9	57.1		57.1	42.9		
Total %	1.5	45.5	47	10.6	14.1	24.7	16.2	12.1	28.3	
Passenger +	3	90	93	20	28	48	31	24	55	196
% Passenger +	100	100	100	95.2	100	98	96.9	100	98.2	99
Heavy	0	0	0	1	0	1	1	0	1	2
% Heavy	0	0	0	4.8	0	2	3.1	0	1.8	1

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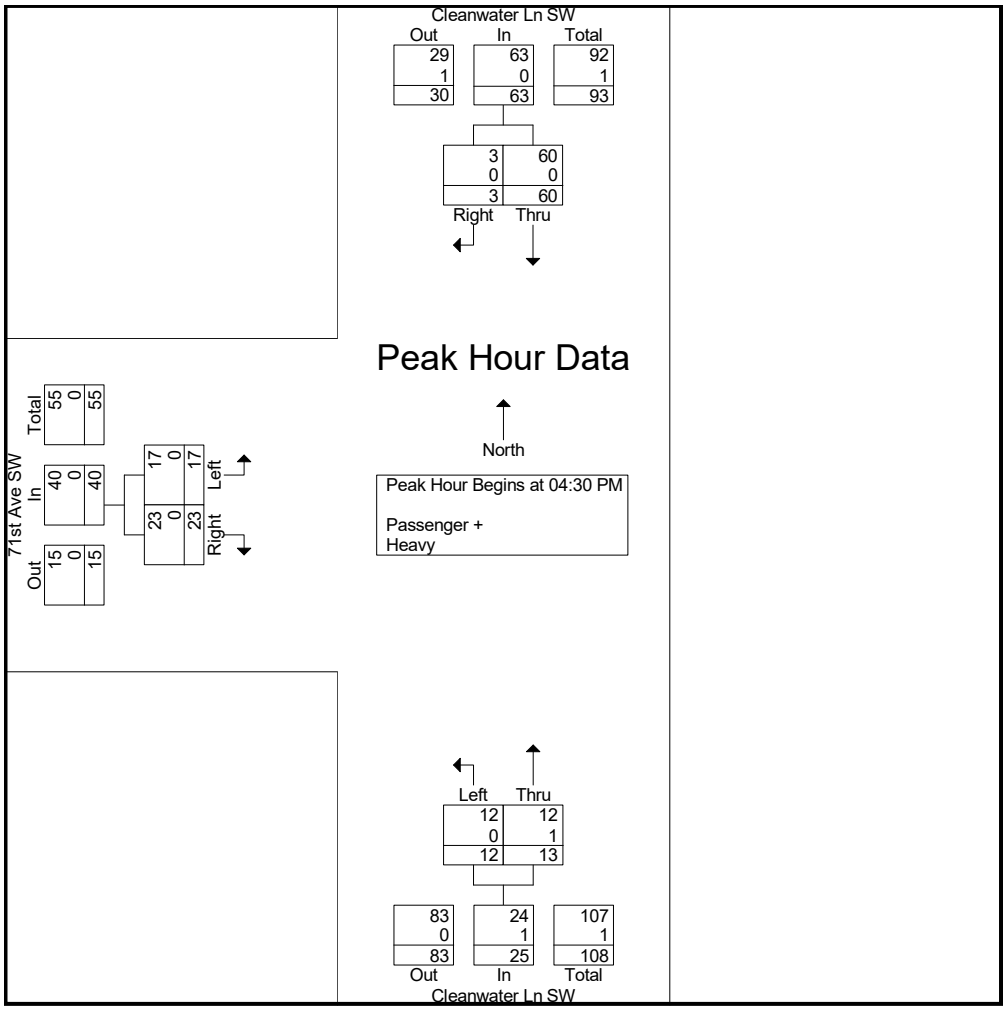
File Name : 5003j
Site Code : 00005003
Start Date : 3/21/2023
Page No : 2

	Cleanwater Ln SW Southbound			Cleanwater Ln SW Northbound			71st Ave SW Eastbound			
Start Time	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	13	13	2	2	4	7	5	12	29
04:45 PM	**2**	7	9	2	**6**	**8**	1	2	3	20
05:00 PM	1	**28**	**29**	**6**	1	7	**9**	**8**	**17**	**53**
05:15 PM	0	12	12	3	3	6	6	2	8	26
Total Volume	3	60	63	13	12	25	23	17	40	128
% App. Total	4.8	95.2		52	48		57.5	42.5		
PHF	.375	.536	.543	.542	.500	.781	.639	.531	.588	.604
Passenger +	3	60	63	12	12	24	23	17	40	127
% Passenger +	100	100	100	92.3	100	96.0	100	100	100	99.2
Heavy	0	0	0	1	0	1	0	0	0	1
% Heavy	0	0	0	7.7	0	4.0	0	0	0	0.8



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PO Box 397 Puyallup, WA 98371

File Name : 5003h
Site Code : 00005003
Start Date : 3/21/2023
Page No : 1

Groups Printed- Passenger + - Heavy

	Cleanwater Ln SW Southbound				71st Ave SW Westbound				Cleanwater Ln SW Northbound				West Lot Access Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	1	2	3	2	0	5	5	7	0	12	19
04:15 PM	0	1	0	1	1	2	3	6	3	0	0	3	3	2	0	5	15
04:30 PM	0	0	0	0	1	2	3	6	6	1	0	7	10	11	0	21	34
04:45 PM	0	0	0	0	1	1	5	7	4	0	0	4	5	4	0	9	20
Total	0	1	0	1	3	6	12	21	16	3	0	19	23	24	0	47	88
05:00 PM	0	1	0	1	0	0	5	5	8	4	1	13	26	19	0	45	64
05:15 PM	0	2	0	2	0	1	5	6	3	3	0	6	6	7	0	13	27
05:30 PM	0	2	4	6	1	0	1	2	3	0	0	3	7	5	0	12	23
05:45 PM	0	0	0	0	1	0	3	4	3	0	0	3	2	3	0	5	12
Total	0	5	4	9	2	1	14	17	17	7	1	25	41	34	0	75	126
Grand Total	0	6	4	10	5	7	26	38	33	10	1	44	64	58	0	122	214
Apprch %	0	60	40		13.2	18.4	68.4		75	22.7	2.3		52.5	47.5	0		
Total %	0	2.8	1.9	4.7	2.3	3.3	12.1	17.8	15.4	4.7	0.5	20.6	29.9	27.1	0	57	
Passenger +	0	6	4	10	5	6	26	37	32	10	1	43	64	57	0	121	211
% Passenger +	0	100	100	100	100	85.7	100	97.4	97	100	100	97.7	100	98.3	0	99.2	98.6
Heavy	0	0	0	0	0	1	0	1	1	0	0	1	0	1	0	1	3
% Heavy	0	0	0	0	0	14.3	0	2.6	3	0	0	2.3	0	1.7	0	0.8	1.4

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File Name : 5003h
Site Code : 00005003
Start Date : 3/21/2023
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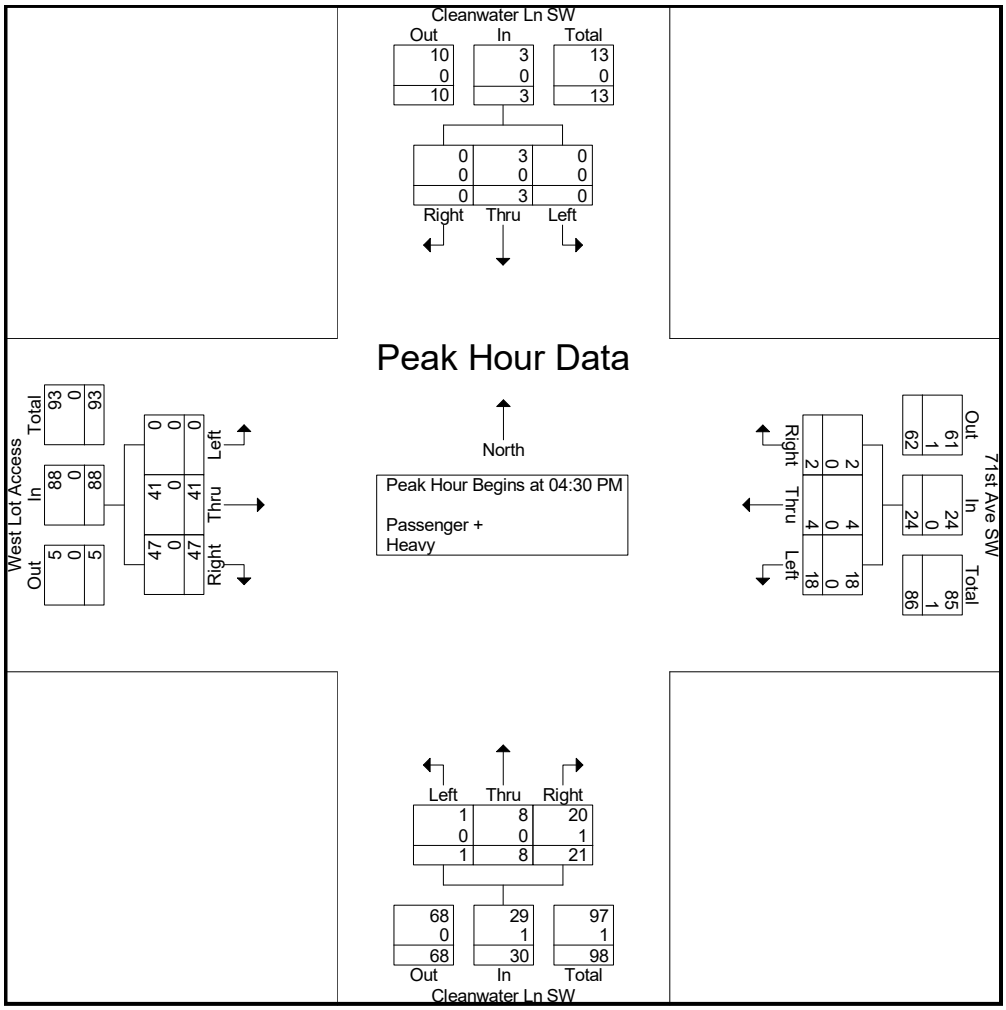
	Cleanwater Ln SW Southbound				71st Ave SW Westbound				Cleanwater Ln SW Northbound				West Lot Access Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	**1**	**2**	3	6	6	1	0	7	10	11	0	21	34
04:45 PM	0	0	0	0	1	1	**5**	**7**	4	0	0	4	5	4	0	9	20
05:00 PM	0	1	0	1	0	0	5	5	**8**	**4**	**1**	**13**	**26**	**19**	0	**45**	**64**
05:15 PM	0	**2**	0	**2**	0	1	5	6	3	3	0	6	6	7	0	13	27
Total Volume	0	3	0	3	2	4	18	24	21	8	1	30	47	41	0	88	145
% App. Total	0	100	0		8.3	16.7	75		70	26.7	3.3		53.4	46.6	0		
PHF	.000	.375	.000	.375	.500	.500	.900	.857	.656	.500	.250	.577	.452	.539	.000	.489	.566
Passenger +	0	3	0	3	2	4	18	24	20	8	1	29	47	41	0	88	144
% Passenger +	0	100	0	100	100	100	100	100	95.2	100	100	96.7	100	100	0	100	99.3
Heavy	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
% Heavy	0	0	0	0	0	0	0	0	4.8	0	0	3.3	0	0	0	0	0.7



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File Name : 5003l
Site Code : 00005003
Start Date : 3/21/2023
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Groups Printed- Passenger + - Heavy

	Cleanwater Ln SW Southbound					Tumwater Blvd SW Westbound					Airport Service Road Northbound					Tumwater Blvd SW Eastbound							
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	11	0	0	0	11	1	165	0	0	166	0	0	0	0	0	0	164	3	7	174	0	351	351
04:15 PM	8	0	0	0	8	3	141	0	0	144	0	0	0	0	0	1	152	4	2	159	0	311	311
04:30 PM	18	0	0	0	18	1	211	0	0	212	0	0	0	0	0	1	172	3	3	179	0	409	409
04:45 PM	10	0	0	0	10	0	165	0	0	165	1	0	0	0	1	0	143	6	5	154	0	330	330
Total	47	0	0	0	47	5	682	0	0	687	1	0	0	0	1	2	631	16	17	666	0	1401	1401
05:00 PM	38	0	0	0	38	2	254	0	0	256	0	0	0	0	0	0	133	6	4	143	0	437	437
05:15 PM	17	0	0	0	17	2	192	0	0	194	1	0	0	0	1	0	144	6	7	157	0	369	369
05:30 PM	13	0	0	0	13	0	146	0	0	146	0	0	0	0	0	1	133	3	3	140	0	299	299
05:45 PM	8	0	0	0	8	3	145	0	0	148	0	0	0	0	0	0	115	4	1	120	0	276	276
Total	76	0	0	0	76	7	737	0	0	744	1	0	0	0	1	1	525	19	15	560	0	1381	1381
Grand Total	123	0	0	0	123	12	1419	0	0	1431	2	0	0	0	2	3	1156	35	32	1226	0	2782	2782
Apprch %	100	0	0	0		0.8	99.2	0	0		100	0	0			0.2	94.3	2.9	2.6				
Total %	4.4	0	0	0	4.4	0.4	51	0	0	51.4	0.1	0	0		0.1	0.1	41.6	1.3	1.2	44.1	0	100	
Passenger +	122	0	0	0	122	11	1377	0	0	1388	2	0	0		2	3	1106	35	32	1176	0	0	2688
% Passenger +	99.2	0	0	0	99.2	91.7	97	0	0	97	100	0	0	0	100	100	95.7	100	100	95.9	0	0	96.6
Heavy	1	0	0	0	1	1	42	0	0	43	0	0	0		0	0	50	0	0	50	0	0	94
% Heavy	0.8	0	0	0	0.8	8.3	3	0	0	3	0	0	0	0	0	0	4.3	0	0	4.1	0	0	3.4

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File Name : 5003l
Site Code : 00005003
Start Date : 3/21/2023
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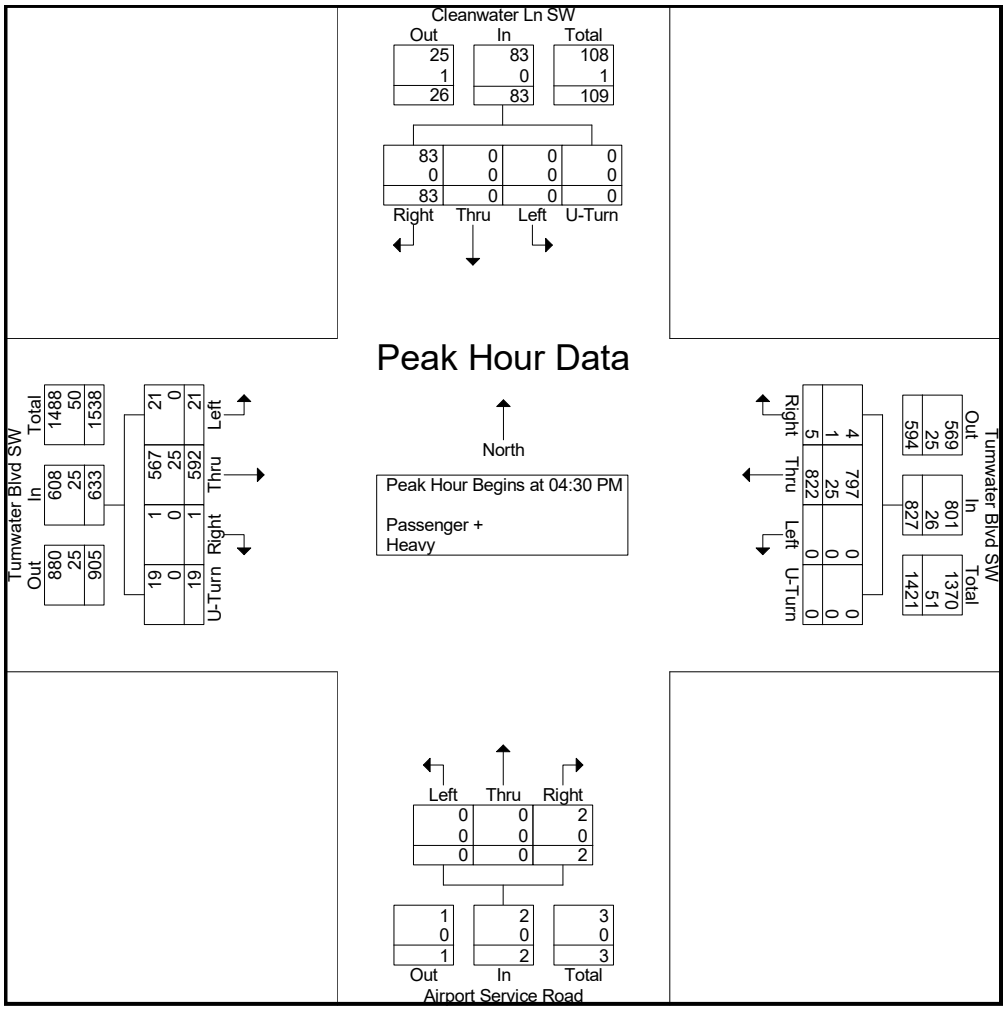
	Cleanwater Ln SW Southbound					Tumwater Blvd SW Westbound					Airport Service Road Northbound				Tumwater Blvd SW Eastbound					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																				
Peak Hour for Entire Intersection Begins at 04:30 PM																				
04:30 PM	18	0	0	0	18	1	211	0	0	212	0	0	0	0	**1**	**172**	3	3	**179**	409
04:45 PM	10	0	0	0	10	0	165	0	0	165	**1**	0	0	**1**	0	143	**6**	5	154	330
05:00 PM	**38**	0	0	0	**38**	**2**	**254**	0	0	**256**	0	0	0	0	0	133	6	4	143	**437**
05:15 PM	17	0	0	0	17	2	192	0	0	194	1	0	0	1	0	144	6	**7**	157	369
Total Volume	83	0	0	0	83	5	822	0	0	827	2	0	0	2	1	592	21	19	633	1545
% App. Total	100	0	0	0		0.6	99.4	0	0		100	0	0		0.2	93.5	3.3	3		
PHF	.546	.000	.000	.000	.546	.625	.809	.000	.000	.808	.500	.000	.000	.500	.250	.860	.875	.679	.884	.884
Passenger +	83	0	0	0	83	4	797	0	0	801	2	0	0	2	1	567	21	19	608	1494
% Passenger +	100	0	0	0	100	80.0	97.0	0	0	96.9	100	0	0	100	100	95.8	100	100	96.1	96.7
Heavy	0	0	0	0	0	1	25	0	0	26	0	0	0	0	0	25	0	0	25	51
% Heavy	0	0	0	0	0	20.0	3.0	0	0	3.1	0	0	0	0	0	4.2	0	0	3.9	3.3



Prepared for: **SCJ Alliance**

Traffic Count Consultants, Inc.

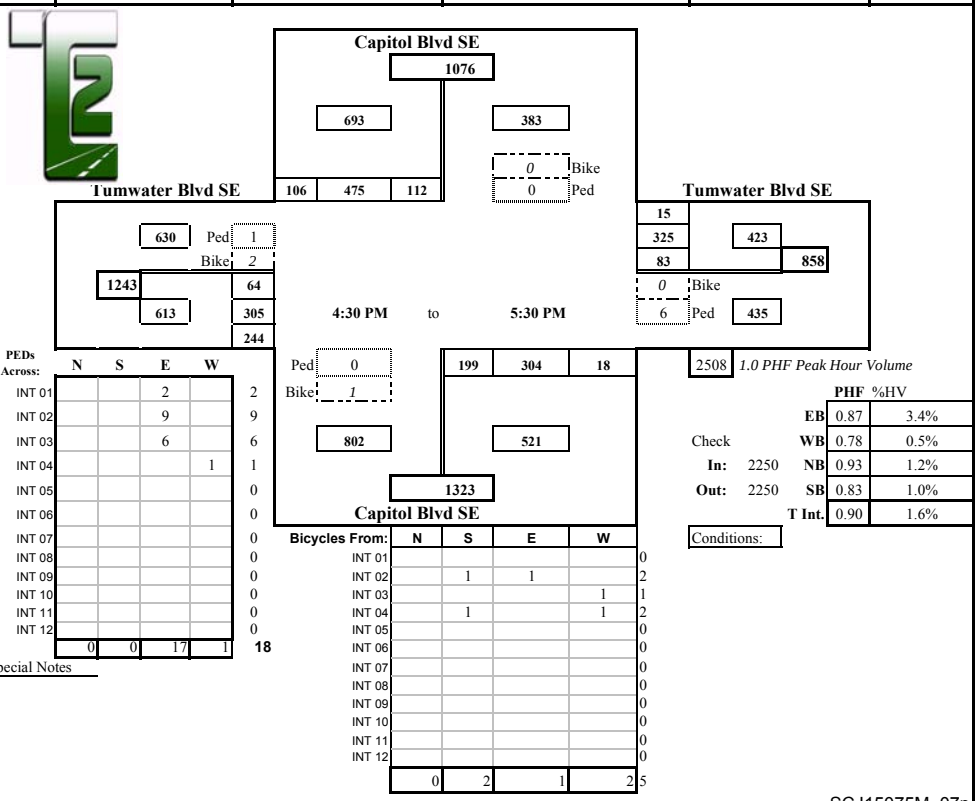
Phone: (253) 926-6009 FAX: (253) 922-7211 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Capitol Blvd SE & Tumwater Blvd SE **Date of Count:** Wed 6/24/2015

Location: Tumwater, Washington **Checked By:** Jess

Time Interval	From North on (SB) Capitol Blvd SE				From South on (NB) Capitol Blvd SE				From East on (WB) Tumwater Blvd SE				From West on (EB) Tumwater Blvd SE				Interval Total
Ending at	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	2	16	118	19	0	54	85	3	2	12	58	1	7	19	63	59	507
4:30 P	1	11	121	23	2	54	67	4	1	12	53	3	3	24	54	42	468
4:45 P	0	37	94	33	0	52	76	5	0	24	72	1	7	17	82	78	571
5:00 P	4	16	106	19	1	47	72	3	0	14	70	5	5	20	81	62	515
5:15 P	0	33	141	36	4	53	83	4	1	28	104	4	4	13	78	50	627
5:30 P	3	26	134	18	1	47	73	6	1	17	79	5	5	14	64	54	537
5:45 P	3	23	105	28	2	67	69	1	4	14	57	2	3	10	61	52	489
6:00 P	7	20	85	14	1	50	75	3	1	10	45	8	3	7	39	43	399
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	20	182	904	190	11	424	600	29	10	131	538	29	37	124	522	440	4113
Peak Hour:	4:30 PM				to	5:30 PM											
Total	7	112	475	106	6	199	304	18	2	83	325	15	21	64	305	244	2250
Approach	693				521				423				613				2250
%HV	1.0%				1.2%				0.5%				3.4%				1.6%
PHF	0.83				0.93				0.78				0.87				0.90



SCJ15075M_07p

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5003d
Site Code : 00005003
Start Date : 3/21/2023
Page No : 1

Groups Printed- Passenger + - Heavy

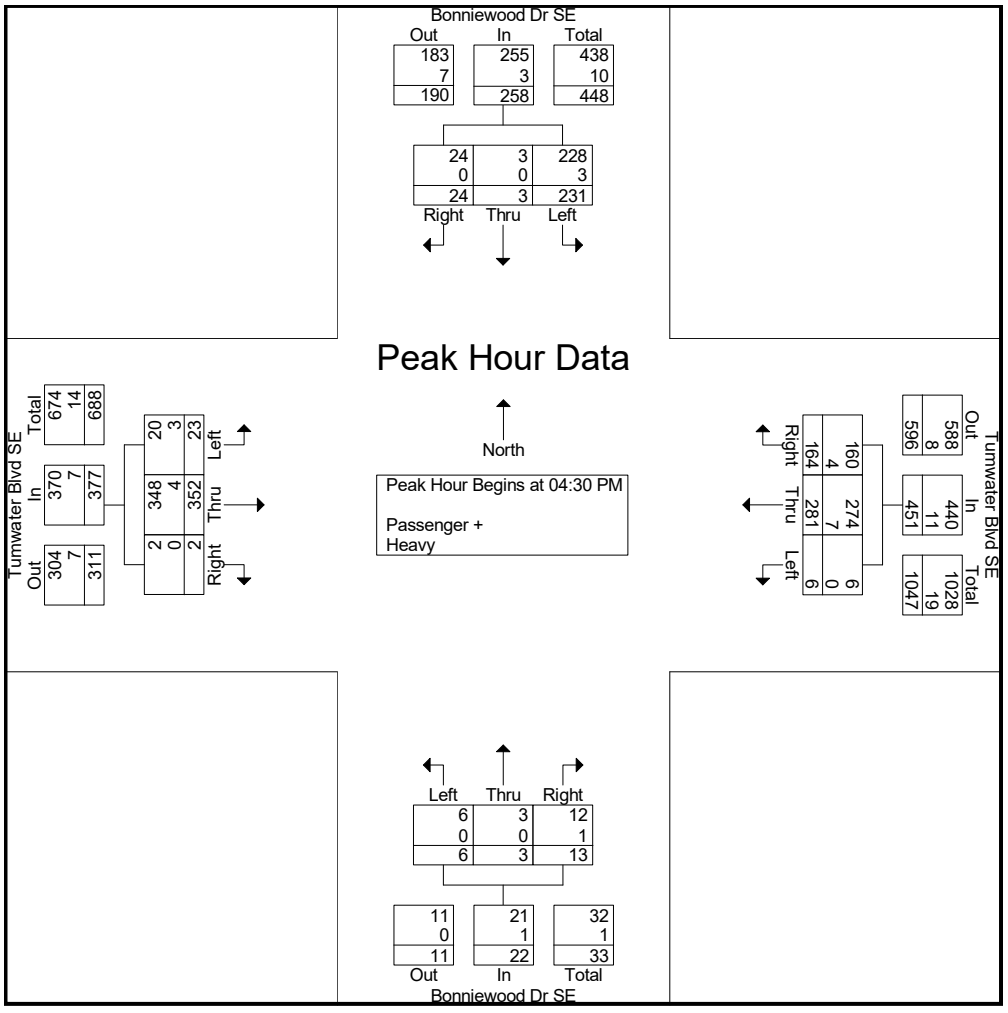
	Bonniewood Dr SE Southbound				Tumwater Blvd SE Westbound				Bonniewood Dr SE Northbound				Tumwater Blvd SE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	9	2	49	60	34	63	0	97	2	0	1	3	1	75	7	83	243
04:15 PM	4	2	60	66	49	54	2	105	5	0	0	5	0	69	11	80	256
04:30 PM	6	1	52	59	34	53	1	88	3	0	2	5	0	92	8	100	252
04:45 PM	4	0	56	60	46	70	1	117	3	2	0	5	0	59	5	64	246
Total	23	5	217	245	163	240	4	407	13	2	3	18	1	295	31	327	997
05:00 PM	7	1	58	66	41	65	3	109	2	0	2	4	0	120	6	126	305
05:15 PM	7	1	65	73	43	93	1	137	5	1	2	8	2	81	4	87	305
05:30 PM	6	2	47	55	46	58	0	104	1	1	0	2	0	74	4	78	239
05:45 PM	5	0	34	39	33	51	0	84	0	2	0	2	0	51	4	55	180
Total	25	4	204	233	163	267	4	434	8	4	4	16	2	326	18	346	1029
Grand Total	48	9	421	478	326	507	8	841	21	6	7	34	3	621	49	673	2026
Apprch %	10	1.9	88.1		38.8	60.3	1		61.8	17.6	20.6		0.4	92.3	7.3		
Total %	2.4	0.4	20.8	23.6	16.1	25	0.4	41.5	1	0.3	0.3	1.7	0.1	30.7	2.4	33.2	
Passenger +	48	9	417	474	320	492	7	819	19	6	7	32	3	616	44	663	1988
% Passenger +	100	100	99	99.2	98.2	97	87.5	97.4	90.5	100	100	94.1	100	99.2	89.8	98.5	98.1
Heavy	0	0	4	4	6	15	1	22	2	0	0	2	0	5	5	10	38
% Heavy	0	0	1	0.8	1.8	3	12.5	2.6	9.5	0	0	5.9	0	0.8	10.2	1.5	1.9

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5003d
Site Code : 00005003
Start Date : 3/21/2023
Page No : 2

	Bonniewood Dr SE Southbound				Tumwater Blvd SE Westbound				Bonniewood Dr SE Northbound				Tumwater Blvd SE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	6	**1**	52	59	34	53	1	88	3	0	**2**	5	0	92	**8**	100	252
04:45 PM	4	0	56	60	**46**	70	1	117	3	**2**	0	5	0	59	5	64	246
05:00 PM	**7**	1	58	66	41	65	**3**	109	2	0	2	4	0	**120**	6	**126**	**305**
05:15 PM	7	1	**65**	**73**	43	**93**	1	**137**	**5**	1	2	**8**	**2**	81	4	87	305
Total Volume	24	3	231	258	164	281	6	451	13	3	6	22	2	352	23	377	1108
% App. Total	9.3	1.2	89.5		36.4	62.3	1.3		59.1	13.6	27.3		0.5	93.4	6.1		
PHF	.857	.750	.888	.884	.891	.755	.500	.823	.650	.375	.750	.688	.250	.733	.719	.748	.908
Passenger +	24	3	228	255	160	274	6	440	12	3	6	21	2	348	20	370	1086
% Passenger +	100	100	98.7	98.8	97.6	97.5	100	97.6	92.3	100	100	95.5	100	98.9	87.0	98.1	98.0
Heavy	0	0	3	3	4	7	0	11	1	0	0	1	0	4	3	7	22
% Heavy	0	0	1.3	1.2	2.4	2.5	0	2.4	7.7	0	0	4.5	0	1.1	13.0	1.9	2.0



Prepared for: **SCJ Alliance**

Traffic Count Consultants, Inc.

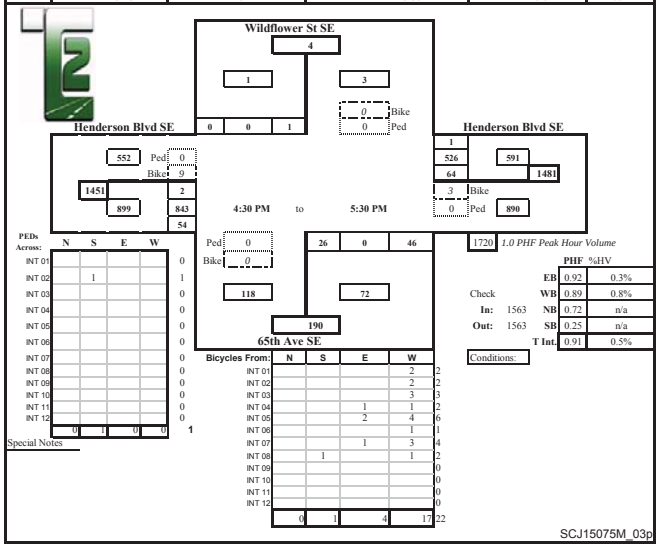
Phone: (253) 926-6009 FAX: (253) 922-7211 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Wildflower St SE/65th Ave SE & Henderson Blvd SE **Date of Count:** Wed 7/01/2015

Location: Tumwater, Washington **Checked By:** Jess

Time Interval Ending at	From North on (SB) Wildflower St SE				From South on (NB) 65th Ave SE				From East on (WB) Henderson Blvd SE				From West on (EB) Henderson Blvd SE				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	0	2	0	1	0	5	0	6	1	10	97	2	0	0	146	10	279
4:30 P	0	0	0	0	0	10	0	6	1	16	105	0	1	0	157	14	308
4:45 P	0	0	0	0	0	4	0	13	0	14	111	0	0	1	205	12	360
5:00 P	0	0	0	0	0	9	0	7	2	12	126	1	0	1	184	14	354
5:15 P	0	1	0	0	0	3	0	11	3	17	149	0	1	0	222	16	419
5:30 P	0	0	0	0	0	10	0	15	0	21	140	0	2	0	232	12	430
5:45 P	0	0	0	0	0	13	0	7	1	17	129	0	2	1	178	10	355
6:00 P	0	0	0	0	0	6	0	17	4	18	139	0	0	0	131	13	324
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	3	0	1	0	60	0	82	12	125	996	3	6	3	1455	101	2829
Peak Hour: 4:30 PM to 5:30 PM																	
Total	0	1	0	0	0	26	0	46	5	64	526	1	3	2	843	54	1563
Approach	1				72				591				899				1563
%HV	n/a				n/a				0.8%				0.3%				0.5%
PHF	0.25				0.72				0.89				0.92				0.91



SCJ15075M_03p

Prepared for: **City of Tumwater**

Traffic Count Consultants, Inc.

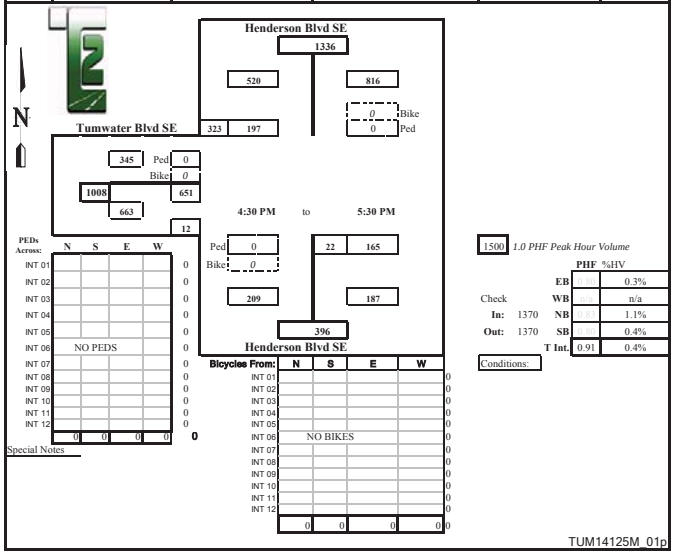
Phone: (253) 926-6009 FAX: (253) 922-7211 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Henderson Blvd SE & Tumwater Blvd SE **Date of Count:** Thurs 11/13/2014

Location: Tumwater, Washington **Checked By:** Jess

Time Interval Ending at	From North on (SB) Henderson Blvd SE				From South on (NB) Henderson Blvd SE				From East on (WB) 0				From West on (EB) Tumwater Blvd SE				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	2	0	39	57	0	4	34	0	0	0	0	0	0	155	0	7	296
4:30 P	3	0	35	66	0	7	35	0	0	0	0	0	0	124	0	0	267
4:45 P	2	0	46	90	0	8	36	0	0	0	0	0	1	169	0	1	350
5:00 P	0	0	37	72	2	6	38	0	0	0	0	0	1	142	0	2	297
5:15 P	0	0	40	72	0	4	52	0	0	0	0	0	0	201	0	6	375
5:30 P	0	0	74	89	0	4	39	0	0	0	0	0	0	139	0	3	348
5:45 P	1	0	56	61	0	7	29	0	0	0	0	0	0	130	0	3	286
6:00 P	0	0	36	42	0	5	25	0	0	0	0	0	0	93	0	3	204
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	8	0	363	549	2	45	288	0	0	0	0	0	2	1153	0	25	2423
Peak Hour: 4:30 PM to 5:30 PM																	
Total	2	0	197	323	2	22	165	0	0	0	0	0	2	651	0	12	1370
Approach	520				187				0				663				1370
%HV	0.4%				1.1%				n/a				0.3%				0.4%
PHF	0.80				0.83				n/a				0.80				0.91



TUM14125M_01p

SCJ ALLIANCE
ENGINEERING AND PLANNING SERVICES

Traffic Volume Calculation Worksheet

Tumwater Transportation Master Plan

PM Peak Hour Volumes

Intersection	Movement		EXISTING 2015 VOLUMES	EXISTING MODEL VOLUMES	2022 Volumes: 2040 EXISTING MODEL VOLUMES	BASE MODEL Δ GROWTH	7 YEAR GROWTH	BASE MODEL ADJUST	PROJECTED 2022 VOLUMES	2040 Base Model: 2040 BASE MODEL VOLUMES	BASE MODEL Δ GROWTH	BASE MODEL ADJUST	PROJECTED 2040 VOLUMES
		L	**135**	305	285	-20	-5		**130**	261	-44		**91**
	EB	T	**550**	183	354	171	46		**596**	288	105		**655**
		R	**154**	161	146	-15	-4		**150**	250	89		**243**
50		L	**56**	72	259	187	50		**106**	148	76		**132**
Linderson Way SE	WB	T	**702**	417	611	194	52		**754**	522	105		**807**
Tumwater Blvd SW		R	**31**	110	99	-11	-3		**28**	109	-1		**30**
		L	**168**	179	178	-1	0		**168**	185	6		**174**
TMC Date: 03/03/15	NB	T	**84**	57	126	69	19		**103**	109	52		**136**
		R	**43**	32	69	37	10		**53**	63	31		**74**
Peak Hour: 4:30 - 5:30		L	**189**	139	123	-16	-4		**185**	161	22		**211**
PHF: .94	SB	T	**161**	70	158	88	24		**185**	145	75		**236**
		R	**878**	438	436	-2	-1		**877**	352	-86		**792**
			3,151	2,163	2,844				**3,335**	2,593			**3,581**
		L	**27**	59	126	67	18		**45**	124	65		**92**
	EB	T	**773**	294	420	126	34		**807**	388	94		**867**
		R	**19**	-	-	-	0	6	**25**	-	0	9	**28**
51		L	**45**	-	-	-	0	14	**59**	-	0	21	**66**
New Market St SW	WB	T	**681**	492	740	248	67		**748**	554	62		**743**
Tumwater Blvd SW		R	**9**	45	106	61	16		**25**	97	52		**61**
		L	**16**	-	-	-	0	5	**21**	-	0	7	**23**
TMC Date: 03/03/15	NB	T	**2**	-	-	-	0	1	**3**	-	0	1	**3**
		R	**46**	-	-	-	0	14	**60**	-	0	21	**67**
Peak Hour: 4:30 - 5:30		L	**31**	46	136	90	24		**55**	135	89		**120**
PHF: .92	SB	T	**16**	-	-	-	0	5	**21**	-	0	7	**23**
		R	**104**	108	229	121	33		**137**	225	117		**221**
			1,769	1,044	1,757	713	131%	30%	**2,005**	1,523	479	46%	**2,314**
		L	**64**	37	135	98	26		**90**	146	109		**173**
	EB	T	**305**	276	358	82	22		**327**	319	43		**348**
		R	**244**	91	-	-	0		**244**	145	54		**298**
52		L	**83**	0	-	-	0	4	**87**	0	0	29	**112**
Capitol Blvd SE	WB	T	**325**	396	457	61	16		**341**	417	21		**346**
Tumwater Blvd SE		R	**15**	275	189	-86	-23	1	**16**	182	-93	5	**20**
		L	**199**	75	-	-	0		**199**	101	26		**225**
TMC Date: 06/24/15	NB	T	**304**	469	-	-	0		**304**	680	211		**515**
		R	**18**	0	-	-	0	1	**19**	0	0		**18**
Peak Hour: 4:30 - 5:30		L	**112**	125	159	34	9		**121**	0	-125	39	**151**
PHF: .90	SB	T	**475**	546	-	-	0		**475**	1050	504		**979**
		R	**106**	133	389	256	69		**175**	221	88		**194**
			2,250	2,423	1,687	445	18%	4%		3,261	838	35%	**3,379**
		L	**2**	4	12	8	2		**4**	12	8		**10**
	EB	T	**843**	475	574	99	27		**870**	534	59		**902**
		R	**54**	45	97	52	14		**68**	95	50		**104**
53		L	**64**	68	123	55	15		**79**	125	57		**121**
Wildflower St SE/65th Ave SE	WB	T	**526**	529	672	143	39		**565**	646	117		**643**
Henderson Blvd SE		R	**1**	7	18	11	3		**4**	18	11		**12**
		L	**26**	34	69	35	9		**35**	65	31		**57**
TMC Date: 07/01/15	NB	T	**0**	0	0	0	0		**0**	0	0		**0**
		R	**46**	37	69	32	9		**55**	74	37		**83**
Peak Hour: 4:30 - 5:30		L	**1**	4	11	7	2		**3**	12	8		**9**
PHF: .91	SB	T	**0**	0	0	0	0		**0**	0	0		**0**
		R	**0**	3	9	6	2		**2**	8	5		**5**
			1,563	1,206	1,654					1,589			**1,946**
		L	**651**	399	532	133	36		**687**	502	103		**754**
	EB	T	**0**	-	-	-	0		**0**	-	0		**0**
		R	**12**	29	100	71	19		**31**	10	-19	12	**5**
54		L	**0**	-	-	-	0		**0**	-	0		**0**
Tumwater Blvd SE	WB	T	**0**	-	-	-	0		**0**	-	0		**0**
Henderson Blvd SE		R	**0**	-	-	-	0		**0**	-	0		**0**
		L	**22**	4	10	6	2		**24**	10	6		**28**
TMC Date: 11/13/14	NB	T	**165**	126	151	25	7		**172**	139	13		**178**
		R	**0**	-	-	-	0		**0**	-	0		**0**
Peak Hour: 4:30 - 5:30		L	**0**	-	-	-	0		**0**	-	0		**0**
PHF: .91	SB	T	**197**	156	226	70	19		**216**	257	101		**298**
		R	**323**	410	524	114	31		**354**	462	52		**375**
			1,370	1,124	1,543				**1,484**	1,380			**1,638**
		L	**0**	-	-	-	0		**0**	-	0		**0**
	EB	T	**152**	74	95	21	6		**158**	91	17		**169**
		R	**88**	70	90	20	5		**93**	124	54		**142**
55		L	**97**	108	219	111	30		**127**	120	12		**109**
Trails End Dr SE	WB	T	**139**	77	107	30	8		**147**	146	69		**208**
Henderson Blvd SE		R	**0**	-	-	-	0		**0**	-	0		**0**
		L	**53**	68	90	22	6		**59**	94	26		**79**
TMC Date: 06/24/15	NB	T	**0**	-	-	-	0		**0**	-	0		**0**
		R	**52**	56	66	10	3		**55**	58	2		**54**
Peak Hour: 5:00 - 6:00		L	**0**	-	-	-	0		**0**	-	0		**0**
PHF: .87	SB	T	**0**	-	-	-	0		**0**	-	0		**0**
		R	**0**	-	-	-	0		**0**	-	0		**0**
			581	453	667				**639**	633			**761**
		L	**4**	143	275	132	36	1	**5**	277	134	2	**6**
	EB	T	**0**	0	3	3	1	0	**0**	3	3	25	**25**
		R	**7**	31	103	72	19	1	**8**	101	70	4	**11**
56		L	**0**	4	53	49	13	0	**0**	52	48	100	**100**
Littlerock Rd SW	WB	T	**0**	0	2	2	1	0	**0**	2	2	50	**50**
Black Hills High School Drwy		R	**0**	22	144	122	33	0	**0**	35	13	25	**25**
		L	**9**	21	102	81	22	1	**10**	95	74	5	**14**
TMC Date: 06/24/15	NB	T	**158**	129	295	166	45		**203**	246	117		**275**
		R	**0**	4	64	60	16	0	**0**	61	57	50	**50**
Peak Hour: 4:30 - 5:30		L	**0**	36	0	-36	-10	0	**0**	43	7	25	**25**
PHF: .96	SB	T	**390**	259	490	231	62		**452**	403	144		**534**
		R	**48**	188	400	212	57	7	**55**	408	220	24	**72**
			616	837	1,931			14%	**733**	1,726		50%	**1,186**

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5003f
Site Code : 00005003
Start Date : 3/21/2023
Page No : 1

Groups Printed- Passenger + - Heavy

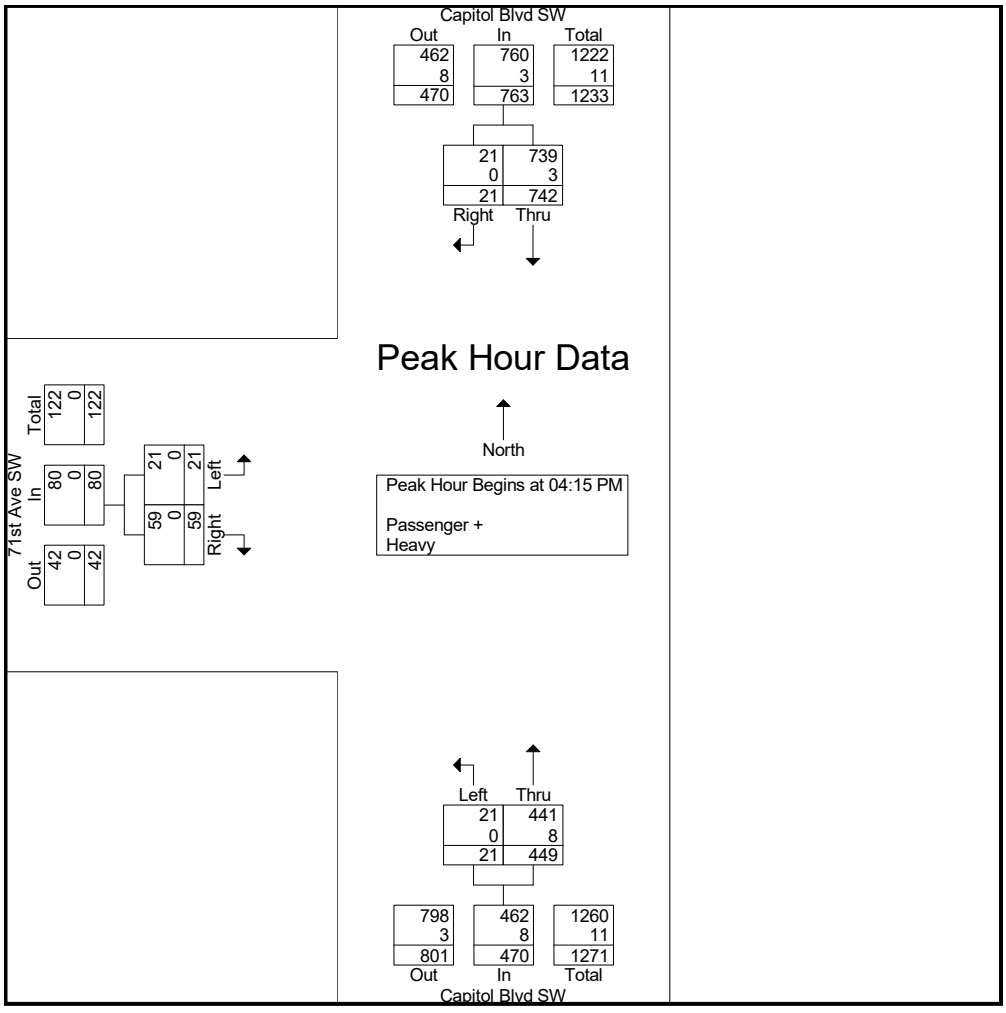
	Capitol Blvd SW Southbound			Capitol Blvd SW Northbound			71st Ave SW Eastbound			
Start Time	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
04:00 PM	2	141	143	101	5	106	13	4	17	266
04:15 PM	5	177	182	124	4	128	6	3	9	319
04:30 PM	3	179	182	101	6	107	14	7	21	310
04:45 PM	8	156	164	104	6	110	10	5	15	289
Total	18	653	671	430	21	451	43	19	62	1184
05:00 PM	5	230	235	120	5	125	29	6	35	395
05:15 PM	4	190	194	90	2	92	12	6	18	304
05:30 PM	3	141	144	94	2	96	8	8	16	256
05:45 PM	3	138	141	76	2	78	7	4	11	230
Total	15	699	714	380	11	391	56	24	80	1185
Grand Total	33	1352	1385	810	32	842	99	43	142	2369
Apprch %	2.4	97.6		96.2	3.8		69.7	30.3		
Total %	1.4	57.1	58.5	34.2	1.4	35.5	4.2	1.8	6	
Passenger +	33	1340	1373	796	31	827	97	43	140	2340
% Passenger +	100	99.1	99.1	98.3	96.9	98.2	98	100	98.6	98.8
Heavy	0	12	12	14	1	15	2	0	2	29
% Heavy	0	0.9	0.9	1.7	3.1	1.8	2	0	1.4	1.2

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5003f
Site Code : 00005003
Start Date : 3/21/2023
Page No : 2

	Capitol Blvd SW Southbound			Capitol Blvd SW Northbound			71st Ave SW Eastbound			
Start Time	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	5	177	182	**124**	4	**128**	6	3	9	319
04:30 PM	3	179	182	101	**6**	107	14	**7**	21	310
04:45 PM	**8**	156	164	104	6	110	10	5	15	289
05:00 PM	5	**230**	**235**	120	5	125	**29**	6	**35**	**395**
Total Volume	21	742	763	449	21	470	59	21	80	1313
% App. Total	2.8	97.2		95.5	4.5		73.8	26.2		
PHF	.656	.807	.812	.905	.875	.918	.509	.750	.571	.831
Passenger +	21	739	760	441	21	462	59	21	80	1302
% Passenger +	100	99.6	99.6	98.2	100	98.3	100	100	100	99.2
Heavy	0	3	3	8	0	8	0	0	0	11
% Heavy	0	0.4	0.4	1.8	0	1.7	0	0	0	0.8



Prepared for: **SCJ Alliance**

Traffic Count Consultants, Inc.

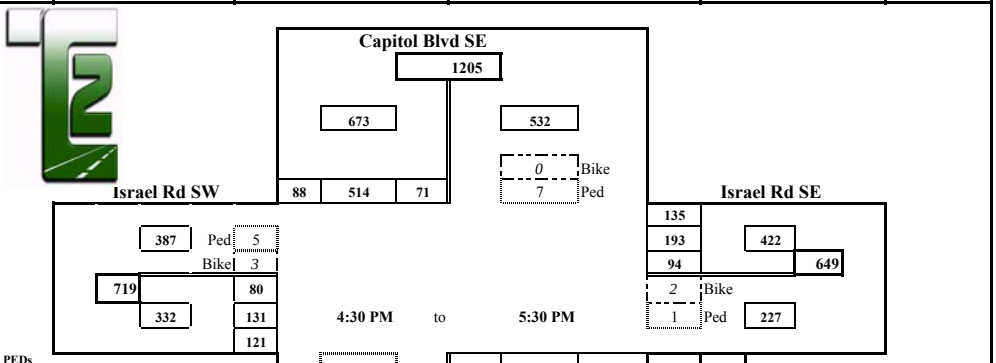
Phone: (253) 926-6009 FAX: (253) 922-7211 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Capitol Blvd SE & Israel Rd SE/SW **Date of Count:** Wed 6/24/2015

Location: Tumwater, Washington **Checked By:** Jess

Time Interval	From North on (SB) Capitol Blvd SE				From South on (NB) Capitol Blvd SE				From East on (WB) Israel Rd SE				From West on (EB) Israel Rd SW				Interval Total
Ending at	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	1	20	94	13	1	34	61	12	3	14	53	25	0	35	34	35	430
4:30 P	1	15	106	29	3	19	77	7	1	12	40	25	1	24	31	25	410
4:45 P	1	21	110	22	1	20	78	8	2	30	45	41	0	15	39	28	457
5:00 P	3	17	110	17	2	23	88	11	3	20	40	40	0	21	31	21	439
5:15 P	1	20	137	21	1	32	75	3	1	30	68	34	0	22	30	49	521
5:30 P	3	13	157	28	1	31	76	3	1	14	40	20	0	22	31	23	458
5:45 P	3	13	104	18	2	24	65	4	2	14	28	20	0	29	22	16	357
6:00 P	2	10	94	21	2	23	76	1	5	22	26	9	0	21	22	57	382
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	15	129	912	169	13	206	596	49	18	156	340	214	1	189	240	254	3454
Peak Hour:	4:30 PM to 5:30 PM																
Total	8	71	514	88	5	106	317	25	7	94	193	135	0	80	131	121	1875
Approach	673				448				422				332				1875
%HV	1.2%				1.1%				1.7%				n/a				1.1%
PHF	0.85				0.92				0.80				0.82				0.90



PEDs Across:	N	S	E	W	
INT 01	2		2		4
INT 02	1	1		1	3
INT 03	1	6		4	11
INT 04	6				6
INT 05				1	1
INT 06		2	1		3
INT 07			1		1
INT 08			1		1
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	10	9	5	6	30

Bicycles From:	N	S	E	W	
INT 01					0
INT 02		1		1	2
INT 03				1	1
INT 04			1	1	2
INT 05				1	1
INT 06			1		1
INT 07					0
INT 08		1			1
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	0	2	2	4	8

2084 *1.0 PHF Peak Hour Volume*

		PHF	%HV
	EB	0.82	n/a
Check	WB	0.80	1.7%
In: 1875	NB	0.92	1.1%
Out: 1875	SB	0.85	1.2%
	T Int.	0.90	1.1%

Conditions:

Special Notes

SCJ15075M_06p

Prepared for: **SCJ Alliance/Shea Carr Jewell**

Traffic Count Consultants, Inc.

