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Initial: _____

City of DuPont Planning Division
Land Use Application

1700 Civic Drive
DuPont, WA 98327
www.dupontwa.gov

Phone: (253) 912-5393
Fax: (253) 964-1455

City File Number: PLNG2020-016

All information listed in this application, or by applicable ordinance, must be submitted in order for a land use application to be determined complete. Only a complete land use application will be processed for conformance with adopted policies and requirements.

General Information:

Project name: Northwest Logistics Center II - Parking Lot Expansion

Applicant name: Brian Mattson, Panattoni Development Company

Address: 1821 Dock Street, Suite 100, Tacoma, WA 98402

Phone number: 206-838-6182 Fax number: bmattson@panattoni.com

Applicant's representative: Ben Eldridge, Barghausen Consulting Engineers

Address: 18215 - 72nd Avenue South, Kent, WA 98032

Phone number: 425-251-6222 Fax number: beldridge@barghausen.com

Description of proposal. Be specific.

Process Type I Site Plan Amendment to correct building size for tenant improvements to existing building.

Site Information:

Assessor's Parcel Number(s): 300039-0282 & 300039-0011

Area of site in square feet: 1,633,531 sq. ft. total

Area of streets and alleys: N/A

Area of storm drainage improvements and conveyance lines: 8,000 sq.ft (new)

Area of open space and neighborhood green tracts: N/A

Area of critical areas and buffers: N/A

Area of building floors: 797,205 sq. ft. total

Area of impervious surfaces: 236,328 sq. ft. new/replaced [1,316,189 sq. ft. total for site]

Area of landscaping: 317,342 sq. ft. total for site

Building height: Guard house 12 feet maximum

Number of dwelling units: N/A

Number of employees: 912 total

Number of disabled, compact and standard parking stalls: ADA - 19 / HOV - 46 / Auto - 847 passenger total = 912 stalls / Trailer - 77

Description and area of all proposed tracts: N/A

Required Plans, Information and Fee:

(Quantity and minimum scale of each item or drawing is indicated in parenthesis. Plans shall be no larger than 24 by 36 inch sheet size)

1. [ ] Vicinity Map (include as part of site plan).
2. [X] Site Plan drawn at 1 inch = 20 feet extending 100 feet beyond the property lines (eight copies).
3. [ ] Landscape Plans identifying: location, size and species of all landmark, historic and specimen trees; trees to be retained, specific tree protection measures drawn at 1 inch = 20 feet (seven copies).
4. [ ] Grading Plan with estimated dimensions and quantities of work involved drawn at 1 inch = 20 feet horizontal with 2' contour intervals (seven copies).
5. [ ] Storm Drainage and Utility Plan drawn at 1 inch = 20 feet (seven copies).
6. [ ] Preliminary Stormwater Management Report and calculations (three copies).
7. [ ] Roadway cross sections, (seven copies of single line drawing with dimensions).
8. [ ] One each 8 by 11 inch reduction of all drawings.
9. [X] Average daily trips generated by the proposal based on the International Transportation Engineers Trip Generation Manual (two copies).
10. [ ] Building Elevations drawn at ¼ inch = 1 foot or larger. Identify building materials and colors (eight copies).
11. [ ] Title report of subject lot that is less than 30 days old to identify all encumbrances (two copies).
12. [ ] Draft of proposed covenants, conditions and restrictions related to the maintenance of open space or commonly owned improvements, if applicable (two copies).
13. [ ] Letter of Sewer Availability from Pierce County (two copies).
14. [ ] Letter of Water Availability from City of DuPont (two copies).
15. [ ] One site drawing showing the refuse enclosure(s) that is approved via signature and date by LeMay, Inc. Contact person is Charlie Maxwell, Public Relations Director, 253-537-8687.
16. [ ] Completed Environmental Checklist (two copies).
17. [X] Completed Land Use Application (one copy).
18. [ ] Completed Agent Affidavit (one copy).
19. [X] Filing fee(s). $1,500

Note:

Fill out and return this application with all material listed in the Required Plans, Information and Fee section. Submittal of all required plans, information and fees constitutes a complete application. You will be contacted by the City within 28 days of formal application submittal regarding whether the application is complete. Site work may not start until all necessary permits have been obtained. Paper or electronic drawings of the proposal may be requested for presentation purposes.