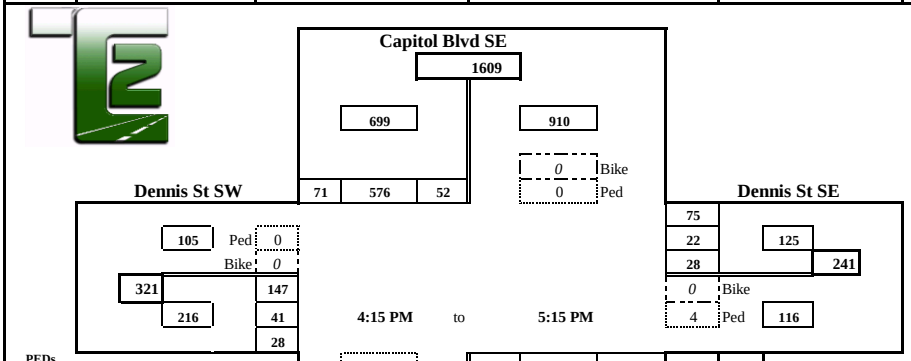
Phone: (253) 926-6009 FAX: (253) 922-7211 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Capitol Blvd SE & Dennis St SE/SW **Date of Count:** Wed 3/05/2014

Location: Tumwater, Washington **Checked By:** Jess

Time Interval Ending at	From North on (SB) Capitol Blvd SE				From South on (NB) Capitol Blvd SE				From East on (WB) Dennis St SE				From West on (EB) Dennis St SW				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	2	14	135	19	2	2	144	15	0	16	4	15	0	28	7	4	403
4:30 P	3	17	139	13	2	4	151	4	0	7	5	14	0	30	4	7	395
4:45 P	1	7	152	12	2	4	155	7	0	8	8	23	0	32	12	5	425
5:00 P	0	16	134	23	2	3	196	6	0	7	5	16	0	42	4	4	456
5:15 P	2	12	151	23	3	1	186	6	0	6	4	22	1	43	21	12	487
5:30 P	2	15	125	19	2	5	136	4	0	7	4	11	0	25	9	6	366
5:45 P	4	17	156	13	1	3	148	4	0	6	8	18	0	19	7	3	402
6:00 P	2	11	116	15	1	2	91	3	0	8	4	17	1	13	9	4	293
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	16	109	1108	137	15	24	1207	49	0	65	42	136	2	232	73	45	3227
Peak Hour:	4:15 PM to 5:15 PM																
Total	6	52	576	71	9	12	688	23	0	28	22	75	1	147	41	28	1763
Approach	699				723				125				216				1763
%HV	0.9%				1.2%				n/a				0.5%				0.9%
PHF	0.94				0.88				0.80				0.71				0.91



PEDs Across:	N	S	E	W	
INT 01	1	2	5		8
INT 02					0
INT 03		2			2
INT 04			2		2
INT 05			2		2
INT 06	2				2
INT 07			1		1
INT 08	1			1	2
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	4	4	10	1	19

Bicycles From:	N	S	E	W	
INT 01					0
INT 02					0
INT 03					0
INT 04					0
INT 05					0
INT 06				1	1
INT 07					0
INT 08					0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	0	0	0	1	1

1948 *1.0 PHF Peak Hour Volume*

		PHF	%HV
	EB	0.71	0.5%
Check	WB	0.80	n/a
In: 1763	NB	0.88	1.2%
Out: 1763	SB	0.94	0.9%
	T Int.	0.91	0.9%

Conditions:

Special Notes

SCJ14026M_11p

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5003b
Site Code : 00005003
Start Date : 3/21/2023
Page No : 1

Groups Printed- Passenger + - Heavy

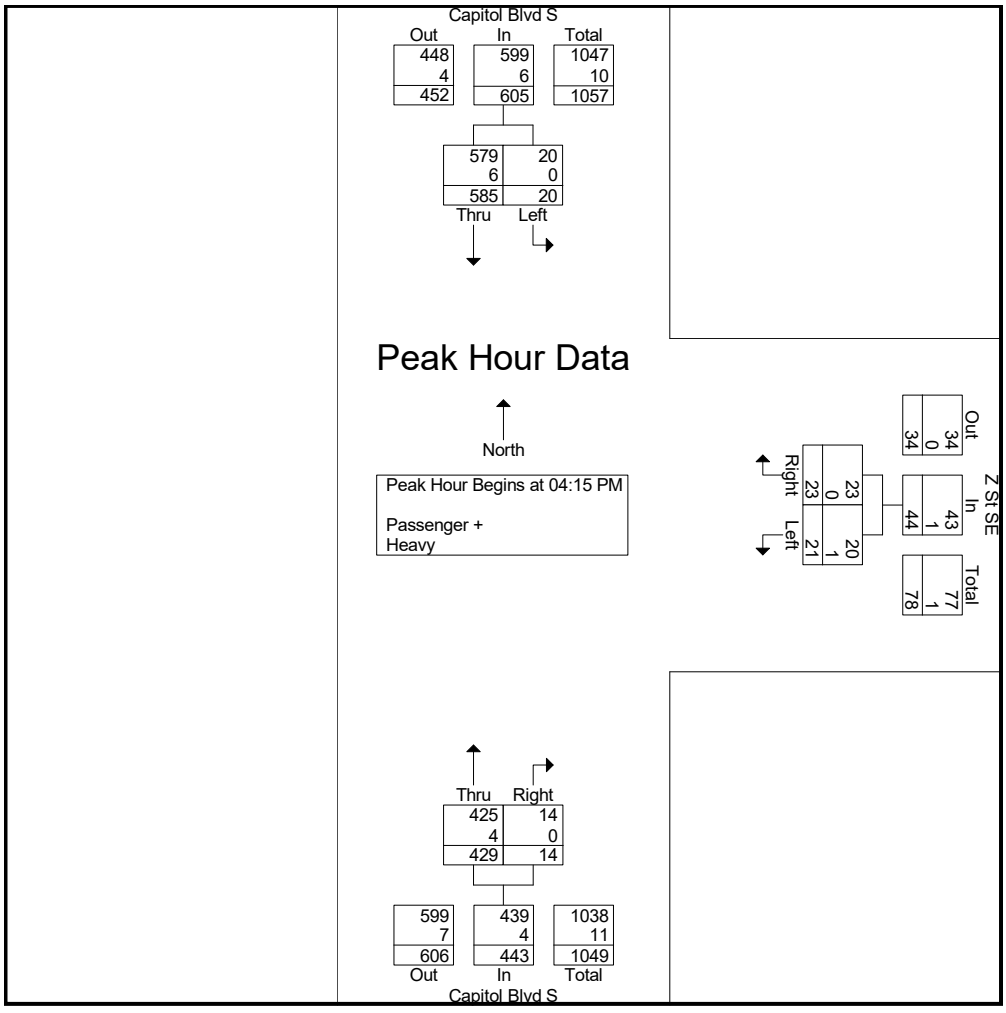
	Capitol Blvd S Southbound			Z St SE Westbound			Capitol Blvd S Northbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
04:00 PM	131	3	134	4	3	7	3	116	119	260
04:15 PM	163	7	170	4	9	13	4	112	116	299
04:30 PM	146	3	149	7	4	11	4	113	117	277
04:45 PM	120	5	125	6	3	9	3	95	98	232
Total	560	18	578	21	19	40	14	436	450	1068
05:00 PM	156	5	161	6	5	11	3	109	112	284
05:15 PM	137	9	146	3	4	7	3	97	100	253
05:30 PM	170	2	172	6	2	8	4	98	102	282
05:45 PM	123	4	127	3	7	10	0	76	76	213
Total	586	20	606	18	18	36	10	380	390	1032
Grand Total	1146	38	1184	39	37	76	24	816	840	2100
Apprch %	96.8	3.2		51.3	48.7		2.9	97.1		
Total %	54.6	1.8	56.4	1.9	1.8	3.6	1.1	38.9	40	
Passenger +	1133	38	1171	39	36	75	24	804	828	2074
% Passenger +	98.9	100	98.9	100	97.3	98.7	100	98.5	98.6	98.8
Heavy	13	0	13	0	1	1	0	12	12	26
% Heavy	1.1	0	1.1	0	2.7	1.3	0	1.5	1.4	1.2

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5003b
Site Code : 00005003
Start Date : 3/21/2023
Page No : 2

	Capitol Blvd S Southbound			Z St SE Westbound			Capitol Blvd S Northbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	**163**	**7**	**170**	4	**9**	**13**	**4**	112	116	**299**
04:30 PM	146	3	149	**7**	4	11	4	**113**	**117**	277
04:45 PM	120	5	125	6	3	9	3	95	98	232
05:00 PM	156	5	161	6	5	11	3	109	112	284
Total Volume	585	20	605	23	21	44	14	429	443	1092
% App. Total	96.7	3.3		52.3	47.7		3.2	96.8		
PHF	.897	.714	.890	.821	.583	.846	.875	.949	.947	.913
Passenger +	579	20	599	23	20	43	14	425	439	1081
% Passenger +	99.0	100	99.0	100	95.2	97.7	100	99.1	99.1	99.0
Heavy	6	0	6	0	1	1	0	4	4	11
% Heavy	1.0	0	1.0	0	4.8	2.3	0	0.9	0.9	1.0



Prepared for: **SCJ Alliance/Shea Carr Jewell**

Traffic Count Consultants, Inc.

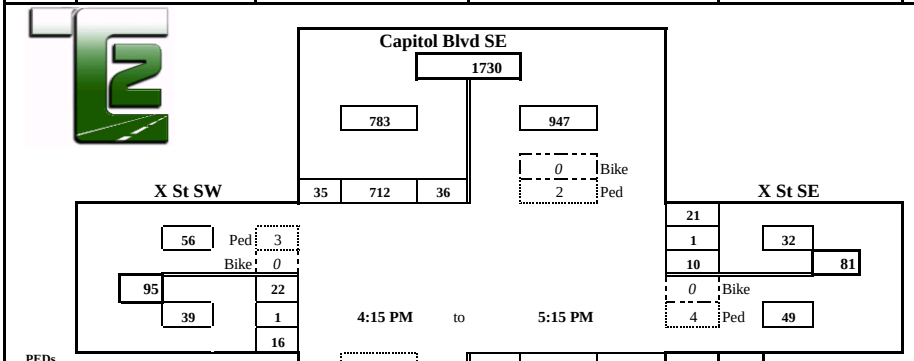
Phone: (253) 926-6009 FAX: (253) 922-7211 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Capitol Blvd SE & X St SE/SW **Date of Count:** Wed 3/05/2014

Location: Tumwater, Washington **Checked By:** Jess

Time Interval Ending at	From North on (SB) Capitol Blvd SE				From South on (NB) Capitol Blvd SE				From East on (WB) X St SE				From West on (EB) X St SW				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	2	9	173	5	2	2	190	7	0	0	0	3	0	5	1	2	397
4:30 P	3	8	176	10	2	3	192	1	0	2	1	4	0	4	0	2	403
4:45 P	1	6	185	8	2	7	214	3	0	1	0	7	0	5	1	5	442
5:00 P	2	7	161	8	1	7	235	6	0	4	0	5	0	6	0	4	443
5:15 P	2	15	190	9	5	3	263	2	0	3	0	5	0	7	0	5	502
5:30 P	1	10	168	7	2	5	167	0	0	3	1	3	0	2	0	5	371
5:45 P	4	7	195	4	1	5	191	1	0	1	0	3	0	4	0	0	411
6:00 P	2	9	146	9	1	1	121	4	0	3	0	4	0	5	0	1	303
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	17	71	1394	60	16	33	1573	24	0	17	2	34	0	38	2	24	3272
Peak Hour:	4:15 PM to 5:15 PM																
Total	8	36	712	35	10	20	904	12	0	10	1	21	0	22	1	16	1790
Approach	783				936				32				39				1790
%HV	1.0%				1.1%				n/a				n/a				1.0%
PHF	0.91				0.87				0.89				0.81				0.89



PEDs Across:	N	S	E	W	
INT 01		2		1	3
INT 02					0
INT 03	1				1
INT 04	1	1	2	1	5
INT 05			2	2	4
INT 06	2		2	2	6
INT 07	2		2		4
INT 08					0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	6	3	8	6	23

Bicycles From:	N	S	E	W	
INT 01					0
INT 02					0
INT 03					0
INT 04					0
INT 05					0
INT 06					0
INT 07					0
INT 08	2				2
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	2	0	0	0	2

2008 *1.0 PHF Peak Hour Volume*

		PHF	%HV
	EB	0.81	n/a
Check	WB	0.89	n/a
In: 1790	NB	0.87	1.1%
Out: 1790	SB	0.91	1.0%
	T Int.	0.89	1.0%

Conditions:

Special Notes

SCJ14026M_10p

Prepared for: **SCJ Alliance/Shea Carr Jewell**

Traffic Count Consultants, Inc.

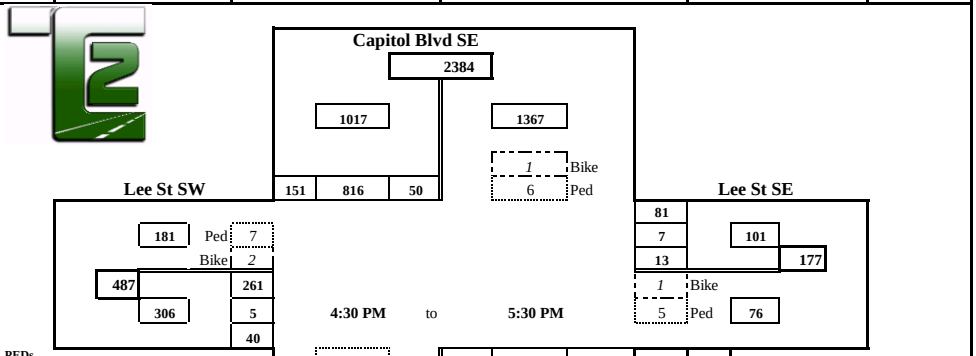
Phone: (253) 926-6009 FAX: (253) 922-7211 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Capitol Blvd SE & Lee St SE/SW **Date of Count:** Wed 3/05/2014

Location: Tumwater, Washington **Checked By:** Jess

Time Interval Ending at	From North on (SB) Capitol Blvd SE				From South on (NB) Capitol Blvd SE				From East on (WB) Lee St SE				From West on (EB) Lee St SW				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	3	13	184	29	2	9	235	6	0	5	1	11	2	70	0	14	577
4:30 P	2	8	190	31	1	4	204	4	0	1	1	10	0	50	1	5	509
4:45 P	1	10	214	25	1	7	248	10	0	2	2	19	1	78	1	13	629
5:00 P	2	13	166	33	3	6	266	5	0	3	2	13	0	56	1	3	567
5:15 P	3	15	230	46	2	2	260	4	0	6	1	23	0	73	1	10	671
5:30 P	2	12	206	47	8	8	251	2	0	2	2	26	0	54	2	14	626
5:45 P	5	10	229	34	2	3	193	0	0	3	2	16	0	52	2	6	550
6:00 P	2	14	175	31	1	10	179	2	0	1	3	16	1	42	0	14	487
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	20	95	1594	276	20	49	1836	33	0	23	14	134	4	475	8	79	4616
Peak Hour:	4:30 PM to 5:30 PM																
Total	8	50	816	151	14	23	1025	21	0	13	7	81	1	261	5	40	2493
Approach	1017				1069				101				306				2493
%HV	0.8%				1.3%				n/a				0.3%				0.9%
PHF	0.87				0.96				0.84				0.83				0.93



PEDs Across:	N	S	E	W	
INT 01		2	2	3	7
INT 02		1		6	7
INT 03	1	5	1	3	10
INT 04	1	1	1		3
INT 05	3		1	1	5
INT 06	1	6	2	3	12
INT 07	1				1
INT 08	1	1	1		3
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	8	16	8	16	48

Bicycles From:	N	S	E	W	
INT 01		1		1	2
INT 02					0
INT 03					0
INT 04	1		1	1	3
INT 05		1		1	2
INT 06					0
INT 07					0
INT 08		1			1
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	1	3	1	3	8

2684 *1.0 PHF Peak Hour Volume*

		PHF	%HV
	EB	0.83	0.3%
Check	WB	0.84	n/a
In: 2493	NB	0.96	1.3%
Out: 2493	SB	0.87	0.8%
	T Int.	0.93	0.9%

Conditions:

Special Notes

SCJ14026M_08p

Prepared for: **SCJ Alliance/Shea Carr Jewell**

Traffic Count Consultants, Inc.

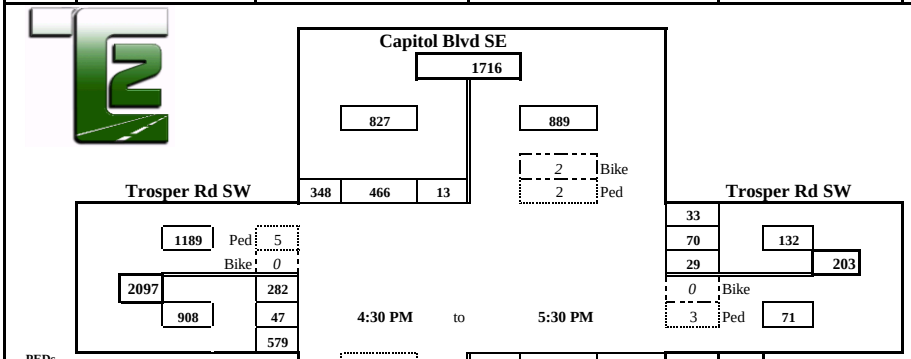
Phone: (253) 926-6009 FAX: (253) 922-7211 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Capitol Blvd SE & Trosper Rd SW **Date of Count:** Wed 3/05/2014

Location: Tumwater, Washington **Checked By:** Jess

Time Interval	From North on (SB) Capitol Blvd SE				From South on (NB) Capitol Blvd SE				From East on (WB) Trosper Rd SW				From West on (EB) Trosper Rd SW				Interval Total
Ending at	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	6	3	88	92	4	190	123	3	0	5	16	3	1	64	10	150	747
4:30 P	1	5	95	51	1	162	86	3	0	7	10	4	1	76	16	144	659
4:45 P	1	4	97	78	2	206	137	5	0	9	17	12	0	83	12	154	814
5:00 P	1	1	105	92	3	225	130	3	0	7	15	6	0	62	15	131	792
5:15 P	3	6	135	95	2	166	146	2	0	6	18	8	2	63	10	160	815
5:30 P	1	2	129	83	6	174	161	1	0	7	20	7	1	74	10	134	802
5:45 P	1	6	128	90	1	184	107	0	0	11	10	9	4	81	6	143	775
6:00 P	1	6	84	72	2	150	89	2	0	6	14	5	1	91	5	137	661
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	15	33	861	653	21	1457	979	19	0	58	120	54	10	594	84	1153	6065
	Peak Hour: 4:30 PM to 5:30 PM																
Total	6	13	466	348	13	771	574	11	0	29	70	33	3	282	47	579	3223
Approach	827				1356				132				908				3223
%HV	0.7%				1.0%				n/a				0.3%				0.7%
PHF	0.88				0.95				0.87				0.91				0.99



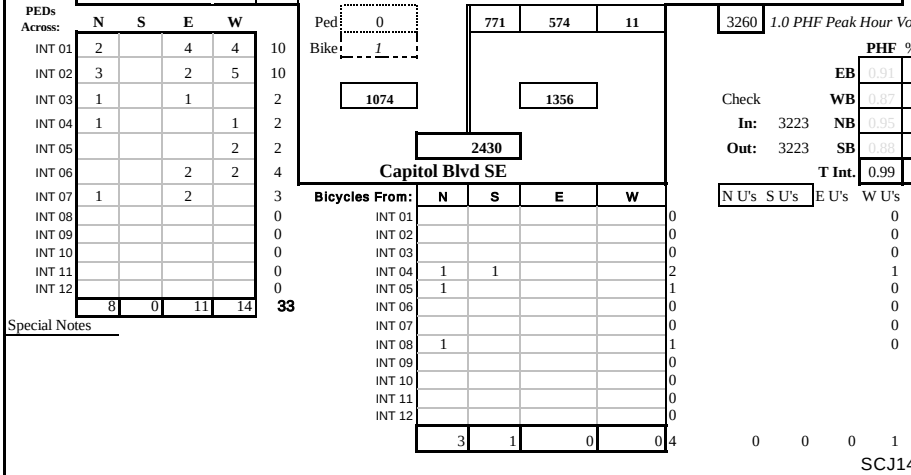
PEDs Across:	N	S	E	W	
INT 01	2		4	4	10
INT 02	3		2	5	10
INT 03	1		1		2
INT 04	1			1	2
INT 05				2	2
INT 06			2	2	4
INT 07	1		2		3
INT 08					0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	8	0	11	14	33

Special Notes

Ped 0 Bike 1

1074 1356 2430

771 574 11



Bicycles From:	N	S	E	W	
INT 01					0
INT 02					0
INT 03					0
INT 04	1	1			2
INT 05	1				1
INT 06					0
INT 07					0
INT 08	1				1
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	3	1	0	0	4

3260 *1.0 PHF Peak Hour Volume*

		PHF	%HV
	EB	0.91	0.3%
Check	WB	0.87	n/a
In: 3223	NB	0.95	1.0%
Out: 3223	SB	0.88	0.7%
	T Int.	0.99	0.7%

N U's	S U's	E U's	W U's
			0
			0
			0
			1
			0
			0
			0
			0
0	0	0	1

SCJ14026M_05p

NEW MARKET APARTMENTS
TRAFFIC IMPACT ANALYSIS

APPENDIX: PIPELINE DATA

1. Tumwater Blvd SW & SB I-5 Ramp

AM Peak Hour

Pipeline Projects												
1. 6501 Capitol Boulevard Apartments	0	0	0	0	0	0	0	0	0	0	0	0
2. Belmont Flats	32	0	0	0	24	0	0	0	0	25	108	0
3. L&I/WSDA Center	0	0	55	0	1	5	0	0	0	0	4	0
4. Yorkshire	42	0	0	0	18	0	0	0	0	42	136	0
Totals	74	0	55	0	43	5	0	0	0	67	248	0

2. Tumwater Blvd SW & NB I-5 Ramp

AM Peak Hour

Pipeline Projects												
1. 6501 Capitol Boulevard Apartments	0	0	0	0	0	0	0	0	0	0	0	0
2. Belmont Flats	0	0	0	0	14	0	0	0	10	0	34	74
3. L&I/WSDA Center	0	0	0	18	6	0	15	0	0	0	59	0
4. Yorkshire	0	0	0	0	9	0	0	0	9	0	26	110
Totals	0	0	0	18	29	0	15	0	19	0	119	184

3. Tumwater Blvd SW & Linderson Way SW/Center St SW

AM Peak Hour

Pipeline Projects												
1. 6501 Capitol Boulevard Apartments	0	0	0	0	0	0	0	0	0	0	0	0
2. Belmont Flats	0	0	0	0	14	0	0	0	0	0	34	0
3. L&I/WSDA Center	24	2	11	34	0	0	0	5	0	0	0	74
4. Yorkshire	0	0	0	0	9	0	0	0	0	0	26	0
Totals	24	2	11	34	23	0	0	5	0	0	60	74

4. Tumwater Blvd SW & New Market St SW

AM Peak Hour

Pipeline Projects												
1. 6501 Capitol Boulevard Apartments	0	0	0	0	0	0	0	0	0	0	0	0
2. Belmont Flats	0	0	0	0	14	0	0	0	0	0	34	0
3. L&I/WSDA Center	0	0	0	0	34	0	0	0	0	0	11	0
4. Yorkshire	0	0	0	0	9	0	0	0	0	0	26	0
Totals	0	0	0	0	57	0	0	0	0	0	71	0

5. New Market St SW & 73rd Ave SW

AM Peak Hour

Pipeline Projects												
1. 6501 Capitol Boulevard Apartments	0	0	0	0	0	0	0	0	0	0	0	0
2. Belmont Flats	0	0	0	0	0	0	0	0	0	0	0	0
3. L&I/WSDA Center	0	0	0	0	0	0	0	0	0	0	0	0
4. Yorkshire	0	0	0	0	0	0	0	0	0	0	0	0
Totals	0	0	0	0	0	0	0	0	0	0	0	0

1. Tumwater Blvd SW & SB I-5 Ramp

PM Peak Hour

Pipeline Projects												
1. 6501 Capitol Boulevard Apartments	0	0	0	0	0	0	0	0	0	0	0	0
2. Belmont Flats	57	0	0	0	45	0	0	0	0	14	61	0
3. L&I/WSDA Center	0	0	10	0	2	8	0	0	0	0	1	0
4. Yorkshire	106	0	0	0	45	0	0	0	0	24	78	0
Totals	163	0	10	0	92	8	0	0	0	38	140	0

2. Tumwater Blvd SW & NB I-5 Ramp

PM Peak Hour

Pipeline Projects												
1. 6501 Capitol Boulevard Apartments	0	0	0	0	0	0	0	0	0	0	0	0
2. Belmont Flats	0	0	0	0	26	0	0	0	19	0	19	42
3. L&I/WSDA Center	0	0	0	28	10	0	2	0	0	0	11	0
4. Yorkshire	0	0	0	0	22	0	0	0	23	0	15	63
Totals	0	0	0	28	58	0	2	0	42	0	45	105

3. Tumwater Blvd SW & Linderson Way SW/Center St SW

PM Peak Hour

Pipeline Projects												
1. 6501 Capitol Boulevard Apartments	0	0	0	0	0	0	0	0	0	0	0	0
2. Belmont Flats	0	0	0	0	26	0	0	0	0	0	19	0
3. L&I/WSDA Center	38	3	18	5	0	0	0	1	0	0	0	13
4. Yorkshire	0	0	0	0	22	0	0	0	0	0	15	0
Totals	38	3	18	5	48	0	0	1	0	0	34	13

4. Tumwater Blvd SW & New Market St SW

PM Peak Hour

Pipeline Projects												
1. 6501 Capitol Boulevard Apartments	0	0	0	0	0	0	0	0	0	0	0	0
2. Belmont Flats	0	0	0	0	26	0	0	0	0	0	19	0
3. L&I/WSDA Center	0	0	0	0	5	0	0	0	0	0	18	0
4. Yorkshire	0	0	0	0	14	0	0	0	0	0	9	0
Totals	0	0	0	0	45	0	0	0	0	0	46	0

5. New Market St SW & 73rd Ave SW

PM Peak Hour

Pipeline Projects												
1. 6501 Capitol Boulevard Apartments	0	0	0	0	0	0	0	0	0	0	0	0
2. Belmont Flats	0	0	0	0	0	0	0	0	0	0	0	0
3. L&I/WSDA Center	0	0	0	0	0	0	0	0	0	0	0	0
4. Yorkshire	0	0	0	0	0	0	0	0	0	0	0	0
Totals	0	0	0	0	0	0	0	0	0	0	0	0

6. New Market St SW & Israel Rd SW

PM Peak Hour

Pipeline Projects												
1. 6501 Capitol Boulevard Apartments	0	0	0	0	0	0	0	0	0	0	0	0
2. Belmont Flats	0	0	0	0	0	0	0	0	0	0	0	0
3. L&I/WSDA Center	0	0	0	0	0	0	0	0	0	0	1	0
4. Yorkshire	0	0	0	0	45	0	0	0	0	0	31	0
Totals	0	0	0	0	45	0	0	0	0	0	32	0

7. 73rd Ave SW & 71st Ave SW

PM Peak Hour

Pipeline Projects												
1. 6501 Capitol Boulevard Apartments	0	0	0	0	0	0	0	0	0	0	0	0
2. Belmont Flats	0	0	0	0	0	0	0	0	0	0	0	0
3. L&I/WSDA Center	0	0	0	0	0	0	0	0	0	0	0	0
4. Yorkshire	0	0	0	0	0	0	0	0	0	0	0	0
Totals	0	0	0	0	0	0	0	0	0	0	0	0

8. Cleanwater Dr SW & 71st Ave SW

PM Peak Hour

Pipeline Projects												
1. 6501 Capitol Boulevard Apartments	0	0	0	0	0	0	0	0	0	0	0	0
2. Belmont Flats	0	0	0	0	0	0	0	0	0	0	0	0
3. L&I/WSDA Center	0	0	0	0	0	0	0	0	0	0	0	0
4. Yorkshire	0	0	0	0	0	0	0	0	0	0	0	0
Totals	0	0	0	0	0	0	0	0	0	0	0	0

9. 71st Ave SW & Cleanwater Dr SW

PM Peak Hour

Pipeline Projects												
1. 6501 Capitol Boulevard Apartments	0	0	0	0	0	0	0	0	0	0	0	0
2. Belmont Flats	0	0	0	0	0	0	0	0	0	0	0	0
3. L&I/WSDA Center	0	0	0	0	0	0	0	0	0	0	0	0
4. Yorkshire	0	0	0	0	0	0	0	0	0	0	0	0
Totals	0	0	0	0	0	0	0	0	0	0	0	0

10. Tumwater Blvd SW & Cleanwater Dr SW

PM Peak Hour

Pipeline Projects												
1. 6501 Capitol Boulevard Apartments	0	0	0	0	0	0	0	0	0	0	0	0
2. Belmont Flats	0	0	0	0	26	0	0	0	0	0	19	0
3. L&I/WSDA Center	0	0	0	0	5	0	0	0	0	0	16	0
4. Yorkshire	0	0	0	0	14	0	0	0	0	0	9	0
Totals	0	0	0	0	45	0	0	0	0	0	44	0

11. Tumwater Blvd SW & Capitol Blvd SE

PM Peak Hour

Pipeline Projects												
1. 6501 Capitol Boulevard Apartments	3	4	3	3	0	0	0	8	0	0	0	3
2. Belmont Flats	0	0	0	0	14	0	0	0	12	9	10	0
3. L&I/WSDA Center	0	0	0	0	3	0	0	0	2	5	10	1
4. Yorkshire	0	9	10	14	8	0	0	14	6	4	5	0
Totals	3	13	13	17	25	0	0	22	20	18	25	4

12. Tumwater Blvd SE & Bonniewood Dr SE

PM Peak Hour

Pipeline Projects												
1. 6501 Capitol Boulevard Apartments	0	0	0	0	0	0	0	0	0	0	0	0
2. Belmont Flats	0	0	0	0	14	0	0	0	0	0	10	0
3. L&I/WSDA Center	0	0	0	0	3	0	0	0	0	0	10	0
4. Yorkshire	0	0	0	0	22	0	0	0	0	0	15	0
Totals	0	0	0	0	39	0	0	0	0	0	35	0

13. Tumwater Blvd SE & Henderson Blvd SE

PM Peak Hour

Pipeline Projects												
1. 6501 Capitol Boulevard Apartments	7	0	0	0	0	0	0	0	7	5	0	5
2. Belmont Flats	7	0	0	0	0	0	0	0	7	5	0	5
3. L&I/WSDA Center	2	0	0	0	0	0	0	0	1	5	0	5
4. Yorkshire	11	0	0	0	0	0	0	0	11	8	0	7
Totals	27	0	0	0	0	0	0	0	26	23	0	22

14. Capitol Blvd SE & 71st Ave SW

PM Peak Hour

Pipeline Projects												
1. 6501 Capitol Boulevard Apartments	0	10	0	0	0	0	0	14	0	0	0	0
2. Belmont Flats	0	0	0	0	0	0	0	0	0	0	0	0
3. L&I/WSDA Center	0	0	0	0	0	0	0	1	0	0	0	0
4. Yorkshire	0	19	0	0	0	0	0	28	0	0	0	0
Totals	0	29	0	0	0	0	0	43	0	0	0	0

15. Capitol Blvd SE & Israel Rd SW

PM Peak Hour

Pipeline Projects												
1. 6501 Capitol Boulevard Apartments	1	12	1	2	0	0	0	16	0	0	0	2
2. Belmont Flats	7	0	0	0	7	0	0	0	0	0	5	5
3. L&I/WSDA Center	0	0	0	0	0	0	0	0	0	0	0	0
4. Yorkshire	9	0	0	0	8	0	0	0	28	19	6	6
Totals	17	12	1	2	15	0	0	16	28	19	11	13

16. Capitol Blvd SE & Dennis St SW

PM Peak Hour

Pipeline Projects												
1. 6501 Capitol Boulevard Apartments	1	14	1	1	0	0	0	20	0	0	0	2
2. Belmont Flats	0	1	0	0	0	1	1	1	1	1	0	0
3. L&I/WSDA Center	0	0	0	0	0	0	0	0	0	0	0	0
4. Yorkshire	0	7	0	0	0	1	1	4	1	1	0	0
Totals	1	22	1	1	0	2	2	25	2	2	0	2

17. Capitol Blvd SE & Z St SW

PM Peak Hour

Pipeline Projects												
1. 6501 Capitol Boulevard Apartments	0	8	0	0	0	0	0	20	0	0	0	0
2. Belmont Flats	0	0	0	0	0	0	0	0	0	0	0	0
3. L&I/WSDA Center	0	0	0	0	0	0	0	0	0	0	0	0
4. Yorkshire	0	4	0	0	0	0	0	2	0	0	0	0
Totals	0	12	0	0	0	0	0	22	0	0	0	0

18. Capitol Blvd SE & X St SW

PM Peak Hour

Pipeline Projects												
1. 6501 Capitol Boulevard Apartments	0	8	0	0	0	0	0	20	0	0	0	0
2. Belmont Flats	0	0	0	0	0	0	0	0	0	0	0	0
3. L&I/WSDA Center	0	0	0	0	0	0	0	0	0	0	0	0
4. Yorkshire	0	1	0	0	0	0	0	1	0	0	0	0
Totals	0	9	0	0	0	0	0	21	0	0	0	0

19. Capitol Blvd SE & Lee St SW

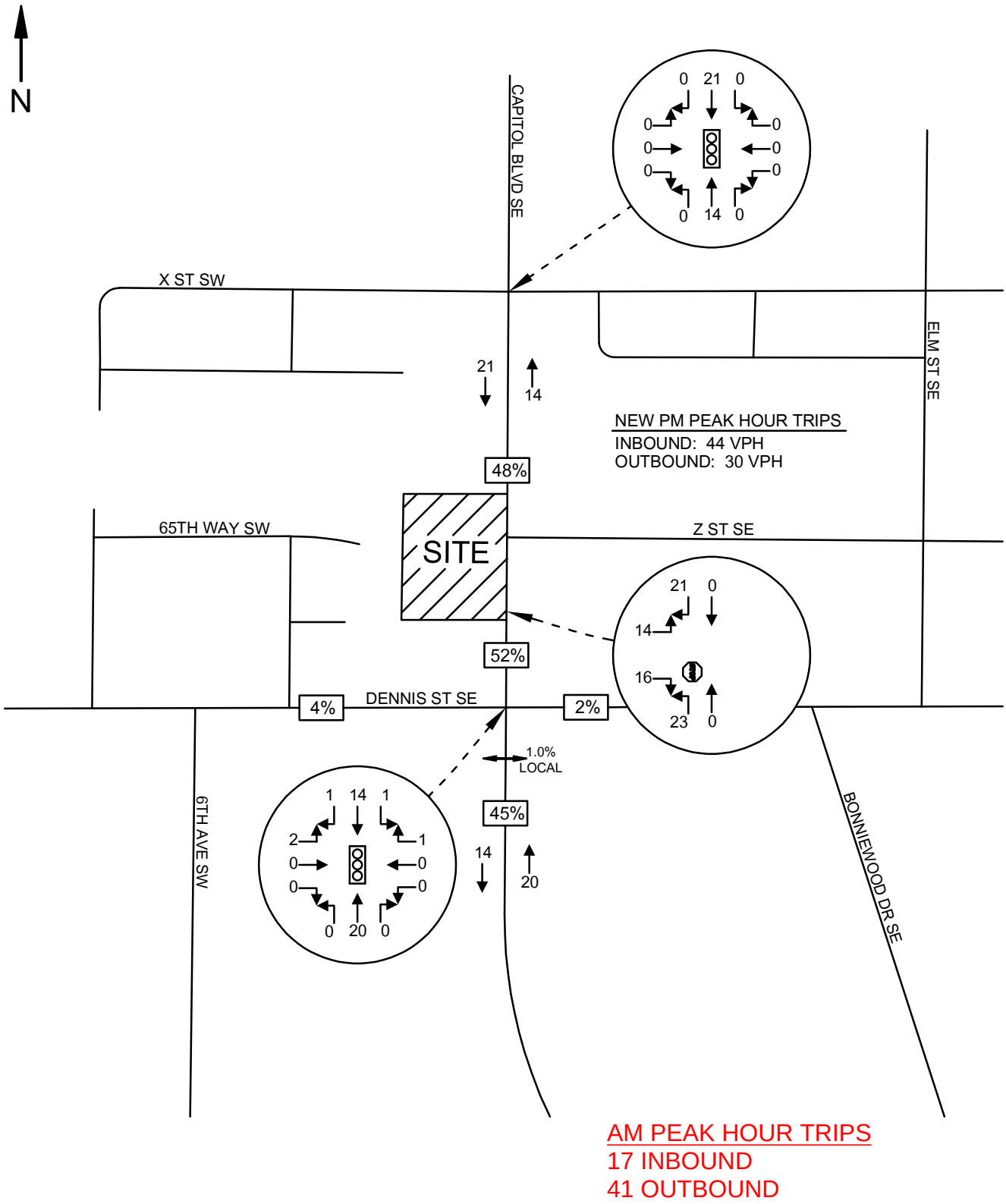
PM Peak Hour

Pipeline Projects												
1. 6501 Capitol Boulevard Apartments	0	6	0	0	0	0	0	17	0	0	0	0
2. Belmont Flats	0	0	0	0	0	0	0	0	0	0	0	0
3. L&I/WSDA Center	0	0	0	0	0	0	0	0	0	0	0	0
4. Yorkshire	0	0	0	0	0	0	0	0	0	0	0	0
Totals	0	6	0	0	0	0	0	17	0	0	0	0

20. Capitol Blvd SE & Trosper Rd SW

PM Peak Hour

Pipeline Projects												
1. 6501 Capitol Boulevard Apartments	0	3	0	0	0	0	0	8	9	3	0	0
2. Belmont Flats	0	0	0	0	0	0	0	0	0	0	0	0
3. L&I/WSDA Center	0	0	0	0	0	0	0	0	0	0	0	0
4. Yorkshire	0	0	0	0	0	0	0	0	0	0	0	0
Totals	0	3	0	0	0	0	0	8	9	3	0	0

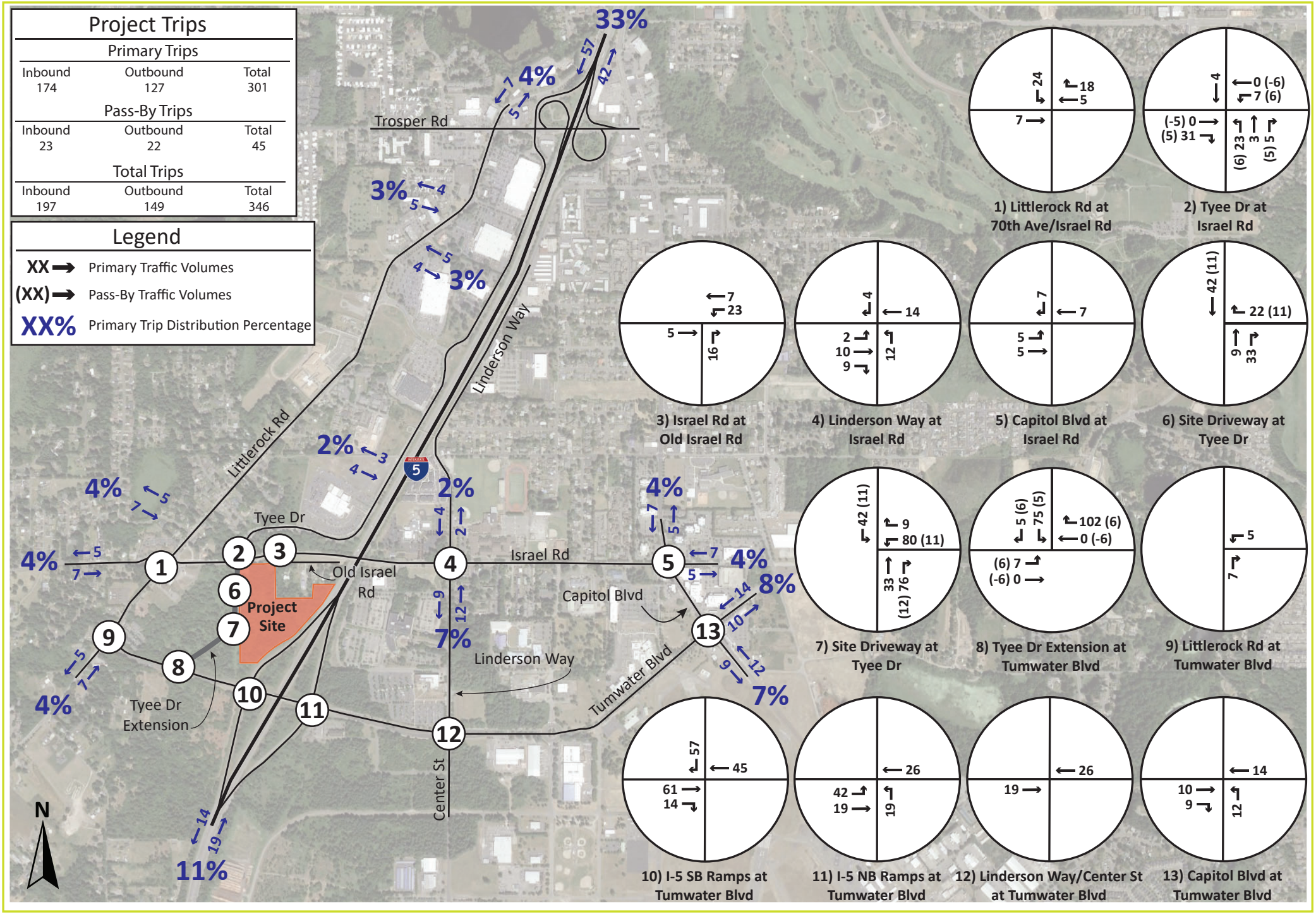


HEATH & ASSOCIATES

TRAFFIC AND CIVIL ENGINEERING

6501 CAPITOL BOULEVARD APARTMENTS

PM PEAK HOUR TRIP DISTRIBUTION & ASSIGNMENT
FIGURE 1.1



SCJ ALLIANCE
ENGINEERING AND PLANNING SERVICES

The Belmont Flats
Tumwater, Washington
Traffic Impact Analysis

Figure 5
Site-Generated Traffic Volumes
PM Peak Hour

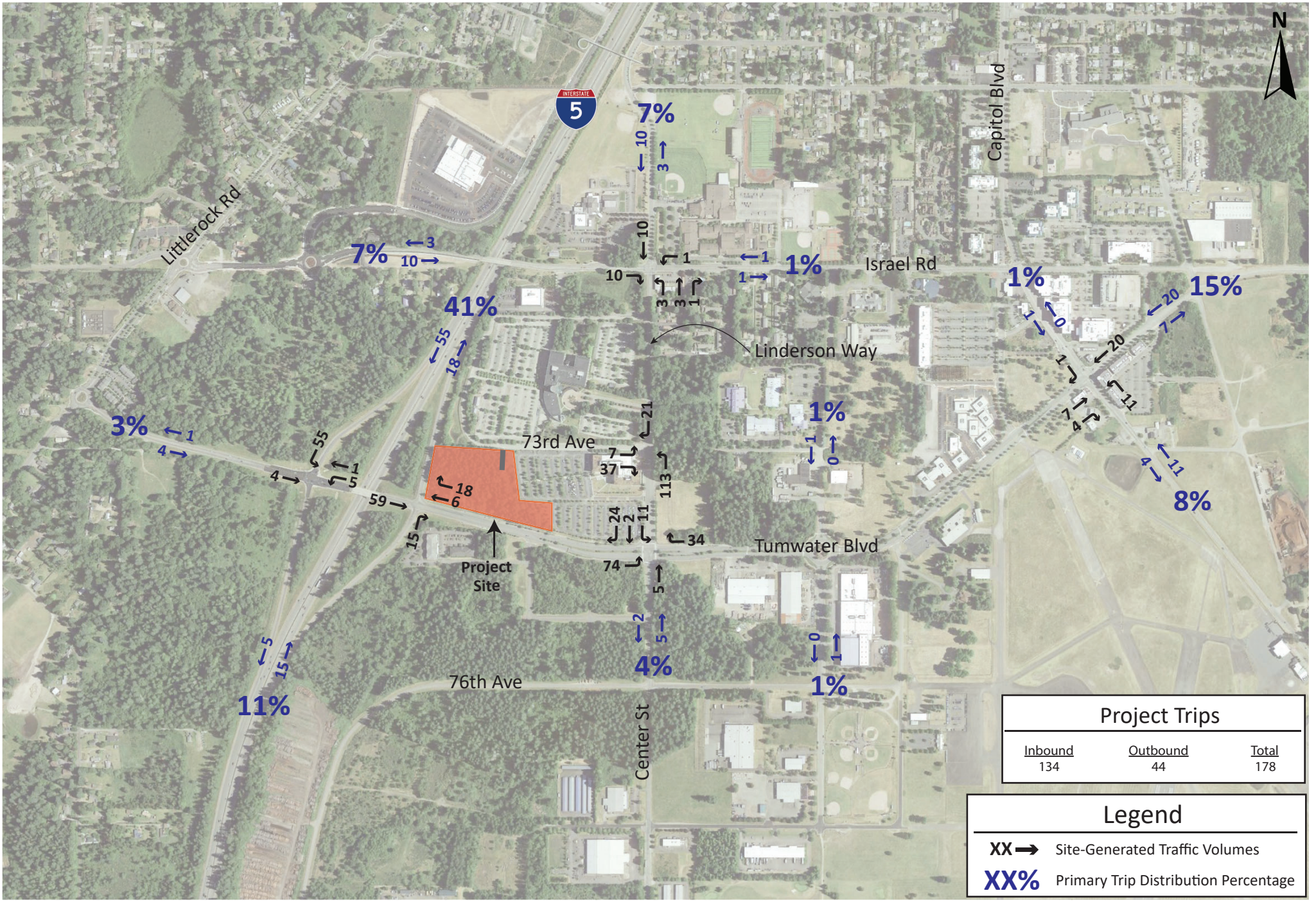
SCJ ALLIANCE
CONSULTING SERVICES

The Belmont Flats

AM Peak Hour Volumes

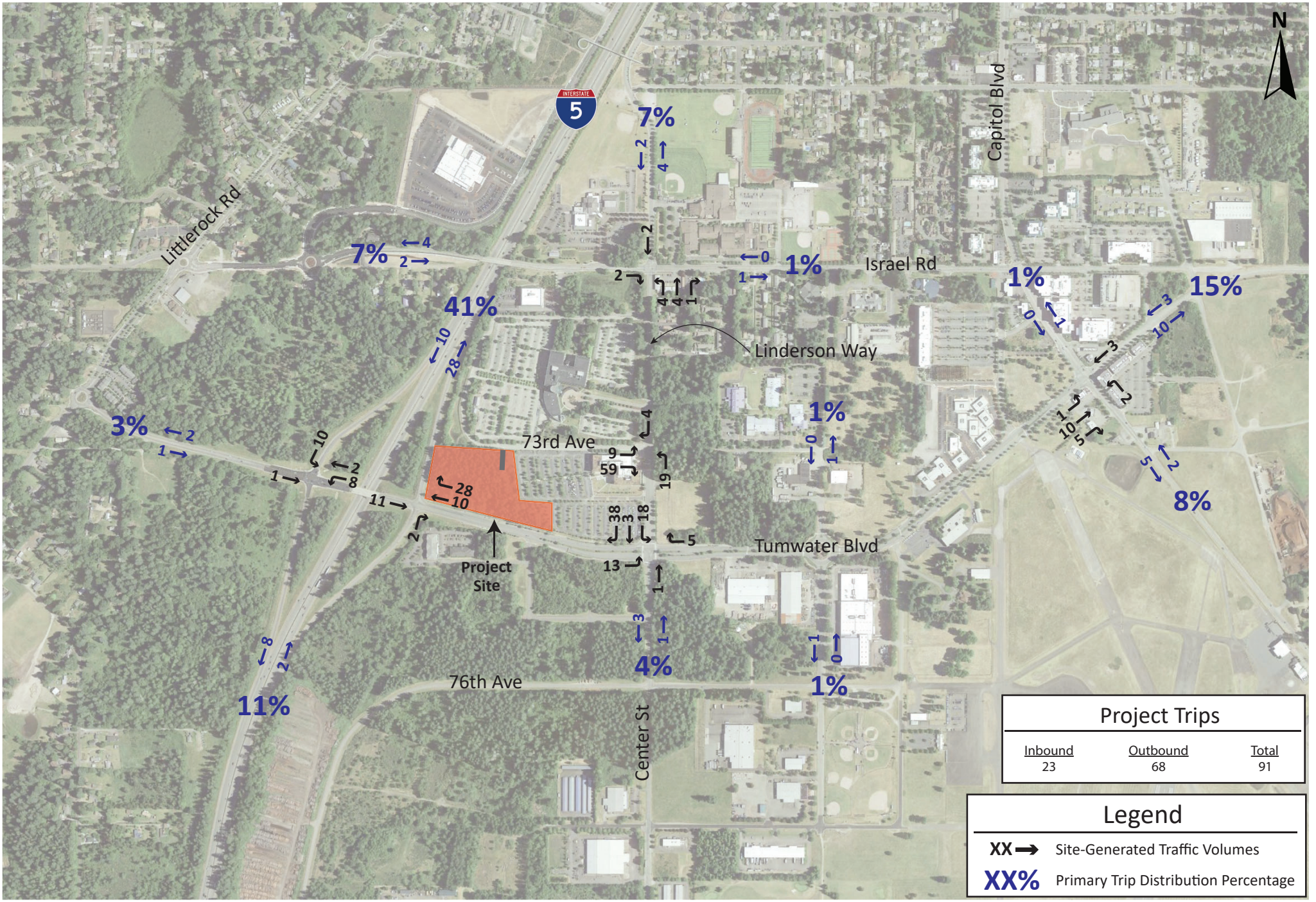
Covid Adjustment	30%
Growth Rate:	4%

Intersection	Movement		Existing 2022 Volumes	Covid Adjustments	Adjusted 2022 Volumes	Background 2024 Growth	Total Pipeline Volumes	Yorkshire Pipeline Volume	Baseline 2024 Volumes	Site Generated Pass-By	Site Generated Primary	Site Generated Total	Projected 2024 Volumes
		L	39	12	51	4	0	3	58	0	4	4	62
	EB	T	169	51	220	18	1	53	292	0	18	18	310
		R	49	15	64	5	10	20	99	0	16	16	115
4		L	93	28	121	10	1	0	132	0	0	0	132
11th Ave/Linderson Way	WB	T	148	44	192	15	2	18	227	0	8	8	235
Israel Rd		R	18	5	23	2	0	0	25	0	0	0	25
		L	43	13	56	4	4	7	71	0	7	7	78
TMC Date: 07/26/2022	NB	T	44	13	57	5	3	0	65	0	0	0	65
		R	61	18	79	6	1	0	86	0	0	0	86
7:15 - 8:15		L	9	3	12	1	0	0	13	0	0	0	13
PHF: 0.78	SB	T	35	11	46	4	10	0	60	0	0	0	60
		R	23	7	30	2	0	1	33	0	2	2	35
			731		950				1,160				1,215
		L	0	0	0	0	0	0	0	0	0	0	0
	EB	T	304	91	395	32	5	136	568	0	108	108	676
		R	40	12	52	4	1	40	97	0	25	25	122
10		L	134	40	174	14	5	0	193	0	0	0	193
I-5 SB Ramps	WB	T	97	29	126	10	2	18	156	0	24	24	180
Tumwater Blvd		R	0	0	0	0	0	0	0	0	0	0	0
		L	0	0	0	0	0	0	0	0	0	0	0
TMC Date: 07/26/2022	NB	T	0	0	0	0	0	0	0	0	0	0	0
		R	0	0	0	0	0	0	0	0	0	0	0
7:15 - 8:15		L	474	1,142	1,616	129	55	0	1,800	0	0	0	1,800
PHF: 0.86	SB	T	3	1	4	0	0	0	4	0	0	0	4
		R	89	27	116	9	0	42	167	0	32	32	199
			1,141		2,483				2,985				3,174
		L	219	266	485	39	0	110	634	0	74	74	708
	EB	T	550	965	1,515	121	60	26	1,722	0	34	34	1,756
		R	0	0	0	0	0	0	0	0	0	0	0
11		L	0	0	0	0	0	0	0	0	0	0	0
I-5 NB Ramps	WB	T	170	51	221	18	7	9	255	0	14	14	269
Tumwater Blvd		R	322	247	569	45	19	0	633	0	0	0	633
		L	50	15	65	5	1	9	80	0	10	10	90
TMC Date: 07/26/2022	NB	T	1	0	1	0	0	0	1	0	0	0	1
		R	246	224	470	38	15	0	523	0	0	0	523
7:15 - 8:15		L	0	0	0	0	0	0	0	0	0	0	0
PHF: 0.87	SB	T	0	0	0	0	0	0	0	0	0	0	0
		R	0	0	0	0	0	0	0	0	0	0	0
			1,558		3,325				3,847				3,979
		L	215	1,015	1,230	98	74	0	1,402	0	0	0	1,402
	EB	T	510	153	663	53	0	26	742	0	34	34	776
		R	81	24	105	8	0	0	113	0	0	0	113
12		L	32	10	42	3	0	0	45	0	0	0	45
Linderson Way/Center St	WB	T	332	100	432	35	0	9	476	0	14	14	490
Tumwater Blvd		R	69	21	90	7	34	0	131	0	0	0	131
		L	70	21	91	7	0	0	98	0	0	0	98
TMC Date: 07/26/2022	NB	T	47	14	61	5	5	0	71	0	0	0	71
		R	30	9	39	3	0	0	42	0	0	0	42
7:15 - 8:15		L	32	10	42	3	11	0	56	0	0	0	56
PHF: 0.89	SB	T	26	8	34	3	2	0	39	0	0	0	39
		R	95	29	124	10	24	0	158	0	0	0	158
			1,539		2,951				3,371				3,419