_____, Agent 9/28/2020 Ben Eldridge

(Applicant Signature) (Date) (Print name)

SNOW BLOSSOM FULFILLMENT CENTER
TRAFFIC IMPACT ANALYSIS

DuPont, WA

Prepared for: Mr. Brian Mattson
Panattoni Development Company, Inc.
1821 Dock Street, Suite 100
Tacoma, WA 98402

September 2020

2214 Tacoma Road Puyallup WA 98371 (253) 770 1401 Fax (253) 770 1473 heathtraffic.com

SNOW BLOSSOM FULFILLMENT CENTER
TRAFFIC IMPACT ANALYSIS

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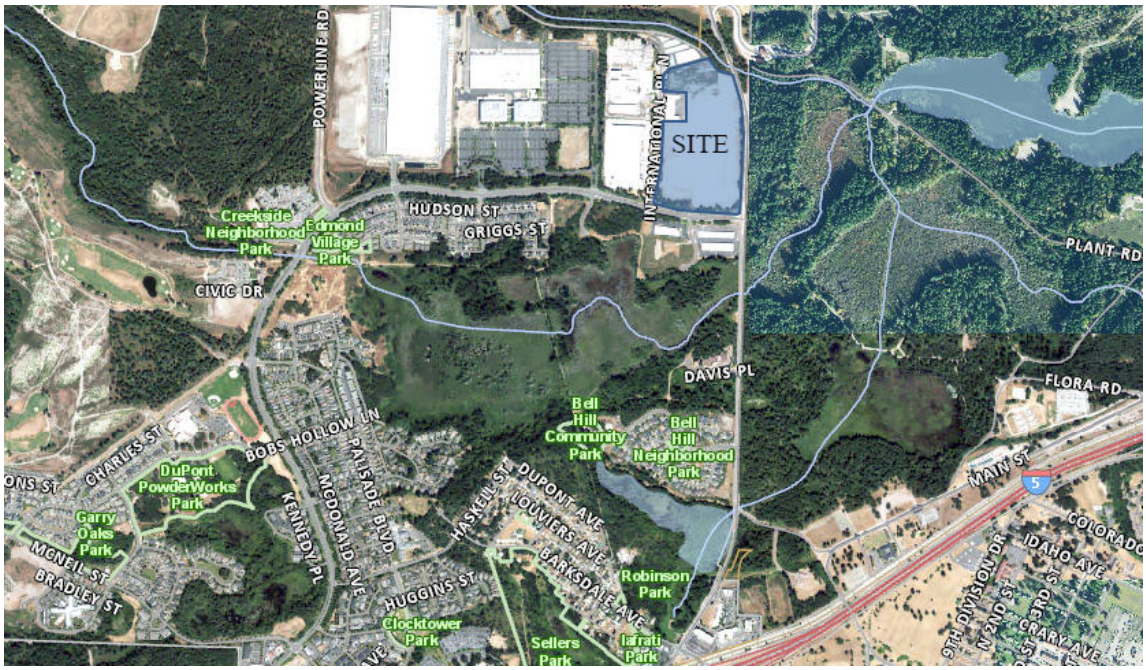
SNOW BLOSSOM FULFILLMENT CENTER
TRAFFIC IMPACT ANALYSIS