L&I/WSDA Safety & Health Lab and Training Center
Tumwater, Washinton
Traffic Impact Analysis

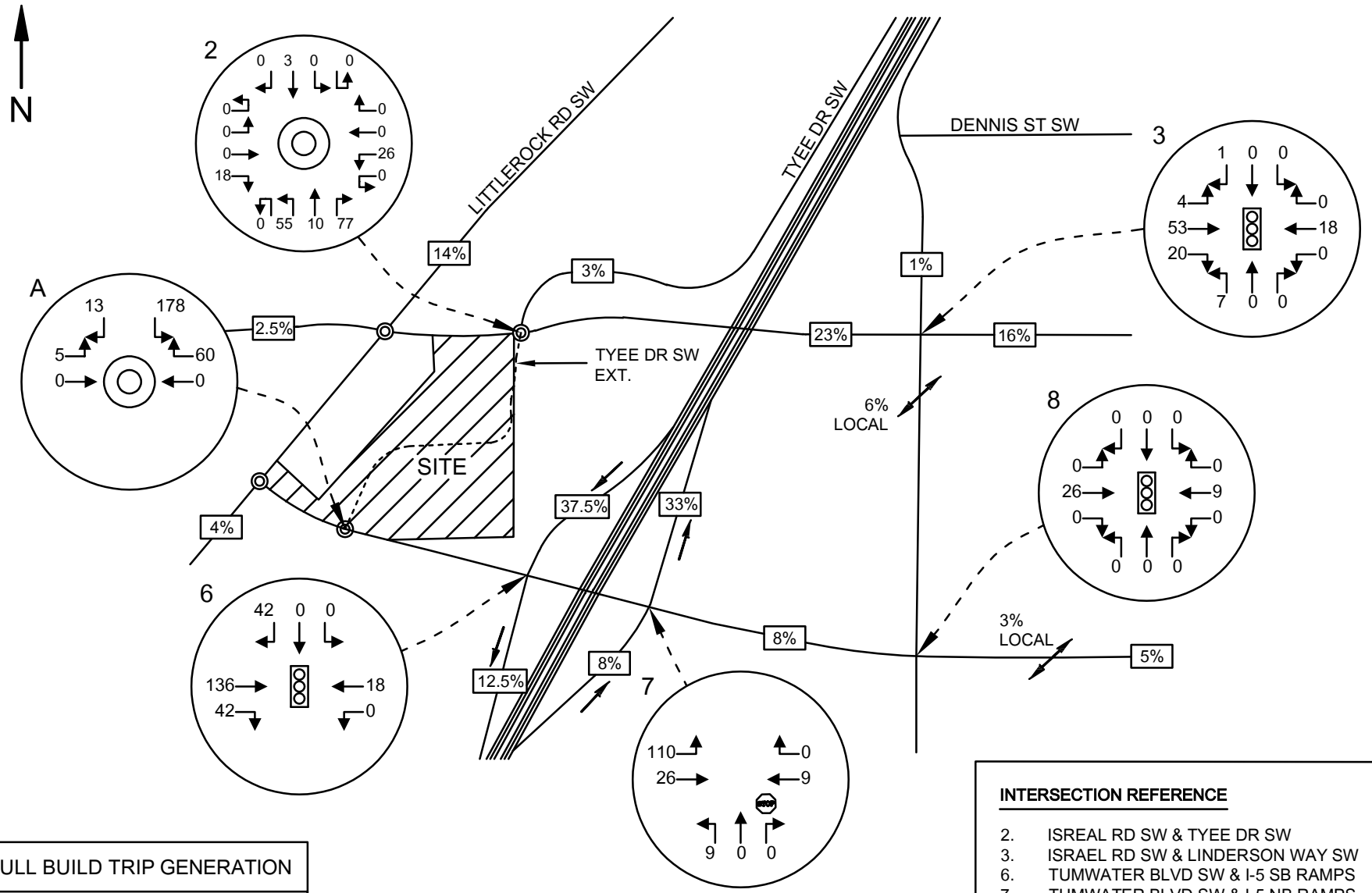
Figure 6
Site-Generated Traffic Volumes
AM Peak Hour



SCJ ALLIANCE
ENGINEERING AND PLANNING SERVICES

L&I/WSDA Safety & Health Lab and Training Center
Tumwater, Washinton
Traffic Impact Analysis

Figure 7
Site-Generated Traffic Volumes
PM Peak Hour



FULL BUILD TRIP GENERATION
NEW AM PEAK HOUR TRIPS INBOUND: 112 VPH OUTBOUND: 333 VPH

INTERSECTION REFERENCE

2. ISREAL RD SW & TYEE DR SW
3. ISRAEL RD SW & LINDERSON WAY SW
6. TUMWATER BLVD SW & I-5 SB RAMPS
7. TUMWATER BLVD SW & I-5 NB RAMPS
8. TUMWATER BLVD SW & LINDERSON WAY SW/CENTER ST SW

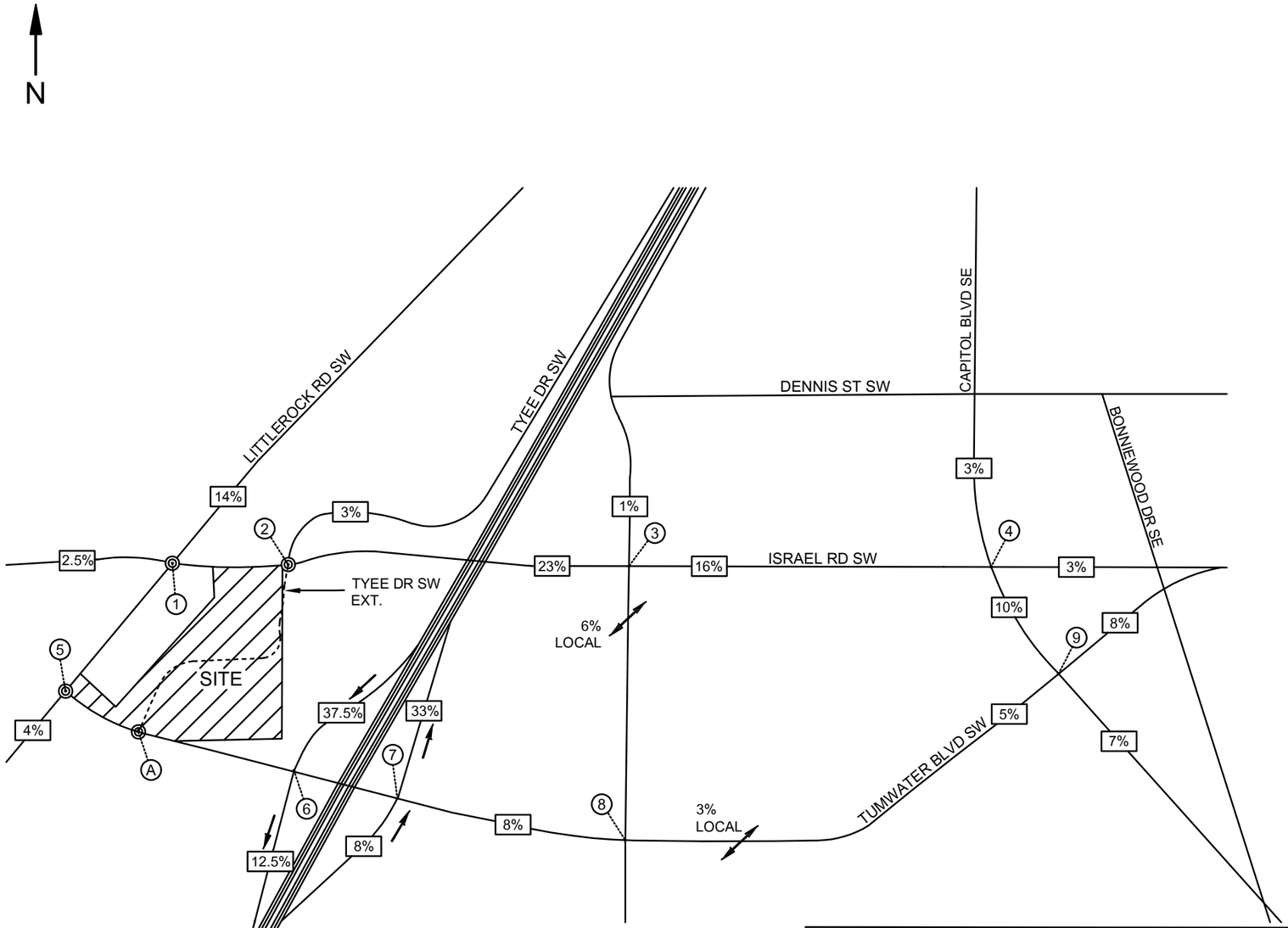
A. TUMWATER BLVD SW & TYEE DR SW (ACCESS)

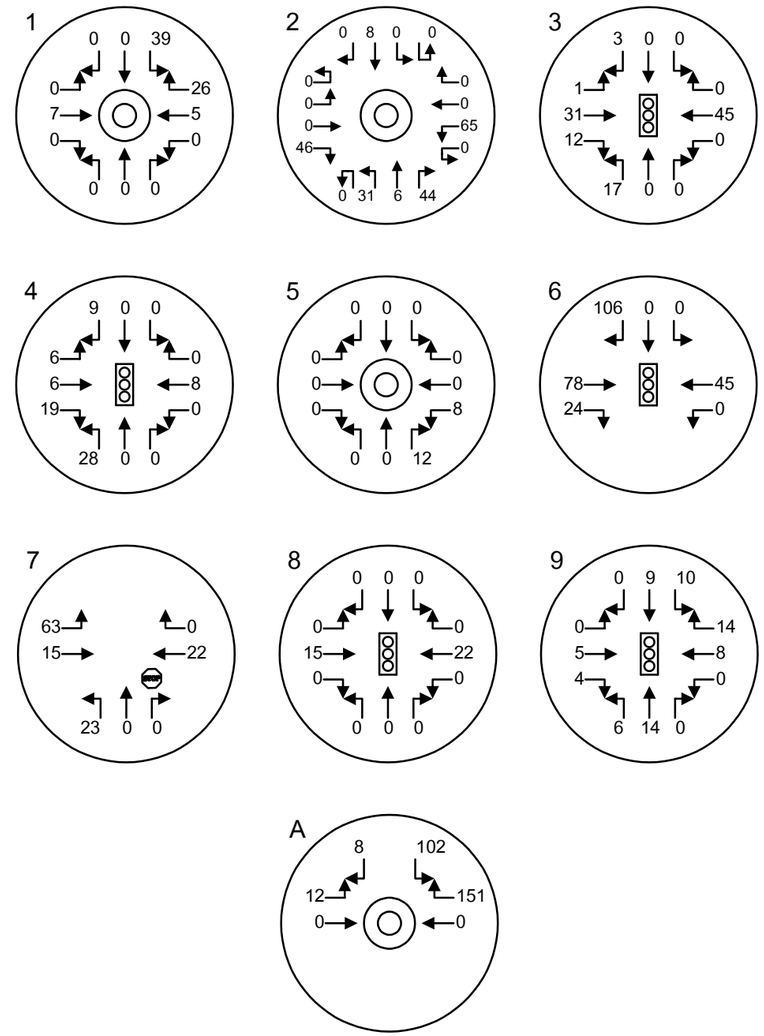
HEATH & ASSOCIATES

TRAFFIC AND CIVIL ENGINEERING

YORKSHIRE

FULL BUILD-OUT SCENARIO 2: AM PEAK HOUR TRIP DISTRIBUTION & ASSIGNMENT
FIGURE 5.1





INTERSECTIONS OF STUDY

1. 70TH AVE SW/ISREAL RD SW & LITTLEROCK RD SW
2. ISRAEL RD SW & TYEE DR SW
3. ISRAEL RD SW & LINDERSON WAY SW
4. ISRAEL RD SW & CAPITOL BLVD S
5. TUMWATER BLVD SW & LITTLEROCK RD SW
6. TUMWATER BLVD SW & I-5 SB RAMPS
7. TUMWATER BLVD SW & I-5 NB RAMPS
8. TUMWATER BLVD SW & LINDERSON WAY SW/CENTER ST SW
9. TUMWATER BLVD SW & CAPITOL BLVD SW/OLD HWY 99 SE

A. TUMWATER BLVD SW & TYEE DR SW (ACCESS)

FULL BUILD TRIP GENERATION

NEW PM PEAK HOUR TRIPS
INBOUND: 282 VPH
OUTBOUND: 191 VPH

HEATH & ASSOCIATES
TRAFFIC AND CIVIL ENGINEERING

YORKSHIRE

FULL BUILD-OUT SCENARIO 2: PM PEAK HOUR TRIP DISTRIBUTION & ASSIGNMENT
FIGURE 5.2

NEW MARKET APARTMENTS
TRAFFIC IMPACT ANALYSIS

APPENDIX: ITE TRIP GENERATION DATA

Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

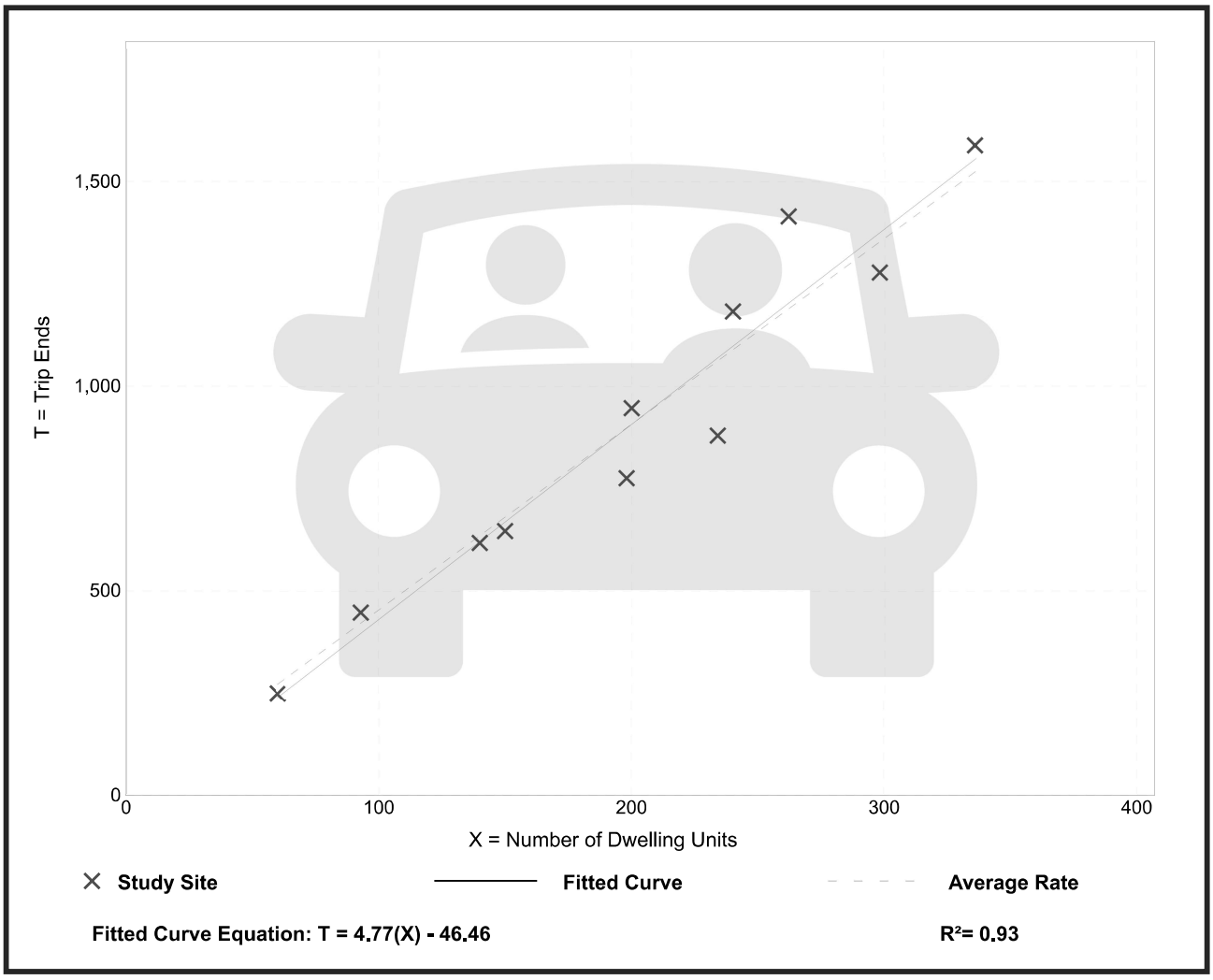
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 11
Avg. Num. of Dwelling Units: 201
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.54	3.76 - 5.40	0.51

Data Plot and Equation



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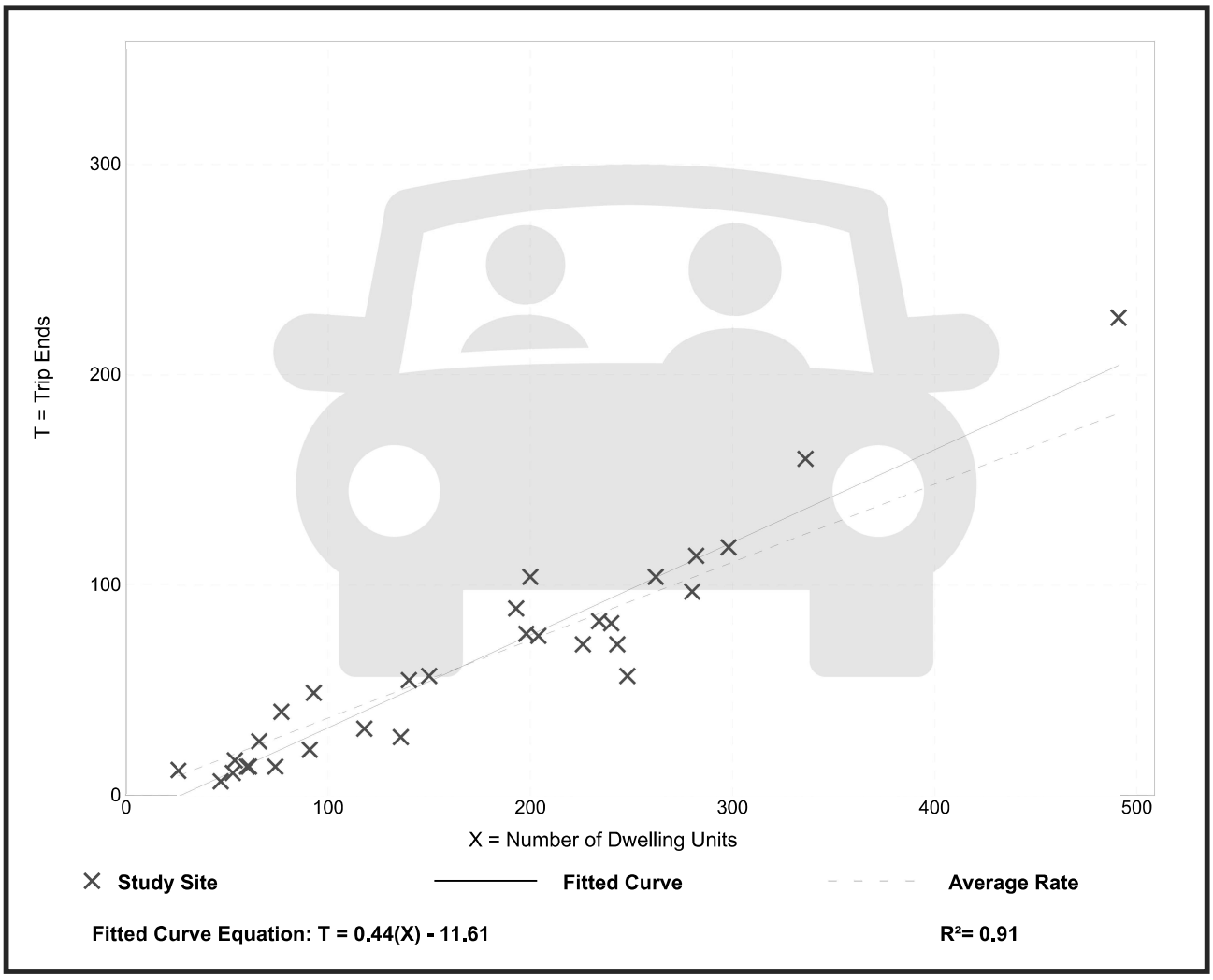
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	30
Avg. Num. of Dwelling Units:	173
Directional Distribution:	23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.37	0.15 - 0.53	0.09

Data Plot and Equation



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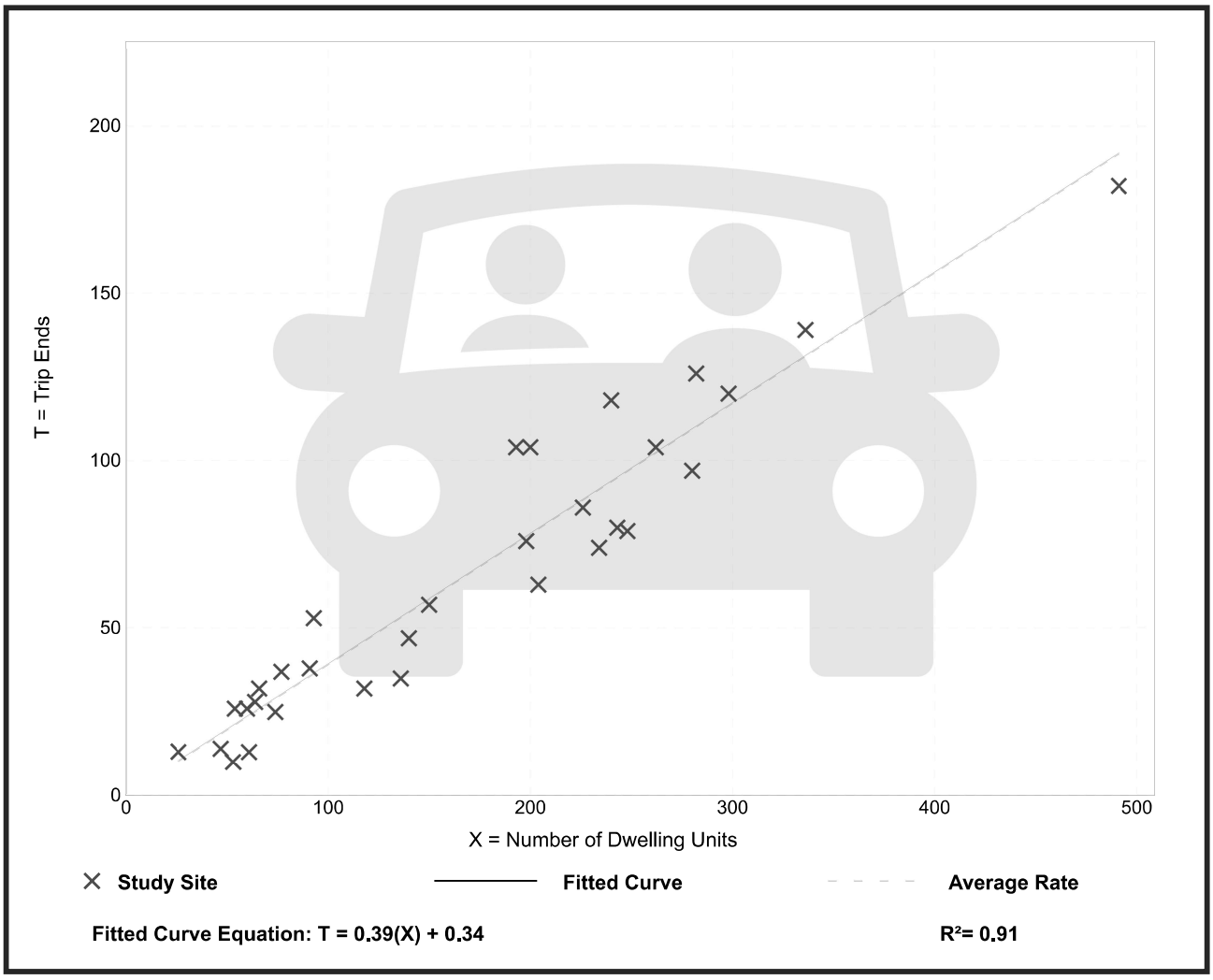
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 31
Avg. Num. of Dwelling Units: 169
Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.19 - 0.57	0.08

Data Plot and Equation



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Day Care Center
(565)

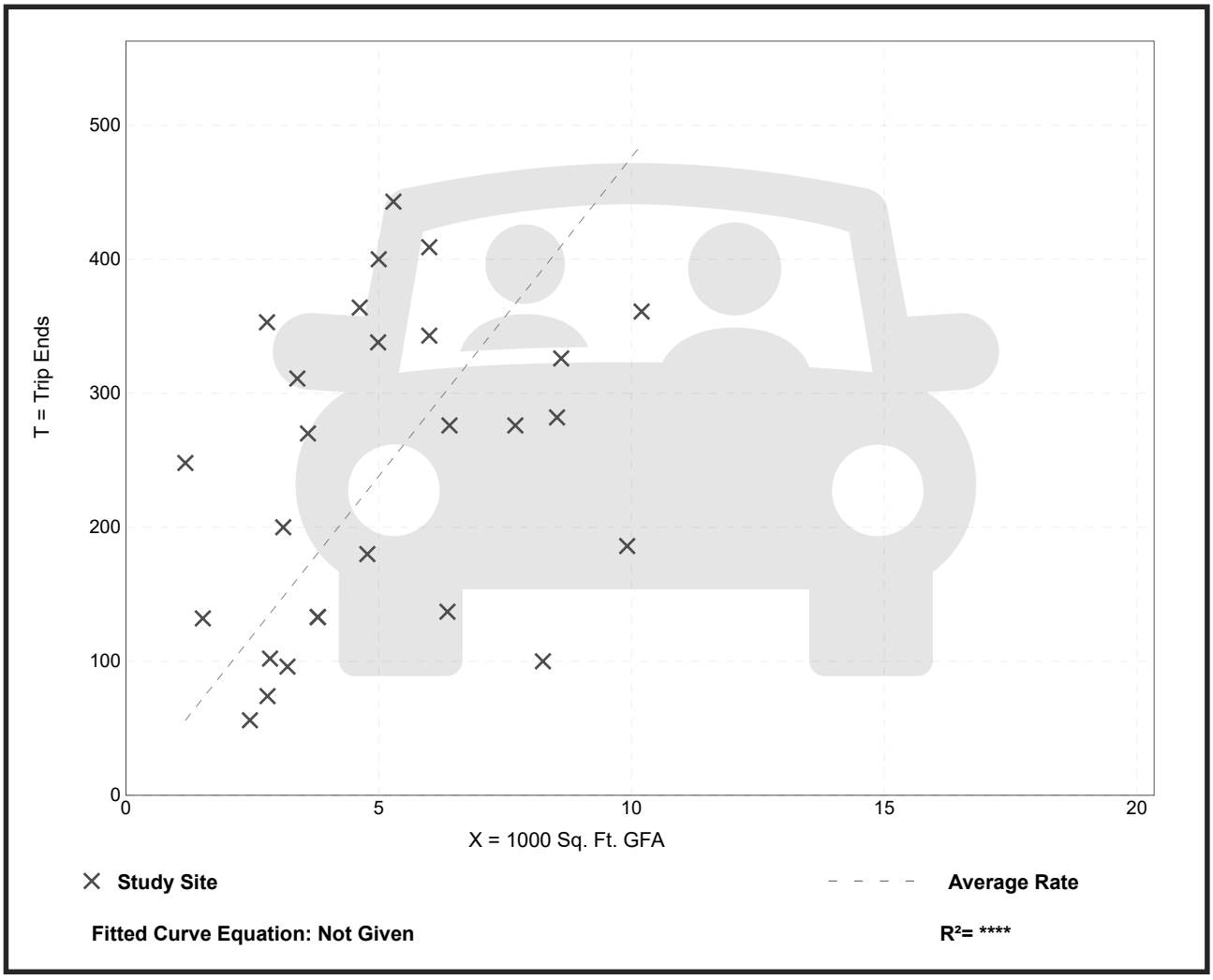
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 27
Avg. 1000 Sq. Ft. GFA: 5
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
47.62	12.12 - 211.06	29.78

Data Plot and Equation



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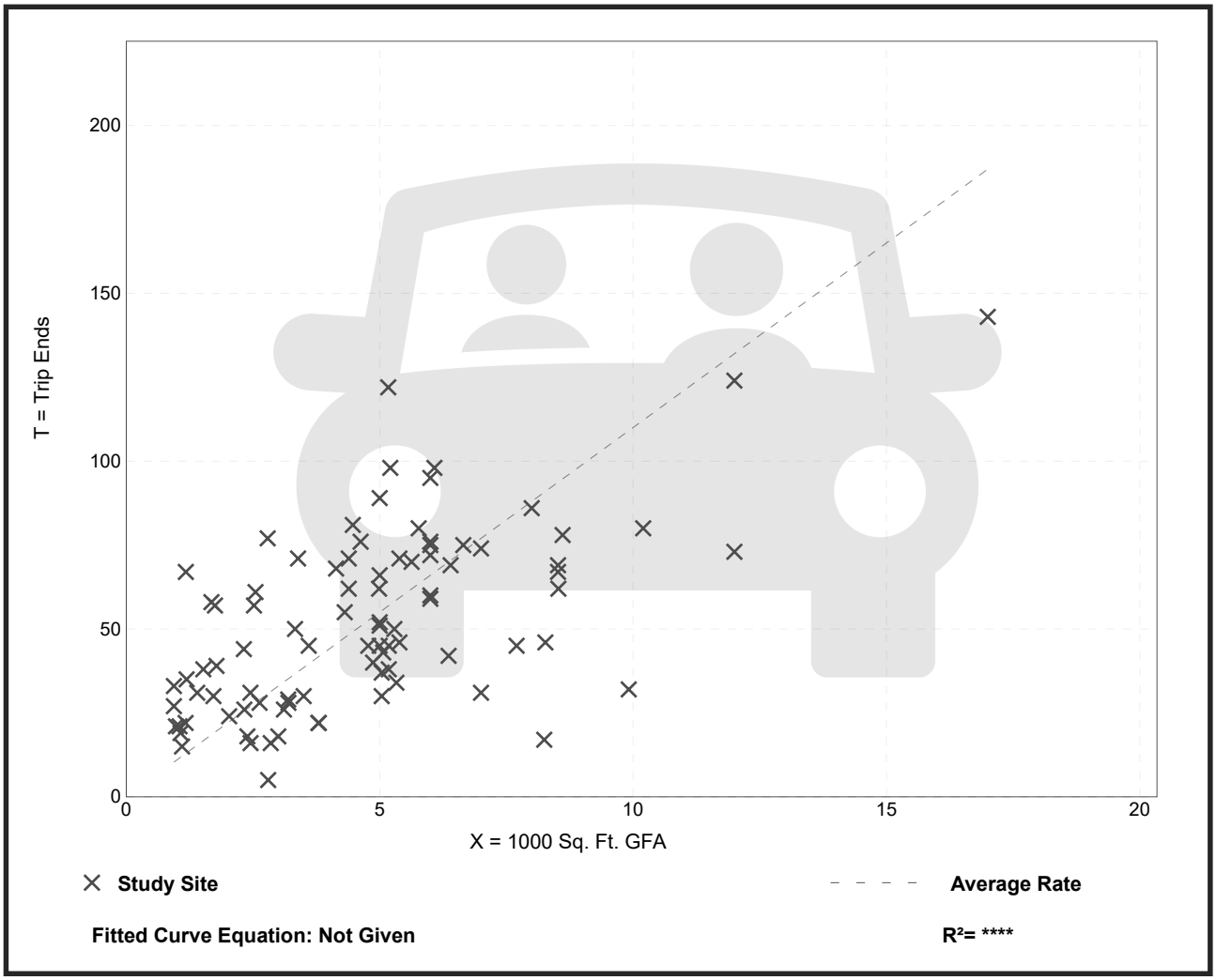
Day Care Center
(565)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 89
Avg. 1000 Sq. Ft. GFA: 5
Directional Distribution: 53% entering, 47% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
11.00	1.79 - 57.02	6.08

Data Plot and Equation



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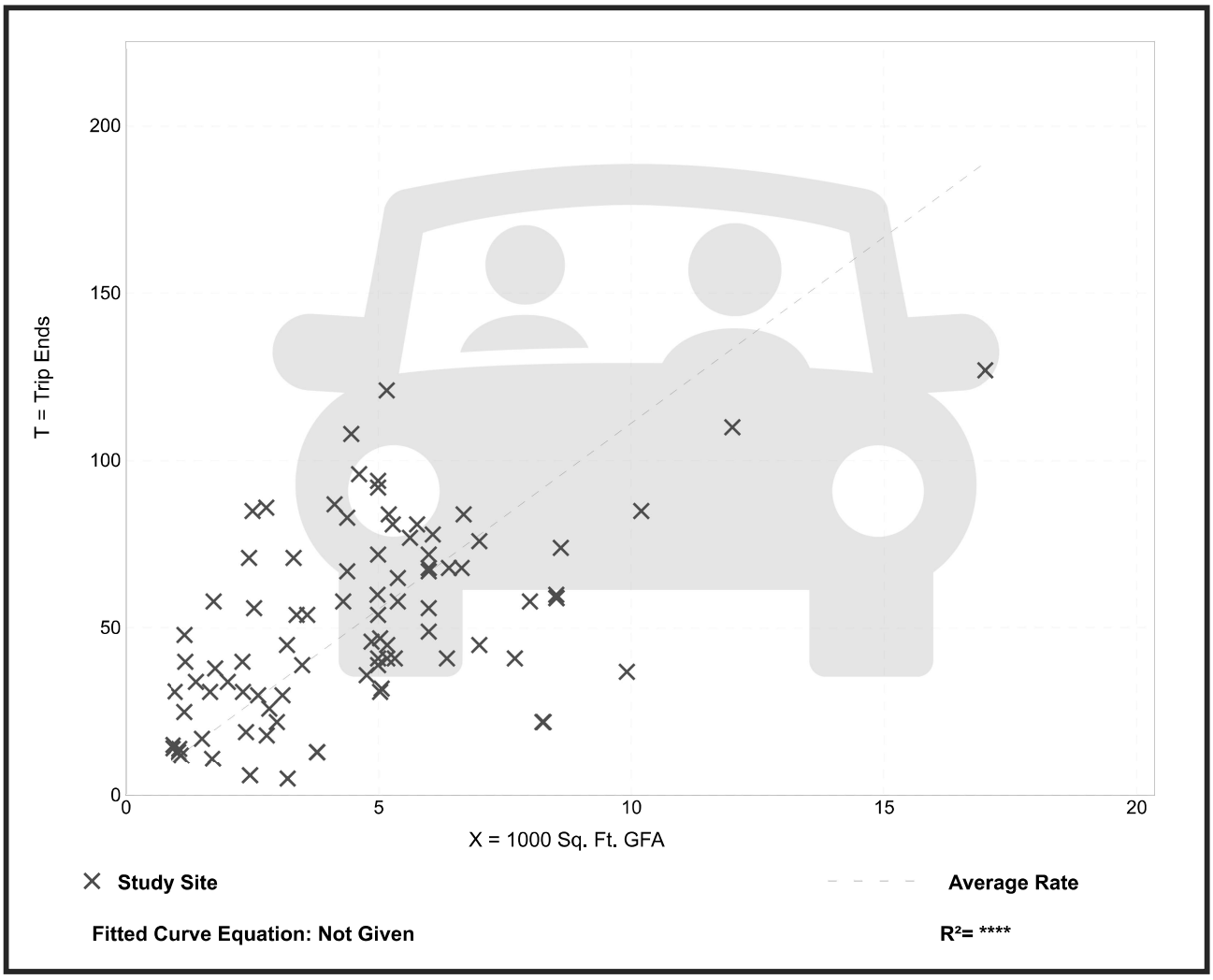
Day Care Center
(565)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 90
Avg. 1000 Sq. Ft. GFA: 5
Directional Distribution: 47% entering, 53% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
11.12	1.56 - 40.85	6.28

Data Plot and Equation



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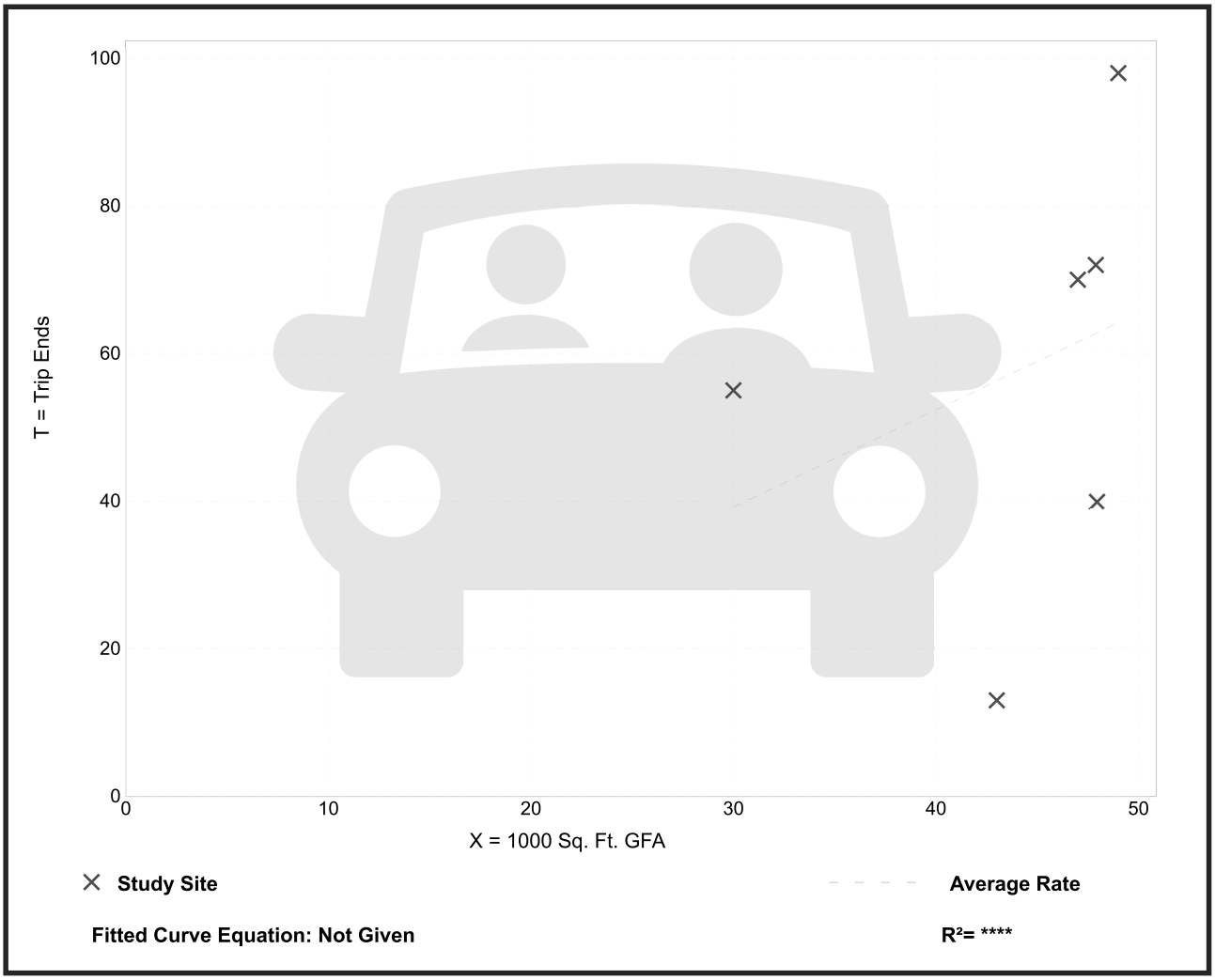
Health/Fitness Club
(492)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 6
Avg. 1000 Sq. Ft. GFA: 44
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.31	0.30 - 2.00	0.64

Data Plot and Equation



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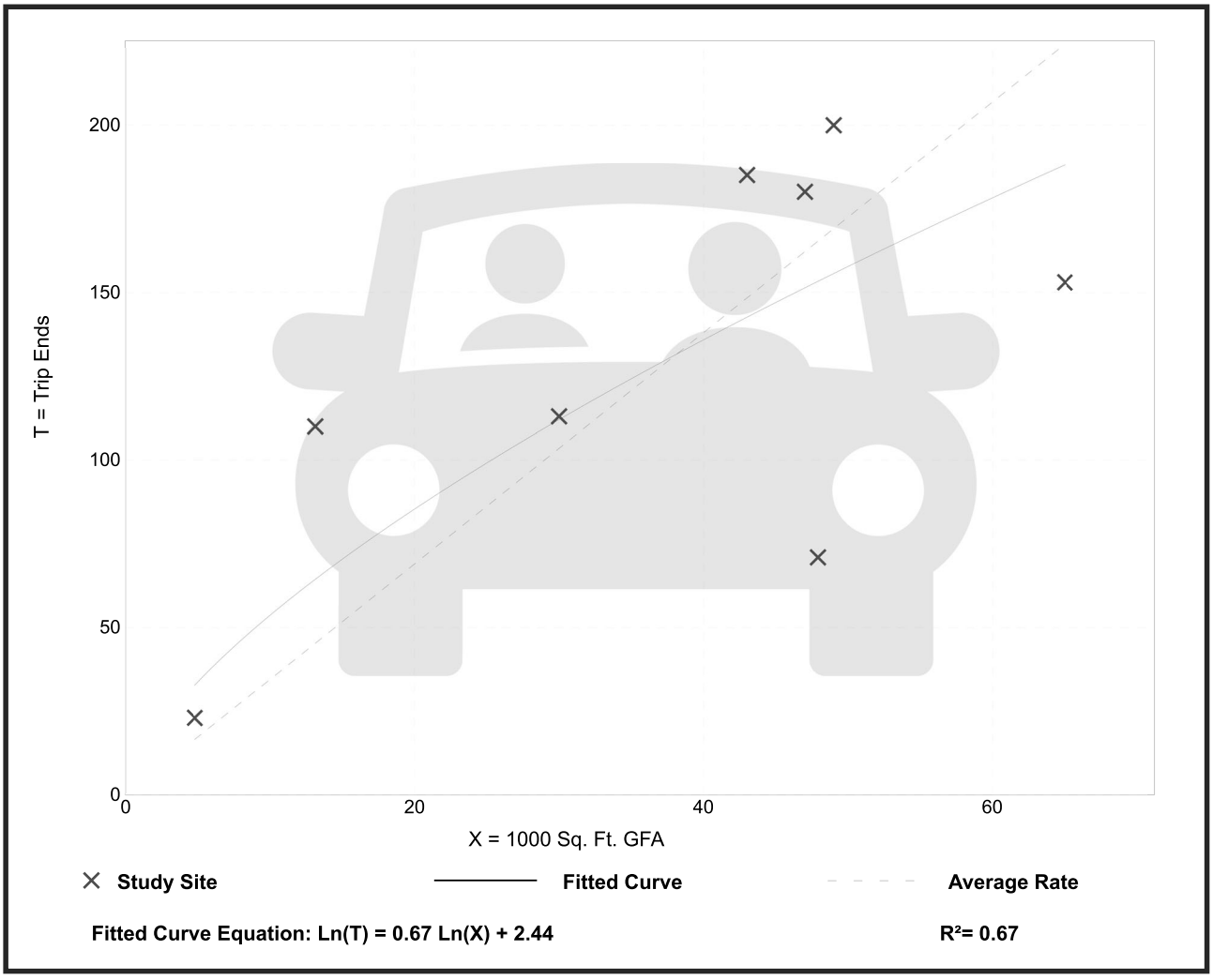
Health/Fitness Club
(492)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 8
Avg. 1000 Sq. Ft. GFA: 37
Directional Distribution: 57% entering, 43% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.45	1.48 - 8.37	1.57

Data Plot and Equation



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Fast Casual Restaurant
(930)

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

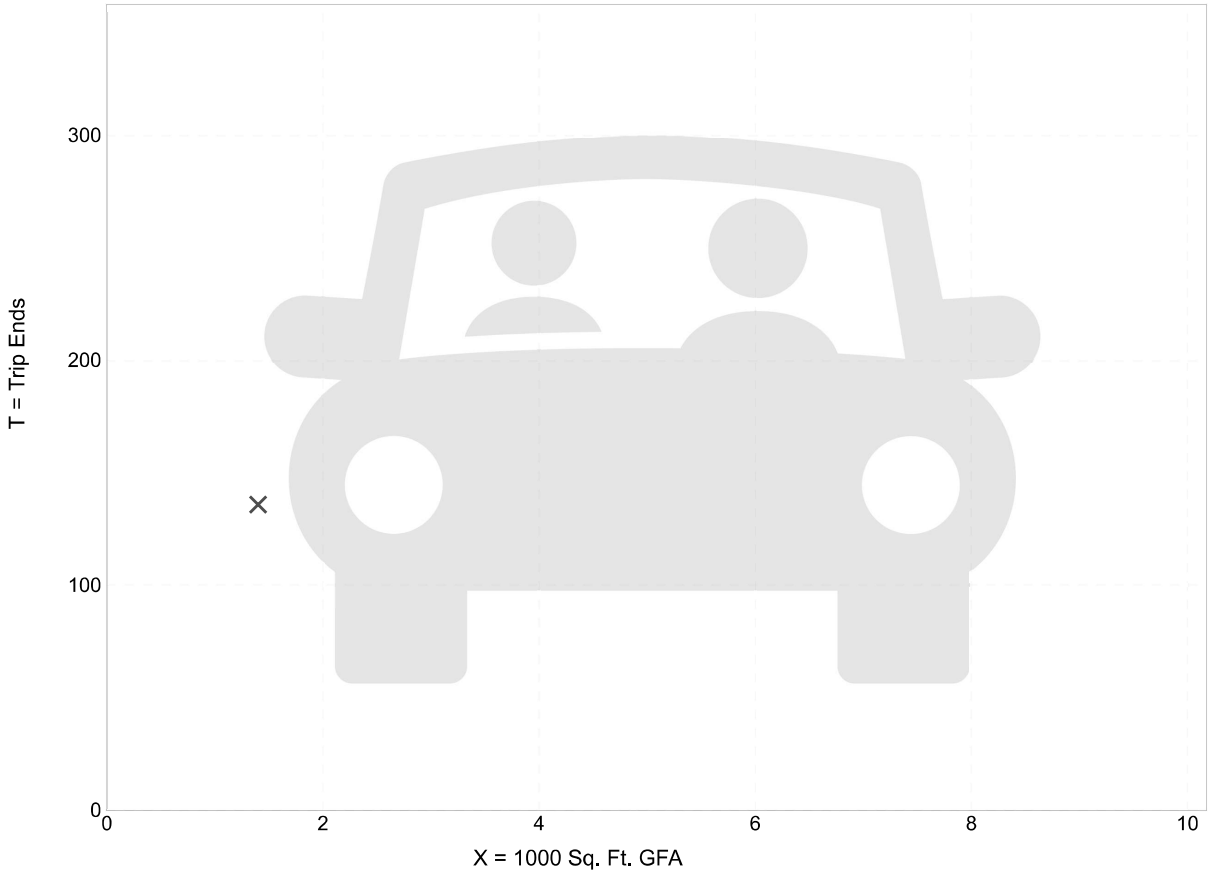
Setting/Location: **General Urban/Suburban**
Number of Studies: 1
Avg. 1000 Sq. Ft. GFA: 1
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
97.14	97.14 - 97.14	*

Data Plot and Equation

Caution – Small Sample Size



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Fast Casual Restaurant
(930)