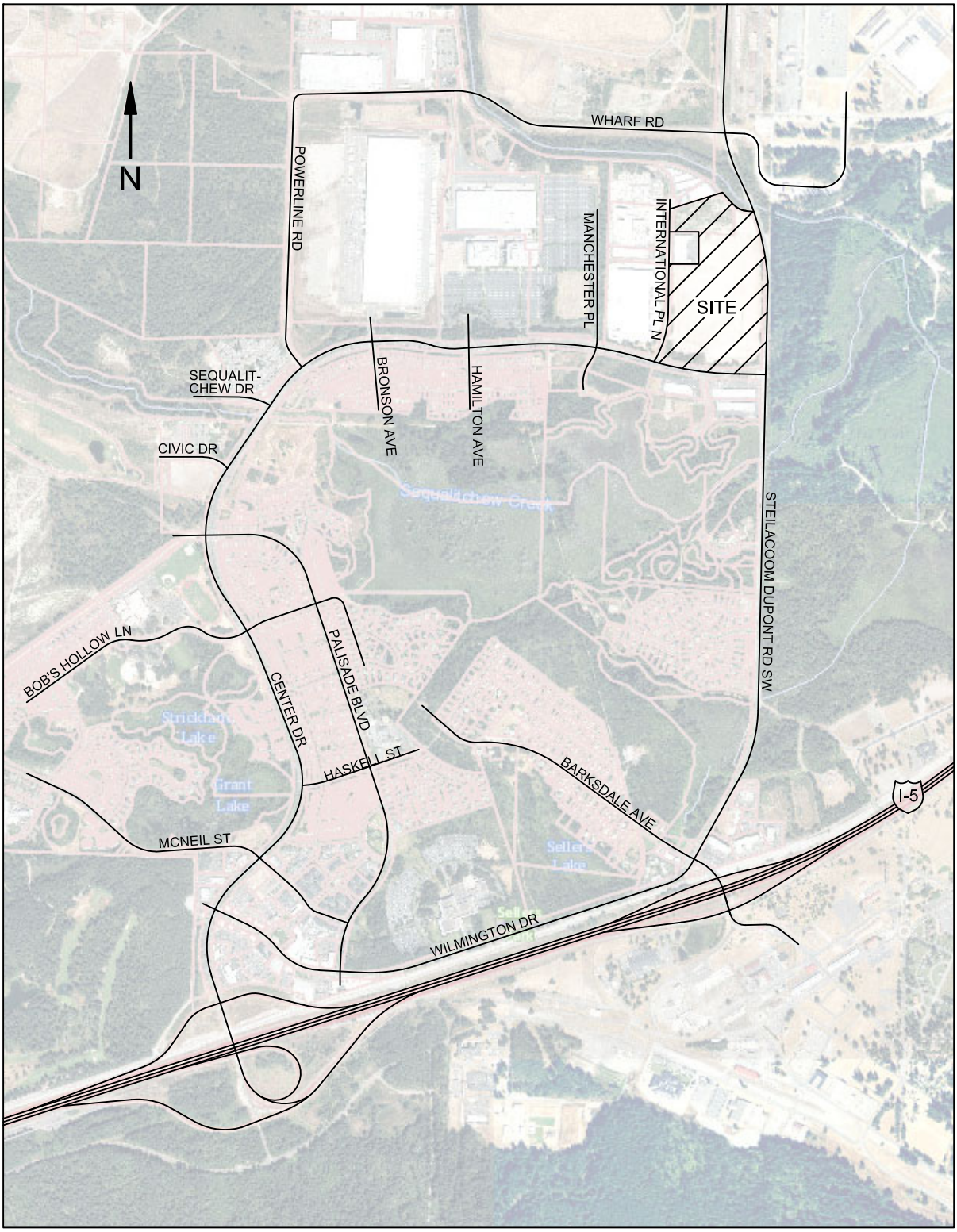
1. INTRODUCTION

The main goals of this study focus on the assessment 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 any planned infrastructure projects that may affect the study area. 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 if needed.

2. PROJECT DESCRIPTION

Snow Blossom Fulfillment Center proposes to occupy an existing warehouse and add a mezzanine to total 797,794 square feet located in the city of DuPont. The warehouse, with a site address of 3230 International Place N, is proposed to be utilized as a hazmat fulfillment center. The subject property is bordered to the west by International Place N, to the east by Steilacoom DuPont Road SW and to the south by Center Drive on a cumulative 37.5-acres within tax parcel #'s: 300039-0011; - 3282. Access is to be provided via International Place N. A two-year horizon of 2022 was analyzed to assess future project impacts subsequent to tenant occupancy. Figure 1 on the following page shows the general site location and roadway network serving the vicinity. A site plan illustrating the overall configuration of the project is presented in Figure 2.