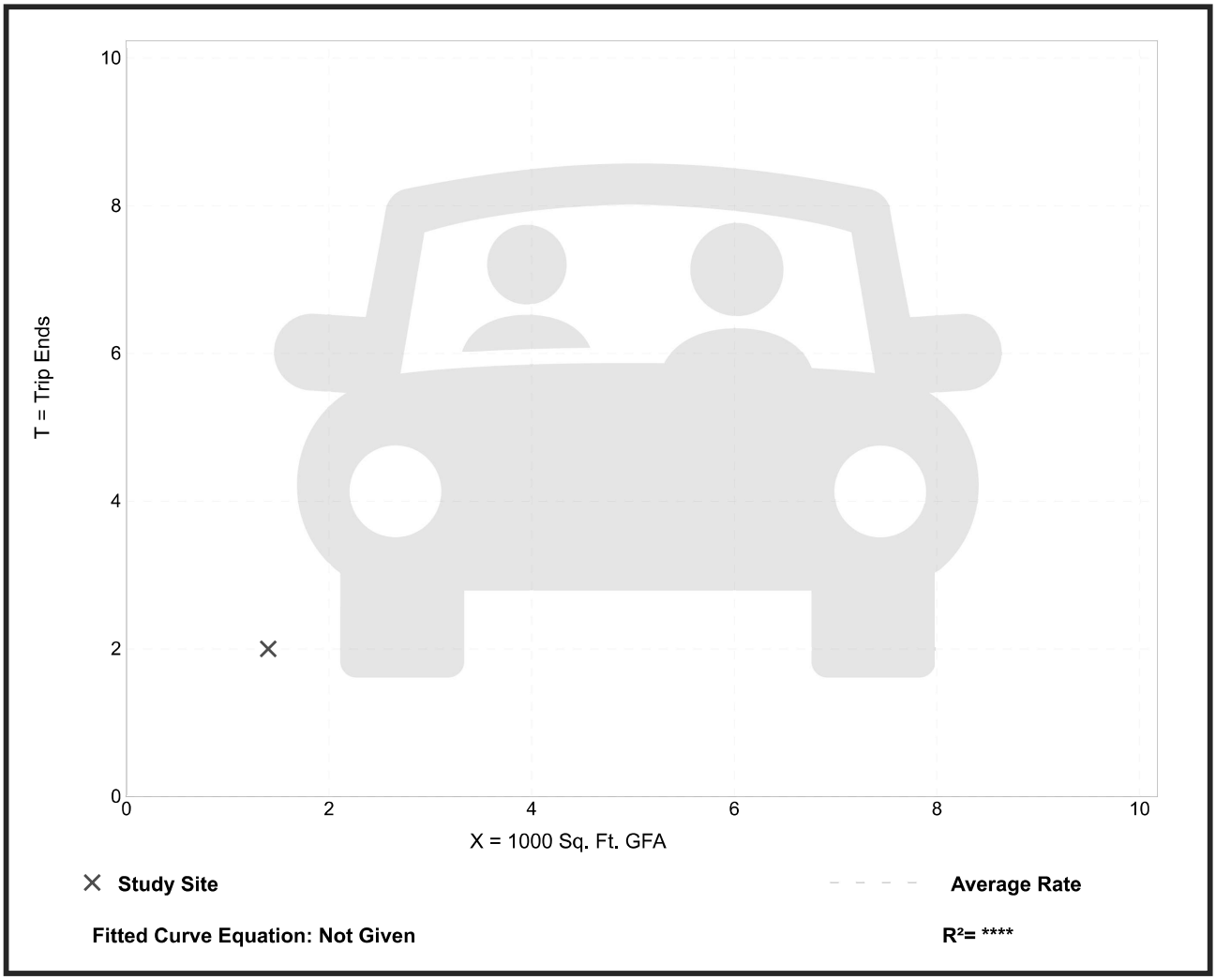
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 1
Avg. 1000 Sq. Ft. GFA: 1
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.43	1.43 - 1.43	*

Data Plot and Equation

Caution – Small Sample Size



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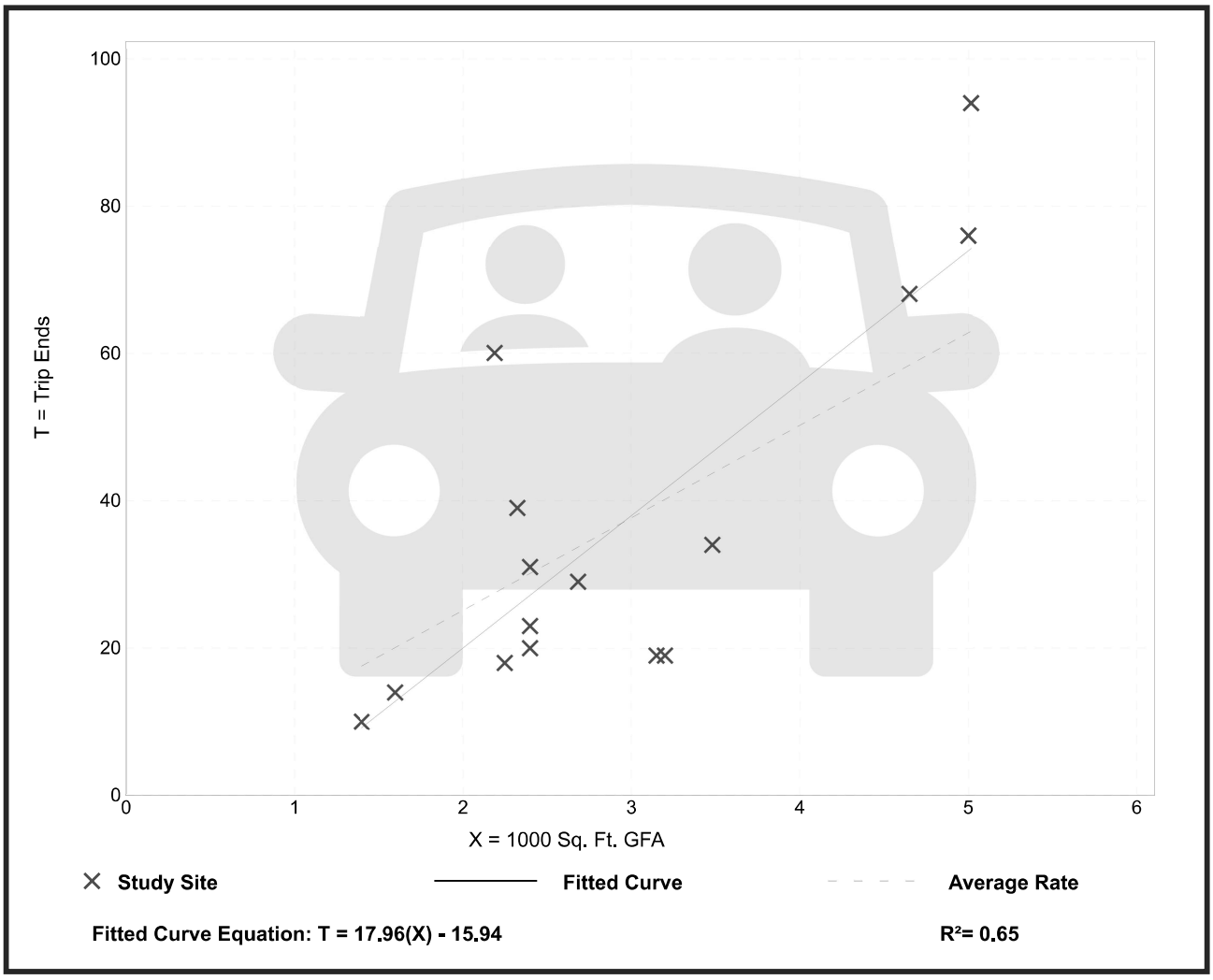
Fast Casual Restaurant
(930)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 15
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 55% entering, 45% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
12.55	5.94 - 27.40	5.52

Data Plot and Equation



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Small Office Building
(712)

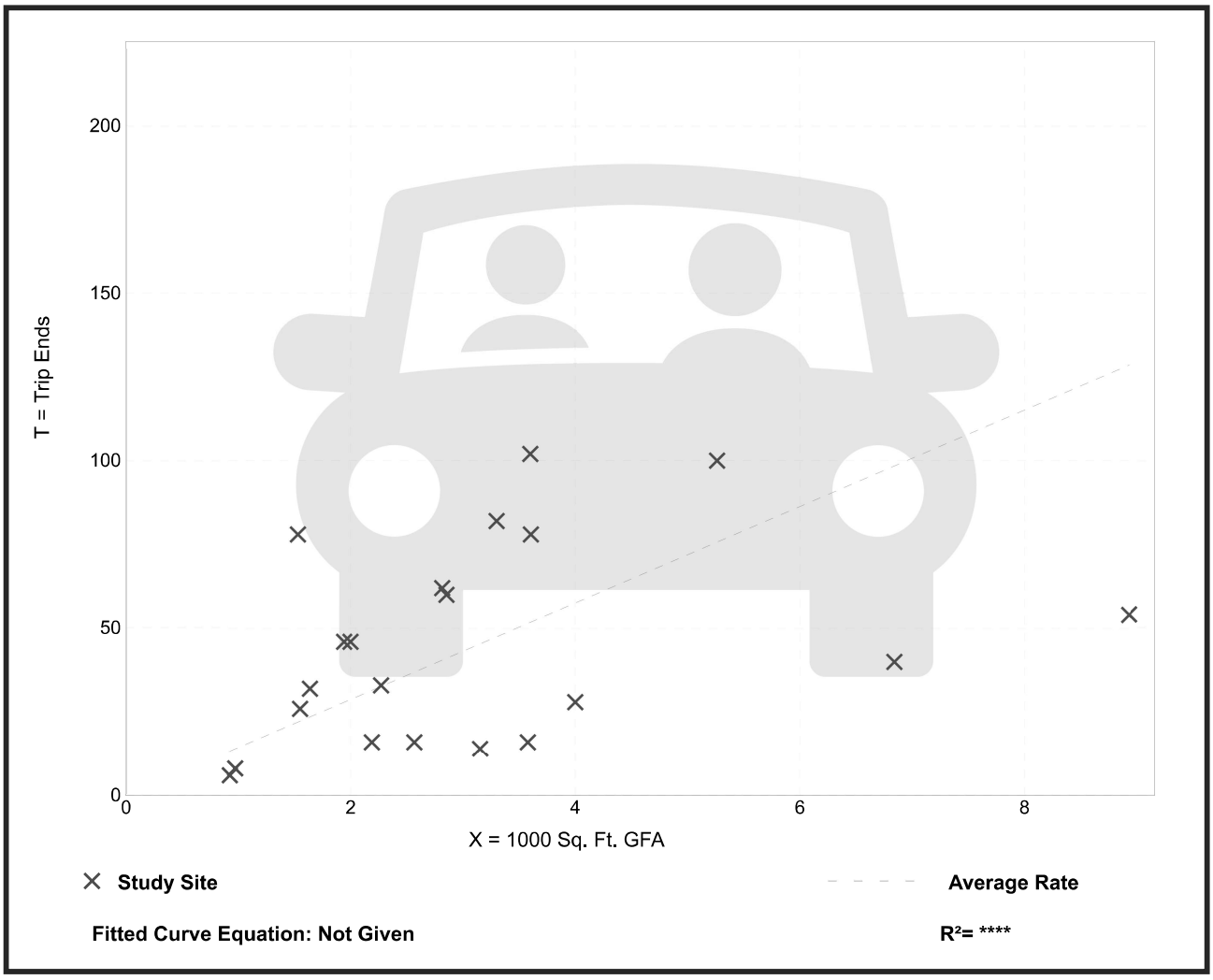
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 21
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
14.39	4.44 - 50.91	10.16

Data Plot and Equation



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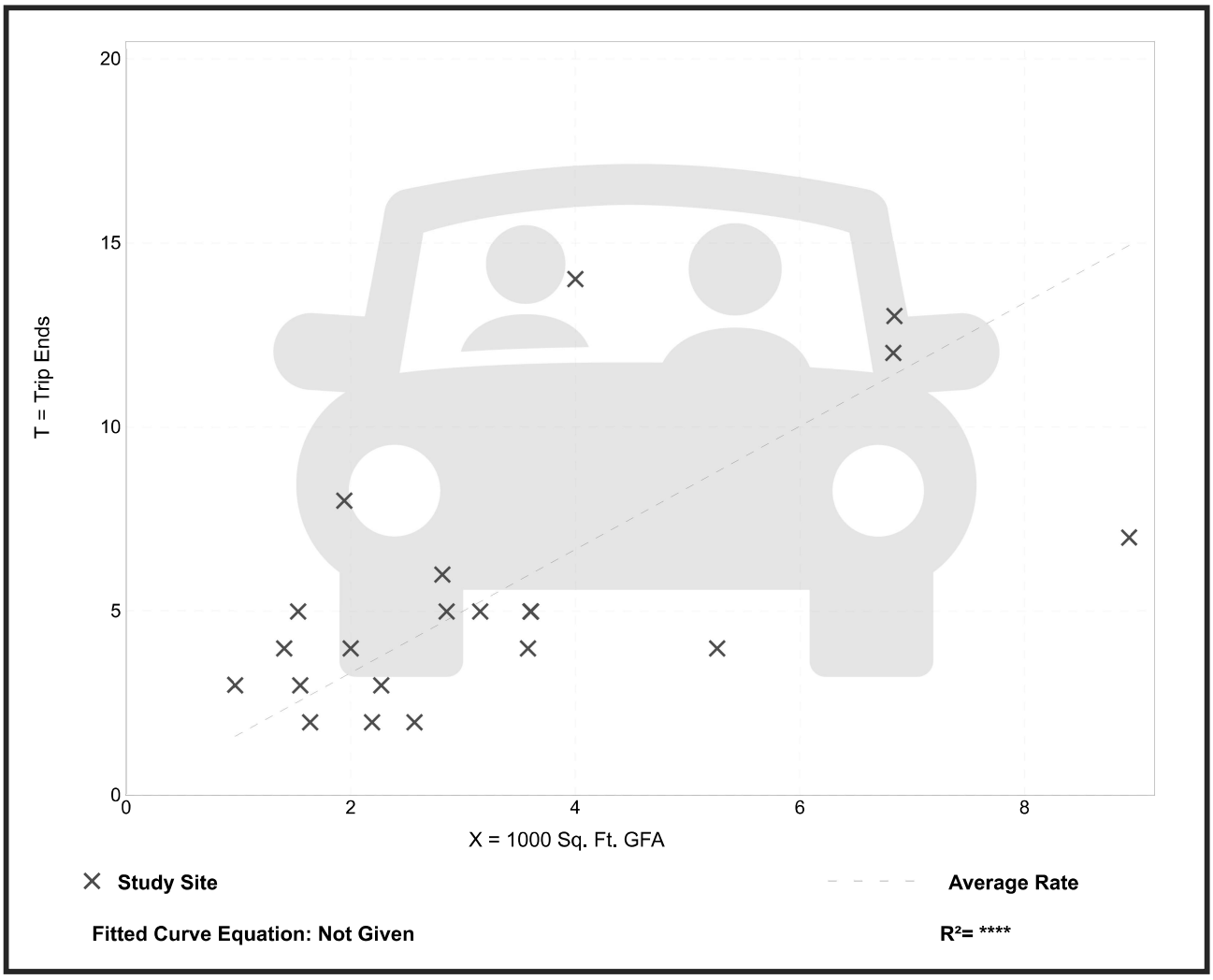
Small Office Building
(712)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 21
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 82% entering, 18% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.67	0.76 - 4.12	0.88

Data Plot and Equation



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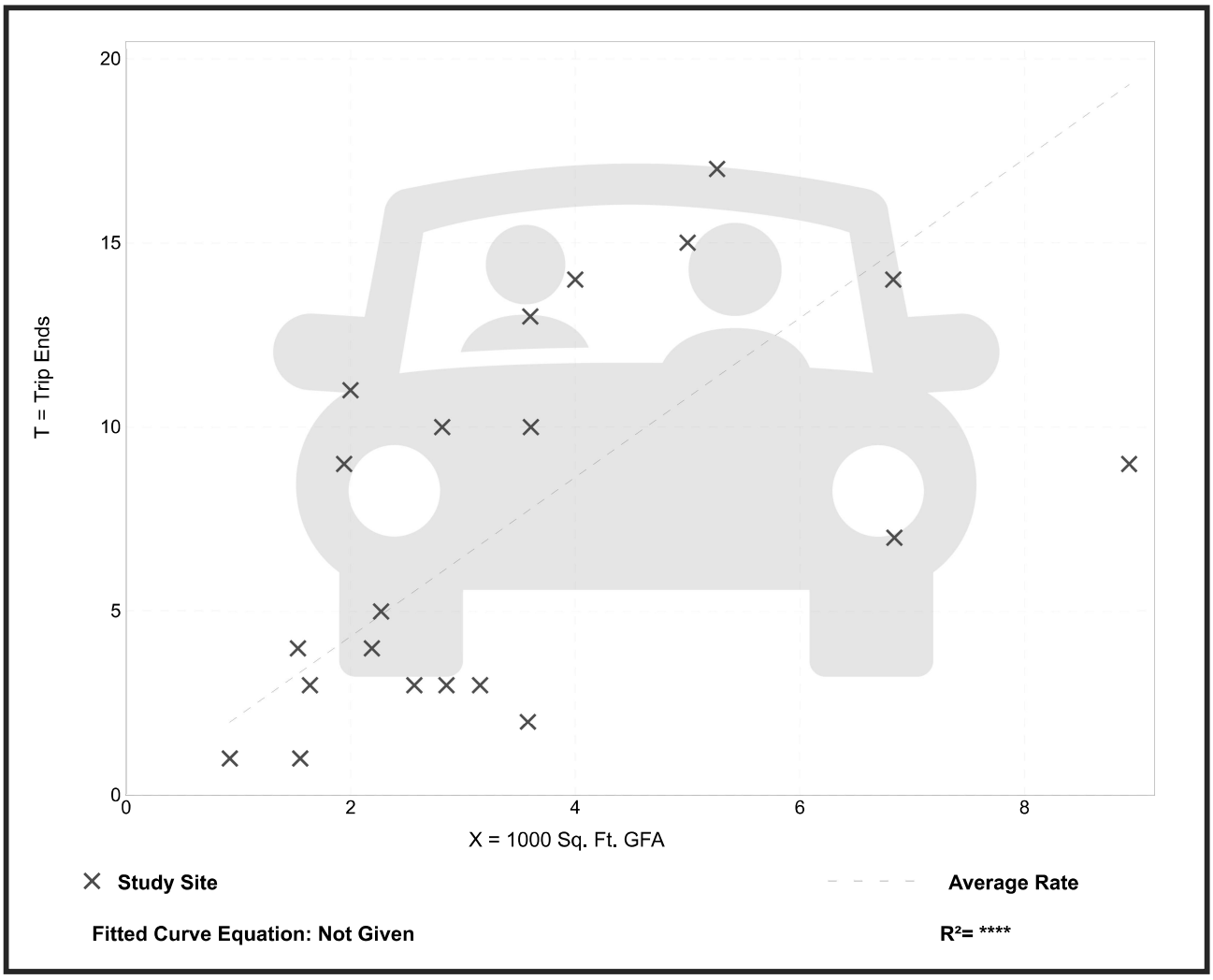
Small Office Building
(712)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 21
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 34% entering, 66% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.16	0.56 - 5.50	1.26

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Vehicle Pass-By Rates by Land Use

Source: ITE *Trip Generation Manual* , 11th Edition

Land Use Code	565								
Land Use	Day Care Center								
Setting	General Urban/Suburban								
Time Period	Weekday PM Peak Period								
# Data Sites	1								
Average Pass-By Rate	44%								
	Pass-By Characteristics for Individual Sites								
	State or	Survey		Pass-By	Non-Pass-By Trips			Adj Street Peak	
GFA (000)	Province	Year	# Interviews	Trip (%)	Primary (%)	Diverted (%)	Total (%)	Hour Volume	Source
7.2	Pennsylvania	1990	—	44	24	32	56	—	23

Heath & Associates Transportation Engineering
Project: New Market Apartments
Jurisdiction: Tumwater

New Market Apartments - Trip Generation Summary

Average Weekday Trips

Development	Land Use	LUC	Variable	Value	Rate	Distribution		Total Trips			Internal Capture		Pass-by Trips		Primary Trips		
						In	Out	In	Out	Total	%	Total	%	Total	In	Out	Total
	Multifamily (Mid-Rise)	#221	Dwelling Units	416	4.54	50%	50%	944.3	944.3	1888.6	4%	75.5	0%	0.0	906.5	906.5	1813.1
	Day Care Center	#565	1,000 sq. ft.	5.5	47.62	50%	50%	131.0	131.0	261.9	4%	10.5	44%	110.6	70.4	70.4	140.8
Full Build-Out	Health/Fitness Club	#492	1,000 sq. ft.	4.89	54.45	50%	50%	133.1	133.1	266.3	4%	10.7	0.0%	0.0	127.8	127.8	255.6
	Fast Casual Restaurant	#930	1,000 sq. ft.	3.6	97.14	50%	50%	174.9	174.9	349.7	4%	14.0	0.0%	0.0	167.9	167.9	335.7
	Small Office Building	#712	1,000 sq. ft.	1.71	14.39	50%	50%	12.3	12.3	24.6	4%	1.0	0.0%	0.0	11.8	11.8	23.6
										2791.1			**Totals**	**110.6**	**1284.4**	**1284.4**	**2568.8**

Weekday AM Peak Hour

Development	Land Use	LUC	Variable	Value	Rate	Distribution		Total Trips			Internal Capture		Pass-by Trips		Primary Trips		
						In	Out	In	Out	Total	%	Total	%	Total	In	Out	Total
	Multifamily (Mid-Rise)	#221	Dwelling Units	416	0.37	23%	77%	35.4	118.5	153.9	1%	1.5	0%	0.0	35.0	117.3	152.4
	Day Care Center	#565	1,000 sq. ft.	5.5	11	53%	47%	32.1	28.4	60.5	1%	0.6	44%	26.4	17.8	15.8	33.5
Full Build-Out	Health/Fitness Club	#492	1,000 sq. ft.	4.89	1.31	51%	49%	3.3	3.1	6.4	1%	0.1	0%	0.0	3.2	3.1	6.3
	Fast Casual Restaurant	#930	1,000 sq. ft.	3.6	1.43	50%	50%	2.6	2.6	5.1	1%	0.1	0%	0.0	2.5	2.5	5.1
	Small Office Building	#712	1,000 sq. ft.	1.71	1.67	82%	18%	2.3	0.5	2.9	1%	0.0	0%	0.0	2.3	0.5	2.8
										228.8			**Totals**	**26.4**	**60.9**	**139.3**	**200.2**

Weekday PM Peak Hour

Development	Land Use	LUC	Variable	Value	Rate	Distribution		Total Trips			Internal Capture		Pass-by Trips		Primary Trips		
						In	Out	In	Out	Total	%	Total	%	Total	In	Out	Total
	Multifamily (Mid-Rise)	#221	Dwelling Units	416	0.39	61%	39%	99.0	63.3	162.2	6%	11	0%	0.0	92.3	59.0	151.2
	Day Care Center	#565	1,000 sq. ft.	5.5	11.12	47%	53%	28.7	32.4	61.2	6%	4.3	44%	25.0	15.0	16.9	31.8
Full Build-Out	Health/Fitness Club	#492	1,000 sq. ft.	4.89	3.45	57%	43%	9.6	7.3	16.9	6%	1.2	0%	0.0	8.9	6.7	15.7
	Fast Casual Restaurant	#930	1,000 sq. ft.	3.6	12.55	55%	45%	24.8	20.3	45.2	6%	3.2	0%	0.0	23.1	18.9	42.0
	Small Office Building	#712	1,000 sq. ft.	1.71	2.16	34%	66%	1.3	2.4	3.7	6%	0.3	0%	0.0	1.2	2.2	3.4
										289.1			**Totals**	**25.0**	**140.4**	**103.7**	**244.1**

Sources:
Institute of Transportation Engineers, *Trip Generation Manual,* 11th Edition, (2021).
Institute of Transportation Engineers, *Trip Generation Handbook,* 3rd Edition, (2017).

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	New Market Apartments	**Organization:**	Heath & Associates
Project Location:	Tumwater	**Performed By:**	K.Y.
Scenario Description:		**Date:**	
Analysis Year:		**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	712	2	SF	3	2	1
Retail				0		
Restaurant	930	4	SF	5	3	2
Cinema/Entertainment				0		
Residential	221	416	Dwelling Units	154	35	119
Hotel				0		
All Other Land Uses[2]	492, 565	10	SF	67	35	32
Total				229	75	154

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	1	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	229	75	154
Internal Capture Percentage	1%	1%	1%
External Vehicle-Trips[3]	227	74	153
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	0%	0%
Retail	N/A	N/A
Restaurant	33%	0%
Cinema/Entertainment	N/A	N/A
Residential	0%	1%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	New Market Apartments
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	2	2	1.00	1	1
Retail	1.00	0	0	1.00	0	0
Restaurant	1.00	3	3	1.00	2	2
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	35	35	1.00	119	119
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	1	0	0	0
Retail	0		0	0	0	0
Restaurant	1	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	2	1	24	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	1	0	0	0
Retail	0		2	0	1	0
Restaurant	0	0		0	2	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	1	0		0
Hotel	0	0	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	2	2	2	0	0
Retail	0	0	0	0	0	0
Restaurant	1	2	3	2	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	35	35	35	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	35	35	35	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	1	1	1	0	0
Retail	0	0	0	0	0	0
Restaurant	0	2	2	2	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	118	119	118	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	32	32	32	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	New Market Apartments	**Organization:**	Heath & Associates
Project Location:	Tumwater	**Performed By:**	K.Y.
Scenario Description:		**Date:**	
Analysis Year:		**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	712	2	SF	4	1	3
Retail				0		
Restaurant	930	4	SF	45	25	20
Cinema/Entertainment				0		
Residential	221	416	Dwelling Units	162	99	63
Hotel				0		
All Other Land Uses[2]	492, 565	10	SF	78	38	40
Total				289	163	126

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	4	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	4	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	289	163	126
Internal Capture Percentage	6%	5%	6%
External Vehicle-Trips[3]	273	155	118
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	0%	0%
Retail	N/A	N/A
Restaurant	16%	20%
Cinema/Entertainment	N/A	N/A
Residential	4%	6%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	New Market Apartments
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	1	1	1.00	3	3
Retail	1.00	0	0	1.00	0	0
Restaurant	1.00	25	25	1.00	20	20
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	99	99	1.00	63	63
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1	0	0	0	0
Retail	0		0	0	0	0
Restaurant	1	8		2	4	1
Cinema/Entertainment	0	0	0		0	0
Residential	3	26	13	0		2
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	1	0	4	0
Retail	0		7	0	46	0
Restaurant	0	0		0	16	0
Cinema/Entertainment	0	0	1		4	0
Residential	1	0	4	0		0
Hotel	0	0	1	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	1	1	1	0	0
Retail	0	0	0	0	0	0
Restaurant	4	21	25	21	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	4	95	99	95	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	38	38	38	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	3	3	3	0	0
Retail	0	0	0	0	0	0
Restaurant	4	16	20	16	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	4	59	63	59	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	40	40	40	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

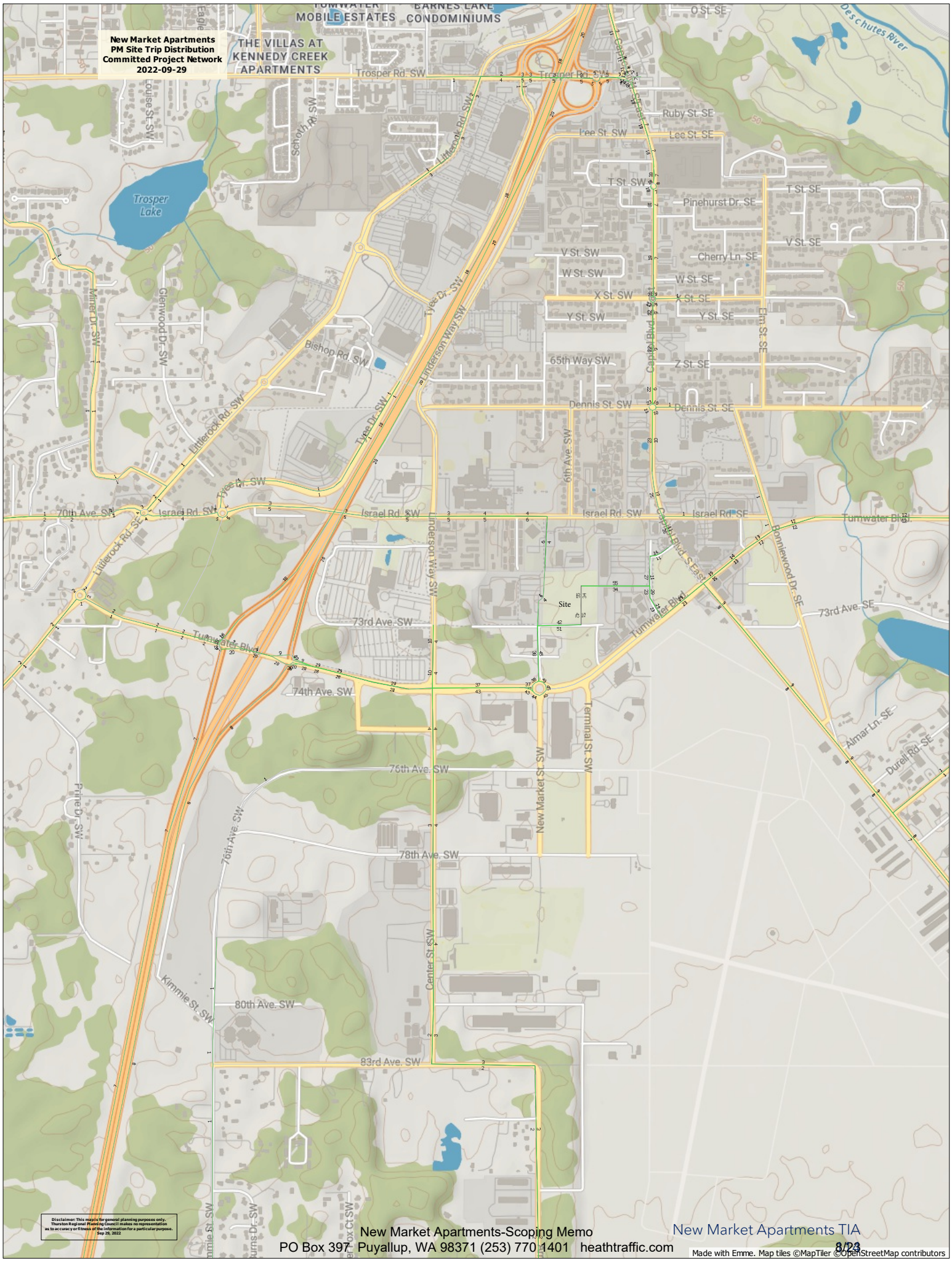
[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

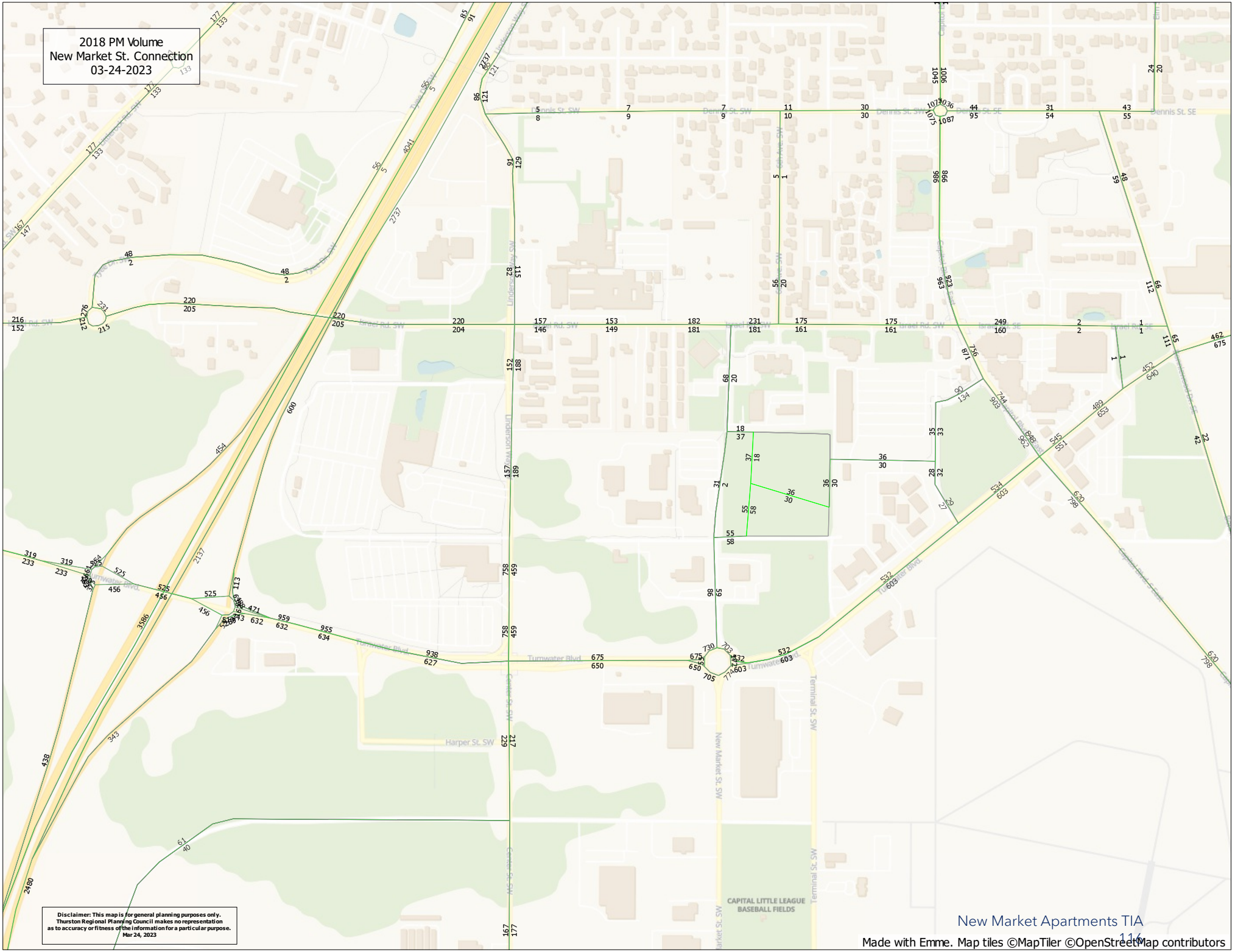
NEW MARKET APARTMENTS
TRAFFIC IMPACT ANALYSIS

APPENDIX: PRIMARY TAZ MODELING



NEW MARKET APARTMENTS
TRAFFIC IMPACT ANALYSIS

APPENDIX: TAZ REROUTE MODELING WITH NEW MARKET ST SW


2018 PM Volume
New Market St. Connection
03-24-2023
Disclaimer: This map is for general planning purposes only. Thurston Regional Planning Council makes no representation as to accuracy or fitness of the information for a particular purpose. Mar 24, 2023
Israel Rd. SW
Turnwater Blvd
Harper St. SW
Dennis St. SW
Dennis St. SE
New Market St. SW
Terminal St. SW
CAPITAL LITTLE LEAGUE BASEBALL FIELDS
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NEW MARKET APARTMENTS
TRAFFIC IMPACT ANALYSIS

APPENDIX: FORECAST CALCULATIONS

XX. Based on Historic, Pre-Covid Data

Peak Hour Forecast Intersection Volumes

Annual Growth Rate: 4 %
# of Years to Horizon: 5

2028

AM

1. Tumwater Blvd SW & SB I-5 Ramps

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Count Year	Growth %
Adjusted Baseline 2022	116	4	1616	0	126	174	0	0	0	52	395	0	2022	2
Baseline 2023	118	4	1648	0	129	177	0	0	0	53	403	0	2023	
Project Trips	0	0	16	0	2	13	0	0	0	0	1	0		
Pipeline	74	0	55	0	43	5	0	0	0	67	248	0		
2028 Without	218	5	2060	0	199	221	0	0	0	132	738	0		
2028 With	218	5	2076	0	201	234	0	0	0	132	739	0		

2. Tumwater Blvd SW & NB I-5 Ramps

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Count Year	Growth %
Adjusted Baseline 2022	0	0	0	569	221	0	470	1	65	0	1515	485	2022	2
Baseline 2023	0	0	0	580	225	0	479	1	66	0	1545	495	2023	
Project Trips	0	0	0	32	15	0	6	0	0	0	17	0		
Pipeline	0	0	0	18	29	0	15	0	19	0	119	184		
2028 Without	0	0	0	724	303	0	598	1	100	0	1999	786		
2028 With	0	0	0	756	318	0	604	1	100	0	2016	786		

3. Tumwater Blvd SW & Linderson Way SW

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Count Year	Growth %
Adjusted Baseline 2022	124	34	42	90	432	42	39	61	91	105	663	1230	2022	2
Baseline 2023	126	35	43	92	441	43	40	62	93	107	676	1255	2023	
Project Trips	0	0	6	12	47	8	4	0	0	0	23	0		
Pipeline	24	2	11	34	23	0	0	5	0	0	60	74		
2028 Without	178	44	63	146	559	52	48	81	113	130	883	1600		
2028 With	178	44	69	158	606	60	52	81	113	130	906	1600		

4. Tumwater Blvd SW & New Market St SW Reference Adjustment Intersection: #3

	SBR	SBT	SBL	SBU	WBR	WBT	WBL	WBU	NBR	NBT	NBL	NBU	EBR	EBT	EBL	EBU	Adjustment Factor
Baseline 2023	43	2	9	0	72	710	37	3	30	14	25	0	11	432	96	2	1%
Adjusted Baseline 2023	43	2	9	0	73	717	37	3	30	14	25	0	11	436	97	2	
Project Trips	68	0	44	0	0	0	0	0	0	0	0	0	0	0	33	0	
Pipeline	0	0	0	0	0	57	0	0	0	0	0	0	0	71	0	0	
Rerouted Trips	39	0	19	0	3	-3	0	0	0	0	0	0	0	-7	7	0	
2028 Without	53	2	11	0	88	930	45	4	37	17	31	0	14	602	118	2	
2028 With	160	2	74	0	91	927	45	4	37	17	31	0	14	595	158	2	

5. New Market St SW & 73rd Ave SW Reference Adjustment Intersection: #4

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Adjustment Factor
Baseline 2023	2	58	0	0	0	0	0	161	61	10	0	1	0%
Adjusted Baseline 2023	2	58	0	0	0	0	0	161	61	10	0	1	
Project Trips	0	56	5	11	0	56	16	17	0	0	0	0	
Pipeline	0	0	0	0	0	0	0	0	0	0	0	0	
Rerouted Trips	0	58	0	0	0	0	0	10	0	0	0	0	
2028 Without	2	71	0	0	0	0	0	196	74	12	0	1	
2028 With	2	185	5	11	0	56	16	223	74	12	0	1	

XX. Based on Historic, Pre-Covid Data

Peak Hour Forecast Intersection Volumes

Annual Growth Rate: 4 %

# of Years to Horizon: 5

2028

PM

1. Tumwater Blvd SW & SB I-5 Ramps City data

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Count Year	Growth %
Baseline 2015	234	32	405	0	275	319	0	0	0	71	342	0	2015	2
Baseline 2023	274	37	475	0	322	374	0	0	0	83	401	0	2023	
Project Trips	0	0	32	0	2	10	0	0	0	0	2	0		
Pipeline	163	0	10	0	92	8	0	0	0	38	140	0		
2028 Without	497	46	587	0	484	463	0	0	0	139	628	0		
2028 With	497	46	619	0	486	473	0	0	0	139	630	0		

2. Tumwater Blvd SW & NB I-5 Ramps

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Count Year	Growth %
Baseline 2015	0	0	0	1209	550	0	135	6	44	0	611	136	2015	2
Baseline 2023	0	0	0	1417	644	0	158	7	52	0	716	159	2023	
Project Trips	0	0	0	24	12	0	13	0	0	0	34	0		
Pipeline	0	0	0	28	58	0	2	0	42	0	45	105		
2028 Without	0	0	0	1751	842	0	194	9	105	0	916	299		
2028 With	0	0	0	1775	854	0	207	9	105	0	950	299		

3. Tumwater Blvd SW & Linderson Way SW

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Count Year	Growth %
Baseline 2015	878	161	189	31	702	56	43	84	168	154	550	135	2015	2
Baseline 2023	1029	189	221	36	823	66	50	98	197	180	644	158	2023	
Project Trips	0	0	12	9	36	6	8	0	0	0	47	0		
Pipeline	38	3	18	5	48	0	0	1	0	0	34	13		
2028 Without	1290	233	287	49	1049	80	61	121	239	220	818	205		
2028 With	1290	233	299	58	1085	86	69	121	239	220	865	205		

4. Tumwater Blvd SW & New Market St SW Reference Adjustment Intersection: #3

	SBR	SBT	SBL	SBU	WBR	WBT	WBL	WBU	NBR	NBT	NBL	NBU	EBR	EBT	EBL	EBU	Adjustment Factor
Baseline 2023	16	1	4	0	19	800	28	0	46	0	35	0	18	455	26	12	36%
Adjusted Baseline 2023	22	1	5	0	26	1088	38	0	63	0	48	0	24	619	35	16	
Project Trips	51	0	34	0	0	0	0	0	0	0	0	0	0	0	67	0	
Pipeline	0	0	0	0	0	45	0	0	0	0	0	0	0	46	0	0	
Rerouted Trips	48	0	24	0	3	-3	0	0	0	0	0	0	0	-7	7	0	
2028 Without	26	2	7	0	31	1369	46	0	76	0	58	0	30	799	43	20	
2028 With	125	2	65	0	34	1366	46	0	76	0	58	0	30	792	117	20	

5. New Market St SW & 73rd Ave SW Reference Adjustment Intersection: #4

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Adjustment Factor
Baseline 2023	0	3	0	0	0	0	0	1	5	5	0	0	50%
Adjusted Baseline 2023	0	5	0	0	0	0	0	2	8	8	0	0	
Project Trips	0	43	12	8	0	43	34	35	0	0	0	0	
Pipeline	0	0	0	0	0	0	0	0	0	0	0	0	
Rerouted Trips	0	72	0	0	0	0	0	10	0	0	0	0	
2028 Without	0	5	0	0	0	0	0	2	9	9	0	0	
2028 With	0	120	12	8	0	43	34	47	9	9	0	0	

6. New Market St SW & Israel Rd SW No Adjustment Needed Per Intersection Reference: #15

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL
Baseline 2023	0	0	0	0	530	13	26	0	26	29	434	0
Project Trips	0	0	0	0	0	15	11	0	6	8	0	0
Pipeline	0	0	0	0	45	0	0	0	0	0	32	0
Rerouted Trips	0	0	0	0	-48	48	7	0	3	24	-24	0
2028 Without	0	0	0	0	690	16	32	0	32	35	560	0
2028 With	0	0	0	0	642	79	50	0	41	67	536	0

7. 73rd Ave SW & 71st Ave SW

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Adjustment Factor
Baseline 2023	0	0	1	1	0	0	0	0	0	0	0	0	50%
Adjusted Baseline 2023	0	0	2	2	0	0	0	0	0	0	0	0	
Project Trips	0	0	0	0	61	0	0	0	0	0	13	0	
Pipeline	0	0	0	0	0	0	0	0	0	0	0	0	
2028 Without	0	0	2	2	0	0	0	0	0	0	0	0	
2028 With	0	0	2	2	61	0	0	0	0	0	13	0	

8. Cleanwater Dr SW & 71st Ave SW - Southern T Intersection

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Adjustment Factor
Baseline 2023	3	60	0	0	0	0	0	13	12	23	0	17	50%
Adjusted Baseline 2023	5	90	0	0	0	0	0	20	18	35	0	26	
Project Trips	17	0	0	0	0	0	0	0	44	0	0	13	
Pipeline	0	0	0	0	0	0	0	0	0	0	0	0	
2028 Without	5	109	0	0	0	0	0	24	22	42	0	31	
2028 With	22	109	0	0	0	0	0	24	66	42	0	44	

9. 71st Ave SW & Cleanwater Dr SW

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Adjustment Factor
Baseline 2023	0	3	0	2	4	18	21	8	1	47	41	0	50%
Adjusted Baseline 2023	0	5	0	3	6	27	32	12	2	71	62	0	
Project Trips	0	0	0	0	0	17	13	0	0	0	0	0	
Pipeline	0	0	0	0	0	0	0	0	0	0	0	0	
2028 Without	0	5	0	4	7	33	38	15	2	86	75	0	
2028 With	0	5	0	4	7	50	51	15	2	86	75	0	

10. Tumwater Blvd SW & Cleanwater Dr SW Reference Adjustment Intersection: #11

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	EBU	Adjustment Factor
Baseline 2023	83	0	0	5	822	0	2	0	0	1	592	21	19	2%
Adjusted Baseline 2023	85	0	0	5	838	0	2	0	0	1	604	21	19	
Project Trips	44	0	0	0	0	0	0	0	0	0	34	0	0	
Pipeline	0	0	0	0	45	0	0	0	0	0	44	0	0	
2028 Without	103	0	0	6	1065	0	2	0	0	1	779	26	24	
2028 With	147	0	0	6	1065	0	2	0	0	1	813	26	24	

11. Tumwater Blvd SW & Capitol Blvd SE

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Count Year	Growth %
Baseline 2015	106	475	112	15	325	83	18	304	199	244	305	64	2015	2
Baseline 2023	124	557	131	18	381	97	21	356	233	286	357	75	2023	
Project Trips	0	0	0	0	29	0	0	0	15	12	22	0		
Pipeline	3	13	13	17	25	0	0	22	20	18	25	4		
2028 Without	154	690	173	38	488	118	26	455	304	366	460	95		
2028 With	154	690	173	38	517	118	26	455	319	378	482	95		

12. Tumwater Blvd SW & Bonniewood Dr SW — Reference Adjustment Intersection: #13

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Adjustment Factor
Baseline 2023	24	3	231	164	281	6	13	3	6	2	352	23	7%
Adjusted Baseline 2023	26	3	247	175	301	6	14	3	6	2	377	25	
Project Trips	1	0	0	0	20	0	0	0	0	0	15	1	
Pipeline	0	0	0	0	39	0	0	0	0	0	35	0	
2028 Without	31	4	301	213	405	8	17	4	8	3	493	30	
2028 With	32	4	301	213	425	8	17	4	8	3	508	31	

13. Tumwater Blvd SW & Henderson Blvd SE

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Count Year	Growth %
Adjusted Baseline 2022	354	216	0	0	0	0	0	172	24	31	0	687	2022	2
Adjusted Baseline 2023	361	220	0	0	0	0	0	175	24	32	0	701	2023	
Project Trips	15	0	0	0	0	0	0	0	5	3	0	12		
Pipeline	27	0	0	0	0	0	0	0	26	23	0	22		
2028 Without	466	268	0	0	0	0	0	213	56	61	0	875		
2028 With	481	268	0	0	0	0	0	213	61	64	0	887		

14. Capitol Blvd SE & 71st Ave SW — Reference Adjustment Intersection: #11 and #15

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Adjustment Factor
Baseline 2023	21	742	0	0	0	0	0	449	21	59	0	21	6%
Adjusted Baseline 2023	22	787	0	0	0	0	0	476	22	63	0	22	
Project Trips	17	0	0	0	0	0	0	0	0	0	0	13	
Pipeline	0	29	0	0	0	0	0	43	0	0	0	0	
2028 Without	27	986	0	0	0	0	0	622	27	76	0	27	
2028 With	44	986	0	0	0	0	0	622	27	76	0	40	

15. Capitol Blvd SE & Israel Rd SW

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Count Year	Growth %
Baseline 2015	88	514	71	135	193	94	25	317	106	121	131	80	2015	2
Baseline 2023	103	602	83	158	226	110	29	371	124	142	153	94	2023	
Project Trips	15	14	0	0	0	3	2	11	0	0	0	11		
Pipeline	17	12	1	2	15	0	0	16	28	19	11	13		
2028 Without	142	745	102	194	290	134	36	468	179	191	198	127		
2028 With	157	759	102	194	290	137	38	479	179	191	198	138		

16. Capitol Blvd SE & Dennis St SW

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Count Year	Growth %
Baseline 2014	71	576	52	75	22	28	23	688	12	28	41	147	2014	2
Baseline 2023	85	688	62	90	26	33	27	822	14	33	49	176	2023	
Project Trips	0	28	0	0	0	1	1	22	0	0	0	0		
Pipeline	1	22	1	1	0	2	2	25	2	2	0	2		
2028 Without	104	860	77	110	32	43	35	1025	19	43	60	216		
2028 With	104	888	77	110	32	44	36	1047	19	43	60	216		

17. Capitol Blvd SE & Z St SE Reference Adjustment Intersection: #16 and #18

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Adjustment Factor
Baseline 2023	0	585	20	23	0	21	14	429	0	0	0	0	85%
Adjusted Baseline 2023	0	1082	37	43	0	39	26	794	0	0	0	0	
Project Trips	0	28	0	0	0	0	0	22	0	0	0	0	
Pipeline	0	12	0	0	0	0	0	22	0	0	0	0	
2028 Without	0	1329	45	52	0	47	32	988	0	0	0	0	
2028 With	0	1357	45	52	0	47	32	1010	0	0	0	0	

18. Capitol Blvd SE & X St SE **Forecast Growth Rate 2%

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Count Year	Growth %
Baseline 2014	35	712	36	21	1	10	12	904	20	16	2	11	2014	2
Baseline 2023	42	851	43	25	1	12	14	1080	24	19	2	13	2023	
Project Trips	0	21	0	0	0	1	1	16	0	0	0	0		
Pipeline	0	9	0	0	0	0	0	21	0	0	0	0		
2028 Without	46	948	48	28	1	13	16	1214	26	21	3	15		
2028 With	46	969	48	28	1	14	17	1230	26	21	3	15		

19. Capitol Blvd SE & Lee St SW **Forecast Growth Rate 2%

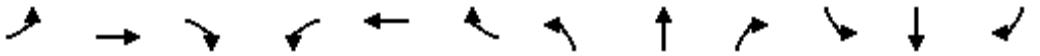
	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Count Year	Growth %
Baseline 2014	151	816	50	81	7	13	21	1025	23	40	5	261	2014	2
Baseline 2023	180	975	60	97	8	16	25	1225	27	48	6	312	2023	
Project Trips	0	20	0	0	0	0	0	15	0	0	0	0		
Pipeline	0	6	0	0	0	0	0	17	0	0	0	0		
2028 Without	199	1083	66	107	9	17	28	1369	30	53	7	344		
2028 With	199	1103	66	107	9	17	28	1384	30	53	7	344		

20. Capitol Blvd SE & Trosper Rd SW **Forecast Growth Rate 2%

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Count Year	Growth %
Baseline 2014	348	466	13	33	70	29	11	574	771	579	47	282	2014	2
Baseline 2023	416	557	16	39	84	35	13	686	921	692	56	337	2023	
Project Trips	0	12	0	0	0	0	0	9	6	8	0	0		
Pipeline	0	3	0	0	0	0	0	8	9	3	0	0		
2028 Without	459	618	17	44	92	38	15	765	1026	767	62	372		
2028 With	459	630	17	44	92	38	15	774	1032	775	62	372		

NEW MARKET APARTMENTS
TRAFFIC IMPACT ANALYSIS

APPENDIX: BASELINE 2023 PEAK HOUR LEVEL OF SERVICE

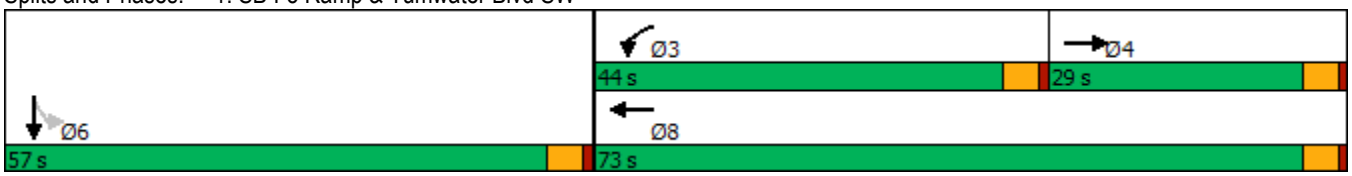


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	403	53	177	129	0	0	0	0	1648	4	118
Future Volume (vph)	0	403	53	177	129	0	0	0	0	1648	4	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	300		0	0		0	600		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.982									0.855	
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3510	0	1736	1827	0	0	0	0	1736	1562	0
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	3510	0	1736	1827	0	0	0	0	1736	1562	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10									137	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		558			562			485			825	
Travel Time (s)		10.9			10.9			11.0			18.8	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	1%	4%	4%	4%	2%	2%	2%	4%	4%	4%
Adj. Flow (vph)	0	469	62	206	150	0	0	0	0	1916	5	137
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	531	0	206	150	0	0	0	0	1916	142	0
Turn Type		NA		Prot	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases										6		
Detector Phase		4		3	8					6	6	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		28.5		9.5	24.5					29.5	29.5	
Total Split (s)		29.0		44.0	73.0					57.0	57.0	
Total Split (%)		22.3%		33.8%	56.2%					43.8%	43.8%	
Maximum Green (s)		24.5		39.5	68.5					52.5	52.5	
Yellow Time (s)		3.5		3.5	3.5					3.5	3.5	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0					0.0	0.0	
Total Lost Time (s)		4.5		4.5	4.5					4.5	4.5	
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		Min		None	Min					None	None	
Walk Time (s)		7.0			7.0					7.0	7.0	
Flash Dont Walk (s)		17.0			13.0					18.0	18.0	
Pedestrian Calls (#/hr)		0			0					0	0	
Act Effct Green (s)		20.6		17.8	42.9					52.8	52.8	
Actuated g/C Ratio		0.20		0.17	0.41					0.50	0.50	
v/c Ratio		0.76		0.70	0.20					2.19	0.17	
Control Delay		47.2		54.7	20.0					560.0	3.8	
Queue Delay		0.0		0.0	0.0					0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		47.2		54.7	20.0					560.0	3.8	
LOS		D		D	B					F	A	
Approach Delay		47.2			40.1						521.7	
Approach LOS		D			D						F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 104.8			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 2.19			
Intersection Signal Delay: 377.9		Intersection LOS: F	
Intersection Capacity Utilization 125.2%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 1: SB I-5 Ramp & Tumwater Blvd SW



Intersection	
Int Delay, s/veh	268.2

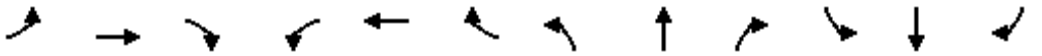
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	495	1545	0	0	225	580	66	1	479	0	0	0
Future Vol, veh/h	495	1545	0	0	225	580	66	1	479	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	300	-	-	-	-	0	-	-	600	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	3	3	3	9	9	9	3	3	3	2	2	2
Mvmt Flow	569	1776	0	0	259	667	76	1	551	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	259	0	-	-	-	0	3173	3173	888
Stage 1	-	-	-	-	-	-	2914	2914	-
Stage 2	-	-	-	-	-	-	259	259	-
Critical Hdwy	4.145	-	-	-	-	-	6.645	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	5.845	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.445	5.545	-
Follow-up Hdwy	2.2285	-	-	-	-	-	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	1298	-	0	0	-	0	~ 9	10	~ 286
Stage 1	-	-	0	0	-	0	~ 27	34	-
Stage 2	-	-	0	0	-	0	781	691	-
Platoon blocked, %		-			-				
Mov Cap-1 Maneuver	1298	-	-	-	-	-	~ 5	0	~ 286
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 5	0	-
Stage 1	-	-	-	-	-	-	~ 15	0	-
Stage 2	-	-	-	-	-	-	781	0	-

Approach	EB	WB	NB
HCM Control Delay, s	2.4	0	$ 1371.9
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT
Capacity (veh/h)	5	286	1298	-	-
HCM Lane V/C Ratio	15.402	1.925	0.438	-	-
HCM Control Delay (s)	$ 7901.4	$ 458.6	9.9	-	-
HCM Lane LOS	F	F	A	-	-
HCM 95th %tile Q(veh)	11.5	38.4	2.3	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1255	676	107	43	441	92	93	62	40	43	35	126
Future Volume (veh/h)	1255	676	107	43	441	92	93	62	40	43	35	126
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1796	1796	1796	1707	1707	1707	1796	1796	1796
Adj Flow Rate, veh/h	1410	760	120	48	496	103	104	70	45	48	39	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	4	4	4	7	7	7	13	13	13	7	7	7
Cap, veh/h	1586	977	154	573	655	292	149	157	133	84	89	
Arrive On Green	0.47	0.32	0.32	0.34	0.19	0.19	0.09	0.09	0.09	0.05	0.05	0.00
Sat Flow, veh/h	3401	3026	478	1711	3413	1522	1626	1707	1447	1711	1796	1522
Grp Volume(v), veh/h	1410	439	441	48	496	103	104	70	45	48	39	0
Grp Sat Flow(s),veh/h/ln	1700	1749	1755	1711	1706	1522	1626	1707	1447	1711	1796	1522
Q Serve(g_s), s	33.9	20.4	20.4	1.7	12.3	5.3	5.6	3.5	2.6	2.5	1.9	0.0
Cycle Q Clear(g_c), s	33.9	20.4	20.4	1.7	12.3	5.3	5.6	3.5	2.6	2.5	1.9	0.0
Prop In Lane	1.00		0.27	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1586	565	567	573	655	292	149	157	133	84	89	
V/C Ratio(X)	0.89	0.78	0.78	0.08	0.76	0.35	0.70	0.45	0.34	0.57	0.44	
Avail Cap(c_a), veh/h	2009	1413	1418	573	1027	458	480	504	427	486	511	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	21.8	27.5	27.5	20.4	34.3	31.4	39.5	38.6	38.2	41.7	41.4	0.0
Incr Delay (d2), s/veh	4.5	2.4	2.3	0.1	1.8	0.7	5.7	2.0	1.5	5.9	3.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.2	8.4	8.5	0.7	5.1	1.9	2.4	1.5	1.0	1.2	0.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.3	29.8	29.8	20.5	36.1	32.1	45.2	40.6	39.7	47.6	44.8	0.0
LnGrp LOS	C	C	C	C	D	C	D	D	D	D	D	
Approach Vol, veh/h		2290			647			219			87	
Approach Delay, s/veh		27.6			34.3			42.6			46.4	
Approach LOS		C			C			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.7	34.6	33.5		8.9	46.3	21.7				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		26.5	7.5	72.5		25.5	53.0	27.0				
Max Q Clear Time (g_c+I1), s		7.6	3.7	22.4		4.5	35.9	14.3				
Green Ext Time (p_c), s		0.7	0.0	6.6		0.3	5.9	2.9				

Intersection Summary	
HCM 6th Ctrl Delay	30.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

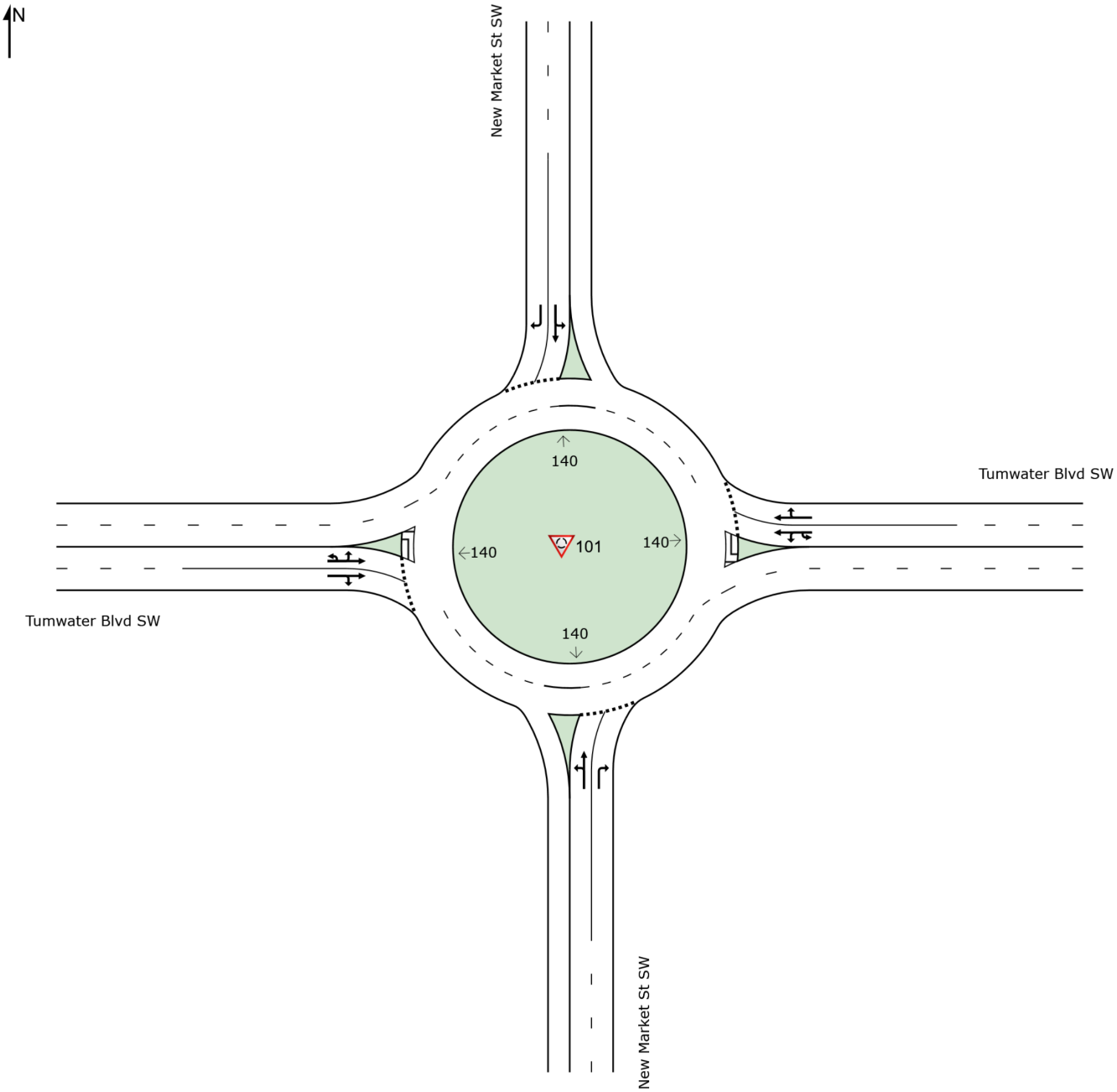
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

SITE LAYOUT

Site: 101 [Tumwater Blvd SW & New Market St SW (Site Folder: 4)]

Existing AM Peak Hour Volumes
Site Category: -
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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MOVEMENT SUMMARY

Site: 101 [Tumwater Blvd SW & New Market St SW (Site Folder: 4)]

Existing AM Peak Hour Volumes
Site Category: -
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: New Market St SW														
3	L2	25	4.0	28	4.0	0.038	11.6	LOS B	0.1	3.7	0.45	0.62	0.45	35.9
8	T1	14	4.0	16	4.0	0.038	4.6	LOS A	0.1	3.7	0.45	0.62	0.45	35.5
18	R2	30	4.0	34	4.0	0.036	5.4	LOS A	0.1	3.4	0.47	0.58	0.47	36.1
Approach		69	4.0	78	4.0	0.038	7.5	LOS A	0.1	3.7	0.46	0.61	0.46	35.9
East: Tumwater Blvd SW														
1u	U	3	5.0	3	5.0	0.317	13.9	LOS B	2.0	51.5	0.38	0.43	0.38	38.4
1	L2	37	5.0	42	5.0	0.317	11.2	LOS B	2.0	51.5	0.38	0.43	0.38	37.7
6	T1	717	5.0	806	5.0	0.317	4.1	LOS A	2.0	52.8	0.37	0.41	0.37	37.6
16	R2	73	5.0	82	5.0	0.317	4.2	LOS A	2.0	52.8	0.35	0.39	0.35	36.3
Approach		830	5.0	932	5.0	0.317	4.4	LOS A	2.0	52.8	0.37	0.41	0.37	37.5
North: New Market St SW														
7	L2	9	19.0	10	19.0	0.023	14.2	LOS B	0.1	2.3	0.58	0.76	0.58	34.0
4	T1	2	19.0	2	19.0	0.023	7.2	LOS A	0.1	2.3	0.58	0.76	0.58	33.9
14	R2	43	19.0	48	19.0	0.057	5.9	LOS A	0.2	6.4	0.56	0.66	0.56	35.5
Approach		54	19.0	61	19.0	0.057	7.4	LOS A	0.2	6.4	0.56	0.68	0.56	35.2
West: Tumwater Blvd SW														
5u	U	2	6.0	2	6.0	0.197	13.3	LOS B	1.1	30.0	0.22	0.47	0.22	37.9
5	L2	97	6.0	109	6.0	0.197	10.6	LOS B	1.1	30.0	0.22	0.47	0.22	37.3
2	T1	436	6.0	490	6.0	0.197	3.6	LOS A	1.2	30.6	0.20	0.38	0.20	38.0
12	R2	11	6.0	12	6.0	0.197	3.8	LOS A	1.2	30.6	0.20	0.33	0.20	36.9
Approach		546	6.0	613	6.0	0.197	4.8	LOS A	1.2	30.6	0.21	0.39	0.21	37.8
All Vehicles		1499	5.8	1684	5.8	0.317	4.8	LOS A	2.0	52.8	0.32	0.42	0.32	37.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

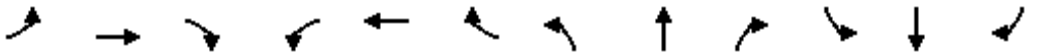
Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	0	10	0	0	0	61	161	0	0	58	2
Future Vol, veh/h	1	0	10	0	0	0	61	161	0	0	58	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	73	73	73	73	73	73	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	14	0	0	0	84	221	0	0	79	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	470	470	81	477	471	221	82	0	0	221	0	0
Stage 1	81	81	-	389	389	-	-	-	-	-	-	-
Stage 2	389	389	-	88	82	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	504	492	979	498	491	819	1515	-	-	1348	-	-
Stage 1	927	828	-	635	608	-	-	-	-	-	-	-
Stage 2	635	608	-	920	827	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	480	461	979	468	460	819	1515	-	-	1348	-	-
Mov Cap-2 Maneuver	480	461	-	468	460	-	-	-	-	-	-	-
Stage 1	869	828	-	595	570	-	-	-	-	-	-	-
Stage 2	595	570	-	907	827	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	0	2.1	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1515	-	-	894	-	1348	-	-
HCM Lane V/C Ratio	0.055	-	-	0.017	-	-	-	-
HCM Control Delay (s)	7.5	0	-	9.1	0	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-	0	-	-

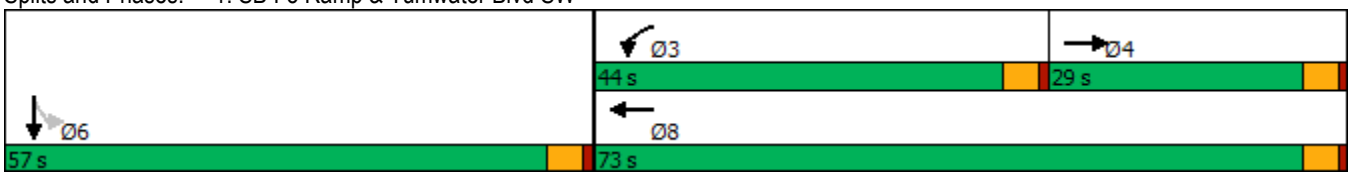


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	401	83	374	322	0	0	0	0	475	37	274
Future Volume (vph)	0	401	83	374	322	0	0	0	0	475	37	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	300		0	0		0	600		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.974									0.868	
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3481	0	1787	1881	0	0	0	0	1736	1586	0
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	3481	0	1787	1881	0	0	0	0	1736	1586	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16									291	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		558			562			485			825	
Travel Time (s)		10.9			10.9			11.0			18.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	4%	4%	4%
Adj. Flow (vph)	0	427	88	398	343	0	0	0	0	505	39	291
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	515	0	398	343	0	0	0	0	505	330	0
Turn Type		NA		Prot	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases										6		
Detector Phase		4		3	8					6	6	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		28.5		9.5	24.5					29.5	29.5	
Total Split (s)		29.0		44.0	73.0					57.0	57.0	
Total Split (%)		22.3%		33.8%	56.2%					43.8%	43.8%	
Maximum Green (s)		24.5		39.5	68.5					52.5	52.5	
Yellow Time (s)		3.5		3.5	3.5					3.5	3.5	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0					0.0	0.0	
Total Lost Time (s)		4.5		4.5	4.5					4.5	4.5	
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		Min		None	Min					None	None	
Walk Time (s)		7.0			7.0					7.0	7.0	
Flash Dont Walk (s)		17.0			13.0					18.0	18.0	
Pedestrian Calls (#/hr)		0			0					0	0	
Act Effct Green (s)		20.0		28.1	52.9					36.9	36.9	
Actuated g/C Ratio		0.20		0.28	0.53					0.37	0.37	
v/c Ratio		0.72		0.79	0.34					0.78	0.43	
Control Delay		45.2		47.6	15.7					38.8	6.3	
Queue Delay		0.0		0.0	0.0					0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		45.2		47.6	15.7					38.8	6.3	
LOS		D		D	B					D	A	
Approach Delay		45.2			32.8						25.9	
Approach LOS		D			C						C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 99.5			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 33.1		Intersection LOS: C	
Intersection Capacity Utilization 72.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: SB I-5 Ramp & Tumwater Blvd SW



Intersection	
Int Delay, s/veh	13.7

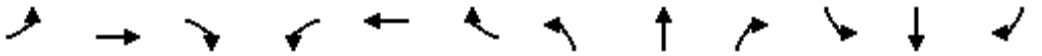
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	159	716	0	0	644	1417	52	7	158	0	0	0
Future Vol, veh/h	159	716	0	0	644	1417	52	7	158	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	300	-	-	-	-	0	-	-	600	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	3	3	3	1	1	1	3	3	3	2	2	2
Mvmt Flow	181	814	0	0	732	1610	59	8	180	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	732	0	-	-	-	0	1908	1908	407
Stage 1	-	-	-	-	-	-	1176	1176	-
Stage 2	-	-	-	-	-	-	732	732	-
Critical Hdwy	4.145	-	-	-	-	-	6.645	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	5.845	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.445	5.545	-
Follow-up Hdwy	2.2285	-	-	-	-	-	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	865	-	0	0	-	0	67	67	592
Stage 1	-	-	0	0	-	0	255	263	-
Stage 2	-	-	0	0	-	0	473	424	-
Platoon blocked, %		-			-				
Mov Cap-1 Maneuver	865	-	-	-	-	-	~ 53	0	592
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 53	0	-
Stage 1	-	-	-	-	-	-	202	0	-
Stage 2	-	-	-	-	-	-	473	0	-

Approach	EB	WB	NB
HCM Control Delay, s	1.9	0	101.9
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT
Capacity (veh/h)	53	592	865	-	-
HCM Lane V/C Ratio	1.265	0.303	0.209	-	-
HCM Control Delay (s)	$ 338	13.7	10.3	-	-
HCM Lane LOS	F	B	B	-	-
HCM 95th %tile Q(veh)	6	1.3	0.8	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	158	644	180	66	823	36	197	98	50	221	189	1029
Future Volume (veh/h)	158	644	180	66	823	36	197	98	50	221	189	1029
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	168	685	191	70	876	38	210	104	53	235	201	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	1	1	1
Cap, veh/h	269	923	257	147	1220	544	283	297	252	319	335	
Arrive On Green	0.08	0.34	0.34	0.08	0.34	0.34	0.16	0.16	0.16	0.18	0.18	0.00
Sat Flow, veh/h	3456	2745	765	1795	3582	1598	1795	1885	1598	1795	1885	1598
Grp Volume(v), veh/h	168	443	433	70	876	38	210	104	53	235	201	0
Grp Sat Flow(s),veh/h/ln	1728	1777	1733	1795	1791	1598	1795	1885	1598	1795	1885	1598
Q Serve(g_s), s	3.4	16.1	16.1	2.7	15.6	1.2	8.1	3.6	2.1	9.0	7.2	0.0
Cycle Q Clear(g_c), s	3.4	16.1	16.1	2.7	15.6	1.2	8.1	3.6	2.1	9.0	7.2	0.0
Prop In Lane	1.00		0.44	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	269	598	583	147	1220	544	283	297	252	319	335	
V/C Ratio(X)	0.62	0.74	0.74	0.48	0.72	0.07	0.74	0.35	0.21	0.74	0.60	
Avail Cap(c_a), veh/h	970	1351	1317	504	2722	1214	1119	1175	996	1119	1175	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	32.6	21.4	21.4	32.0	21.0	16.3	29.3	27.4	26.8	28.4	27.6	0.0
Incr Delay (d2), s/veh	2.4	1.8	1.9	2.4	0.8	0.1	3.8	0.7	0.4	3.3	1.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	6.4	6.3	1.2	6.1	0.4	3.6	1.6	0.8	4.0	3.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.0	23.3	23.3	34.4	21.8	16.3	33.2	28.1	27.2	31.7	29.4	0.0
LnGrp LOS	D	C	C	C	C	B	C	C	C	C	C	
Approach Vol, veh/h		1044			984			367			436	
Approach Delay, s/veh		25.2			22.5			30.9			30.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		16.0	10.5	29.1		17.5	10.2	29.4				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		45.5	20.5	55.5		45.5	20.5	55.5				
Max Q Clear Time (g_c+I1), s		10.1	4.7	18.1		11.0	5.4	17.6				
Green Ext Time (p_c), s		1.4	0.1	6.4		1.9	0.4	7.3				

Intersection Summary												
HCM 6th Ctrl Delay			25.8									
HCM 6th LOS			C									

Notes

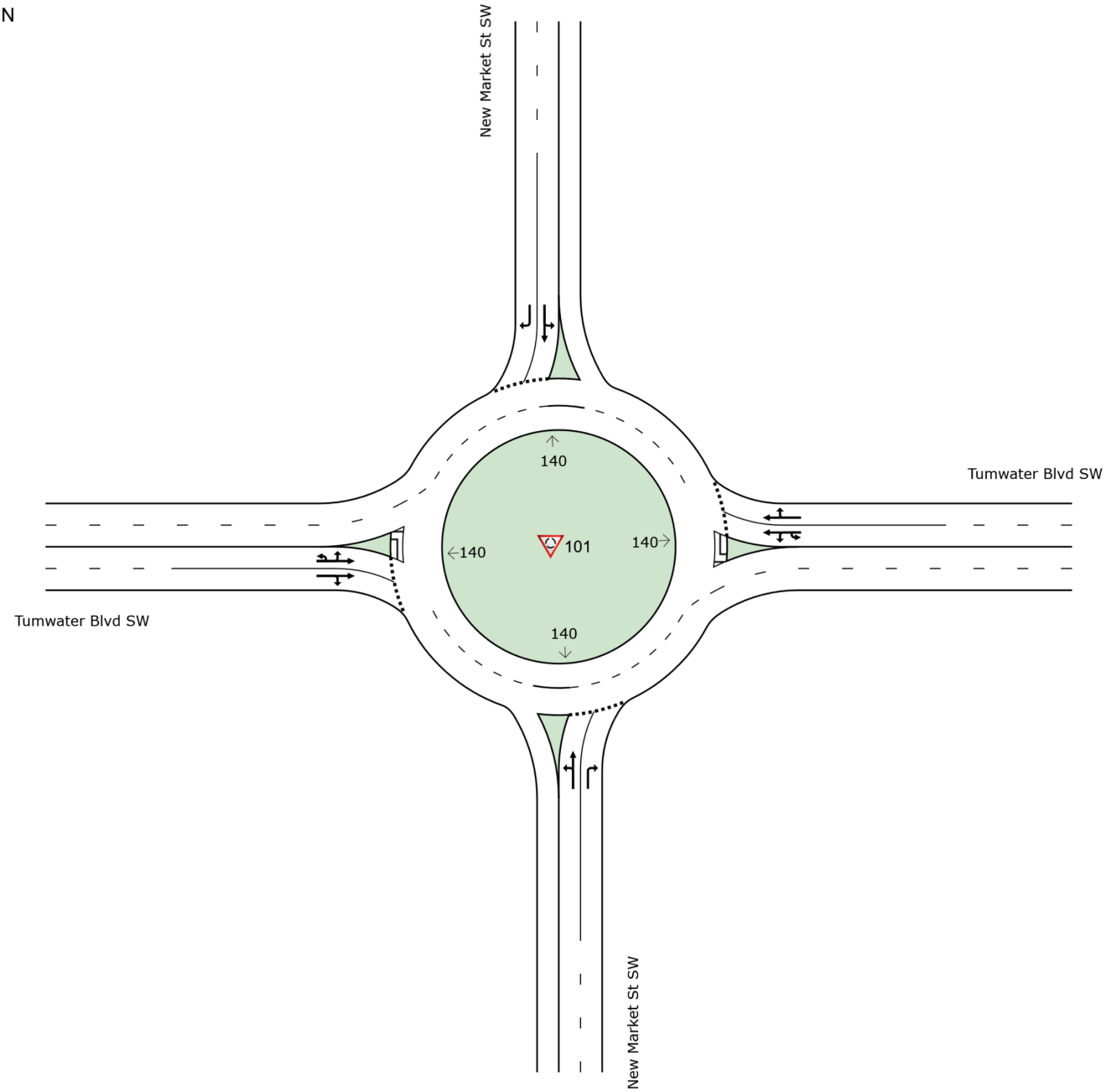
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

SITE LAYOUT

Site: 101 [Tumwater Blvd SW & New Market St SW (Site Folder: 4)]

Existing PM Peak Hour Volumes
Site Category: -
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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MOVEMENT SUMMARY

Site: 101 [Tumwater Blvd SW & New Market St SW (Site Folder: 4)]

Existing PM Peak Hour Volumes
Site Category: -
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: New Market St SW														
3	L2	48	7.0	53	7.0	0.065	12.6	LOS B	0.2	6.3	0.52	0.76	0.52	34.4
8	T1	1	7.0	1	7.0	0.065	5.6	LOS A	0.2	6.3	0.52	0.76	0.52	34.1
18	R2	63	7.0	70	7.0	0.066	5.3	LOS A	0.3	6.7	0.49	0.61	0.49	36.0
Approach		112	7.0	124	7.0	0.066	8.4	LOS A	0.3	6.7	0.50	0.68	0.50	35.2
East: Tumwater Blvd SW														
1u	U	1	3.0	1	3.0	0.415	13.7	LOS B	3.0	76.8	0.37	0.41	0.37	39.0
1	L2	38	3.0	42	3.0	0.415	11.0	LOS B	3.0	76.8	0.37	0.41	0.37	38.0
6	T1	1088	3.0	1209	3.0	0.415	3.9	LOS A	3.1	78.3	0.35	0.38	0.35	37.8
16	R2	26	3.0	29	3.0	0.415	4.1	LOS A	3.1	78.3	0.34	0.36	0.34	36.4
Approach		1153	3.0	1281	3.0	0.415	4.1	LOS A	3.1	78.3	0.35	0.38	0.35	37.7
North: New Market St SW														
7	L2	5	50.0	6	50.0	0.020	18.1	LOS B	0.1	2.4	0.70	0.84	0.70	31.6
4	T1	1	50.0	1	50.0	0.020	10.9	LOS B	0.1	2.4	0.70	0.84	0.70	32.0
14	R2	22	50.0	24	50.0	0.047	8.7	LOS A	0.2	6.3	0.65	0.77	0.65	33.9
Approach		28	50.0	31	50.0	0.047	10.4	LOS B	0.2	6.3	0.66	0.79	0.66	33.4
West: Tumwater Blvd SW														
5u	U	16	6.0	18	6.0	0.246	13.3	LOS B	1.5	39.7	0.21	0.40	0.21	38.7
5	L2	35	6.0	39	6.0	0.246	10.6	LOS B	1.5	39.7	0.21	0.40	0.21	38.2
2	T1	619	6.0	688	6.0	0.246	3.5	LOS A	1.5	40.4	0.20	0.36	0.20	38.2
12	R2	24	6.0	27	6.0	0.246	3.8	LOS A	1.5	40.4	0.19	0.33	0.19	36.9
Approach		694	6.0	771	6.0	0.246	4.1	LOS A	1.5	40.4	0.20	0.36	0.20	38.2
All Vehicles		1987	4.9	2208	4.9	0.415	4.5	LOS A	3.1	78.3	0.31	0.40	0.31	37.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	0	8	0	0	0	8	2	0	0	5	0
Future Vol, veh/h	0	0	8	0	0	0	8	2	0	0	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	50	50	50	50	50	50	50	50	50	50	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	16	0	0	0	16	4	0	0	10	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	46	46	10	54	46	4	10	0	0	4	0	0
Stage 1	10	10	-	36	36	-	-	-	-	-	-	-
Stage 2	36	36	-	18	10	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	955	846	1071	944	846	1080	1610	-	-	1618	-	-
Stage 1	1011	887	-	980	865	-	-	-	-	-	-	-
Stage 2	980	865	-	1001	887	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	947	838	1071	923	838	1080	1610	-	-	1618	-	-
Mov Cap-2 Maneuver	947	838	-	923	838	-	-	-	-	-	-	-
Stage 1	1001	887	-	970	856	-	-	-	-	-	-	-
Stage 2	970	856	-	986	887	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.4	0	5.8	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1610	-	-	1071	-	1618	-	-
HCM Lane V/C Ratio	0.01	-	-	0.015	-	-	-	-
HCM Control Delay (s)	7.3	0	-	8.4	0	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	434	29	13	530	26	26
Future Vol, veh/h	434	29	13	530	26	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	511	34	15	624	31	31

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	545	0	1182	528
Stage 1	-	-	-	-	528	-
Stage 2	-	-	-	-	654	-
Critical Hdwy	-	-	4.11	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	2.209	-	3.509	3.309
Pot Cap-1 Maneuver	-	-	1029	-	211	552
Stage 1	-	-	-	-	594	-
Stage 2	-	-	-	-	519	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1029	-	208	552
Mov Cap-2 Maneuver	-	-	-	-	345	-
Stage 1	-	-	-	-	594	-
Stage 2	-	-	-	-	511	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	14.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	345	552	-	-	1029	-
HCM Lane V/C Ratio	0.089	0.055	-	-	0.015	-
HCM Control Delay (s)	16.4	11.9	-	-	8.6	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	0.2	-	-	0	-

Intersection	
Intersection Delay, s/veh	6.7
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	0	0	2	0
Future Vol, veh/h	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2	0	0	2	0
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	6.3	0	7.1
HCM LOS	A	-	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	100%
Vol Thru, %	100%	0%	0%
Vol Right, %	0%	100%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	2	2
LT Vol	0	0	2
Through Vol	0	0	0
RT Vol	0	2	0
Lane Flow Rate	0	2	2
Geometry Grp	1	1	1
Degree of Util (X)	0	0.002	0.002
Departure Headway (Hd)	3.94	3.338	4.138
Convergence, Y/N	Yes	Yes	Yes
Cap	0	1079	870
Service Time	1.94	1.338	2.138
HCM Lane V/C Ratio	0	0.002	0.002
HCM Control Delay	6.9	6.3	7.1
HCM Lane LOS	N	A	A
HCM 95th-tile Q	0	0	0

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	26	35	18	20	90	5
Future Vol, veh/h	26	35	18	20	90	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	60	60	60	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	58	30	33	150	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	247	154	158	0	-	0
Stage 1	154	-	-	-	-	-
Stage 2	93	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	741	892	1422	-	-	-
Stage 1	874	-	-	-	-	-
Stage 2	931	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	725	892	1422	-	-	-
Mov Cap-2 Maneuver	725	-	-	-	-	-
Stage 1	856	-	-	-	-	-
Stage 2	931	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	3.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1422	-	812	-	-
HCM Lane V/C Ratio	0.021	-	0.125	-	-
HCM Control Delay (s)	7.6	0	10.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	62	71	27	6	3	2	12	32	0	5	0
Future Vol, veh/h	0	62	71	27	6	3	2	12	32	0	5	0
Peak Hour Factor	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	109	125	47	11	5	4	21	56	0	9	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.2	7.8	7.6	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	0%	75%	0%
Vol Thru, %	26%	47%	17%	100%
Vol Right, %	70%	53%	8%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	46	133	36	5
LT Vol	2	0	27	0
Through Vol	12	62	6	5
RT Vol	32	71	3	0
Lane Flow Rate	81	233	63	9
Geometry Grp	1	1	1	1
Degree of Util (X)	0.093	0.247	0.077	0.011
Departure Headway (Hd)	4.156	3.818	4.37	4.646
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	868	931	809	775
Service Time	2.156	1.884	2.455	2.648
HCM Lane V/C Ratio	0.093	0.25	0.078	0.012
HCM Control Delay	7.6	8.2	7.8	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	1	0.2	0

Intersection	
Int Delay, s/veh	1.1

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	19	21	604	1	0	838	5	0	0	2	0	0	85
Future Vol, veh/h	19	21	604	1	0	838	5	0	0	2	0	0	85
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	300	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	4	4	4	3	3	3	1	1	1	1	1	1
Mvmt Flow	21	24	686	1	0	952	6	0	0	2	0	0	97

Major/Minor	Major1				Major2			Minor1			Minor2		
Conflicting Flow All	958	958	0	0	-	-	0	-	-	344	-	-	479
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	4.18	-	-	-	-	-	-	-	6.92	-	-	6.92
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.52	2.24	-	-	-	-	-	-	-	3.31	-	-	3.31
Pot Cap-1 Maneuver	353	701	-	-	0	-	-	0	0	655	0	0	535
Stage 1	-	-	-	-	0	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %			-	-		-	-						
Mov Cap-1 Maneuver	430	430	-	-	-	-	-	-	-	655	-	-	535
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0	10.5	13.2
HCM LOS			B	B

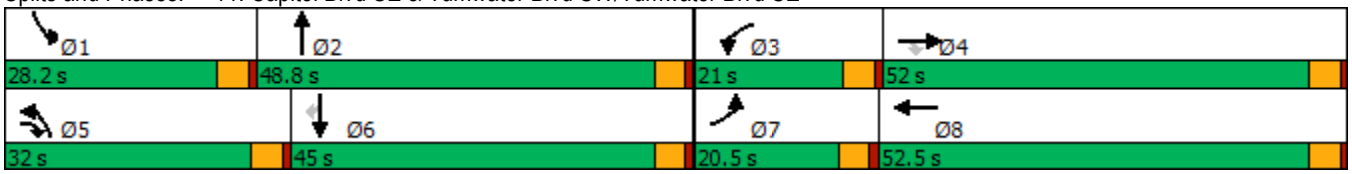
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	655	430	-	-	-	-	535
HCM Lane V/C Ratio	0.003	0.104	-	-	-	-	0.181
HCM Control Delay (s)	10.5	14.3	-	-	-	-	13.2
HCM Lane LOS	B	B	-	-	-	-	B
HCM 95th %tile Q(veh)	0	0.3	-	-	-	-	0.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	357	286	97	381	18	233	356	21	131	557	124
Future Volume (vph)	75	357	286	97	381	18	233	356	21	131	557	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	300		0	250		0	300		250
Storage Lanes	1		1	1		0	2		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.97	0.95	0.95	1.00	0.95	1.00
Frt			0.850		0.993			0.992				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1845	1568	1787	3549	0	3467	3546	0	1787	3574	1599
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	1845	1568	1787	3549	0	3467	3546	0	1787	3574	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			259		3			4				138
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		495			500			530			490	
Travel Time (s)		9.6			9.7			10.3			9.5	
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
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	83	397	318	108	423	20	259	396	23	146	619	138
Shared Lane Traffic (%)												
Lane Group Flow (vph)	83	397	318	108	443	0	259	419	0	146	619	138
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									6
Detector Phase	7	4	5	3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	39.5	9.5	9.5	39.5		9.5	34.5		9.5	37.5	37.5
Total Split (s)	20.5	52.0	32.0	21.0	52.5		32.0	48.8		28.2	45.0	45.0
Total Split (%)	13.7%	34.7%	21.3%	14.0%	35.0%		21.3%	32.5%		18.8%	30.0%	30.0%
Maximum Green (s)	16.0	47.5	27.5	16.5	48.0		27.5	44.3		23.7	40.5	40.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Dont Walk (s)		28.0			28.0			23.0			26.0	26.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effct Green (s)	10.9	28.9	14.7	12.0	33.4		14.7	26.0		14.7	26.1	26.1
Actuated g/C Ratio	0.11	0.29	0.15	0.12	0.33		0.15	0.26		0.15	0.26	0.26
v/c Ratio	0.44	0.75	0.71	0.51	0.38		0.51	0.46		0.56	0.67	0.27
Control Delay	57.1	44.6	20.4	57.1	29.7		46.9	34.9		53.8	39.5	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	57.1	44.6	20.4	57.1	29.7		46.9	34.9		53.8	39.5	7.7
LOS	E	D	C	E	C		D	C		D	D	A
Approach Delay		36.2			35.1			39.5			36.9	
Approach LOS		D			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 101			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 37.0		Intersection LOS: D	
Intersection Capacity Utilization 61.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 11: Capitol Blvd SE & Tumwater Blvd SW/Tumwater Blvd SE



Intersection	
Int Delay, s/veh	31.1

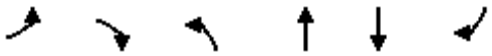
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	377	2	6	301	175	6	3	14	247	3	26
Future Vol, veh/h	25	377	2	6	301	175	6	3	14	247	3	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	1	1	1
Mvmt Flow	27	414	2	7	331	192	7	3	15	271	3	29

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	523	0	0	416	0	0	926	1006	415	919	911	427
Stage 1	-	-	-	-	-	-	469	469	-	441	441	-
Stage 2	-	-	-	-	-	-	457	537	-	478	470	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.15	6.55	6.25	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.55	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.55	-	6.11	5.51	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.545	4.045	3.345	3.509	4.009	3.309
Pot Cap-1 Maneuver	1043	-	-	1143	-	-	246	238	631	~ 253	275	630
Stage 1	-	-	-	-	-	-	569	556	-	597	579	-
Stage 2	-	-	-	-	-	-	578	518	-	570	562	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1043	-	-	1143	-	-	227	230	631	~ 238	265	630
Mov Cap-2 Maneuver	-	-	-	-	-	-	227	230	-	~ 238	265	-
Stage 1	-	-	-	-	-	-	554	542	-	581	574	-
Stage 2	-	-	-	-	-	-	544	513	-	538	547	-

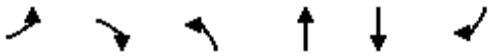
Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.1	15	131.3
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	227	483	1043	-	-	1143	-	-	238	551
HCM Lane V/C Ratio	0.029	0.039	0.026	-	-	0.006	-	-	1.14	0.058
HCM Control Delay (s)	21.3	12.8	8.5	-	-	8.2	0	-	145.3	11.9
HCM Lane LOS	C	B	A	-	-	A	A	-	F	B
HCM 95th %tile Q(veh)	0.1	0.1	0.1	-	-	0	-	-	12.4	0.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



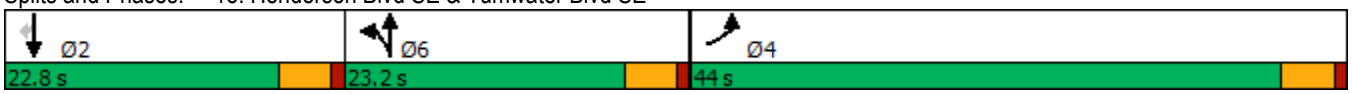
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	701	32	24	175	220	361
Future Volume (vph)	701	32	24	175	220	361
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0			100
Storage Lanes	1	0	0			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.994					0.850
Flt Protected	0.954			0.994		
Satd. Flow (prot)	1784	0	0	1870	1881	1599
Flt Permitted	0.954			0.994		
Satd. Flow (perm)	1784	0	0	1870	1881	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	3					392
Link Speed (mph)	35			35	35	
Link Distance (ft)	363			447	465	
Travel Time (s)	7.1			8.7	9.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	762	35	26	190	239	392
Shared Lane Traffic (%)						
Lane Group Flow (vph)	797	0	0	216	239	392
Turn Type	Prot		Split	NA	NA	Perm
Protected Phases	4		6	6	2	
Permitted Phases						2
Detector Phase	4		6	6	2	2
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5
Total Split (s)	44.0		23.2	23.2	22.8	22.8
Total Split (%)	48.9%		25.8%	25.8%	25.3%	25.3%
Maximum Green (s)	39.5		18.7	18.7	18.3	18.3
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	4.5			4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		Min	Min	Min	Min
Walk Time (s)	7.0		7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0		0	0	0	0
Act Effct Green (s)	39.8			14.3	15.2	15.2
Actuated g/C Ratio	0.48			0.17	0.18	0.18
v/c Ratio	0.93			0.67	0.69	0.64
Control Delay	41.5			43.3	43.5	8.8
Queue Delay	0.0			0.0	0.0	0.0



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Total Delay	41.5			43.3	43.5	8.8
LOS	D			D	D	A
Approach Delay	41.5			43.3	21.9	
Approach LOS	D			D	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 82.9			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 34.2		Intersection LOS: C	
Intersection Capacity Utilization 74.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 13: Henderson Blvd SE & Tumwater Blvd SE



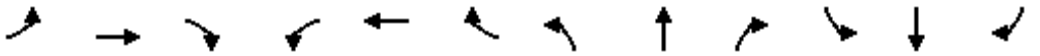
Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	63	22	476	787	22
Future Vol, veh/h	22	63	22	476	787	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	2	2	1	1	1	1
Mvmt Flow	27	76	27	573	948	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1303	488	975	0	-	0
Stage 1	962	-	-	-	-	-
Stage 2	341	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.12	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.21	-	-	-
Pot Cap-1 Maneuver	152	526	709	-	-	-
Stage 1	331	-	-	-	-	-
Stage 2	692	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	146	526	709	-	-	-
Mov Cap-2 Maneuver	253	-	-	-	-	-
Stage 1	318	-	-	-	-	-
Stage 2	692	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	709	-	253	526	-	-
HCM Lane V/C Ratio	0.037	-	0.105	0.144	-	-
HCM Control Delay (s)	10.3	-	20.9	13	-	-
HCM Lane LOS	B	-	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	0.5	-	-

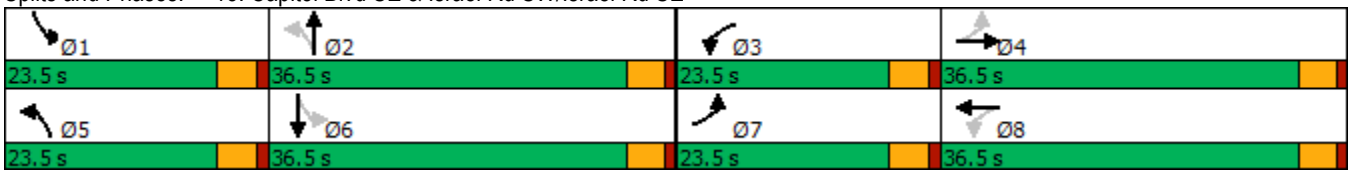


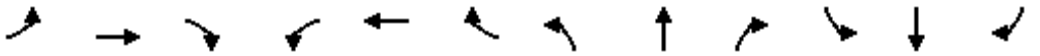
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	153	142	110	226	158	124	371	29	83	602	103
Future Volume (vph)	94	153	142	110	226	158	124	371	29	83	602	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	250		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.928			0.938			0.989			0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1746	0	1770	1747	0	1787	3535	0	1787	3496	0
Flt Permitted	0.250			0.316			0.143			0.495		
Satd. Flow (perm)	470	1746	0	589	1747	0	269	3535	0	931	3496	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38			29			6			16	
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		461			432			410			333	
Travel Time (s)		12.6			11.8			8.0			6.5	
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
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	104	170	158	122	251	176	138	412	32	92	669	114
Shared Lane Traffic (%)												
Lane Group Flow (vph)	104	328	0	122	427	0	138	444	0	92	783	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	32.5		9.5	32.5		9.5	33.5		9.5	27.5	
Total Split (s)	23.5	36.5		23.5	36.5		23.5	36.5		23.5	36.5	
Total Split (%)	19.6%	30.4%		19.6%	30.4%		19.6%	30.4%		19.6%	30.4%	
Maximum Green (s)	19.0	32.0		19.0	32.0		19.0	32.0		19.0	32.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		21.0			21.0			22.0			16.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	34.9	25.4		36.5	28.8		42.4	33.1		35.5	26.9	
Actuated g/C Ratio	0.38	0.28		0.40	0.31		0.46	0.36		0.38	0.29	
v/c Ratio	0.33	0.65		0.34	0.76		0.44	0.35		0.21	0.76	
Control Delay	20.1	33.4		19.9	38.9		20.4	25.1		17.3	36.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	20.1	33.4		19.9	38.9		20.4	25.1		17.3	36.0	
LOS	C	C		B	D		C	C		B	D	
Approach Delay		30.2			34.7			24.0			34.1	
Approach LOS		C			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 92.3			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 31.1		Intersection LOS: C	
Intersection Capacity Utilization 68.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 15: Capitol Blvd SE & Israel Rd SW/Israel Rd SE



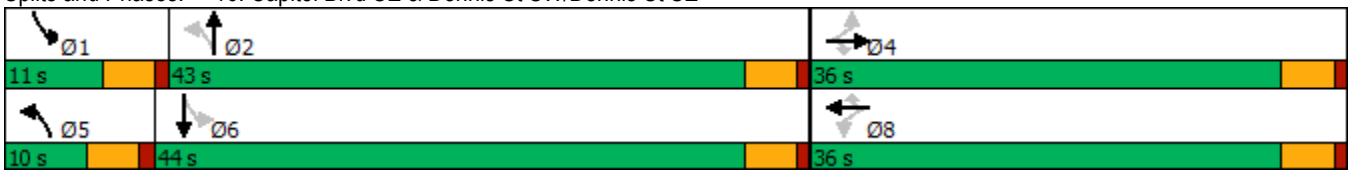


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	49	33	33	26	90	14	822	27	62	688	85
Future Volume (vph)	176	49	33	33	26	90	14	822	27	62	688	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		100	250		0	200		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.995			0.984	
Flt Protected		0.962			0.973		0.950			0.950		
Satd. Flow (prot)	0	1810	1599	0	1830	1599	1787	3556	0	1787	3517	0
Flt Permitted		0.730			0.780		0.291			0.194		
Satd. Flow (perm)	0	1373	1599	0	1467	1599	547	3556	0	365	3517	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			73			99		5			19	
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		435			480			405			366	
Travel Time (s)		11.9			13.1			7.9			7.1	
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
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	193	54	36	36	29	99	15	903	30	68	756	93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	247	36	0	65	99	15	933	0	68	849	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	32.5	32.5	32.5	30.5	30.5	30.5	9.5	27.5		9.5	27.5	
Total Split (s)	36.0	36.0	36.0	36.0	36.0	36.0	10.0	43.0		11.0	44.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	11.1%	47.8%		12.2%	48.9%	
Maximum Green (s)	31.5	31.5	31.5	31.5	31.5	31.5	5.5	38.5		6.5	39.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	21.0	21.0	21.0	19.0	19.0	19.0		16.0			16.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		17.2	17.2		17.2	17.2	28.0	25.3		30.3	29.4	
Actuated g/C Ratio		0.30	0.30		0.30	0.30	0.48	0.44		0.52	0.51	
v/c Ratio		0.61	0.07		0.15	0.18	0.04	0.60		0.19	0.47	
Control Delay		26.8	1.5		18.7	5.6	7.8	16.2		8.7	11.2	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		26.8	1.5		18.7	5.6	7.8	16.2		8.7	11.2	
LOS		C	A		B	A	A	B		A	B	
Approach Delay		23.6			10.8			16.1			11.1	
Approach LOS		C			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 57.9			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 14.6		Intersection LOS: B	
Intersection Capacity Utilization 58.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 16: Capitol Blvd SE & Dennis St SW/Dennis St SE



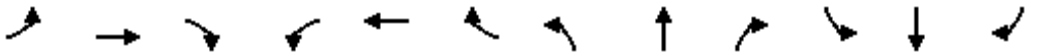
Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	43	794	26	37	1082
Future Vol, veh/h	39	43	794	26	37	1082
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	92
Heavy Vehicles, %	2	2	1	1	1	1
Mvmt Flow	43	47	873	29	41	1176

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1558	451	0	0	902	0
Stage 1	888	-	-	-	-	-
Stage 2	670	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.12	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.21	-
Pot Cap-1 Maneuver	103	556	-	-	756	-
Stage 1	362	-	-	-	-	-
Stage 2	470	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	97	556	-	-	756	-
Mov Cap-2 Maneuver	226	-	-	-	-	-
Stage 1	362	-	-	-	-	-
Stage 2	445	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.1	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	328	756	-
HCM Lane V/C Ratio	-	-	0.275	0.054	-
HCM Control Delay (s)	-	-	20.1	10	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	1.1	0.2	-

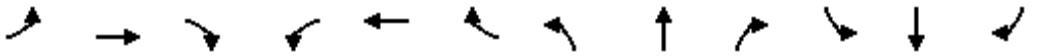


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	2	19	12	1	25	24	1080	14	43	851	42
Future Volume (vph)	13	2	19	12	1	25	24	1080	14	43	851	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	100		0	200		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.863			0.855			0.998			0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1623	0	1787	1608	0	1787	3567	0	1787	3549	0
Flt Permitted							0.269			0.174		
Satd. Flow (perm)	1881	1623	0	1881	1608	0	506	3567	0	327	3549	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			28			2			8	
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		427			448			483			381	
Travel Time (s)		11.6			12.2			9.4			7.4	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	15	2	21	13	1	28	27	1213	16	48	956	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	23	0	13	29	0	27	1229	0	48	1003	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	31.5	31.5		30.5	30.5		9.5	26.5		9.5	27.5	
Total Split (s)	31.5	31.5		31.5	31.5		9.8	48.0		10.5	48.7	
Total Split (%)	35.0%	35.0%		35.0%	35.0%		10.9%	53.3%		11.7%	54.1%	
Maximum Green (s)	27.0	27.0		27.0	27.0		5.3	43.5		6.0	44.2	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	20.0	20.0		19.0	19.0			15.0			16.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	6.6	6.6		6.6	6.6		34.3	34.3		35.7	36.4	
Actuated g/C Ratio	0.14	0.14		0.14	0.14		0.72	0.72		0.75	0.77	
v/c Ratio	0.06	0.09		0.05	0.12		0.05	0.48		0.11	0.37	
Control Delay	24.2	13.8		24.1	12.7		2.7	7.5		2.8	5.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	24.2	13.8		24.1	12.7		2.7	7.5		2.8	5.2	
LOS	C	B		C	B		A	A		A	A	
Approach Delay		17.9			16.2			7.4			5.1	
Approach LOS		B			B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 47.4			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.48			
Intersection Signal Delay: 6.7		Intersection LOS: A	
Intersection Capacity Utilization 50.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 18: Capitol Blvd SE & X St SW/X St SE