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VICINITY MAP & ROADWAY SYSTEM
FIGURE 1

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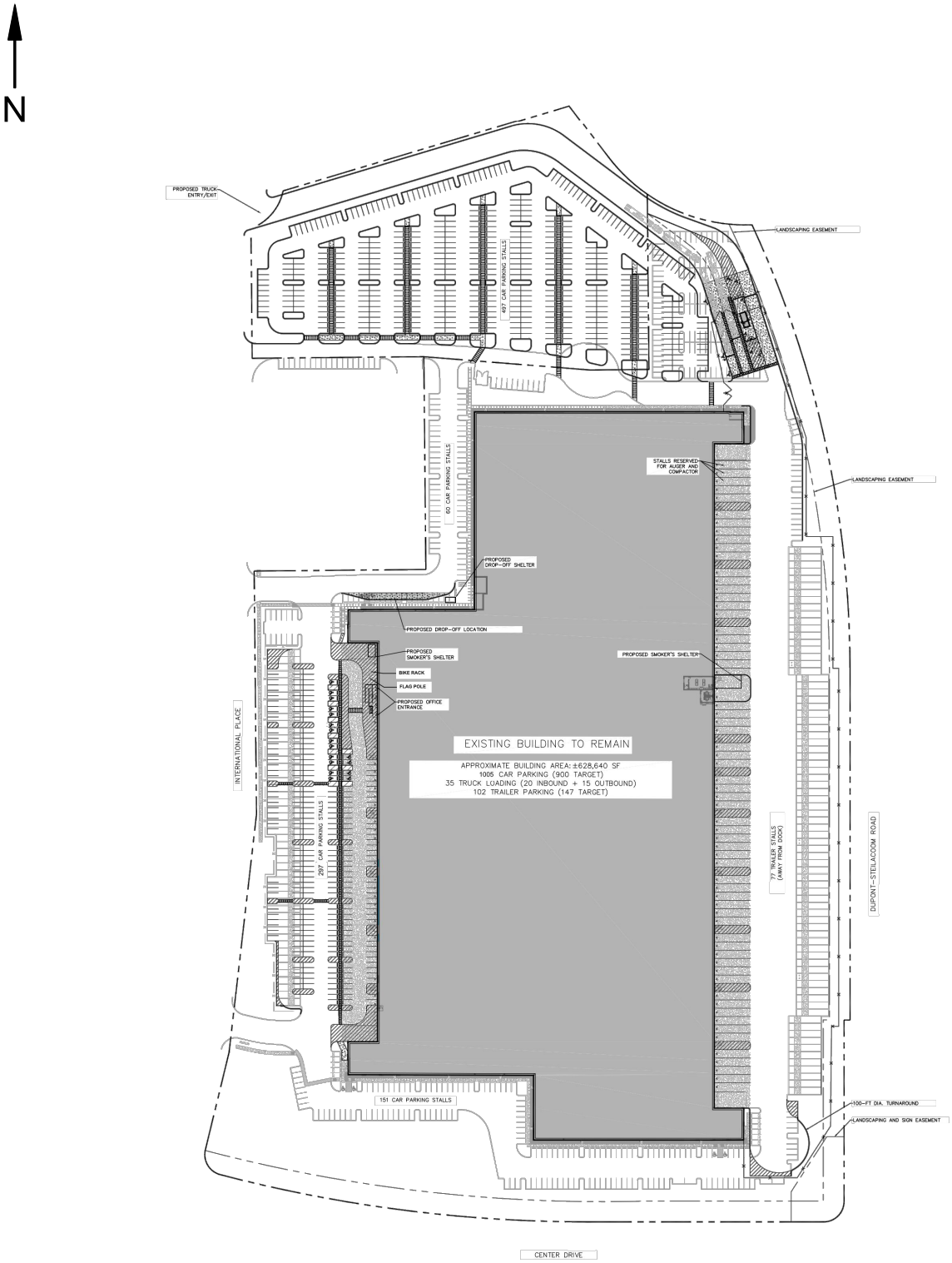