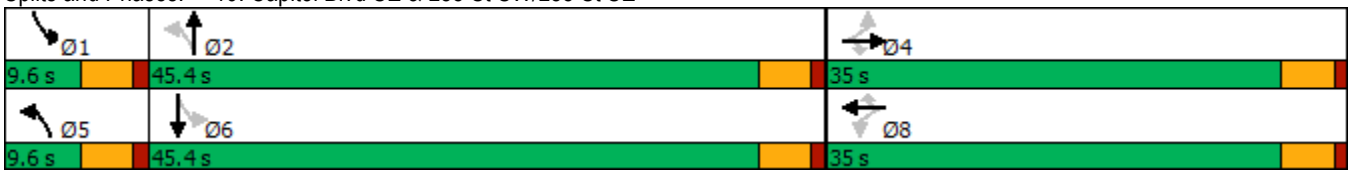


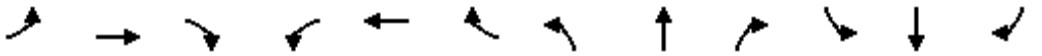
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	312	6	48	16	8	97	27	1225	25	60	975	180
Future Volume (vph)	312	6	48	16	8	97	27	1225	25	60	975	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		100	200		0	200		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.997			0.977	
Flt Protected		0.953			0.968		0.950			0.950		
Satd. Flow (prot)	0	1793	1599	0	1821	1599	1787	3564	0	1787	3492	0
Flt Permitted		0.711			0.781		0.140			0.092		
Satd. Flow (perm)	0	1338	1599	0	1469	1599	263	3564	0	173	3492	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			73			104		3			31	
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		435			481			462			371	
Travel Time (s)		11.9			13.1			9.0			7.2	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	335	6	52	17	9	104	29	1317	27	65	1048	194
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	341	52	0	26	104	29	1344	0	65	1242	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	30.5	30.5	30.5	30.5	30.5	30.5	9.5	24.5		9.5	25.5	
Total Split (s)	35.0	35.0	35.0	35.0	35.0	35.0	9.6	45.4		9.6	45.4	
Total Split (%)	38.9%	38.9%	38.9%	38.9%	38.9%	38.9%	10.7%	50.4%		10.7%	50.4%	
Maximum Green (s)	30.5	30.5	30.5	30.5	30.5	30.5	5.1	40.9		5.1	40.9	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	19.0	19.0	19.0	19.0	19.0	19.0		13.0			14.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		24.8	24.8		24.8	24.8	45.4	41.5		47.2	45.3	
Actuated g/C Ratio		0.30	0.30		0.30	0.30	0.55	0.50		0.57	0.55	
v/c Ratio		0.85	0.10		0.06	0.19	0.12	0.75		0.33	0.65	
Control Delay		48.1	3.4		20.8	5.5	9.7	21.8		13.2	16.8	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		48.1	3.4		20.8	5.5	9.7	21.8		13.2	16.8	
LOS		D	A		C	A	A	C		B	B	
Approach Delay		42.2			8.6			21.5			16.7	
Approach LOS		D			A			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 82.8			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 21.6		Intersection LOS: C	
Intersection Capacity Utilization 74.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 19: Capitol Blvd SE & Lee St SW/Lee St SE



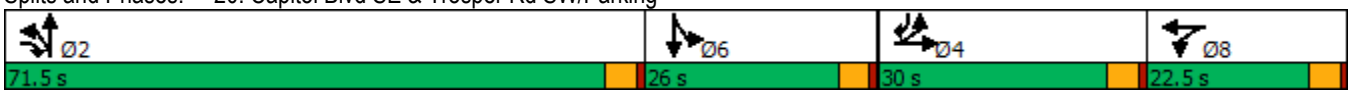


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	337	56	692	35	84	39	921	686	13	16	557	416
Future Volume (vph)	337	56	692	35	84	39	921	686	13	16	557	416
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	350		0	50		0	225		0	200		200
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850		0.953			0.997				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1881	1599	1787	1793	0	1787	3564	0	1787	3574	1599
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1787	1881	1599	1787	1793	0	1787	3564	0	1787	3574	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			638		13			2				337
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		457			480			499			401	
Travel Time (s)		12.5			13.1			9.7			7.8	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	340	57	699	35	85	39	930	693	13	16	563	420
Shared Lane Traffic (%)												
Lane Group Flow (vph)	340	57	699	35	124	0	930	706	0	16	563	420
Turn Type	Split	NA	Over	Split	NA		Split	NA		Split	NA	Over
Protected Phases	4	4	2	8	8		2	2		6	6	4
Permitted Phases												
Detector Phase	4	4	2	8	8		2	2		6	6	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	30.0	30.0	71.5	22.5	22.5		71.5	71.5		26.0	26.0	30.0
Total Split (%)	20.0%	20.0%	47.7%	15.0%	15.0%		47.7%	47.7%		17.3%	17.3%	20.0%
Maximum Green (s)	25.5	25.5	67.0	18.0	18.0		67.0	67.0		21.5	21.5	25.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	Max	None	None		Max	Max		Max	Max	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	0
Act Effct Green (s)	25.5	25.5	67.1	13.9	13.9		67.1	67.1		21.5	21.5	25.5
Actuated g/C Ratio	0.17	0.17	0.46	0.10	0.10		0.46	0.46		0.15	0.15	0.17
v/c Ratio	1.09	0.17	0.65	0.21	0.68		1.13	0.43		0.06	1.07	0.75
Control Delay	131.8	53.9	6.3	63.3	75.8		111.9	27.9		55.8	116.8	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	131.8	53.9	6.3	63.3	75.8		111.9	27.9		55.8	116.8	22.0
LOS	F	D	A	E	E		F	C		E	F	C
Approach Delay		47.7			73.1			75.6			75.9	
Approach LOS		D			E			E			E	

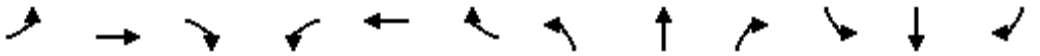
Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 146			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.13			
Intersection Signal Delay: 67.7		Intersection LOS: E	
Intersection Capacity Utilization 106.9%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 20: Capitol Blvd SE & Trosper Rd SW/Parking



NEW MARKET APARTMENTS
TRAFFIC IMPACT ANALYSIS

APPENDIX: LEVEL OF SERVICE – FORECAST 2028 PEAK HOUR BACKGROUND VOLUMES

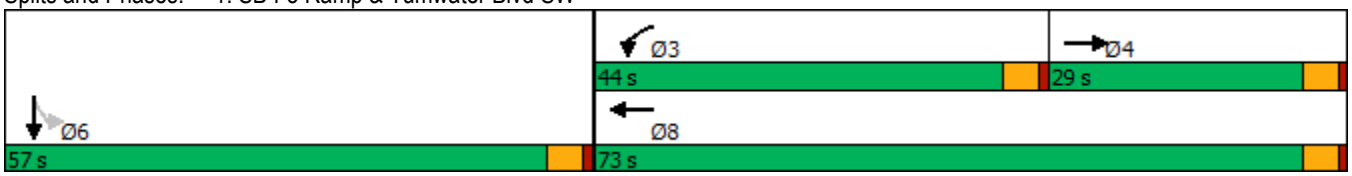


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	738	132	221	199	0	0	0	0	2060	5	218
Future Volume (vph)	0	738	132	221	199	0	0	0	0	2060	5	218
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	300		0	0		0	600		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977									0.853	
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3492	0	1736	1827	0	0	0	0	1736	1558	0
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	3492	0	1736	1827	0	0	0	0	1736	1558	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14									253	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		558			562			485			825	
Travel Time (s)		10.9			10.9			11.0			18.8	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	1%	4%	4%	4%	2%	2%	2%	4%	4%	4%
Adj. Flow (vph)	0	858	153	257	231	0	0	0	0	2395	6	253
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1011	0	257	231	0	0	0	0	2395	259	0
Turn Type		NA		Prot	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases										6		
Detector Phase		4		3	8					6	6	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		28.5		9.5	24.5					29.5	29.5	
Total Split (s)		29.0		44.0	73.0					57.0	57.0	
Total Split (%)		22.3%		33.8%	56.2%					43.8%	43.8%	
Maximum Green (s)		24.5		39.5	68.5					52.5	52.5	
Yellow Time (s)		3.5		3.5	3.5					3.5	3.5	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0					0.0	0.0	
Total Lost Time (s)		4.5		4.5	4.5					4.5	4.5	
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		Min		None	Min					None	None	
Walk Time (s)		7.0			7.0					7.0	7.0	
Flash Dont Walk (s)		17.0			13.0					18.0	18.0	
Pedestrian Calls (#/hr)		0			0					0	0	
Act Effct Green (s)		24.6		21.7	50.8					52.6	52.6	
Actuated g/C Ratio		0.22		0.19	0.45					0.47	0.47	
v/c Ratio		1.31		0.77	0.28					2.95	0.30	
Control Delay		183.6		58.4	20.1					896.5	3.7	
Queue Delay		0.0		0.0	0.0					0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		183.6		58.4	20.1					896.5	3.7	
LOS		F		E	C					F	A	
Approach Delay		183.6			40.3						809.4	
Approach LOS		F			D						F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 112.4			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 2.95			
Intersection Signal Delay: 566.7		Intersection LOS: F	
Intersection Capacity Utilization 162.2%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 1: SB I-5 Ramp & Tumwater Blvd SW



Intersection	
Int Delay, s/veh	3.4

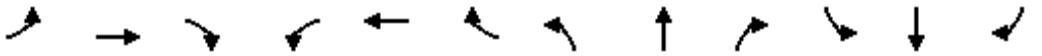
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	786	1999	0	0	303	724	100	1	598	0	0	0
Future Vol, veh/h	786	1999	0	0	303	724	100	1	598	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	300	-	-	-	-	0	-	-	600	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	3	3	3	9	9	9	3	3	3	2	2	2
Mvmt Flow	903	2298	0	0	348	832	115	1	687	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	348	0	-	-	-	0	4452	4452	1149
Stage 1	-	-	-	-	-	-	4104	4104	-
Stage 2	-	-	-	-	-	-	348	348	-
Critical Hdwy	4.145	-	-	-	-	-	6.645	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	5.845	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.445	5.545	-
Follow-up Hdwy	2.2285	-	-	-	-	-	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	1203	-	0	0	-	0	~ 1	~ 1	~ 191
Stage 1	-	-	0	0	-	0	~ 5	7	-
Stage 2	-	-	0	0	-	0	711	631	-
Platoon blocked, %		-			-				
Mov Cap-1 Maneuver	1203	-	-	-	-	-	0	0	~ 191
Mov Cap-2 Maneuver	-	-	-	-	-	-	0	0	-
Stage 1	-	-	-	-	-	-	~ 1	0	-
Stage 2	-	-	-	-	-	-	711	0	-

Approach	EB	WB	NB
HCM Control Delay, s	4.6	0	
HCM LOS			-

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT
Capacity (veh/h)	-	191	1203	-	-
HCM Lane V/C Ratio	-	3.599	0.751	-	-
HCM Control Delay (s)	$	1218.8	16.4	-	-
HCM Lane LOS	-	F	C	-	-
HCM 95th %tile Q(veh)	-	66	7.5	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1600	883	130	52	559	146	113	81	48	63	44	178
Future Volume (veh/h)	1600	883	130	52	559	146	113	81	48	63	44	178
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1796	1796	1796	1707	1707	1707	1796	1796	1796
Adj Flow Rate, veh/h	1798	992	146	58	628	164	127	91	54	71	49	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	4	4	4	7	7	7	13	13	13	7	7	7
Cap, veh/h	1588	1199	176	493	727	324	165	173	147	103	108	
Arrive On Green	0.47	0.39	0.39	0.29	0.21	0.21	0.10	0.10	0.10	0.06	0.06	0.00
Sat Flow, veh/h	3401	3059	450	1711	3413	1522	1626	1707	1447	1711	1796	1522
Grp Volume(v), veh/h	1798	567	571	58	628	164	127	91	54	71	49	0
Grp Sat Flow(s),veh/h/ln	1700	1749	1760	1711	1706	1522	1626	1707	1447	1711	1796	1522
Q Serve(g_s), s	53.0	33.1	33.2	2.8	20.1	10.8	8.6	5.7	4.0	4.6	3.0	0.0
Cycle Q Clear(g_c), s	53.0	33.1	33.2	2.8	20.1	10.8	8.6	5.7	4.0	4.6	3.0	0.0
Prop In Lane	1.00		0.26	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1588	685	690	493	727	324	165	173	147	103	108	
V/C Ratio(X)	1.13	0.83	0.83	0.12	0.86	0.51	0.77	0.53	0.37	0.69	0.45	
Avail Cap(c_a), veh/h	1588	1117	1124	493	812	362	380	399	338	384	404	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	30.3	31.1	31.1	29.8	43.1	39.4	49.7	48.4	47.6	52.3	51.5	0.0
Incr Delay (d2), s/veh	68.0	2.8	2.8	0.1	8.9	1.2	7.4	2.5	1.5	8.0	3.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	35.4	14.0	14.1	1.2	9.3	4.1	3.8	2.5	1.5	2.2	1.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	98.2	33.8	33.9	29.9	52.0	40.6	57.1	50.9	49.1	60.3	54.5	0.0
LnGrp LOS	F	C	C	C	D	D	E	D	D	E	D	
Approach Vol, veh/h		2936			850			272			120	
Approach Delay, s/veh		73.3			48.3			53.4			57.9	
Approach LOS		E			D			D			E	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		16.0	37.2	49.0		11.3	57.5	28.7				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		26.5	7.5	72.5		25.5	53.0	27.0				
Max Q Clear Time (g_c+I1), s		10.6	4.8	35.2		6.6	55.0	22.1				
Green Ext Time (p_c), s		0.9	0.0	9.3		0.4	0.0	2.0				

Intersection Summary		
HCM 6th Ctrl Delay		66.5
HCM 6th LOS		E

Notes

User approved pedestrian interval to be less than phase max green.

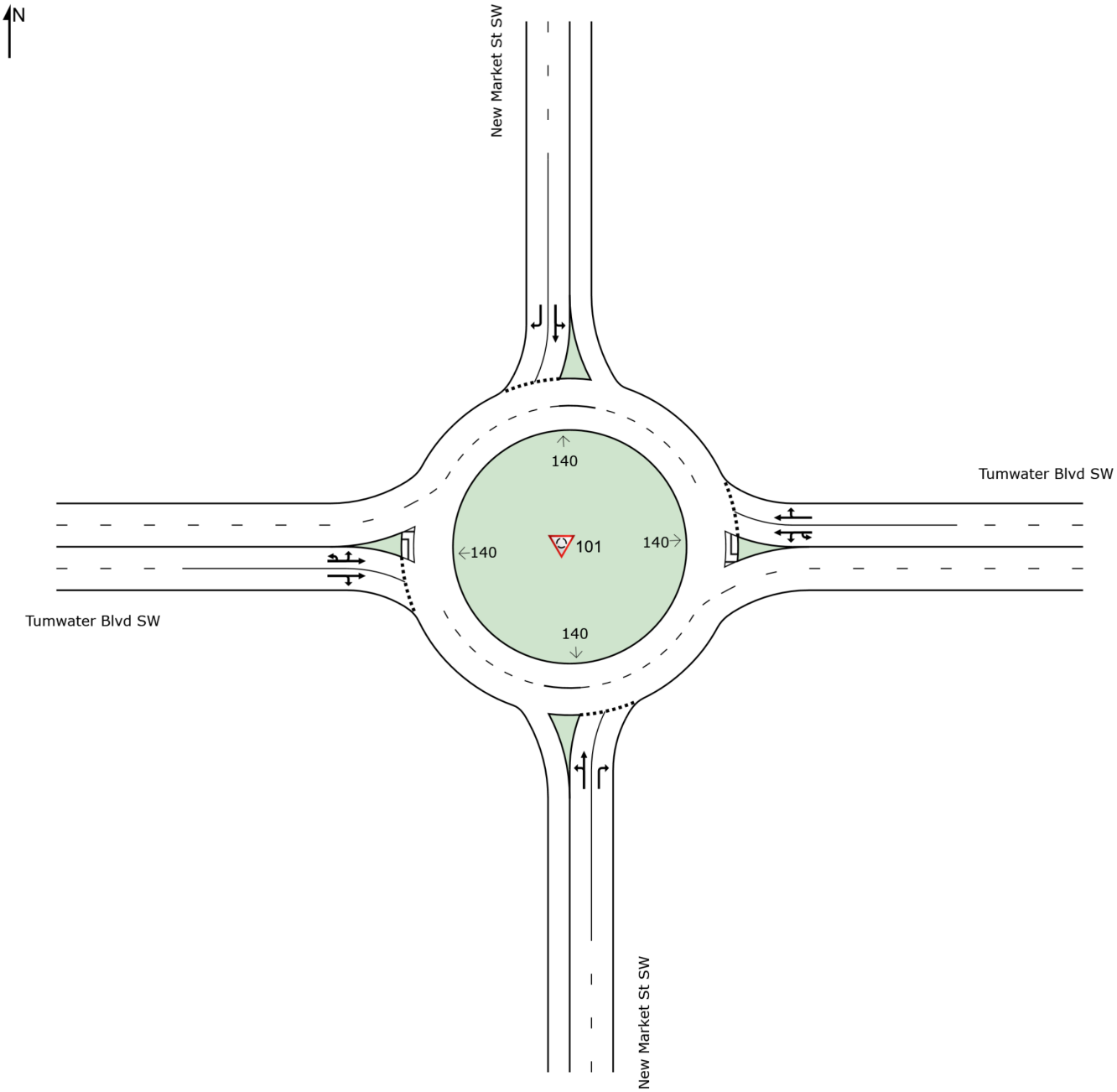
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

SITE LAYOUT

Site: 101 [Tumwater Blvd SW & New Market St SW (Site Folder: 4)]

Forecast 2028 AM Peak Hour Background Volumes
Site Category: -
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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MOVEMENT SUMMARY

Site: 101 [Tumwater Blvd SW & New Market St SW (Site Folder: 4)]

Forecast 2028 AM Peak Hour Background Volumes
Site Category: -
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: New Market St SW														
3	L2	31	4.0	35	4.0	0.050	12.0	LOS B	0.2	5.1	0.52	0.66	0.52	35.7
8	T1	17	4.0	19	4.0	0.050	5.0	LOS A	0.2	5.1	0.52	0.66	0.52	35.3
18	R2	37	4.0	42	4.0	0.050	5.9	LOS A	0.2	4.8	0.54	0.65	0.54	35.9
Approach		85	4.0	96	4.0	0.050	8.0	LOS A	0.2	5.1	0.52	0.66	0.52	35.7
East: Tumwater Blvd SW														
1u	U	4	5.0	4	5.0	0.418	14.3	LOS B	2.9	75.5	0.47	0.46	0.47	38.1
1	L2	45	5.0	51	5.0	0.418	11.5	LOS B	2.9	75.5	0.47	0.46	0.47	37.4
6	T1	930	5.0	1045	5.0	0.418	4.3	LOS A	3.0	77.9	0.45	0.43	0.45	37.3
16	R2	88	5.0	99	5.0	0.418	4.5	LOS A	3.0	77.9	0.43	0.41	0.43	36.0
Approach		1067	5.0	1199	5.0	0.418	4.7	LOS A	3.0	77.9	0.45	0.43	0.45	37.2
North: New Market St SW														
7	L2	11	19.0	12	19.0	0.029	14.8	LOS B	0.1	3.2	0.64	0.81	0.64	33.7
4	T1	2	19.0	2	19.0	0.029	7.8	LOS A	0.1	3.2	0.64	0.81	0.64	33.6
14	R2	53	19.0	60	19.0	0.078	6.5	LOS A	0.3	9.5	0.63	0.74	0.63	35.3
Approach		66	19.0	74	19.0	0.078	7.9	LOS A	0.3	9.5	0.63	0.75	0.63	35.0
West: Tumwater Blvd SW														
5u	U	2	6.0	2	6.0	0.268	13.4	LOS B	1.7	44.8	0.26	0.47	0.26	37.9
5	L2	118	6.0	133	6.0	0.268	10.7	LOS B	1.7	44.8	0.26	0.47	0.26	37.3
2	T1	602	6.0	676	6.0	0.268	3.6	LOS A	1.8	45.9	0.25	0.38	0.25	37.8
12	R2	14	6.0	16	6.0	0.268	3.9	LOS A	1.8	45.9	0.24	0.34	0.24	36.7
Approach		736	6.0	827	6.0	0.268	4.8	LOS A	1.8	45.9	0.25	0.40	0.25	37.7
All Vehicles		1954	5.8	2195	5.8	0.418	5.0	LOS A	3.0	77.9	0.38	0.44	0.38	37.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

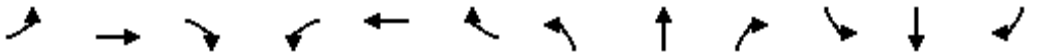
Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	0	12	0	0	0	74	196	0	0	71	2
Future Vol, veh/h	1	0	12	0	0	0	74	196	0	0	71	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	73	73	73	73	73	73	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	16	0	0	0	101	268	0	0	97	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	569	569	99	577	570	268	100	0	0	268	0	0
Stage 1	99	99	-	470	470	-	-	-	-	-	-	-
Stage 2	470	470	-	107	100	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	433	432	957	428	431	771	1493	-	-	1296	-	-
Stage 1	907	813	-	574	560	-	-	-	-	-	-	-
Stage 2	574	560	-	898	812	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	407	397	957	395	397	771	1493	-	-	1296	-	-
Mov Cap-2 Maneuver	407	397	-	395	397	-	-	-	-	-	-	-
Stage 1	834	813	-	528	515	-	-	-	-	-	-	-
Stage 2	528	515	-	883	812	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.2	0	2.1	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1493	-	-	867	-	1296	-	-
HCM Lane V/C Ratio	0.068	-	-	0.021	-	-	-	-
HCM Control Delay (s)	7.6	0	-	9.2	0	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-	0	-	-

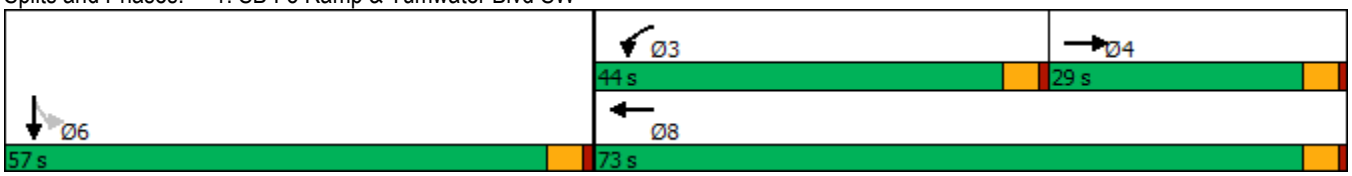


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	628	139	463	484	0	0	0	0	587	46	497
Future Volume (vph)	0	628	139	463	484	0	0	0	0	587	46	497
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	300		0	0		0	600		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.973									0.863	
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3478	0	1787	1881	0	0	0	0	1736	1577	0
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	3478	0	1787	1881	0	0	0	0	1736	1577	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18									307	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		558			562			485			825	
Travel Time (s)		10.9			10.9			11.0			18.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	4%	4%	4%
Adj. Flow (vph)	0	668	148	493	515	0	0	0	0	624	49	529
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	816	0	493	515	0	0	0	0	624	578	0
Turn Type		NA		Prot	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases										6		
Detector Phase		4		3	8					6	6	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		28.5		9.5	24.5					29.5	29.5	
Total Split (s)		29.0		44.0	73.0					57.0	57.0	
Total Split (%)		22.3%		33.8%	56.2%					43.8%	43.8%	
Maximum Green (s)		24.5		39.5	68.5					52.5	52.5	
Yellow Time (s)		3.5		3.5	3.5					3.5	3.5	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0					0.0	0.0	
Total Lost Time (s)		4.5		4.5	4.5					4.5	4.5	
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		Min		None	Min					None	None	
Walk Time (s)		7.0			7.0					7.0	7.0	
Flash Dont Walk (s)		17.0			13.0					18.0	18.0	
Pedestrian Calls (#/hr)		0			0					0	0	
Act Effct Green (s)		24.7		36.8	66.0					48.8	48.8	
Actuated g/C Ratio		0.20		0.30	0.53					0.39	0.39	
v/c Ratio		1.15		0.93	0.51					0.91	0.72	
Control Delay		128.1		68.4	21.5					55.1	19.8	
Queue Delay		0.0		0.0	0.0					0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		128.1		68.4	21.5					55.1	19.8	
LOS		F		E	C					E	B	
Approach Delay		128.1			44.4						38.1	
Approach LOS		F			D						D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 123.9			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.15			
Intersection Signal Delay: 64.5		Intersection LOS: E	
Intersection Capacity Utilization 91.8%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: SB I-5 Ramp & Tumwater Blvd SW



Intersection	
Int Delay, s/veh	269.2

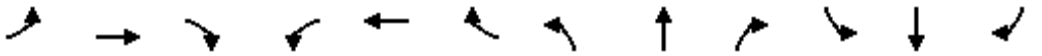
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	299	916	0	0	842	1751	105	9	194	0	0	0
Future Vol, veh/h	299	916	0	0	842	1751	105	9	194	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	300	-	-	-	-	0	-	-	600	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	3	3	3	1	1	1	3	3	3	2	2	2
Mvmt Flow	340	1041	0	0	957	1990	119	10	220	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	957	0	-	-	-	0	2678	2678	521
Stage 1	-	-	-	-	-	-	1721	1721	-
Stage 2	-	-	-	-	-	-	957	957	-
Critical Hdwy	4.145	-	-	-	-	-	6.645	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	5.845	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.445	5.545	-
Follow-up Hdwy	2.2285	-	-	-	-	-	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	711	-	0	0	-	0	~ 21	22	499
Stage 1	-	-	0	0	-	0	129	142	-
Stage 2	-	-	0	0	-	0	370	333	-
Platoon blocked, %		-			-				
Mov Cap-1 Maneuver	711	-	-	-	-	-	~ 11	0	499
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 11	0	-
Stage 1	-	-	-	-	-	-	~ 67	0	-
Stage 2	-	-	-	-	-	-	370	0	-

Approach	EB	WB	NB
HCM Control Delay, s	3.6	0	$ 2053
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT
Capacity (veh/h)	11	499	711	-	-
HCM Lane V/C Ratio	11.777	0.442	0.478	-	-
HCM Control Delay (s)	$ 5516.4	17.8	14.6	-	-
HCM Lane LOS	F	C	B	-	-
HCM 95th %tile Q(veh)	17.6	2.2	2.6	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	205	818	220	80	1049	49	239	121	61	287	233	1290
Future Volume (veh/h)	205	818	220	80	1049	49	239	121	61	287	233	1290
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	218	870	234	85	1116	52	254	129	65	305	248	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	1	1	1
Cap, veh/h	292	1038	279	158	1355	604	305	321	272	365	383	
Arrive On Green	0.08	0.37	0.37	0.09	0.38	0.38	0.17	0.17	0.17	0.20	0.20	0.00
Sat Flow, veh/h	3456	2769	744	1795	3582	1598	1795	1885	1598	1795	1885	1598
Grp Volume(v), veh/h	218	558	546	85	1116	52	254	129	65	305	248	0
Grp Sat Flow(s),veh/h/ln	1728	1777	1736	1795	1791	1598	1795	1885	1598	1795	1885	1598
Q Serve(g_s), s	6.8	31.5	31.5	5.0	30.9	2.3	15.0	6.7	3.9	17.9	13.3	0.0
Cycle Q Clear(g_c), s	6.8	31.5	31.5	5.0	30.9	2.3	15.0	6.7	3.9	17.9	13.3	0.0
Prop In Lane	1.00		0.43	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	292	666	651	158	1355	604	305	321	272	365	383	
V/C Ratio(X)	0.75	0.84	0.84	0.54	0.82	0.09	0.83	0.40	0.24	0.84	0.65	
Avail Cap(c_a), veh/h	645	897	877	335	1809	807	743	780	661	743	780	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	49.1	31.3	31.3	48.0	30.9	22.0	44.1	40.6	39.5	42.0	40.2	0.0
Incr Delay (d2), s/veh	3.8	5.3	5.5	2.8	2.4	0.1	5.8	0.8	0.4	5.1	1.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	14.0	13.7	2.3	13.3	0.9	7.1	3.2	1.5	8.4	6.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.9	36.6	36.8	50.8	33.3	22.0	49.9	41.4	39.9	47.1	42.0	0.0
LnGrp LOS	D	D	D	D	C	C	D	D	D	D	D	
Approach Vol, veh/h		1322			1253			448			553	
Approach Delay, s/veh		39.4			34.0			46.0			44.8	
Approach LOS		D			C			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.2	14.2	45.7		26.8	13.8	46.1				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		45.5	20.5	55.5		45.5	20.5	55.5				
Max Q Clear Time (g_c+I1), s		17.0	7.0	33.5		19.9	8.8	32.9				
Green Ext Time (p_c), s		1.7	0.1	7.7		2.4	0.5	8.6				

Intersection Summary	
HCM 6th Ctrl Delay	39.2
HCM 6th LOS	D

Notes

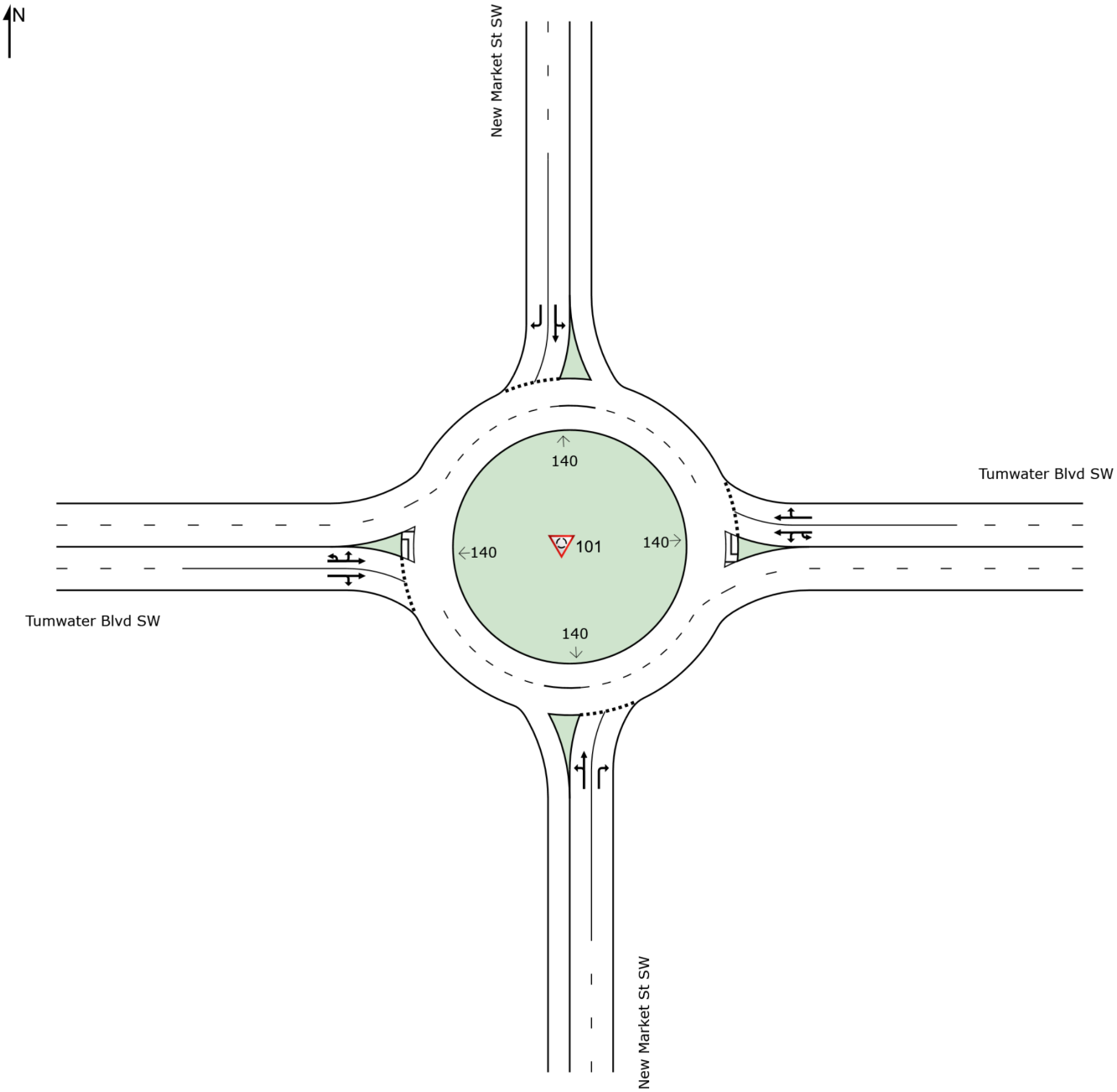
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

SITE LAYOUT

Site: 101 [Tumwater Blvd SW & New Market St SW (Site Folder: 4)]

Forecast 2028 PM Peak Hour Background Volumes
Site Category: -
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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MOVEMENT SUMMARY

Site: 101 [Tumwater Blvd SW & New Market St SW (Site Folder: 4)]

Forecast 2028 PM Peak Hour Background Volumes
Site Category: -
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: New Market St SW														
3	L2	58	7.0	64	7.0	0.088	13.3	LOS B	0.3	8.9	0.58	0.82	0.58	34.2
8	T1	1	7.0	1	7.0	0.088	6.3	LOS A	0.3	8.9	0.58	0.82	0.58	33.9
18	R2	76	7.0	84	7.0	0.086	5.7	LOS A	0.3	9.2	0.56	0.66	0.56	35.8
Approach		135	7.0	150	7.0	0.088	9.0	LOS A	0.3	9.2	0.57	0.73	0.57	35.1
East: Tumwater Blvd SW														
1u	U	1	3.0	1	3.0	0.531	14.1	LOS B	4.4	113.5	0.47	0.43	0.47	38.5
1	L2	46	3.0	51	3.0	0.531	11.3	LOS B	4.4	113.5	0.47	0.43	0.47	37.6
6	T1	1369	3.0	1521	3.0	0.531	4.2	LOS A	4.5	115.6	0.45	0.41	0.45	37.4
16	R2	31	3.0	34	3.0	0.531	4.3	LOS A	4.5	115.6	0.43	0.39	0.43	36.0
Approach		1447	3.0	1608	3.0	0.531	4.4	LOS A	4.5	115.6	0.45	0.41	0.45	37.3
North: New Market St SW														
7	L2	7	50.0	8	50.0	0.035	19.6	LOS B	0.1	4.4	0.76	0.90	0.76	31.1
4	T1	2	50.0	2	50.0	0.035	12.4	LOS B	0.1	4.4	0.76	0.90	0.76	31.5
14	R2	26	50.0	29	50.0	0.067	10.0	LOS A	0.3	9.5	0.72	0.84	0.72	33.2
Approach		35	50.0	39	50.0	0.067	12.0	LOS B	0.3	9.5	0.74	0.85	0.74	32.7
West: Tumwater Blvd SW														
5u	U	20	6.0	22	6.0	0.320	13.4	LOS B	2.2	56.9	0.26	0.41	0.26	38.5
5	L2	43	6.0	48	6.0	0.320	10.7	LOS B	2.2	56.9	0.26	0.41	0.26	38.0
2	T1	799	6.0	888	6.0	0.320	3.6	LOS A	2.2	58.1	0.25	0.37	0.25	38.0
12	R2	30	6.0	33	6.0	0.320	3.9	LOS A	2.2	58.1	0.24	0.34	0.24	36.7
Approach		892	6.0	991	6.0	0.320	4.2	LOS A	2.2	58.1	0.25	0.37	0.25	38.0
All Vehicles		2509	4.9	2788	4.9	0.531	4.7	LOS A	4.5	115.6	0.39	0.42	0.39	37.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	9	0	0	0	9	2	0	0	5	0
Future Vol, veh/h	0	0	9	0	0	0	9	2	0	0	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	50	50	50	50	50	50	50	50	50	50	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	18	0	0	0	18	4	0	0	10	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	50	50	10	59	50	4	10	0	0	4	0	0
Stage 1	10	10	-	40	40	-	-	-	-	-	-	-
Stage 2	40	40	-	19	10	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	950	841	1071	937	841	1080	1610	-	-	1618	-	-
Stage 1	1011	887	-	975	862	-	-	-	-	-	-	-
Stage 2	975	862	-	1000	887	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	942	832	1071	914	832	1080	1610	-	-	1618	-	-
Mov Cap-2 Maneuver	942	832	-	914	832	-	-	-	-	-	-	-
Stage 1	1000	887	-	964	853	-	-	-	-	-	-	-
Stage 2	964	853	-	983	887	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.4	0	5.9	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1610	-	-	1071	-	1618	-	-
HCM Lane V/C Ratio	0.011	-	-	0.017	-	-	-	-
HCM Control Delay (s)	7.3	0	-	8.4	0	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-	0	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	560	35	16	690	32	32
Future Vol, veh/h	560	35	16	690	32	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	659	41	19	812	38	38

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	700	0	1530	680
Stage 1	-	-	-	-	680	-
Stage 2	-	-	-	-	850	-
Critical Hdwy	-	-	4.11	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	2.209	-	3.509	3.309
Pot Cap-1 Maneuver	-	-	902	-	130	453
Stage 1	-	-	-	-	505	-
Stage 2	-	-	-	-	421	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	902	-	127	453
Mov Cap-2 Maneuver	-	-	-	-	264	-
Stage 1	-	-	-	-	505	-
Stage 2	-	-	-	-	412	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	17.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	264	453	-	-	902	-
HCM Lane V/C Ratio	0.143	0.083	-	-	0.021	-
HCM Control Delay (s)	20.9	13.7	-	-	9.1	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.5	0.3	-	-	0.1	-

Intersection	
Intersection Delay, s/veh	6.7
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	0	0	2	0
Future Vol, veh/h	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2	0	0	2	0
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	6.3	0	7.1
HCM LOS	A	-	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	100%
Vol Thru, %	100%	0%	0%
Vol Right, %	0%	100%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	2	2
LT Vol	0	0	2
Through Vol	0	0	0
RT Vol	0	2	0
Lane Flow Rate	0	2	2
Geometry Grp	1	1	1
Degree of Util (X)	0	0.002	0.002
Departure Headway (Hd)	3.94	3.338	4.138
Convergence, Y/N	Yes	Yes	Yes
Cap	0	1079	870
Service Time	1.94	1.338	2.138
HCM Lane V/C Ratio	0	0.002	0.002
HCM Control Delay	6.9	6.3	7.1
HCM Lane LOS	N	A	A
HCM 95th-tile Q	0	0	0

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	31	42	22	24	109	5
Future Vol, veh/h	31	42	22	24	109	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	60	60	60	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	52	70	37	40	182	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	300	186	190	0	-	0
Stage 1	186	-	-	-	-	-
Stage 2	114	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	691	856	1384	-	-	-
Stage 1	846	-	-	-	-	-
Stage 2	911	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	672	856	1384	-	-	-
Mov Cap-2 Maneuver	672	-	-	-	-	-
Stage 1	823	-	-	-	-	-
Stage 2	911	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	3.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1384	-	767	-	-
HCM Lane V/C Ratio	0.026	-	0.159	-	-
HCM Control Delay (s)	7.7	0	10.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	75	86	33	7	4	2	15	38	0	5	0
Future Vol, veh/h	0	75	86	33	7	4	2	15	38	0	5	0
Peak Hour Factor	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	132	151	58	12	7	4	26	67	0	9	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.7	8	7.9	7.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	0%	75%	0%
Vol Thru, %	27%	47%	16%	100%
Vol Right, %	69%	53%	9%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	55	161	44	5
LT Vol	2	0	33	0
Through Vol	15	75	7	5
RT Vol	38	86	4	0
Lane Flow Rate	96	282	77	9
Geometry Grp	1	1	1	1
Degree of Util (X)	0.115	0.303	0.097	0.012
Departure Headway (Hd)	4.296	3.857	4.537	4.809
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	839	915	793	747
Service Time	2.3	1.947	2.547	2.817
HCM Lane V/C Ratio	0.114	0.308	0.097	0.012
HCM Control Delay	7.9	8.7	8	7.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	1.3	0.3	0

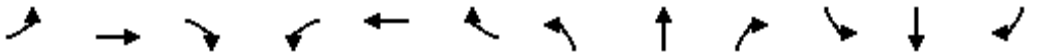
Intersection	
Int Delay, s/veh	1.3

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	24	26	779	1	0	1065	6	0	0	2	0	0	103
Future Vol, veh/h	24	26	779	1	0	1065	6	0	0	2	0	0	103
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	300	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	4	4	4	3	3	3	1	1	1	1	1	1
Mvmt Flow	26	30	885	1	0	1210	7	0	0	2	0	0	117

Major/Minor	Major1				Major2			Minor1			Minor2		
Conflicting Flow All	1217	1217	0	0	-	-	0	-	-	443	-	-	609
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	4.18	-	-	-	-	-	-	-	6.92	-	-	6.92
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.52	2.24	-	-	-	-	-	-	-	3.31	-	-	3.31
Pot Cap-1 Maneuver	241	558	-	-	0	-	-	0	0	565	0	0	441
Stage 1	-	-	-	-	0	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %			-	-		-	-						
Mov Cap-1 Maneuver	287	287	-	-	-	-	-	-	-	565	-	-	441
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	0	11.4	16.1
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	565	287	-	-	-	-	441
HCM Lane V/C Ratio	0.004	0.194	-	-	-	-	0.265
HCM Control Delay (s)	11.4	20.5	-	-	-	-	16.1
HCM Lane LOS	B	C	-	-	-	-	C
HCM 95th %tile Q(veh)	0	0.7	-	-	-	-	1.1

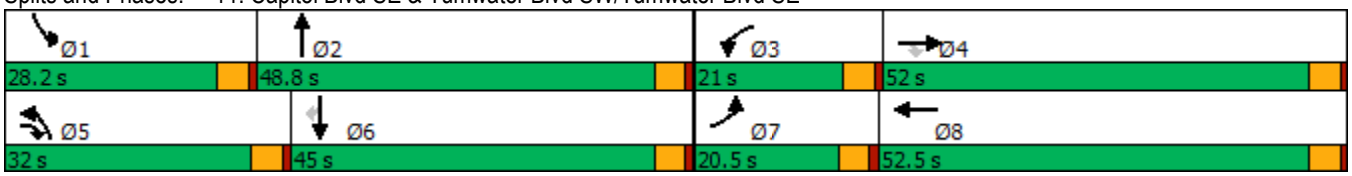


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	460	366	118	488	38	304	455	26	176	690	154
Future Volume (vph)	95	460	366	118	488	38	304	455	26	176	690	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	300		0	250		0	300		250
Storage Lanes	1		1	1		0	2		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.97	0.95	0.95	1.00	0.95	1.00
Frt			0.850		0.989			0.992				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1845	1568	1787	3535	0	3467	3546	0	1787	3574	1599
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	1845	1568	1787	3535	0	3467	3546	0	1787	3574	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			81		6			4				153
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		495			500			530			490	
Travel Time (s)		9.6			9.7			10.3			9.5	
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
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	106	511	407	131	542	42	338	506	29	196	767	171
Shared Lane Traffic (%)												
Lane Group Flow (vph)	106	511	407	131	584	0	338	535	0	196	767	171
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									6
Detector Phase	7	4	5	3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	39.5	9.5	9.5	39.5		9.5	34.5		9.5	37.5	37.5
Total Split (s)	20.5	52.0	32.0	21.0	52.5		32.0	48.8		28.2	45.0	45.0
Total Split (%)	13.7%	34.7%	21.3%	14.0%	35.0%		21.3%	32.5%		18.8%	30.0%	30.0%
Maximum Green (s)	16.0	47.5	27.5	16.5	48.0		27.5	44.3		23.7	40.5	40.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Dont Walk (s)		28.0			28.0			23.0			26.0	26.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effct Green (s)	12.8	40.0	63.3	13.9	41.1		18.7	33.6		18.9	33.8	33.8
Actuated g/C Ratio	0.10	0.32	0.51	0.11	0.33		0.15	0.27		0.15	0.27	0.27
v/c Ratio	0.60	0.87	0.49	0.66	0.50		0.65	0.56		0.73	0.79	0.31
Control Delay	72.7	57.8	18.7	74.2	36.3		58.9	43.1		70.2	50.8	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	72.7	57.8	18.7	74.2	36.3		58.9	43.1		70.2	50.8	9.9
LOS	E	E	B	E	D		E	D		E	D	A
Approach Delay		43.8			43.3			49.2			48.0	
Approach LOS		D			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 125.1			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 46.2		Intersection LOS: D	
Intersection Capacity Utilization 73.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 11: Capitol Blvd SE & Tumwater Blvd SW/Tumwater Blvd SE



Intersection	
Int Delay, s/veh	126.5

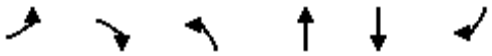
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	493	3	8	405	213	8	4	17	301	4	31
Future Vol, veh/h	30	493	3	8	405	213	8	4	17	301	4	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	1	1	1
Mvmt Flow	33	542	3	9	445	234	9	4	19	331	4	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	679	0	0	545	0	0	1209	1307	544	1201	1191	562
Stage 1	-	-	-	-	-	-	610	610	-	580	580	-
Stage 2	-	-	-	-	-	-	599	697	-	621	611	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.15	6.55	6.25	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.55	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.55	-	6.11	5.51	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.545	4.045	3.345	3.509	4.009	3.309
Pot Cap-1 Maneuver	913	-	-	1024	-	-	157	157	533	~ 162	188	528
Stage 1	-	-	-	-	-	-	476	480	-	502	502	-
Stage 2	-	-	-	-	-	-	483	438	-	477	486	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	913	-	-	1024	-	-	139	149	533	~ 147	179	528
Mov Cap-2 Maneuver	-	-	-	-	-	-	139	149	-	~ 147	179	-
Stage 1	-	-	-	-	-	-	459	463	-	484	494	-
Stage 2	-	-	-	-	-	-	441	431	-	439	469	-

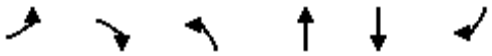
Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.1	20.4	$ 568.6
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	139	358	913	-	-	1024	-	-	147	432
HCM Lane V/C Ratio	0.063	0.064	0.036	-	-	0.009	-	-	2.25	0.089
HCM Control Delay (s)	32.6	15.7	9.1	-	-	8.5	0	-	$ 633.1	14.1
HCM Lane LOS	D	C	A	-	-	A	A	-	F	B
HCM 95th %tile Q(veh)	0.2	0.2	0.1	-	-	0	-	-	27.5	0.3

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



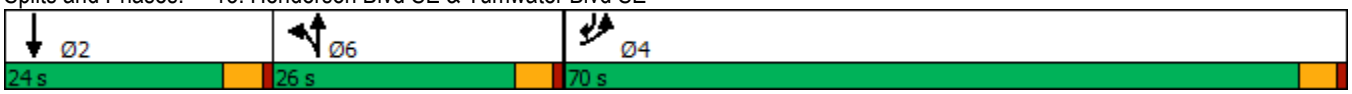
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	875	61	56	213	268	466
Future Volume (vph)	875	61	56	213	268	466
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0			100
Storage Lanes	1	0	0			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.991					0.850
Flt Protected	0.955			0.990		
Satd. Flow (prot)	1780	0	0	1862	1881	1599
Flt Permitted	0.955			0.990		
Satd. Flow (perm)	1780	0	0	1862	1881	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	5					507
Link Speed (mph)	35			35	35	
Link Distance (ft)	363			447	465	
Travel Time (s)	7.1			8.7	9.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	951	66	61	232	291	507
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1017	0	0	293	291	507
Turn Type	Prot		Split	NA	NA	Over
Protected Phases	4		6	6	2	4
Permitted Phases						
Detector Phase	4		6	6	2	4
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5
Total Split (s)	70.0		26.0	26.0	24.0	70.0
Total Split (%)	58.3%		21.7%	21.7%	20.0%	58.3%
Maximum Green (s)	65.5		21.5	21.5	19.5	65.5
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	4.5			4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		Min	Min	Min	None
Walk Time (s)	7.0		7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0		0	0	0	0
Act Effct Green (s)	65.5			20.8	19.5	65.5
Actuated g/C Ratio	0.55			0.17	0.16	0.55
v/c Ratio	1.04			0.90	0.95	0.46
Control Delay	66.8			79.6	89.7	2.6
Queue Delay	0.0			0.0	0.0	0.0



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Total Delay	66.8			79.6	89.7	2.6
LOS	E			E	F	A
Approach Delay	66.8			79.6	34.4	
Approach LOS	E			E	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 119.3			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.04			
Intersection Signal Delay: 56.3		Intersection LOS: E	
Intersection Capacity Utilization 91.9%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 13: Henderson Blvd SE & Tumwater Blvd SE



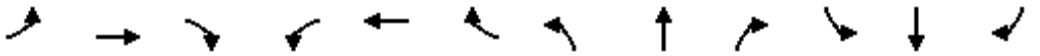
Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	27	76	27	622	986	27
Future Vol, veh/h	27	76	27	622	986	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	2	2	1	1	1	1
Mvmt Flow	33	92	33	749	1188	33

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1646	611	1221	0	-	0
Stage 1	1205	-	-	-	-	-
Stage 2	441	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.12	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.21	-	-	-
Pot Cap-1 Maneuver	90	437	572	-	-	-
Stage 1	247	-	-	-	-	-
Stage 2	616	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	85	437	572	-	-	-
Mov Cap-2 Maneuver	183	-	-	-	-	-
Stage 1	233	-	-	-	-	-
Stage 2	616	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.9	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	572	-	183	437	-	-
HCM Lane V/C Ratio	0.057	-	0.178	0.21	-	-
HCM Control Delay (s)	11.7	-	28.9	15.4	-	-
HCM Lane LOS	B	-	D	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.6	0.8	-	-

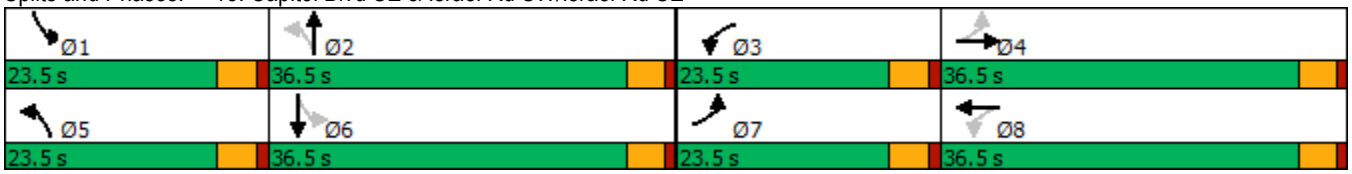


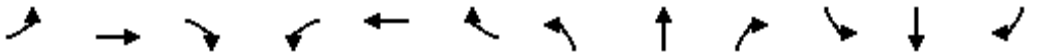
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	127	198	191	134	290	194	179	468	36	102	745	142
Future Volume (vph)	127	198	191	134	290	194	179	468	36	102	745	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	250		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.926			0.940			0.989			0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1742	0	1770	1751	0	1787	3535	0	1787	3488	0
Flt Permitted	0.125			0.200			0.109			0.384		
Satd. Flow (perm)	235	1742	0	373	1751	0	205	3535	0	722	3488	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39			27			6			18	
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		461			432			410			333	
Travel Time (s)		12.6			11.8			8.0			6.5	
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
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	141	220	212	149	322	216	199	520	40	113	828	158
Shared Lane Traffic (%)												
Lane Group Flow (vph)	141	432	0	149	538	0	199	560	0	113	986	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	32.5		9.5	32.5		9.5	33.5		9.5	27.5	
Total Split (s)	23.5	36.5		23.5	36.5		23.5	36.5		23.5	36.5	
Total Split (%)	19.6%	30.4%		19.6%	30.4%		19.6%	30.4%		19.6%	30.4%	
Maximum Green (s)	19.0	32.0		19.0	32.0		19.0	32.0		19.0	32.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		21.0			21.0			22.0			16.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	43.1	32.1		43.4	32.3		50.8	37.2		41.5	32.1	
Actuated g/C Ratio	0.40	0.30		0.40	0.30		0.47	0.34		0.38	0.30	
v/c Ratio	0.56	0.79		0.51	0.99		0.64	0.46		0.31	0.94	
Control Delay	29.0	44.7		25.3	74.4		31.1	29.2		19.2	54.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	29.0	44.7		25.3	74.4		31.1	29.2		19.2	54.0	
LOS	C	D		C	E		C	C		B	D	
Approach Delay		40.8			63.7			29.7			50.4	
Approach LOS		D			E			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 107.9			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay: 46.6		Intersection LOS: D	
Intersection Capacity Utilization 84.2%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 15: Capitol Blvd SE & Israel Rd SW/Israel Rd SE



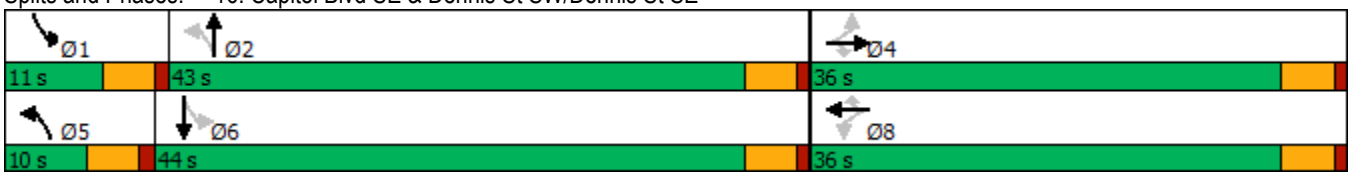


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	216	60	43	43	32	110	19	1025	35	77	860	104
Future Volume (vph)	216	60	43	43	32	110	19	1025	35	77	860	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		100	250		0	200		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.995			0.984	
Flt Protected		0.962			0.972		0.950			0.950		
Satd. Flow (prot)	0	1810	1599	0	1829	1599	1787	3556	0	1787	3517	0
Flt Permitted		0.718			0.712		0.195			0.114		
Satd. Flow (perm)	0	1351	1599	0	1339	1599	367	3556	0	214	3517	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			73			121		5			18	
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		435			480			405			366	
Travel Time (s)		11.9			13.1			7.9			7.1	
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
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	237	66	47	47	35	121	21	1126	38	85	945	114
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	303	47	0	82	121	21	1164	0	85	1059	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	32.5	32.5	32.5	30.5	30.5	30.5	9.5	27.5		9.5	27.5	
Total Split (s)	36.0	36.0	36.0	36.0	36.0	36.0	10.0	43.0		11.0	44.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	11.1%	47.8%		12.2%	48.9%	
Maximum Green (s)	31.5	31.5	31.5	31.5	31.5	31.5	5.5	38.5		6.5	39.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	21.0	21.0	21.0	19.0	19.0	19.0		16.0			16.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		21.6	21.6		21.6	21.6	34.8	30.8		37.7	35.6	
Actuated g/C Ratio		0.31	0.31		0.31	0.31	0.49	0.44		0.54	0.51	
v/c Ratio		0.73	0.09		0.20	0.21	0.07	0.75		0.32	0.59	
Control Delay		35.4	2.7		21.8	5.3	9.0	21.5		11.6	15.4	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		35.4	2.7		21.8	5.3	9.0	21.5		11.6	15.4	
LOS		D	A		C	A	A	C		B	B	
Approach Delay		31.0			12.0			21.3			15.1	
Approach LOS		C			B			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 70.4			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 19.4		Intersection LOS: B	
Intersection Capacity Utilization 66.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 16: Capitol Blvd SE & Dennis St SW/Dennis St SE



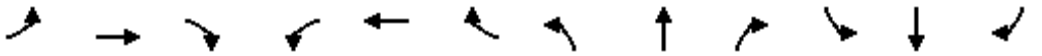
Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	47	52	988	32	45	1329
Future Vol, veh/h	47	52	988	32	45	1329
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	92
Heavy Vehicles, %	2	2	1	1	1	1
Mvmt Flow	52	57	1086	35	49	1445

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1925	561	0	0	1121	0
Stage 1	1104	-	-	-	-	-
Stage 2	821	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.12	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.21	-
Pot Cap-1 Maneuver	59	471	-	-	625	-
Stage 1	279	-	-	-	-	-
Stage 2	393	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	54	471	-	-	625	-
Mov Cap-2 Maneuver	168	-	-	-	-	-
Stage 1	279	-	-	-	-	-
Stage 2	362	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	29.4	0	0.4
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	254	625	-
HCM Lane V/C Ratio	-	-	0.428	0.079	-
HCM Control Delay (s)	-	-	29.4	11.3	-
HCM Lane LOS	-	-	D	B	-
HCM 95th %tile Q(veh)	-	-	2	0.3	-

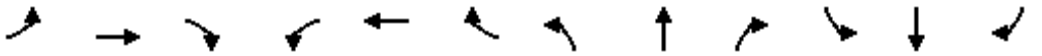


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	3	21	13	1	28	26	1214	16	48	948	46
Future Volume (vph)	15	3	21	13	1	28	26	1214	16	48	948	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	100		0	200		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.867			0.855			0.998			0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1631	0	1787	1608	0	1787	3567	0	1787	3549	0
Flt Permitted							0.233			0.143		
Satd. Flow (perm)	1881	1631	0	1881	1608	0	438	3567	0	269	3549	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			31			2			8	
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		427			448			483			381	
Travel Time (s)		11.6			12.2			9.4			7.4	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	17	3	24	15	1	31	29	1364	18	54	1065	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	17	27	0	15	32	0	29	1382	0	54	1117	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	31.5	31.5		30.5	30.5		9.5	26.5		9.5	27.5	
Total Split (s)	31.5	31.5		31.5	31.5		9.8	48.0		10.5	48.7	
Total Split (%)	35.0%	35.0%		35.0%	35.0%		10.9%	53.3%		11.7%	54.1%	
Maximum Green (s)	27.0	27.0		27.0	27.0		5.3	43.5		6.0	44.2	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	20.0	20.0		19.0	19.0			15.0			16.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	6.7	6.7		6.7	6.7		39.5	39.5		40.9	41.6	
Actuated g/C Ratio	0.13	0.13		0.13	0.13		0.75	0.75		0.78	0.79	
v/c Ratio	0.07	0.12		0.06	0.14		0.06	0.52		0.14	0.40	
Control Delay	27.3	15.2		27.2	13.5		2.5	7.4		2.9	5.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	27.3	15.2		27.2	13.5		2.5	7.4		2.9	5.0	
LOS	C	B		C	B		A	A		A	A	
Approach Delay		19.8			17.9			7.3			4.9	
Approach LOS		B			B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 52.7			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay: 6.7		Intersection LOS: A	
Intersection Capacity Utilization 54.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 18: Capitol Blvd SE & X St SW/X St SE

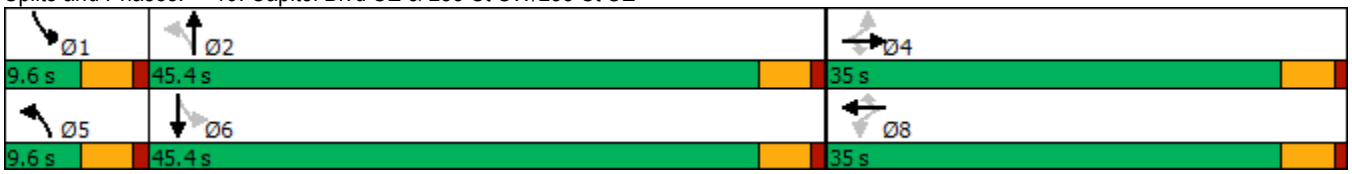


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	344	7	53	17	9	107	30	1369	28	66	1083	199
Future Volume (vph)	344	7	53	17	9	107	30	1369	28	66	1083	199
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		100	200		0	200		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.997			0.977	
Flt Protected		0.953			0.969		0.950			0.950		
Satd. Flow (prot)	0	1793	1599	0	1823	1599	1787	3564	0	1787	3492	0
Flt Permitted		0.710			0.774		0.095			0.092		
Satd. Flow (perm)	0	1336	1599	0	1456	1599	179	3564	0	173	3492	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			73			115		3			31	
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		435			481			462			371	
Travel Time (s)		11.9			13.1			9.0			7.2	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	370	8	57	18	10	115	32	1472	30	71	1165	214
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	378	57	0	28	115	32	1502	0	71	1379	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	30.5	30.5	30.5	30.5	30.5	30.5	9.5	24.5		9.5	25.5	
Total Split (s)	35.0	35.0	35.0	35.0	35.0	35.0	9.6	45.4		9.6	45.4	
Total Split (%)	38.9%	38.9%	38.9%	38.9%	38.9%	38.9%	10.7%	50.4%		10.7%	50.4%	
Maximum Green (s)	30.5	30.5	30.5	30.5	30.5	30.5	5.1	40.9		5.1	40.9	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	19.0	19.0	19.0	19.0	19.0	19.0		13.0			14.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		26.9	26.9		26.9	26.9	45.3	41.4		46.2	43.3	
Actuated g/C Ratio		0.32	0.32		0.32	0.32	0.53	0.49		0.54	0.51	
v/c Ratio		0.89	0.10		0.06	0.20	0.17	0.86		0.37	0.77	
Control Delay		52.8	4.2		20.7	5.3	10.9	27.5		14.8	21.9	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		52.8	4.2		20.7	5.3	10.9	27.5		14.8	21.9	
LOS		D	A		C	A	B	C		B	C	
Approach Delay		46.4			8.3			27.2			21.6	
Approach LOS		D			A			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 84.8			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 26.5		Intersection LOS: C	
Intersection Capacity Utilization 80.2%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 19: Capitol Blvd SE & Lee St SW/Lee St SE

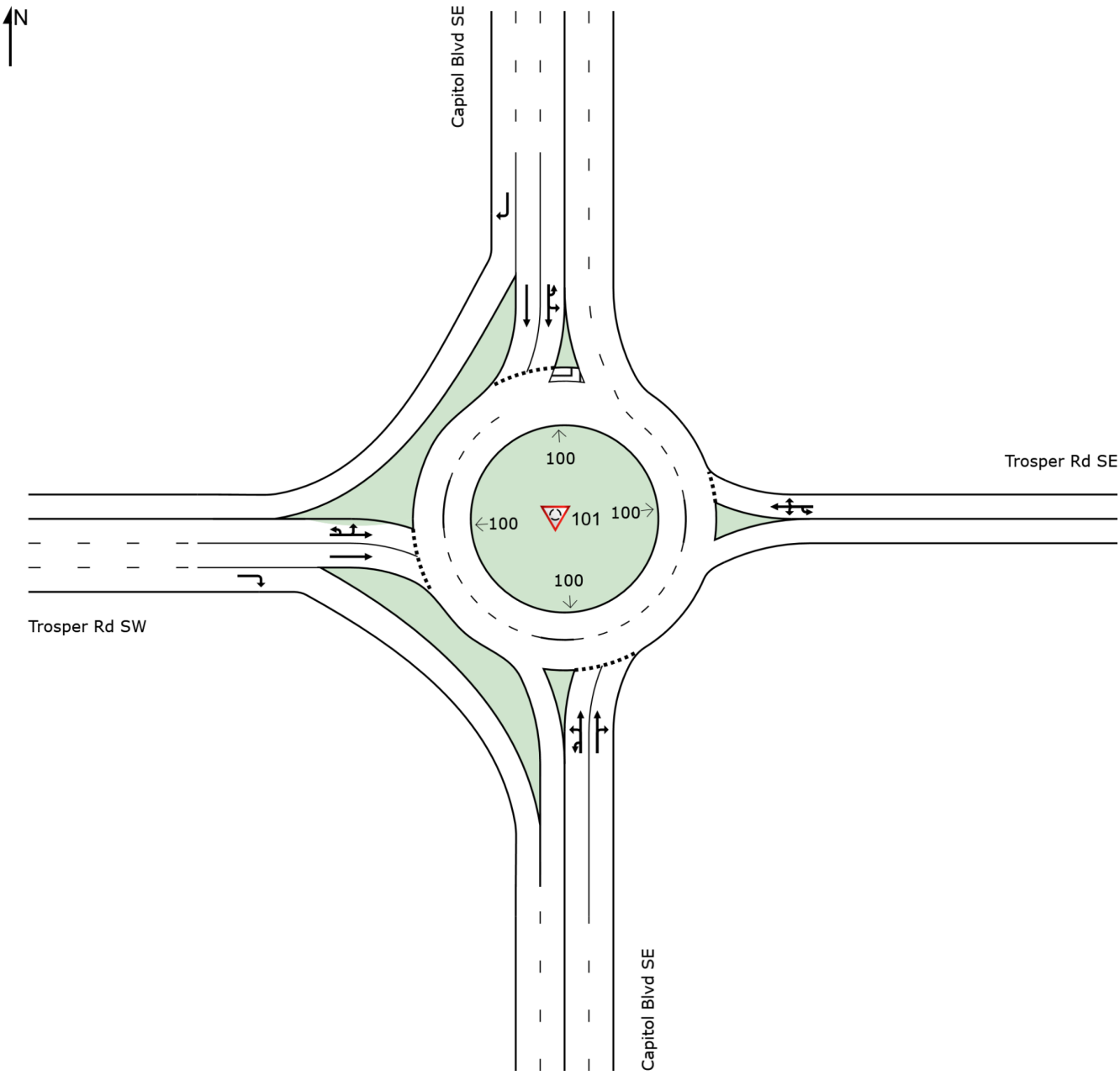


SITE LAYOUT

Site: 101 [Capitol Blvd SE & Trosper Rd SW (Site Folder: 20)]

Forecast 2028 PM Peak Hour Background Volumes
Site Category: -
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Organisation: HEATH & ASSOCIATES | Licence: PLUS / 1PC | Created: Saturday, June 17, 2023 10:06:20 AM
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MOVEMENT SUMMARY

Site: 101 [Capitol Blvd SE & Trosper Rd SW (Site Folder: 20)]

Forecast 2028 PM Peak Hour Background Volumes
Site Category: -
Roundabout

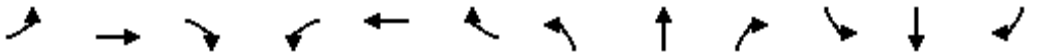
Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Capitol Blvd SE														
3u	U	1	3.0	1	3.0	1.213	117.7	LOS F	77.9	1995.2	1.00	3.16	6.28	13.6
3	L2	1026	3.0	1080	3.0	1.213	115.3	LOS F	77.9	1995.2	1.00	3.16	6.28	13.5
8	T1	765	3.0	805	3.0	1.010	34.6	LOS F	27.8	711.6	1.00	1.69	2.73	25.2
18	R2	15	3.0	16	3.0	1.010	34.8	LOS F	27.8	711.6	1.00	1.69	2.73	24.6
Approach		1807	3.0	1902	3.0	1.213	80.4	LOS F	77.9	1995.2	1.00	2.53	4.74	16.8
East: Trosper Rd SE														
1u	U	1	3.0	1	3.0	0.984	87.5	LOS F	9.8	249.6	1.00	1.44	2.53	16.9
1	L2	38	3.0	40	3.0	0.984	85.1	LOS F	9.8	249.6	1.00	1.44	2.53	16.7
6	T1	92	3.0	97	3.0	0.984	79.1	LOS E	9.8	249.6	1.00	1.44	2.53	16.7
16	R2	44	3.0	46	3.0	0.984	79.1	LOS E	9.8	249.6	1.00	1.44	2.53	16.5
Approach		175	3.0	184	3.0	0.984	80.5	LOS F	9.8	249.6	1.00	1.44	2.53	16.6
North: Capitol Blvd SE														
7u	U	1	0.0	1	0.0	0.853	53.7	LOS D	11.6	295.7	1.00	1.37	2.02	22.8
7	L2	17	3.0	18	3.0	0.853	51.7	LOS D	11.6	295.7	1.00	1.37	2.02	22.4
4	T1	618	3.0	651	3.0	0.853	43.2	LOS D	13.8	353.6	1.00	1.39	2.04	23.0
14	R2	459	3.0	483	3.0	0.297	3.8	LOS A	0.0	0.0	0.00	0.46	0.00	36.9
Approach		1095	3.0	1153	3.0	0.853	26.8	LOS C	13.8	353.6	0.58	1.00	1.19	27.2
West: Trosper Rd SW														
5u	U	1	3.0	1	3.0	0.417	14.4	LOS B	2.5	63.8	0.71	0.83	0.73	34.1
5	L2	372	3.0	392	3.0	0.417	11.9	LOS B	2.5	63.8	0.71	0.83	0.73	33.3
2	T1	62	3.0	65	3.0	0.417	6.6	LOS A	2.5	63.8	0.63	0.68	0.63	35.5
12	R2	767	3.0	807	3.0	0.497	3.9	LOS A	0.0	0.0	0.00	0.45	0.00	36.8
Approach		1202	3.0	1265	3.0	0.497	6.5	LOS A	2.5	63.8	0.25	0.58	0.26	35.5
All Vehicles		4279	3.0	4504	3.0	1.213	46.0	LOS D	77.9	1995.2	0.68	1.54	2.48	22.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

NEW MARKET APARTMENTS
TRAFFIC IMPACT ANALYSIS

APPENDIX: LEVEL OF SERVICE – FORECAST 2028 PEAK HOUR VOLUMES WITH PROJECT

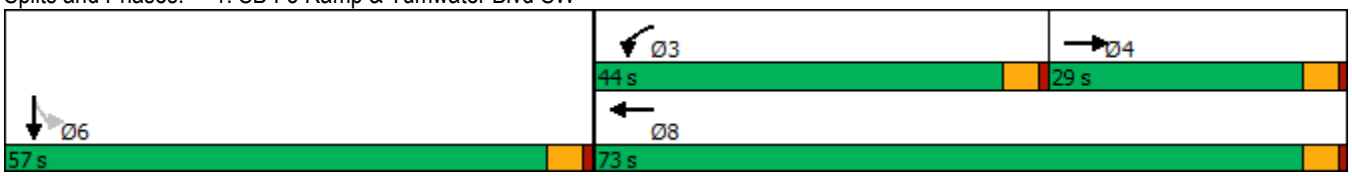


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	739	132	234	201	0	0	0	0	2076	5	218
Future Volume (vph)	0	739	132	234	201	0	0	0	0	2076	5	218
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	300		0	0		0	600		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977									0.853	
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3492	0	1736	1827	0	0	0	0	1736	1558	0
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	3492	0	1736	1827	0	0	0	0	1736	1558	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14									253	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		558			562			485			825	
Travel Time (s)		10.9			10.9			11.0			18.8	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	1%	4%	4%	4%	2%	2%	2%	4%	4%	4%
Adj. Flow (vph)	0	859	153	272	234	0	0	0	0	2414	6	253
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1012	0	272	234	0	0	0	0	2414	259	0
Turn Type		NA		Prot	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases										6		
Detector Phase		4		3	8					6	6	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		28.5		9.5	24.5					29.5	29.5	
Total Split (s)		29.0		44.0	73.0					57.0	57.0	
Total Split (%)		22.3%		33.8%	56.2%					43.8%	43.8%	
Maximum Green (s)		24.5		39.5	68.5					52.5	52.5	
Yellow Time (s)		3.5		3.5	3.5					3.5	3.5	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0					0.0	0.0	
Total Lost Time (s)		4.5		4.5	4.5					4.5	4.5	
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		Min		None	Min					None	None	
Walk Time (s)		7.0			7.0					7.0	7.0	
Flash Dont Walk (s)		17.0			13.0					18.0	18.0	
Pedestrian Calls (#/hr)		0			0					0	0	
Act Effct Green (s)		24.6		22.8	51.9					52.6	52.6	
Actuated g/C Ratio		0.22		0.20	0.46					0.46	0.46	
v/c Ratio		1.32		0.78	0.28					3.00	0.30	
Control Delay		189.8		58.8	19.9					920.5	3.8	
Queue Delay		0.0		0.0	0.0					0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		189.8		58.8	19.9					920.5	3.8	
LOS		F		E	B					F	A	
Approach Delay		189.8			40.8						831.7	
Approach LOS		F			D						F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 113.5			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 3.00			
Intersection Signal Delay: 581.2		Intersection LOS: F	
Intersection Capacity Utilization 163.9%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 1: SB I-5 Ramp & Tumwater Blvd SW



Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	786	2016	0	0	318	756	100	1	604	0	0	0
Future Vol, veh/h	786	2016	0	0	318	756	100	1	604	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	300	-	-	-	-	0	-	-	600	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	3	3	3	9	9	9	3	3	3	2	2	2
Mvmt Flow	903	2317	0	0	366	869	115	1	694	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	366	0	-	-	-	0	4489	4489	1159
Stage 1	-	-	-	-	-	-	4123	4123	-
Stage 2	-	-	-	-	-	-	366	366	-
Critical Hdwy	4.145	-	-	-	-	-	6.645	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	5.845	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.445	5.545	-
Follow-up Hdwy	2.2285	-	-	-	-	-	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	1185	-	0	0	-	0	~ 1	~ 1	~ 188
Stage 1	-	-	0	0	-	0	~ 5	7	-
Stage 2	-	-	0	0	-	0	698	620	-
Platoon blocked, %		-			-				
Mov Cap-1 Maneuver	1185	-	-	-	-	-	0	0	~ 188
Mov Cap-2 Maneuver	-	-	-	-	-	-	0	0	-
Stage 1	-	-	-	-	-	-	~ 1	0	-
Stage 2	-	-	-	-	-	-	698	0	-

Approach	EB	WB	NB
HCM Control Delay, s	4.8	0	
HCM LOS			-

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT
Capacity (veh/h)	-	188	1185	-	-
HCM Lane V/C Ratio	-	3.693	0.762	-	-
HCM Control Delay (s)	-	$ 1261.6	17	-	-
HCM Lane LOS	-	F	C	-	-
HCM 95th %tile Q(veh)	-	67.2	7.9	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1600	906	130	60	606	158	113	81	52	69	44	178
Future Volume (veh/h)	1600	906	130	60	606	158	113	81	52	69	44	178
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1796	1796	1796	1707	1707	1707	1796	1796	1796
Adj Flow Rate, veh/h	1798	1018	146	67	681	178	127	91	58	78	49	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	4	4	4	7	7	7	13	13	13	7	7	7
Cap, veh/h	1556	1223	175	481	758	338	164	172	146	110	115	
Arrive On Green	0.46	0.40	0.40	0.28	0.22	0.22	0.10	0.10	0.10	0.06	0.06	0.00
Sat Flow, veh/h	3401	3070	440	1711	3413	1522	1626	1707	1447	1711	1796	1522
Grp Volume(v), veh/h	1798	579	585	67	681	178	127	91	58	78	49	0
Grp Sat Flow(s),veh/h/ln	1700	1749	1762	1711	1706	1522	1626	1707	1447	1711	1796	1522
Q Serve(g_s), s	53.0	34.5	34.6	3.4	22.5	11.9	8.8	5.9	4.3	5.2	3.0	0.0
Cycle Q Clear(g_c), s	53.0	34.5	34.6	3.4	22.5	11.9	8.8	5.9	4.3	5.2	3.0	0.0
Prop In Lane	1.00		0.25	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1556	697	702	481	758	338	164	172	146	110	115	
V/C Ratio(X)	1.16	0.83	0.83	0.14	0.90	0.53	0.77	0.53	0.40	0.71	0.43	
Avail Cap(c_a), veh/h	1556	1094	1102	481	795	355	372	390	331	376	395	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	31.4	31.3	31.4	31.2	43.8	39.7	50.8	49.5	48.8	53.2	52.2	0.0
Incr Delay (d2), s/veh	77.8	3.2	3.2	0.1	12.7	1.3	7.5	2.5	1.7	8.2	2.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	37.4	14.7	14.8	1.4	10.7	4.5	3.9	2.6	1.6	2.5	1.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	109.3	34.6	34.6	31.3	56.5	41.0	58.3	51.9	50.5	61.4	54.6	0.0
LnGrp LOS	F	C	C	C	E	D	E	D	D	E	D	
Approach Vol, veh/h		2962			926			276			127	
Approach Delay, s/veh		79.9			51.7			54.6			58.8	
Approach LOS		E			D			D			E	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	16.2	37.1	50.7	11.9	57.5	30.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	26.5	7.5	72.5	25.5	53.0	27.0
Max Q Clear Time (g_c+I1), s	10.8	5.4	36.6	7.2	55.0	24.5
Green Ext Time (p_c), s	0.9	0.0	9.6	0.4	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	71.6
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

MOVEMENT SUMMARY

Site: 101 [Tumwater Blvd SW & New Market St SW (Site Folder: 4)]

Forecast 2028 AM Peak Hour Volumes With Project
Site Category: -
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: New Market St SW														
3	L2	31	4.0	35	4.0	0.054	12.1	LOS B	0.2	5.7	0.56	0.68	0.56	35.6
8	T1	17	4.0	19	4.0	0.054	5.2	LOS A	0.2	5.7	0.56	0.68	0.56	35.2
18	R2	37	4.0	42	4.0	0.054	6.2	LOS A	0.2	5.5	0.58	0.69	0.58	35.8
Approach		85	4.0	96	4.0	0.054	8.2	LOS A	0.2	5.7	0.57	0.68	0.57	35.6
East: Tumwater Blvd SW														
1u	U	4	5.0	4	5.0	0.435	14.6	LOS B	3.1	81.2	0.54	0.49	0.54	37.8
1	L2	45	5.0	51	5.0	0.435	11.8	LOS B	3.1	81.2	0.54	0.49	0.54	37.1
6	T1	927	5.0	1042	5.0	0.435	4.6	LOS A	3.3	85.0	0.52	0.46	0.52	37.0
16	R2	91	5.0	102	5.0	0.435	4.7	LOS A	3.3	85.0	0.50	0.44	0.50	35.7
Approach		1067	5.0	1199	5.0	0.435	5.0	LOS A	3.3	85.0	0.52	0.46	0.52	36.9
North: New Market St SW														
7	L2	74	19.0	83	19.0	0.164	14.8	LOS B	0.7	19.1	0.68	0.88	0.68	33.3
4	T1	2	19.0	2	19.0	0.164	7.8	LOS A	0.7	19.1	0.68	0.88	0.68	33.2
14	R2	160	19.0	180	19.0	0.243	6.8	LOS A	1.1	32.1	0.69	0.78	0.69	35.2
Approach		236	19.0	265	19.0	0.243	9.3	LOS A	1.1	32.1	0.69	0.81	0.69	34.5
West: Tumwater Blvd SW														
5u	U	2	6.0	2	6.0	0.300	13.9	LOS B	2.0	51.4	0.40	0.53	0.40	37.1
5	L2	158	6.0	178	6.0	0.300	11.1	LOS B	2.0	51.4	0.40	0.53	0.40	36.5
2	T1	595	6.0	669	6.0	0.300	4.0	LOS A	2.0	53.5	0.38	0.42	0.38	37.2
12	R2	14	6.0	16	6.0	0.300	4.2	LOS A	2.0	53.5	0.37	0.37	0.37	36.2
Approach		769	6.0	864	6.0	0.300	5.5	LOS A	2.0	53.5	0.39	0.44	0.39	37.1
All Vehicles		2157	6.8	2423	6.8	0.435	5.8	LOS A	3.3	85.0	0.49	0.50	0.49	36.6

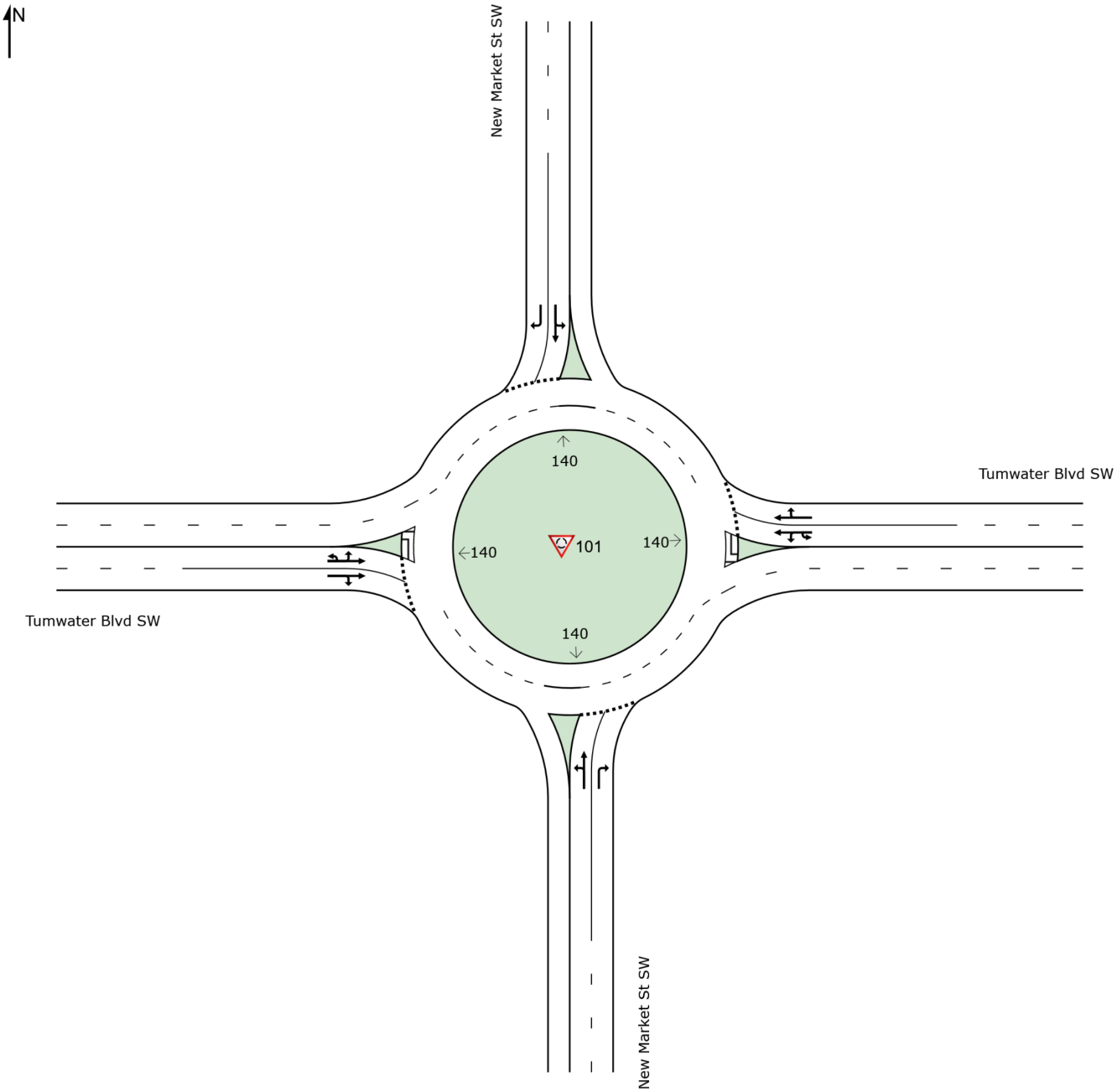
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SITE LAYOUT

Site: 101 [Tumwater Blvd SW & New Market St SW (Site Folder: 4)]

Forecast 2028 AM Peak Hour Volumes With Project
Site Category: -
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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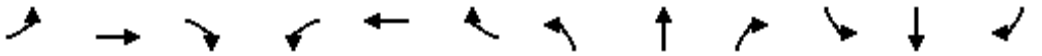
Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	12	56	0	11	74	223	16	5	185	2
Future Vol, veh/h	1	0	12	56	0	11	74	223	16	5	185	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	73	73	73	73	73	73	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	16	77	0	15	101	305	22	7	253	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	795	798	255	795	788	316	256	0	0	327	0	0
Stage 1	269	269	-	518	518	-	-	-	-	-	-	-
Stage 2	526	529	-	277	270	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	305	319	784	305	323	724	1309	-	-	1233	-	-
Stage 1	737	687	-	541	533	-	-	-	-	-	-	-
Stage 2	535	527	-	729	686	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	275	287	784	275	290	724	1309	-	-	1233	-	-
Mov Cap-2 Maneuver	275	287	-	275	290	-	-	-	-	-	-	-
Stage 1	667	682	-	490	482	-	-	-	-	-	-	-
Stage 2	474	477	-	709	681	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.4	21.7	1.9	0.2
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1309	-	-	686	306	1233	-	-
HCM Lane V/C Ratio	0.077	-	-	0.026	0.3	0.006	-	-
HCM Control Delay (s)	8	0	-	10.4	21.7	7.9	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.1	1.2	0	-	-

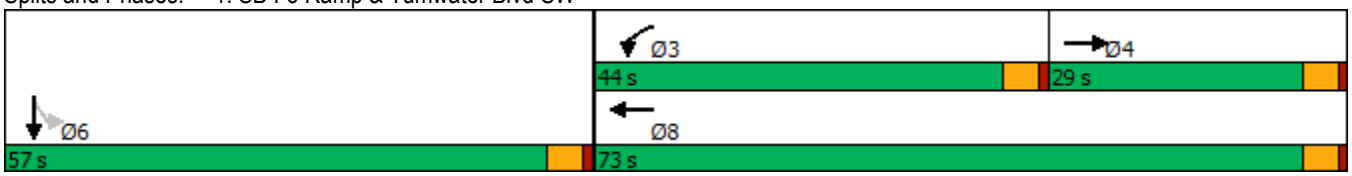


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	630	139	473	486	0	0	0	0	619	46	497
Future Volume (vph)	0	630	139	473	486	0	0	0	0	619	46	497
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	300		0	0		0	600		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.973									0.863	
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3478	0	1787	1881	0	0	0	0	1736	1577	0
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	3478	0	1787	1881	0	0	0	0	1736	1577	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18									305	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		558			562			485			825	
Travel Time (s)		10.9			10.9			11.0			18.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	4%	4%	4%
Adj. Flow (vph)	0	670	148	503	517	0	0	0	0	659	49	529
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	818	0	503	517	0	0	0	0	659	578	0
Turn Type		NA		Prot	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases										6		
Detector Phase		4		3	8					6	6	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		28.5		9.5	24.5					29.5	29.5	
Total Split (s)		29.0		44.0	73.0					57.0	57.0	
Total Split (%)		22.3%		33.8%	56.2%					43.8%	43.8%	
Maximum Green (s)		24.5		39.5	68.5					52.5	52.5	
Yellow Time (s)		3.5		3.5	3.5					3.5	3.5	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0					0.0	0.0	
Total Lost Time (s)		4.5		4.5	4.5					4.5	4.5	
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		Min		None	Min					None	None	
Walk Time (s)		7.0			7.0					7.0	7.0	
Flash Dont Walk (s)		17.0			13.0					18.0	18.0	
Pedestrian Calls (#/hr)		0			0					0	0	
Act Effct Green (s)		24.6		37.8	66.8					50.7	50.7	
Actuated g/C Ratio		0.19		0.30	0.53					0.40	0.40	
v/c Ratio		1.19		0.95	0.52					0.95	0.71	
Control Delay		141.6		71.6	22.1					60.8	19.8	
Queue Delay		0.0		0.0	0.0					0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		141.6		71.6	22.1					60.8	19.8	
LOS		F		E	C					E	B	
Approach Delay		141.6			46.5						41.6	
Approach LOS		F			D						D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 126.6			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.19			
Intersection Signal Delay: 69.8		Intersection LOS: E	
Intersection Capacity Utilization 93.6%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: SB I-5 Ramp & Tumwater Blvd SW



Intersection	
Int Delay, s/veh	290.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	299	950	0	0	854	1775	105	9	207	0	0	0
Future Vol, veh/h	299	950	0	0	854	1775	105	9	207	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	300	-	-	-	-	0	-	-	600	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	3	3	3	1	1	1	3	3	3	2	2	2
Mvmt Flow	340	1080	0	0	970	2017	119	10	235	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	970	0	-	-	-	0	2730	2730	540
Stage 1	-	-	-	-	-	-	1760	1760	-
Stage 2	-	-	-	-	-	-	970	970	-
Critical Hdwy	4.145	-	-	-	-	-	6.645	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	5.845	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.445	5.545	-
Follow-up Hdwy	2.2285	-	-	-	-	-	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	703	-	0	0	-	0	~ 19	20	485
Stage 1	-	-	0	0	-	0	123	136	-
Stage 2	-	-	0	0	-	0	365	329	-
Platoon blocked, %		-			-				
Mov Cap-1 Maneuver	703	-	-	-	-	-	~ 10	0	485
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 10	0	-
Stage 1	-	-	-	-	-	-	~ 63	0	-
Stage 2	-	-	-	-	-	-	365	0	-

Approach	EB	WB	NB
HCM Control Delay, s	3.5	0	$ 2182.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT
Capacity (veh/h)	10	485	703	-	-
HCM Lane V/C Ratio	12.955	0.485	0.483	-	-
HCM Control Delay (s)	$ 6109.9	19.2	14.8	-	-
HCM Lane LOS	F	C	B	-	-
HCM 95th %tile Q(veh)	17.7	2.6	2.7	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	205	865	220	86	1085	58	239	121	69	299	233	1290
Future Volume (veh/h)	205	865	220	86	1085	58	239	121	69	299	233	1290
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	218	920	234	91	1154	62	254	129	73	318	248	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	1	1	1
Cap, veh/h	288	1077	273	149	1373	612	303	318	270	375	393	
Arrive On Green	0.08	0.38	0.38	0.08	0.38	0.38	0.17	0.17	0.17	0.21	0.21	0.00
Sat Flow, veh/h	3456	2806	713	1795	3582	1598	1795	1885	1598	1795	1885	1598
Grp Volume(v), veh/h	218	582	572	91	1154	62	254	129	73	318	248	0
Grp Sat Flow(s),veh/h/ln	1728	1777	1742	1795	1791	1598	1795	1885	1598	1795	1885	1598
Q Serve(g_s), s	7.1	34.7	34.9	5.7	33.9	2.9	15.8	7.1	4.6	19.7	13.9	0.0
Cycle Q Clear(g_c), s	7.1	34.7	34.9	5.7	33.9	2.9	15.8	7.1	4.6	19.7	13.9	0.0
Prop In Lane	1.00		0.41	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	288	682	668	149	1373	612	303	318	270	375	393	
V/C Ratio(X)	0.76	0.85	0.86	0.61	0.84	0.10	0.84	0.41	0.27	0.85	0.63	
Avail Cap(c_a), veh/h	612	852	836	318	1718	766	706	741	628	706	741	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	51.9	32.7	32.7	51.2	32.4	22.9	46.5	42.9	41.9	44.0	41.7	0.0
Incr Delay (d2), s/veh	4.0	7.0	7.3	4.0	3.2	0.1	6.1	0.8	0.5	5.4	1.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	15.8	15.6	2.7	14.8	1.1	7.5	3.3	1.8	9.3	6.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.9	39.7	40.0	55.2	35.7	23.0	52.7	43.7	42.4	49.4	43.4	0.0
LnGrp LOS	E	D	D	E	D	C	D	D	D	D	D	
Approach Vol, veh/h		1372			1307			456			566	
Approach Delay, s/veh		42.4			36.4			48.5			46.8	
Approach LOS		D			D			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.0	14.1	48.9		28.6	14.2	48.9				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		45.5	20.5	55.5		45.5	20.5	55.5				
Max Q Clear Time (g_c+I1), s		17.8	7.7	36.9		21.7	9.1	35.9				
Green Ext Time (p_c), s		1.7	0.1	7.5		2.4	0.5	8.4				

Intersection Summary	
HCM 6th Ctrl Delay	41.7
HCM 6th LOS	D

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

SITE LAYOUT

Site: 101 [Tumwater Blvd SW & New Market St SW (Site Folder: 4)]

Forecast 2028 PM Peak Hour Volumes With Project
Site Category: -
Roundabout

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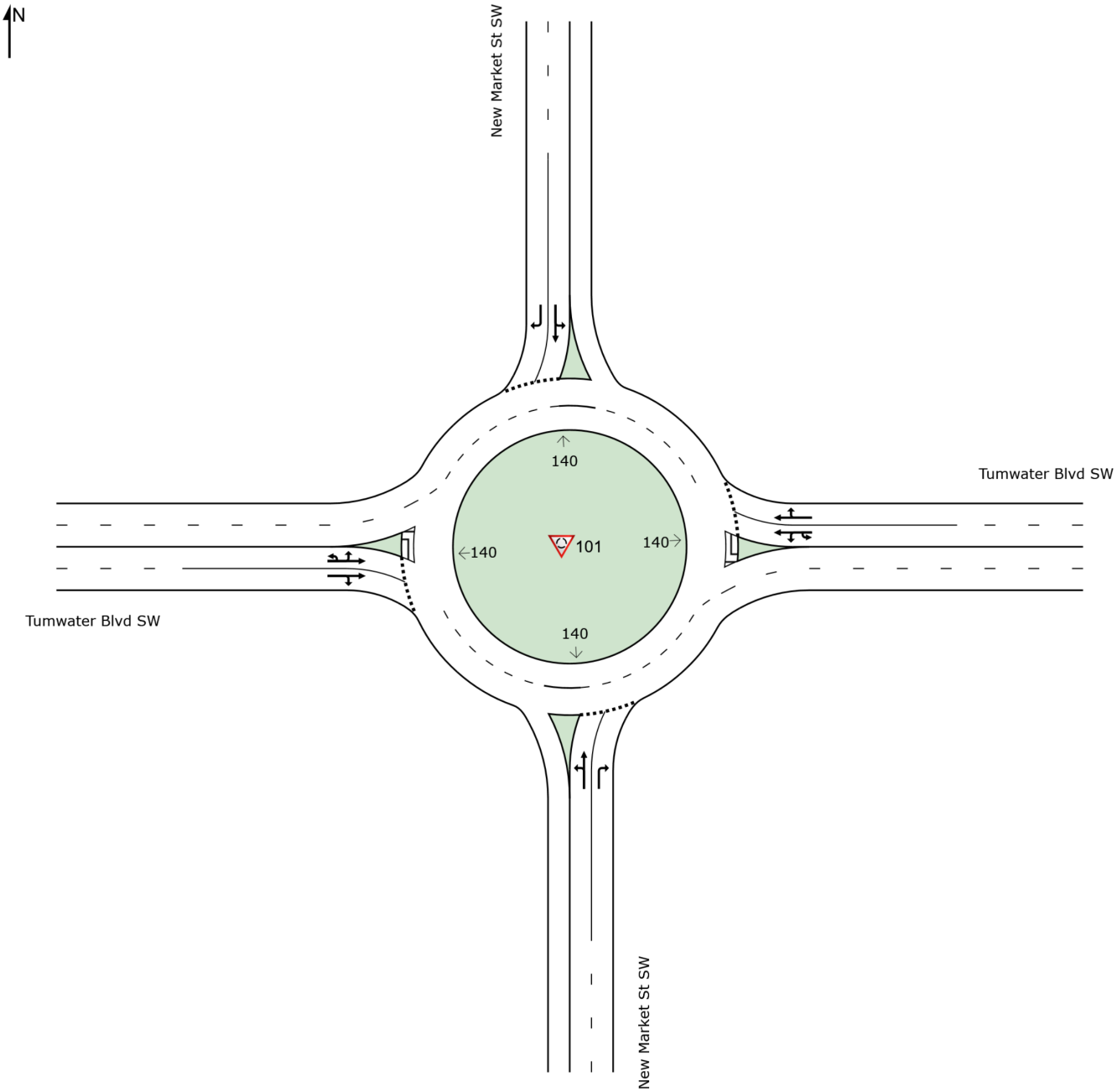

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MOVEMENT SUMMARY

Site: 101 [Tumwater Blvd SW & New Market St SW (Site Folder: 4)]

Forecast 2028 PM Peak Hour Volumes With Project
Site Category: -
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: New Market St SW														
3	L2	58	7.0	64	7.0	0.101	13.7	LOS B	0.4	10.7	0.64	0.86	0.64	34.0
8	T1	1	7.0	1	7.0	0.101	6.7	LOS A	0.4	10.7	0.64	0.86	0.64	33.7
18	R2	76	7.0	84	7.0	0.095	6.0	LOS A	0.4	11.0	0.63	0.70	0.63	35.6
Approach		135	7.0	150	7.0	0.101	9.3	LOS A	0.4	11.0	0.64	0.77	0.64	34.9
East: Tumwater Blvd SW														
1u	U	1	3.0	1	3.0	0.565	14.7	LOS B	4.7	121.4	0.60	0.50	0.60	38.0
1	L2	46	3.0	51	3.0	0.565	11.9	LOS B	4.7	121.4	0.60	0.50	0.60	37.0
6	T1	1366	3.0	1518	3.0	0.565	4.7	LOS A	4.9	126.1	0.57	0.46	0.57	36.8
16	R2	34	3.0	38	3.0	0.565	4.8	LOS A	4.9	126.1	0.55	0.43	0.55	35.5
Approach		1447	3.0	1608	3.0	0.565	5.0	LOS A	4.9	126.1	0.57	0.46	0.57	36.8
North: New Market St SW														
7	L2	65	50.0	72	50.0	0.289	21.7	LOS C	1.2	40.6	0.83	0.96	0.90	29.8
4	T1	2	50.0	2	50.0	0.289	14.5	LOS B	1.2	40.6	0.83	0.96	0.90	30.2
14	R2	125	50.0	139	50.0	0.346	11.6	LOS B	1.6	56.7	0.81	0.92	0.90	32.5
Approach		192	50.0	213	50.0	0.346	15.0	LOS B	1.6	56.7	0.82	0.93	0.90	31.4
West: Tumwater Blvd SW														
5u	U	20	6.0	22	6.0	0.374	14.0	LOS B	2.7	71.0	0.45	0.50	0.45	37.3
5	L2	117	6.0	130	6.0	0.374	11.3	LOS B	2.7	71.0	0.45	0.50	0.45	36.8
2	T1	792	6.0	880	6.0	0.374	4.1	LOS A	2.8	74.2	0.43	0.43	0.43	37.1
12	R2	30	6.0	33	6.0	0.374	4.3	LOS A	2.8	74.2	0.42	0.38	0.42	36.0
Approach		959	6.0	1066	6.0	0.374	5.2	LOS A	2.8	74.2	0.43	0.44	0.43	37.0
All Vehicles		2733	7.6	3037	7.6	0.565	6.0	LOS A	4.9	126.1	0.55	0.50	0.55	36.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	9	43	0	8	9	47	34	12	120	0
Future Vol, veh/h	0	0	9	43	0	8	9	47	34	12	120	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	50	50	50	50	50	50	50	50	50	50	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	18	86	0	16	18	94	68	24	240	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	460	486	240	461	452	128	240	0	0	162	0	0
Stage 1	288	288	-	164	164	-	-	-	-	-	-	-
Stage 2	172	198	-	297	288	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	512	481	799	511	503	922	1327	-	-	1417	-	-
Stage 1	720	674	-	838	762	-	-	-	-	-	-	-
Stage 2	830	737	-	712	674	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	490	464	799	486	485	922	1327	-	-	1417	-	-
Mov Cap-2 Maneuver	490	464	-	486	485	-	-	-	-	-	-	-
Stage 1	709	661	-	825	751	-	-	-	-	-	-	-
Stage 2	803	726	-	682	661	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.6	13.5	0.8	0.7
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1327	-	-	799	525	1417	-	-
HCM Lane V/C Ratio	0.014	-	-	0.023	0.194	0.017	-	-
HCM Control Delay (s)	7.8	0	-	9.6	13.5	7.6	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.7	0.1	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	536	67	79	642	42	50
Future Vol, veh/h	536	67	79	642	42	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	631	79	93	755	49	59

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	710	0	1612	671
Stage 1	-	-	-	-	671	-
Stage 2	-	-	-	-	941	-
Critical Hdwy	-	-	4.11	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	2.209	-	3.509	3.309
Pot Cap-1 Maneuver	-	-	894	-	115	458
Stage 1	-	-	-	-	510	-
Stage 2	-	-	-	-	381	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	894	-	103	458
Mov Cap-2 Maneuver	-	-	-	-	231	-
Stage 1	-	-	-	-	510	-
Stage 2	-	-	-	-	341	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	18.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	231	458	-	-	894	-
HCM Lane V/C Ratio	0.214	0.128	-	-	0.104	-
HCM Control Delay (s)	24.8	14	-	-	9.5	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.8	0.4	-	-	0.3	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	13	0	0	61	2	0	0	0	2	0	0
Future Vol, veh/h	0	13	0	0	61	2	0	0	0	2	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	14	0	0	66	2	0	0	0	2	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	68	0	0	14	0	0	81	82	14	81	81	67
Stage 1	-	-	-	-	-	-	14	14	-	67	67	-
Stage 2	-	-	-	-	-	-	67	68	-	14	14	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1533	-	-	1604	-	-	907	808	1066	907	809	997
Stage 1	-	-	-	-	-	-	1006	884	-	943	839	-
Stage 2	-	-	-	-	-	-	943	838	-	1006	884	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1533	-	-	1604	-	-	907	808	1066	907	809	997
Mov Cap-2 Maneuver	-	-	-	-	-	-	907	808	-	907	809	-
Stage 1	-	-	-	-	-	-	1006	884	-	943	839	-
Stage 2	-	-	-	-	-	-	943	838	-	1006	884	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1533	-	-	1604	-	-	907
HCM Lane V/C Ratio	-	-	-	-	-	-	-	0.002
HCM Control Delay (s)	0	0	-	-	0	-	-	9
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	44	42	66	24	109	22
Future Vol, veh/h	44	42	66	24	109	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	60	60	60	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	73	70	110	40	182	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	461	201	219	0	-	0
Stage 1	201	-	-	-	-	-
Stage 2	260	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	559	840	1350	-	-	-
Stage 1	833	-	-	-	-	-
Stage 2	783	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	513	840	1350	-	-	-
Mov Cap-2 Maneuver	513	-	-	-	-	-
Stage 1	764	-	-	-	-	-
Stage 2	783	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.3	5.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1350	-	633	-	-
HCM Lane V/C Ratio	0.081	-	0.226	-	-
HCM Control Delay (s)	7.9	0	12.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.3	-	0.9	-	-

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	75	86	50	7	4	2	15	51	0	5	0
Future Vol, veh/h	0	75	86	50	7	4	2	15	51	0	5	0
Peak Hour Factor	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	132	151	88	12	7	4	26	89	0	9	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.9	8.4	8.1	8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	0%	82%	0%
Vol Thru, %	22%	47%	11%	100%
Vol Right, %	75%	53%	7%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	68	161	61	5
LT Vol	2	0	50	0
Through Vol	15	75	7	5
RT Vol	51	86	4	0
Lane Flow Rate	119	282	107	9
Geometry Grp	1	1	1	1
Degree of Util (X)	0.144	0.316	0.138	0.012
Departure Headway (Hd)	4.334	4.024	4.626	4.917
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	828	895	776	728
Service Time	2.359	2.041	2.649	2.948
HCM Lane V/C Ratio	0.144	0.315	0.138	0.012
HCM Control Delay	8.1	8.9	8.4	8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	1.4	0.5	0

Intersection	
Int Delay, s/veh	1.8

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	24	26	813	1	0	1065	6	0	0	2	0	0	147
Future Vol, veh/h	24	26	813	1	0	1065	6	0	0	2	0	0	147
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	300	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	4	4	4	3	3	3	1	1	1	1	1	1
Mvmt Flow	26	30	924	1	0	1210	7	0	0	2	0	0	167

Major/Minor	Major1				Major2			Minor1			Minor2		
Conflicting Flow All	1217	1217	0	0	-	-	0	-	-	463	-	-	609
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	4.18	-	-	-	-	-	-	-	6.92	-	-	6.92
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.52	2.24	-	-	-	-	-	-	-	3.31	-	-	3.31
Pot Cap-1 Maneuver	241	558	-	-	0	-	-	0	0	548	0	0	441
Stage 1	-	-	-	-	0	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %			-	-		-	-						
Mov Cap-1 Maneuver	259	259	-	-	-	-	-	-	-	548	-	-	441
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0	11.6	18.1
HCM LOS			B	C