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SNOW BLOSSOM FULFILLMENT CENTER

SITE PLAN
FIGURE 2

3. EXISTING CONDITIONS

3.1 Existing Roadway Characteristics

The street network serving the proposed project consists of a variety of roadways. The major roadways and arterials defined in the study area are listed and described below.

Table 1: Roadway Network

Functional Classification	Roadway	Speed Limit	Lanes	Street Parking	Sidewalk	Bike Facilities
Principal Arterial	Center Street	35 mph	4	No	Yes	Lanes
Minor Arterial	Steilacoom DuPont Rd SW	35-45 mph	2-3	No	S/O Station Dr	Signage
Local	International Place	25 mph	2	No	Yes	Paved Shoulders

3.2 Public Transit Service

Transit within the city is provided via two Sound Transit Express Bus routes. Route 592 – DuPont-Seattle provides service from DuPont to Downtown Seattle and runs from approximately 4:00 AM to 8:30 PM with 15-20 minute headways during peak periods. Route 594 – Lakewood/Tacoma-Seattle offers select service to DuPont (see Sound Transit routes and schedules for further information). All stops originate and depart from the DuPont Station located on the southeast corner of Wilmington Drive & Palisade Boulevard, approximately two miles from the subject site and is therefore not anticipated to be significantly utilized by the proposed development's employees.

According to the DuPont's Comprehensive Plan, the City would like to explore adding and expanding transit opportunities as employment and populations continue to grow. As a potential transportation demand measure, and if demand exists, the developer may consider adding a shuttle service to run to and from DuPont Station during employee shift periods as a way to incentivize and encourage alternative modes of transport.

3.3 Non-Motorist Infrastructure

The adjacent Center Drive and International Place roadways support detached sidewalks along either side and shoulders accommodating bicycle transport. The intersection of the two roadways allows for safe pedestrian crossings facilitated via actuated walk phases controlled by the signal. However, with no transit readily available within the immediate site vicinity, little non-motorist activity to/from the site can be expected.

3.4 Roadway Improvements

A review of the City of DuPont's Six-Year (2019-2024) Transportation Improvement Plan and WSDOT's 2020-2023 Statewide Transportation Improvement Program indicates improvement projects are scheduled within the project vicinity. The most significant project to note is WSDOT's proposed Interchange Exit 119 Redesign:

I-5 Exit 119 Reconstruction – is a proposed redesign of the existing I-5 Exit 119 to increase capacity and allow for a more efficient and safe design. The scope of work include removing a portion of Barksdale Avenue, east of Steilacoom-DuPont Road and constructing a new grade-separated southbound exit. Also proposed are new I-5 Northbound and Southbound Bypass routes to Steilacoom-DuPont Road and the JBLM DuPont Gate. See appendix for WSDOT's design exhibits. The project is currently undergoing environmental studies and the construction is estimated to be completed in 2025.

As part of WSDOT's involvements with the I-5 Exit 119 Reconstruction, the City has established a number of improvements along Steilacoom-DuPont Road from the proposed Exit 119 location to Wharf Road including intersection improvements at Center Drive.

Other City improvement projects consist of traffic signal modernization and coordination from I-5 Exit 118 to Steilacoom-DuPont Road; however, these projects have not secured funding and are in the preplanning stages. Given the time horizons of the planned improvements, no projects were considered in the forecast horizon analysis as they would not be completed at such time.