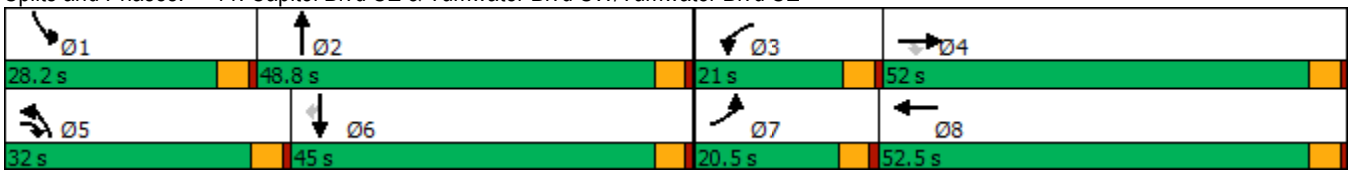
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	548	259	-	-	-	-	441
HCM Lane V/C Ratio	0.004	0.215	-	-	-	-	0.379
HCM Control Delay (s)	11.6	22.7	-	-	-	-	18.1
HCM Lane LOS	B	C	-	-	-	-	C
HCM 95th %tile Q(veh)	0	0.8	-	-	-	-	1.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	482	378	118	517	38	319	455	26	173	690	154
Future Volume (vph)	95	482	378	118	517	38	319	455	26	173	690	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	300		0	250		0	300		250
Storage Lanes	1		1	1		0	2		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.97	0.95	0.95	1.00	0.95	1.00
Frt			0.850		0.990			0.992				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1845	1568	1787	3539	0	3467	3546	0	1787	3574	1599
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	1845	1568	1787	3539	0	3467	3546	0	1787	3574	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			81		5			4				153
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		495			500			530			490	
Travel Time (s)		9.6			9.7			10.3			9.5	
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
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	106	536	420	131	574	42	354	506	29	192	767	171
Shared Lane Traffic (%)												
Lane Group Flow (vph)	106	536	420	131	616	0	354	535	0	192	767	171
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									6
Detector Phase	7	4	5	3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	39.5	9.5	9.5	39.5		9.5	34.5		9.5	37.5	37.5
Total Split (s)	20.5	52.0	32.0	21.0	52.5		32.0	48.8		28.2	45.0	45.0
Total Split (%)	13.7%	34.7%	21.3%	14.0%	35.0%		21.3%	32.5%		18.8%	30.0%	30.0%
Maximum Green (s)	16.0	47.5	27.5	16.5	48.0		27.5	44.3		23.7	40.5	40.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Dont Walk (s)		28.0			28.0			23.0			26.0	26.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effct Green (s)	12.8	42.2	66.5	14.0	43.4		19.6	35.0		18.9	34.3	34.3
Actuated g/C Ratio	0.10	0.33	0.52	0.11	0.34		0.15	0.27		0.15	0.27	0.27
v/c Ratio	0.61	0.89	0.49	0.68	0.52		0.67	0.55		0.73	0.81	0.32
Control Delay	75.1	60.3	18.8	76.8	37.2		60.0	43.4		72.4	52.9	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	75.1	60.3	18.8	76.8	37.2		60.0	43.4		72.4	52.9	10.0
LOS	E	E	B	E	D		E	D		E	D	A
Approach Delay		45.4			44.1			50.0			49.7	
Approach LOS		D			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 128.7			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 47.5		Intersection LOS: D	
Intersection Capacity Utilization 75.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 11: Capitol Blvd SE & Tumwater Blvd SW/Tumwater Blvd SE



Intersection	
Int Delay, s/veh	138.4

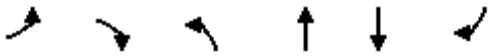
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	508	3	8	425	213	8	4	17	301	4	32
Future Vol, veh/h	31	508	3	8	425	213	8	4	17	301	4	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	1	1	1
Mvmt Flow	34	558	3	9	467	234	9	4	19	331	4	35

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	701	0	0	561	0	0	1250	1347	560	1241	1231	584
Stage 1	-	-	-	-	-	-	628	628	-	602	602	-
Stage 2	-	-	-	-	-	-	622	719	-	639	629	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.15	6.55	6.25	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.55	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.55	-	6.11	5.51	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.545	4.045	3.345	3.509	4.009	3.309
Pot Cap-1 Maneuver	896	-	-	1010	-	-	147	149	522	~ 152	178	513
Stage 1	-	-	-	-	-	-	466	471	-	488	490	-
Stage 2	-	-	-	-	-	-	469	428	-	466	477	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	896	-	-	1010	-	-	129	141	522	~ 137	169	513
Mov Cap-2 Maneuver	-	-	-	-	-	-	129	141	-	~ 137	169	-
Stage 1	-	-	-	-	-	-	448	453	-	469	483	-
Stage 2	-	-	-	-	-	-	426	422	-	428	459	-

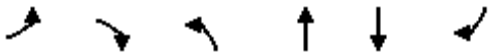
Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.1	21.4	$ 635.5
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	129	345	896	-	-	1010	-	-	137	418
HCM Lane V/C Ratio	0.068	0.067	0.038	-	-	0.009	-	-	2.414	0.095
HCM Control Delay (s)	34.9	16.2	9.2	-	-	8.6	0	-	$ 709.8	14.5
HCM Lane LOS	D	C	A	-	-	A	A	-	F	B
HCM 95th %tile Q(veh)	0.2	0.2	0.1	-	-	0	-	-	28.6	0.3

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



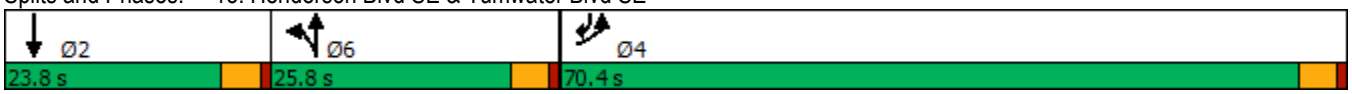
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	887	64	61	213	268	481
Future Volume (vph)	887	64	61	213	268	481
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0			100
Storage Lanes	1	0	0			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.991					0.850
Flt Protected	0.955			0.989		
Satd. Flow (prot)	1780	0	0	1860	1881	1599
Flt Permitted	0.955			0.989		
Satd. Flow (perm)	1780	0	0	1860	1881	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	5					523
Link Speed (mph)	35			35	35	
Link Distance (ft)	363			447	465	
Travel Time (s)	7.1			8.7	9.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	964	70	66	232	291	523
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1034	0	0	298	291	523
Turn Type	Prot		Split	NA	NA	Over
Protected Phases	4		6	6	2	4
Permitted Phases						
Detector Phase	4		6	6	2	4
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5
Total Split (s)	70.4		25.8	25.8	23.8	70.4
Total Split (%)	58.7%		21.5%	21.5%	19.8%	58.7%
Maximum Green (s)	65.9		21.3	21.3	19.3	65.9
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	4.5			4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		Min	Min	Min	None
Walk Time (s)	7.0		7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0		0	0	0	0
Act Effct Green (s)	65.9			20.8	19.3	65.9
Actuated g/C Ratio	0.55			0.17	0.16	0.55
v/c Ratio	1.05			0.92	0.96	0.47
Control Delay	70.6			82.6	92.7	2.6
Queue Delay	0.0			0.0	0.0	0.0



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Total Delay	70.6			82.6	92.7	2.6
LOS	E			F	F	A
Approach Delay	70.6			82.6	34.8	
Approach LOS	E			F	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 119.5			
Natural Cycle: 130			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.05			
Intersection Signal Delay: 58.7		Intersection LOS: E	
Intersection Capacity Utilization 93.0%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 13: Henderson Blvd SE & Tumwater Blvd SE



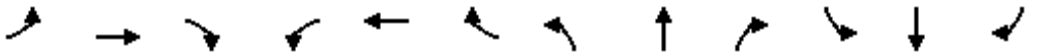
Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	76	27	622	986	44
Future Vol, veh/h	40	76	27	622	986	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	2	2	1	1	1	1
Mvmt Flow	48	92	33	749	1188	53

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1656	621	1241	0	-	0
Stage 1	1215	-	-	-	-	-
Stage 2	441	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.12	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.21	-	-	-
Pot Cap-1 Maneuver	89	430	562	-	-	-
Stage 1	243	-	-	-	-	-
Stage 2	616	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	84	430	562	-	-	-
Mov Cap-2 Maneuver	181	-	-	-	-	-
Stage 1	229	-	-	-	-	-
Stage 2	616	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21.3	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	562	-	181	430	-	-
HCM Lane V/C Ratio	0.058	-	0.266	0.213	-	-
HCM Control Delay (s)	11.8	-	32	15.6	-	-
HCM Lane LOS	B	-	D	C	-	-
HCM 95th %tile Q(veh)	0.2	-	1	0.8	-	-

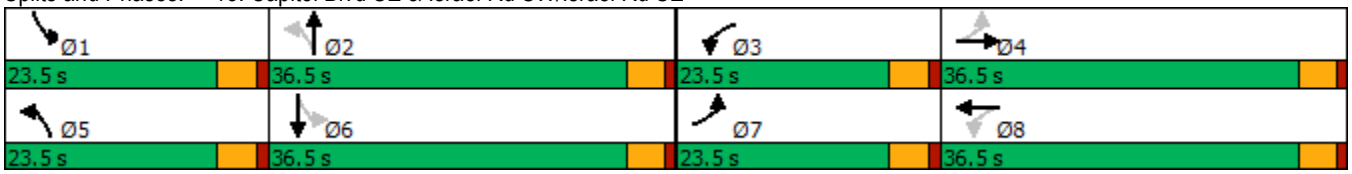


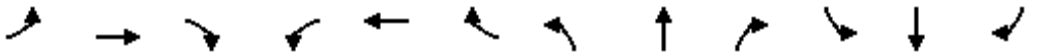
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	138	198	191	137	290	194	179	479	38	102	759	157
Future Volume (vph)	138	198	191	137	290	194	179	479	38	102	759	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	250		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.926			0.940			0.989			0.974	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1742	0	1770	1751	0	1787	3535	0	1787	3481	0
Flt Permitted	0.124			0.204			0.109			0.371		
Satd. Flow (perm)	233	1742	0	380	1751	0	205	3535	0	698	3481	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39			27			7			20	
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		461			432			410			333	
Travel Time (s)		12.6			11.8			8.0			6.5	
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
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	153	220	212	152	322	216	199	532	42	113	843	174
Shared Lane Traffic (%)												
Lane Group Flow (vph)	153	432	0	152	538	0	199	574	0	113	1017	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	32.5		9.5	32.5		9.5	33.5		9.5	27.5	
Total Split (s)	23.5	36.5		23.5	36.5		23.5	36.5		23.5	36.5	
Total Split (%)	19.6%	30.4%		19.6%	30.4%		19.6%	30.4%		19.6%	30.4%	
Maximum Green (s)	19.0	32.0		19.0	32.0		19.0	32.0		19.0	32.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		21.0			21.0			22.0			16.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	43.9	32.3		43.5	32.1		50.8	37.2		41.5	32.1	
Actuated g/C Ratio	0.41	0.30		0.40	0.30		0.47	0.34		0.38	0.30	
v/c Ratio	0.59	0.79		0.51	1.00		0.65	0.47		0.31	0.97	
Control Delay	30.1	44.6		25.3	76.7		31.6	29.7		19.6	60.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	30.1	44.6		25.3	76.7		31.6	29.7		19.6	60.0	
LOS	C	D		C	E		C	C		B	E	
Approach Delay		40.8			65.4			30.2			56.0	
Approach LOS		D			E			C			E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 108.3			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 48.9		Intersection LOS: D	
Intersection Capacity Utilization 85.7%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 15: Capitol Blvd SE & Israel Rd SW/Israel Rd SE



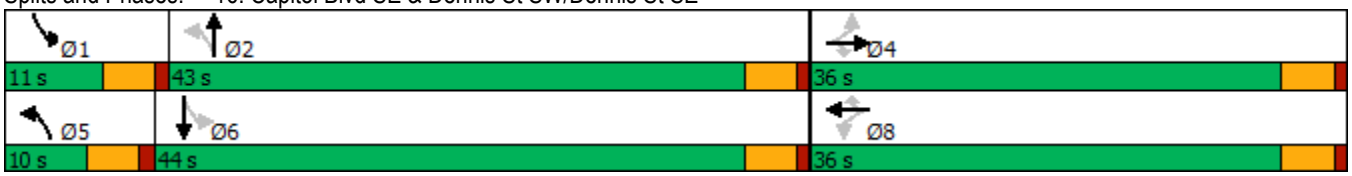


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	216	60	43	44	32	110	19	1047	36	77	888	104
Future Volume (vph)	216	60	43	44	32	110	19	1047	36	77	888	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		100	250		0	200		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.995			0.984	
Flt Protected		0.962			0.972		0.950			0.950		
Satd. Flow (prot)	0	1810	1599	0	1829	1599	1787	3556	0	1787	3517	0
Flt Permitted		0.718			0.704		0.183			0.111		
Satd. Flow (perm)	0	1351	1599	0	1324	1599	344	3556	0	209	3517	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			73			121		5			18	
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		435			480			405			366	
Travel Time (s)		11.9			13.1			7.9			7.1	
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
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	237	66	47	48	35	121	21	1151	40	85	976	114
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	303	47	0	83	121	21	1191	0	85	1090	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	32.5	32.5	32.5	30.5	30.5	30.5	9.5	27.5		9.5	27.5	
Total Split (s)	36.0	36.0	36.0	36.0	36.0	36.0	10.0	43.0		11.0	44.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	11.1%	47.8%		12.2%	48.9%	
Maximum Green (s)	31.5	31.5	31.5	31.5	31.5	31.5	5.5	38.5		6.5	39.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	21.0	21.0	21.0	19.0	19.0	19.0		16.0			16.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		21.8	21.8		21.8	21.8	35.4	31.4		38.2	36.1	
Actuated g/C Ratio		0.31	0.31		0.31	0.31	0.50	0.44		0.54	0.51	
v/c Ratio		0.73	0.09		0.20	0.21	0.07	0.76		0.32	0.61	
Control Delay		35.7	2.7		22.0	5.3	9.1	21.9		11.8	15.7	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		35.7	2.7		22.0	5.3	9.1	21.9		11.8	15.7	
LOS		D	A		C	A	A	C		B	B	
Approach Delay		31.3			12.1			21.6			15.4	
Approach LOS		C			B			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 71.1			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 19.6		Intersection LOS: B	
Intersection Capacity Utilization 67.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 16: Capitol Blvd SE & Dennis St SW/Dennis St SE

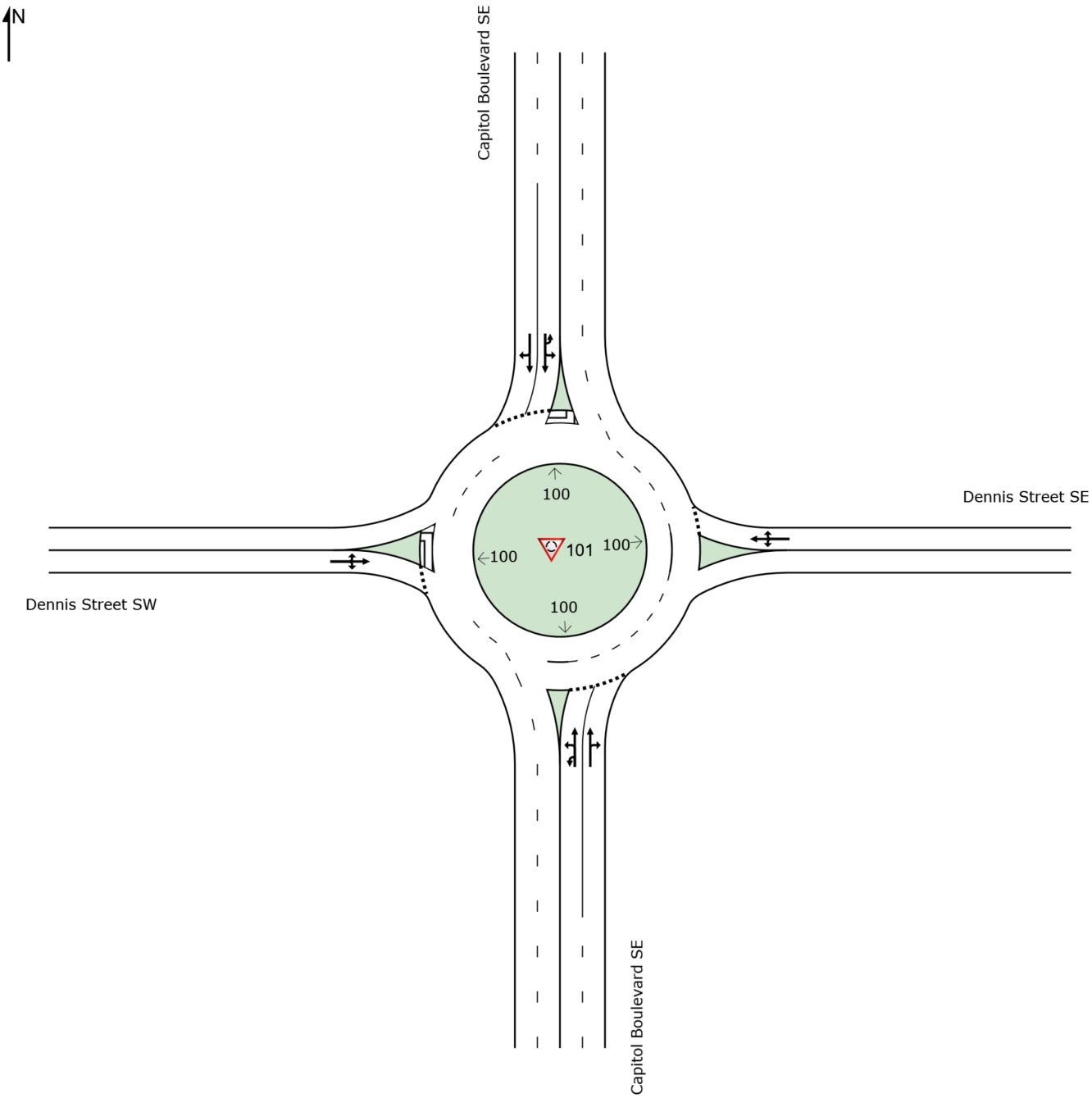


SITE LAYOUT

Site: 101 [Capitol Blvd SE & Dennis St SW (Site Folder: 16)]

Forecast 2028 PM Peak Hour Volumes With Project
Site Category: -
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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MOVEMENT SUMMARY

Site: 101 [Capitol Blvd SE & Dennis St SW (Site Folder: 16)]

Forecast 2028 PM Peak Hour Volumes With Project
Site Category: -
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Capitol Boulevard SE														
3u	U	1	3.0	1	3.0	0.002	12.4	LOS B	0.0	0.2	0.03	0.67	0.03	35.3
3	L2	1	3.0	1	3.0	0.002	9.9	LOS A	0.0	0.2	0.03	0.67	0.03	34.4
8	T1	1	3.0	1	3.0	0.002	4.1	LOS A	0.0	0.2	0.03	0.41	0.03	38.1
18	R2	1	3.0	1	3.0	0.002	4.1	LOS A	0.0	0.2	0.03	0.41	0.03	36.8
Approach		4	3.0	4	3.0	0.002	7.6	LOS A	0.0	0.2	0.03	0.54	0.03	36.1
East: Dennis Street SE														
1	L2	1	3.0	1	3.0	0.003	9.9	LOS A	0.0	0.3	0.04	0.51	0.04	37.1
6	T1	1	3.0	1	3.0	0.003	4.1	LOS A	0.0	0.3	0.04	0.51	0.04	37.0
16	R2	1	3.0	1	3.0	0.003	3.9	LOS A	0.0	0.3	0.04	0.51	0.04	35.8
Approach		3	3.0	3	3.0	0.003	6.0	LOS A	0.0	0.3	0.04	0.51	0.04	36.6
North: Capitol Boulevard SE														
7u	U	1	3.0	1	3.0	0.002	12.4	LOS B	0.0	0.2	0.04	0.67	0.04	35.3
7	L2	1	3.0	1	3.0	0.002	9.9	LOS A	0.0	0.2	0.04	0.67	0.04	34.4
4	T1	1	3.0	1	3.0	0.001	4.1	LOS A	0.0	0.2	0.03	0.41	0.03	38.1
14	R2	1	3.0	1	3.0	0.001	4.1	LOS A	0.0	0.2	0.03	0.41	0.03	36.7
Approach		4	3.0	4	3.0	0.002	7.6	LOS A	0.0	0.2	0.04	0.54	0.04	36.0
West: Dennis Street SW														
5	L2	1	3.0	1	3.0	0.003	9.9	LOS A	0.0	0.3	0.04	0.51	0.04	37.1
2	T1	1	3.0	1	3.0	0.003	4.1	LOS A	0.0	0.3	0.04	0.51	0.04	37.0
12	R2	1	3.0	1	3.0	0.003	3.9	LOS A	0.0	0.3	0.04	0.51	0.04	35.8
Approach		3	3.0	3	3.0	0.003	6.0	LOS A	0.0	0.3	0.04	0.51	0.04	36.6
All Vehicles		14	3.0	15	3.0	0.003	6.9	LOS A	0.0	0.3	0.04	0.53	0.04	36.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	1.4

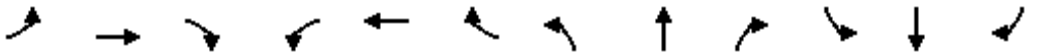
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	47	52	1010	32	45	1357
Future Vol, veh/h	47	52	1010	32	45	1357
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	92
Heavy Vehicles, %	2	2	1	1	1	1
Mvmt Flow	52	57	1110	35	49	1475

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1964	573	0	0	1145	0
Stage 1	1128	-	-	-	-	-
Stage 2	836	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.12	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.21	-
Pot Cap-1 Maneuver	55	463	-	-	612	-
Stage 1	271	-	-	-	-	-
Stage 2	386	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 51	463	-	-	612	-
Mov Cap-2 Maneuver	163	-	-	-	-	-
Stage 1	271	-	-	-	-	-
Stage 2	355	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	30.6	0	0.4
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	247	612	-
HCM Lane V/C Ratio	-	-	0.44	0.081	-
HCM Control Delay (s)	-	-	30.6	11.4	-
HCM Lane LOS	-	-	D	B	-
HCM 95th %tile Q(veh)	-	-	2.1	0.3	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	3	21	14	1	28	26	1230	17	48	969	46
Future Volume (vph)	15	3	21	14	1	28	26	1230	17	48	969	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	100		0	200		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.867			0.855			0.998			0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1631	0	1787	1608	0	1787	3567	0	1787	3549	0
Flt Permitted							0.226			0.140		
Satd. Flow (perm)	1881	1631	0	1881	1608	0	425	3567	0	263	3549	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			31			2			7	
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		427			448			483			381	
Travel Time (s)		11.6			12.2			9.4			7.4	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	17	3	24	16	1	31	29	1382	19	54	1089	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	17	27	0	16	32	0	29	1401	0	54	1141	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	31.5	31.5		30.5	30.5		9.5	26.5		9.5	27.5	
Total Split (s)	31.5	31.5		31.5	31.5		9.8	48.0		10.5	48.7	
Total Split (%)	35.0%	35.0%		35.0%	35.0%		10.9%	53.3%		11.7%	54.1%	
Maximum Green (s)	27.0	27.0		27.0	27.0		5.3	43.5		6.0	44.2	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	20.0	20.0		19.0	19.0			15.0			16.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	6.7	6.7		6.7	6.7		40.1	40.0		41.5	42.2	
Actuated g/C Ratio	0.13	0.13		0.13	0.13		0.75	0.75		0.78	0.79	
v/c Ratio	0.07	0.12		0.07	0.14		0.06	0.52		0.14	0.41	
Control Delay	27.4	15.2		27.4	13.6		2.5	7.5		2.9	5.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	27.4	15.2		27.4	13.6		2.5	7.5		2.9	5.1	
LOS	C	B		C	B		A	A		A	A	
Approach Delay		19.9			18.2			7.4			5.0	
Approach LOS		B			B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 53.4			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay: 6.7		Intersection LOS: A	
Intersection Capacity Utilization 54.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 18: Capitol Blvd SE & X St SW/X St SE

MOVEMENT SUMMARY

Site: 101 [Capitol Blvd SE & X St SW (Site Folder: 18)]

Forecast 2028 PM Peak Hour Volumes With Project
Site Category: -
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Capitol Boulevard SE														
3u	U	1	3.0	1	3.0	0.573	13.0	LOS B	4.4	113.8	0.34	0.43	0.34	37.9
3	L2	26	3.0	29	3.0	0.573	10.5	LOS B	4.4	113.8	0.34	0.43	0.34	36.8
8	T1	1230	3.0	1382	3.0	0.573	4.7	LOS A	4.4	113.8	0.34	0.43	0.34	36.8
18	R2	17	3.0	19	3.0	0.573	4.7	LOS A	4.4	113.8	0.34	0.42	0.34	35.6
Approach		1274	3.0	1431	3.0	0.573	4.8	LOS A	4.4	113.8	0.34	0.43	0.34	36.8
East: X Street SE														
1	L2	14	3.0	16	3.0	0.098	15.1	LOS B	0.4	9.7	0.68	0.85	0.68	34.3
6	T1	1	3.0	1	3.0	0.098	9.3	LOS A	0.4	9.7	0.68	0.85	0.68	34.2
16	R2	28	3.0	31	3.0	0.098	9.1	LOS A	0.4	9.7	0.68	0.85	0.68	33.2
Approach		43	3.0	48	3.0	0.098	11.0	LOS B	0.4	9.7	0.68	0.85	0.68	33.6
North: Capitol Boulevard SE														
7u	U	1	3.0	1	3.0	0.419	12.7	LOS B	3.1	79.8	0.24	0.41	0.24	38.1
7	L2	48	3.0	54	3.0	0.419	10.2	LOS B	3.1	79.8	0.24	0.41	0.24	37.1
4	T1	969	3.0	1089	3.0	0.419	4.4	LOS A	3.1	80.1	0.24	0.40	0.24	37.1
14	R2	46	3.0	52	3.0	0.419	4.4	LOS A	3.1	80.1	0.23	0.39	0.23	36.0
Approach		1064	3.0	1196	3.0	0.419	4.7	LOS A	3.1	80.1	0.24	0.40	0.24	37.1
West: X Street SW														
5	L2	15	3.0	17	3.0	0.102	22.7	LOS C	0.7	16.8	0.89	0.86	0.89	30.6
2	T1	3	3.0	3	3.0	0.102	16.9	LOS B	0.7	16.8	0.89	0.86	0.89	30.6
12	R2	21	3.0	24	3.0	0.102	16.7	LOS B	0.7	16.8	0.89	0.86	0.89	29.7
Approach		39	3.0	44	3.0	0.102	19.0	LOS B	0.7	16.8	0.89	0.86	0.89	30.1
All Vehicles		2420	3.0	2719	3.0	0.573	5.1	LOS A	4.4	113.8	0.31	0.43	0.31	36.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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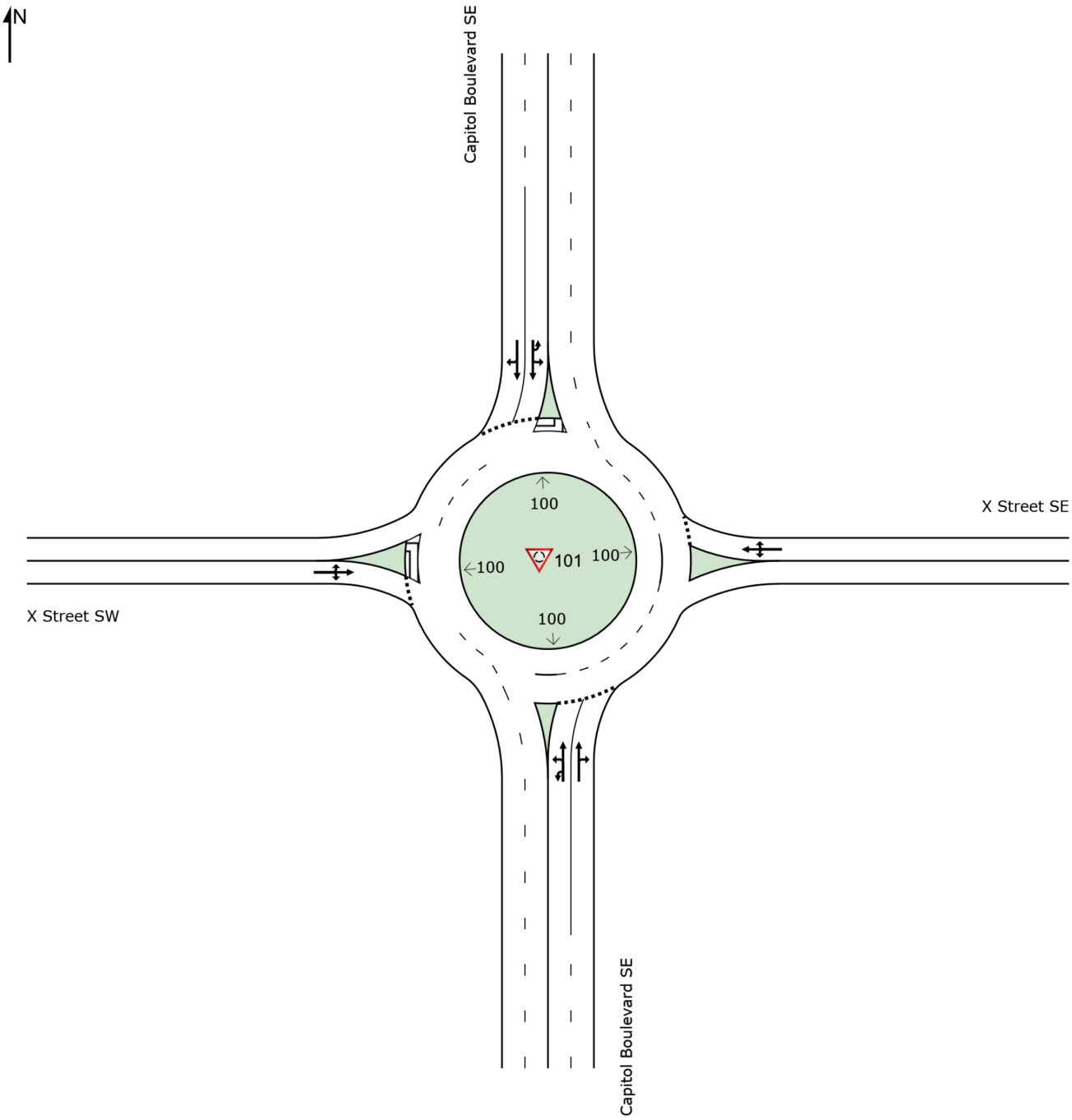
SITE LAYOUT

Site: 101 [Capitol Blvd SE & X St SW (Site Folder: 18)]

Forecast 2028 PM Peak Hour Volumes With Project
Site Category: -
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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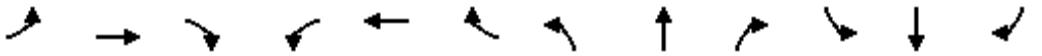
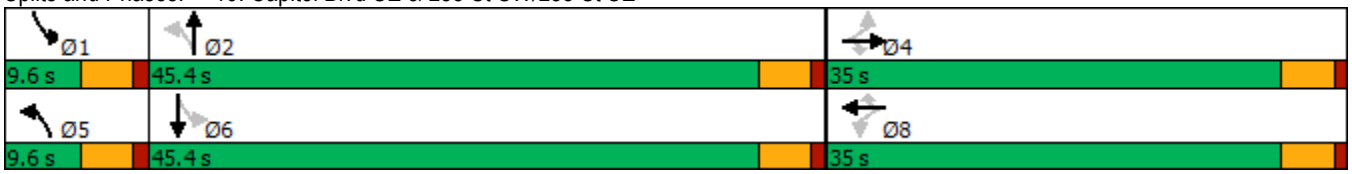


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	344	7	53	17	9	107	30	1384	28	66	1103	199
Future Volume (vph)	344	7	53	17	9	107	30	1384	28	66	1103	199
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		100	200		0	200		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.997			0.977	
Flt Protected		0.953			0.969		0.950			0.950		
Satd. Flow (prot)	0	1793	1599	0	1823	1599	1787	3564	0	1787	3492	0
Flt Permitted		0.710			0.774		0.095			0.092		
Satd. Flow (perm)	0	1336	1599	0	1456	1599	179	3564	0	173	3492	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			73			115		3			30	
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		435			481			462			371	
Travel Time (s)		11.9			13.1			9.0			7.2	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	370	8	57	18	10	115	32	1488	30	71	1186	214
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	378	57	0	28	115	32	1518	0	71	1400	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	30.5	30.5	30.5	30.5	30.5	30.5	9.5	24.5		9.5	25.5	
Total Split (s)	35.0	35.0	35.0	35.0	35.0	35.0	9.6	45.4		9.6	45.4	
Total Split (%)	38.9%	38.9%	38.9%	38.9%	38.9%	38.9%	10.7%	50.4%		10.7%	50.4%	
Maximum Green (s)	30.5	30.5	30.5	30.5	30.5	30.5	5.1	40.9		5.1	40.9	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	19.0	19.0	19.0	19.0	19.0	19.0		13.0			14.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		26.9	26.9		26.9	26.9	45.3	41.4		46.2	43.3	
Actuated g/C Ratio		0.32	0.32		0.32	0.32	0.53	0.49		0.54	0.51	
v/c Ratio		0.89	0.10		0.06	0.20	0.17	0.87		0.37	0.78	
Control Delay		52.8	4.2		20.7	5.3	10.9	28.2		14.8	22.4	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		52.8	4.2		20.7	5.3	10.9	28.2		14.8	22.4	
LOS		D	A		C	A	B	C		B	C	
Approach Delay		46.4			8.3			27.8			22.0	
Approach LOS		D			A			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 84.8			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 26.9		Intersection LOS: C	
Intersection Capacity Utilization 80.7%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 19: Capitol Blvd SE & Lee St SW/Lee St SE



MOVEMENT SUMMARY

Site: 101 [Capitol Blvd SE & Trosper Rd SW (Site Folder: 20)]

Forecast 2028 PM Peak Hour Volumes With Project
Site Category: -
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Capitol Blvd SE														
3u	U	1	3.0	1	3.0	1.221	121.0	LOS F	80.0	2048.5	1.00	3.22	6.41	13.3
3	L2	1032	3.0	1086	3.0	1.221	118.6	LOS F	80.0	2048.5	1.00	3.22	6.41	13.2
8	T1	774	3.0	815	3.0	1.021	37.4	LOS F	29.6	757.4	1.00	1.75	2.88	24.4
18	R2	15	3.0	16	3.0	1.021	37.6	LOS F	29.6	757.4	1.00	1.75	2.88	23.9
Approach		1822	3.0	1918	3.0	1.221	83.4	LOS F	80.0	2048.5	1.00	2.58	4.88	16.4
East: Trosper Rd SE														
1u	U	1	3.0	1	3.0	0.986	87.8	LOS F	9.8	250.4	1.00	1.45	2.54	16.9
1	L2	38	3.0	40	3.0	0.986	85.4	LOS F	9.8	250.4	1.00	1.45	2.54	16.7
6	T1	92	3.0	97	3.0	0.986	79.4	LOS E	9.8	250.4	1.00	1.45	2.54	16.7
16	R2	44	3.0	46	3.0	0.986	79.5	LOS E	9.8	250.4	1.00	1.45	2.54	16.4
Approach		175	3.0	184	3.0	0.986	80.8	LOS F	9.8	250.4	1.00	1.45	2.54	16.6
North: Capitol Blvd SE														
7u	U	1	0.0	1	0.0	0.869	56.0	LOS E	12.2	311.7	1.00	1.39	2.09	22.2
7	L2	17	3.0	18	3.0	0.869	54.1	LOS D	12.2	311.7	1.00	1.39	2.09	21.9
4	T1	630	3.0	663	3.0	0.869	45.4	LOS D	14.6	373.9	1.00	1.42	2.11	22.5
14	R2	459	3.0	483	3.0	0.297	3.8	LOS A	0.0	0.0	0.00	0.46	0.00	36.9
Approach		1107	3.0	1165	3.0	0.869	28.3	LOS C	14.6	373.9	0.59	1.02	1.24	26.7
West: Trosper Rd SW														
5u	U	1	3.0	1	3.0	0.421	14.4	LOS B	2.5	64.7	0.72	0.83	0.74	34.0
5	L2	372	3.0	392	3.0	0.421	12.0	LOS B	2.5	64.7	0.72	0.83	0.74	33.3
2	T1	62	3.0	65	3.0	0.421	6.7	LOS A	2.5	64.7	0.64	0.69	0.64	35.5
12	R2	775	3.0	816	3.0	0.502	3.9	LOS A	0.0	0.0	0.00	0.45	0.00	36.8
Approach		1210	3.0	1274	3.0	0.502	6.5	LOS A	2.5	64.7	0.25	0.58	0.26	35.5
All Vehicles		4314	3.0	4541	3.0	1.221	47.6	LOS D	80.0	2048.5	0.68	1.57	2.55	21.8

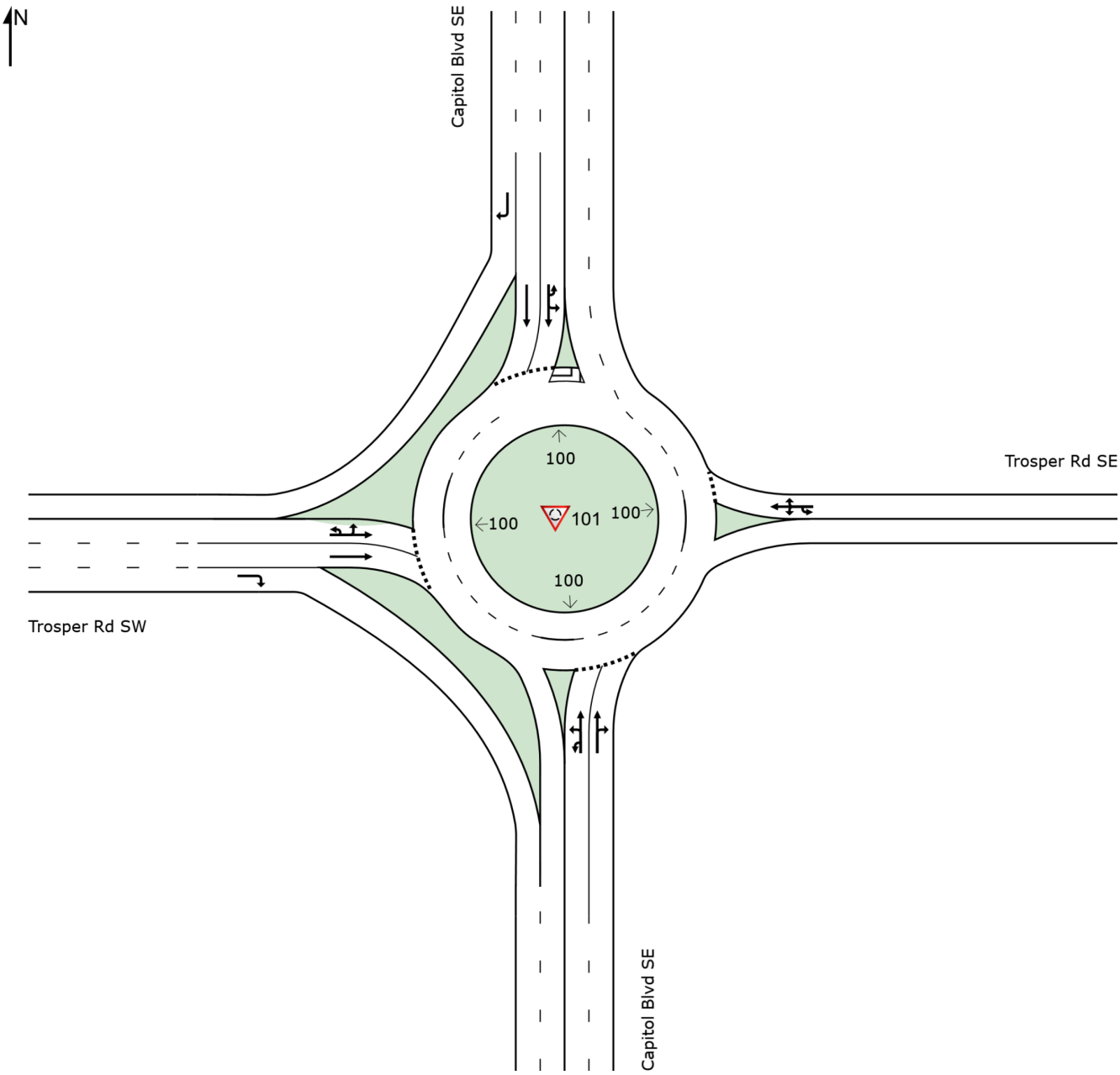
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SITE LAYOUT

Site: 101 [Capitol Blvd SE & Trosper Rd SW (Site Folder: 20)]

Forecast 2028 PM Peak Hour Volumes With Project
Site Category: -
Roundabout

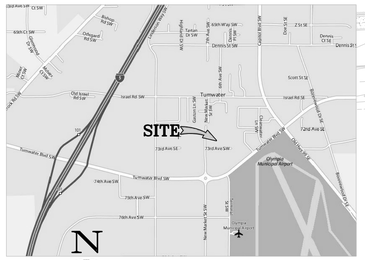
Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



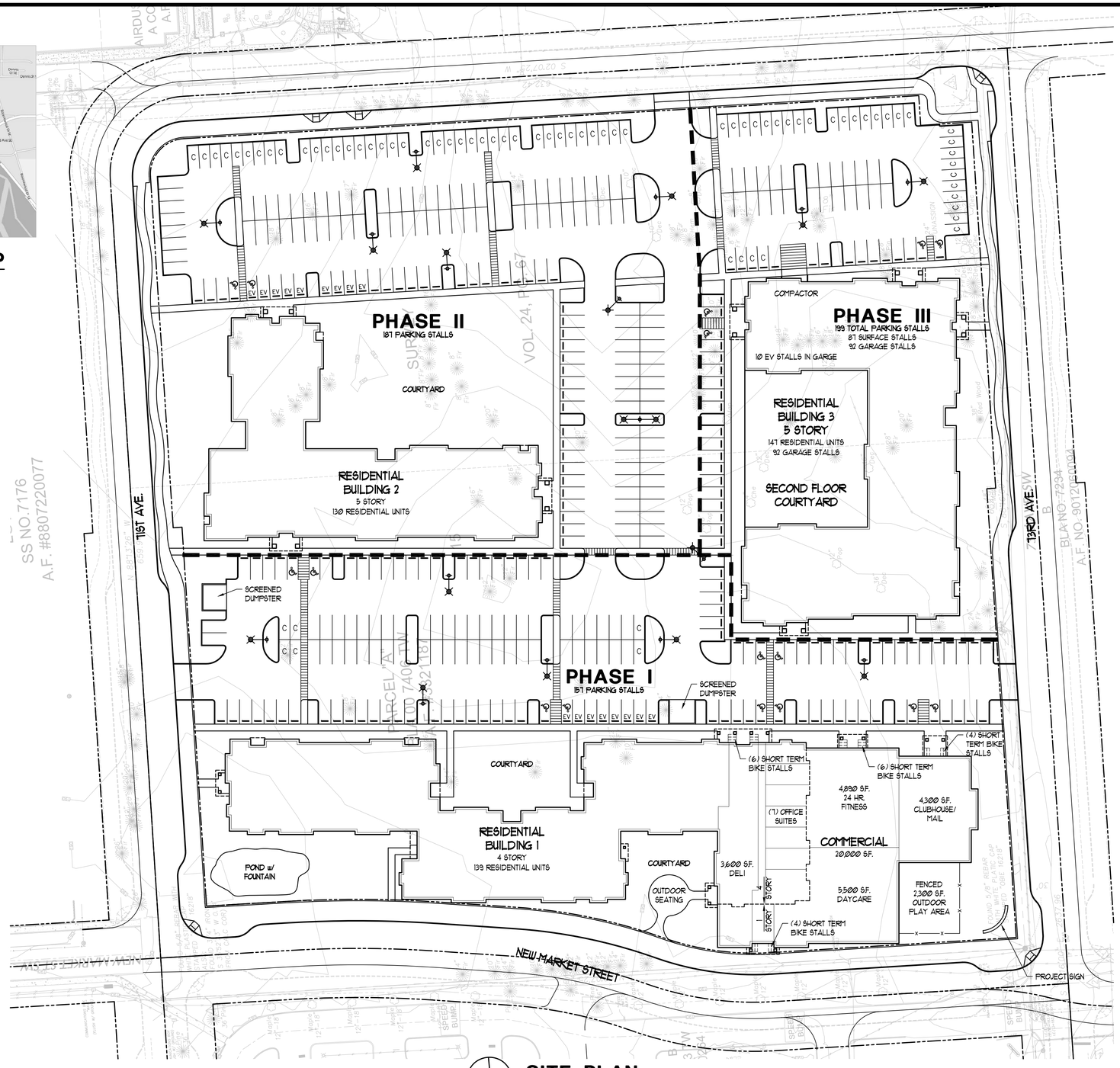
Organisation: HEATH & ASSOCIATES | Licence: PLUS / 1PC | Created: Saturday, June 17, 2023 10:09:12 AM
Project: C:\Users\kyoung.HEATH\Heath and Associates\Traffic Studies - Documents\Sidra\5003\New Market Apartments.sip9

NEW MARKET APARTMENTS
TRAFFIC IMPACT ANALYSIS

APPENDIX: MISCELLANIOUS



VICINITY MAP
N.T.S.



SITE PLAN
SCALE: 1"=40'

GENERAL DATA

PARCEL NUMBER:	8170150000
LEGAL:	SECTION 03 TOWNSHIP 17 RANGE 2W PLAT WEST BRIGHTON PARK 007019 BLK 15 TR A BLA007406TW 3321187
OWNER:	VINE STREET INVESTORS LLC
APPLICANT:	BOB WOOLF 6808 HAWKS PRAIRIE ROAD NE OLYMPIA, WA 98516
WATER:	CITY OF TUMWATER
SEWER:	CITY OF TUMWATER
ZONE:	TC - TOWN CENTER
FIRE SPRINKLER:	YES - NFPA 13
FIRE ALARM:	YES
OCCUPANCY:	R-2
TYPE OF CONSTRUCTION:	VA
BUILDING HEIGHT:	BUILDING 1 = 50' BUILDING 2 & 3 = 62'
CODE:	2018 IBC
PARKING:	TOTAL 543 STALLS 479 STALLS REQUIRED 377 STANDARD STALLS 92 STRUCTURED PARKING STALLS 74 COMPACT STALLS EV INFRASTRUCTURE (543 x 05 = 27 STATIONS)

PARKING CALCULATION:

PHASE I:
(135) STUDIOS, 1 BEDROOM & 2 BEDROOM x 1 STALL = 135 STALLS
(PROJECT IS WITHIN 1/2 MILE OF TRANSIT STOP)
(4) 3 BEDROOM x 2 STALL = 8 STALLS
+ 1 GUEST FOR EVERY 10 UNITS = 14 STALLS
151 STALLS REQUIRED < 151 OK

PHASE II:
(120) STUDIOS, 1 BEDROOM & 2 BEDROOM x 1 STALL = 120 STALLS
(PROJECT IS WITHIN 1/2 MILE OF TRANSIT STOP)
(10) 3 BEDROOM x 2 STALL = 20 STALLS
+ 1 GUEST FOR EVERY 10 UNITS = 13 STALLS
153 STALLS REQUIRED < 187 OK

PHASE III:
(133) STUDIOS, 1 BEDROOM & 2 BEDROOM x 1 STALL = 133 STALLS
(PROJECT IS WITHIN 1/2 MILE OF TRANSIT STOP)
(14) 3 BEDROOM x 2 STALL = 28 STALLS
+ 1 GUEST FOR EVERY 10 UNITS = 15 STALLS
176 STALLS REQUIRED < 199 OK

TOTAL:
(388) STUDIOS, 1 BEDROOM & 2 BEDROOM x 1 STALL = 388 STALLS
(PROJECT IS WITHIN 1/2 MILE OF TRANSIT STOP)
(28) 3 BEDROOM x 2 STALL = 56 STALLS
+ 1 GUEST FOR EVERY 10 UNITS = 42 STALLS
486 STALLS REQUIRED < 543 OK

BIKE PARKING:

BUILDING 1:	
SHORT TERM:	139 UNITS / 4 = 35 x 05 = 18 STALLS
LONG TERM:	139 UNITS / 4 = 35 + 17 = 52 STALLS
BUILDING 2:	
SHORT TERM:	130 UNITS / 4 = 33 x 05 = 17 STALLS
LONG TERM:	130 UNITS / 4 = 33 + 16 = 49 STALLS
BUILDING 3:	
SHORT TERM:	147 UNITS / 4 = 37 x 05 = 19 STALLS
LONG TERM:	147 UNITS / 4 = 37 + 18 = 55 STALLS
DAYCARE:	
SHORT TERM:	1 STALL
LONG TERM:	1 STALL

SITE AREA CALCULATIONS

SITE AREA (BEFORE ROW DEDICATION): 417,514 SF.
ROW DEDICATION: 62,699 SF.

	PHASE I	PHASE II	PHASE III	TOTAL:
TOTAL SITE AREA:	148,446 SF.	124,023 SF.	80,995 SF.	353,464 SF.
BUILDING FOOTPRINT:	50,335 SF.	21,968 SF.	38,689 SF.	110,992 SF.
TOTAL BUILDING AREA:	154,213 SF.	109,840 SF.	152,837 SF.	416,890 SF.
TOTAL LANDSCAPING:	36,945 SF. (25%)	36,941 (30%)	14,816 (18%)	88,702 SF. (25%)
LANDSCAPING REQUIRED:	22,716 SF. (15%)	18,603 SF. (15%)	12,149 SF. (15%)	53,020 SF. (15%)
PAVING AREA:	54,306 SF.	59,791 SF.	23,104 SF.	137,201 SF.
TOTAL IMPERVIOUS AREA:	111,501 SF. (75%)	87,082 (70%)	66,179 (82%)	264,762 SF. (75%)
MAXIMUM IMPERVIOUS:	126,179 SF. (85%)	105,420 SF. (85%)	68,846 SF. (85%)	300,444 SF. (85%)

FAR CALC.:
416,890 / 353,464 = 1.17

DENSITY:
416 UNITS / 8.11 ACRES = 51 UNITS / ACRE

OPEN SPACE CALCULATIONS

	PHASE I	PHASE II	PHASE III	TOTAL:
RESIDENTIAL UNITS:	139	130	147	416
OPEN SPACE REQUIRED: (UNITS x 150 SF.)	20,850 SF.	19,500 SF.	22,050 SF.	62,400 SF.
OPEN SPACE PROVIDED:	26,450 SF.	26,401 SF.	17,179 SF.	70,030 SF.
ACTIVE OPEN SPACE:	11,000 SF.	12,000 SF.	9,000 SF.	32,000 SF.
PASSIVE OPEN SPACE:	15,450 SF.	14,401 SF.	8,179 SF.	38,030 SF.

UNIT MIX	BLDG. 1	BLDG. 2	BLDG. 3	TOTAL
3 BED	4	10	14	28
2 BED w/ DEN	24	14	13	51
2 BED / 2 BATH	37	34	19	90
1 BED w/ DEN	41	5	38	84
1 BED	11	24	21	56
STUDIO w/ DEN	15	20	24	59
STUDIO	7	23	18	48
TOTAL UNITS	139	130	147	416

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3809 REGISTERED ARCHITECT
GLENN C. WELLS
STATE OF WASHINGTON

date: 10-20-22
drawn: R.C.T.
checked: G.C.W.

city issue: 01-13-23
revisions: -

title: SITE PLAN
NEW MARKET
NEW MARKET STREET AND 73RD AVENUE
TUMWATER, WASHINGTON

sheet no. SP1.0

NEW MARKET