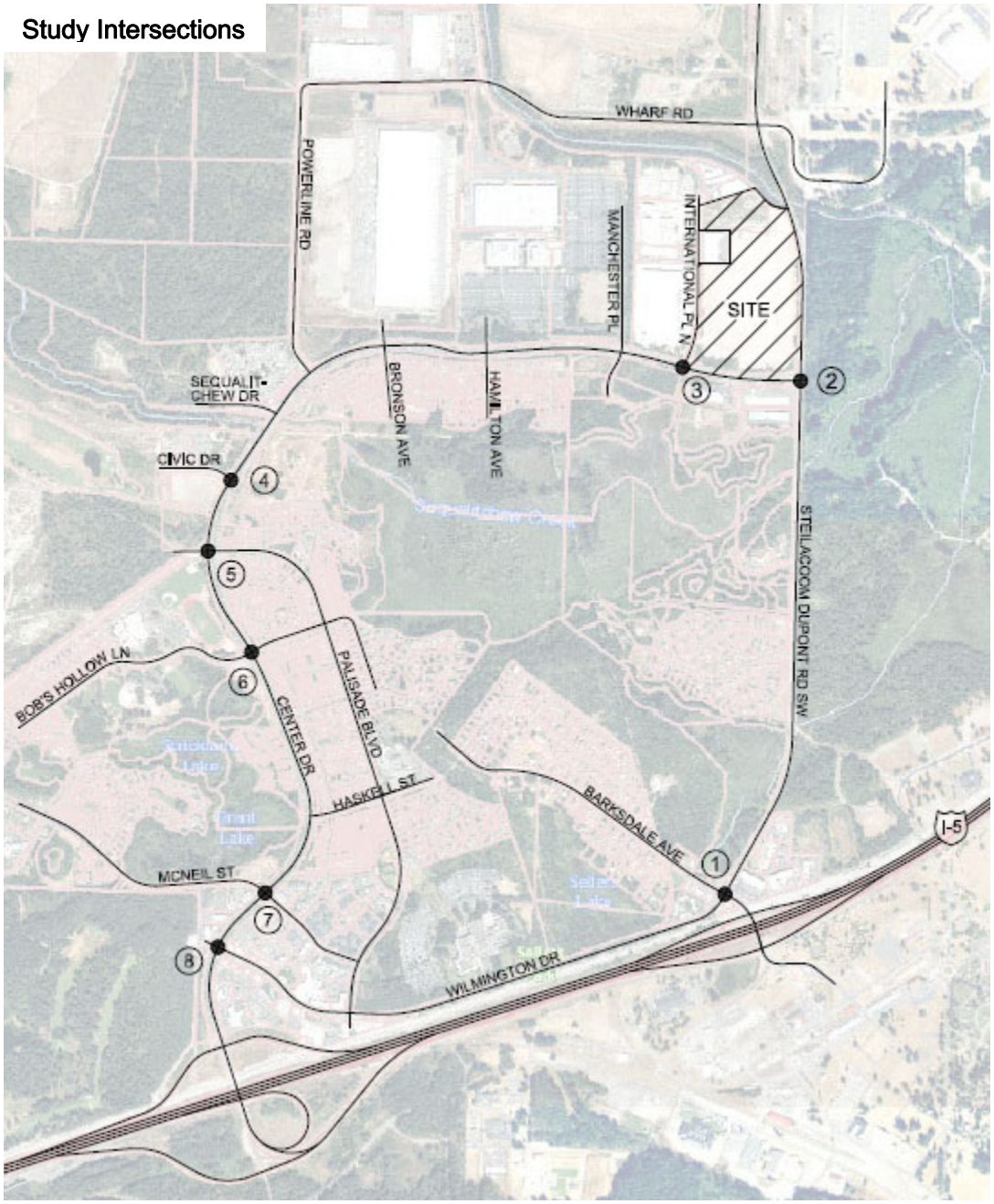
3.5 Baseline Intersection Volumes

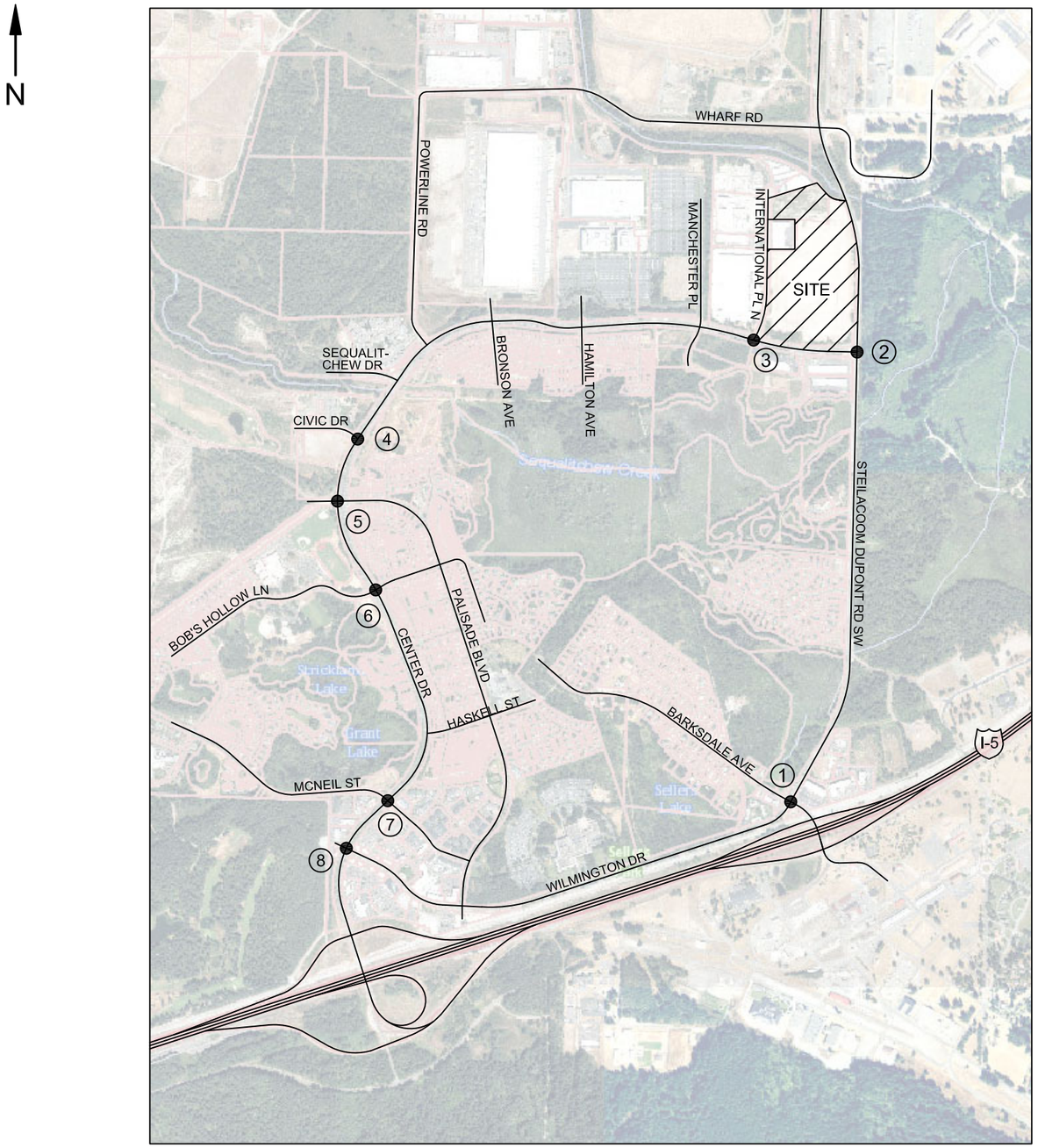
In order to assess and evaluate the project impacts relative to the adjacent street system, a number of outlying intersections were selected for evaluation by the City. All intersections are signalized controlled and turning movement count data were provided in the scoping request through the City. Timeframes examined in this analysis consist of the AM peak period (7:00-9:00 AM) and the PM peak period (4:00-6:00 PM) as these periods generally represent the highest congestion points of a typical weekday.

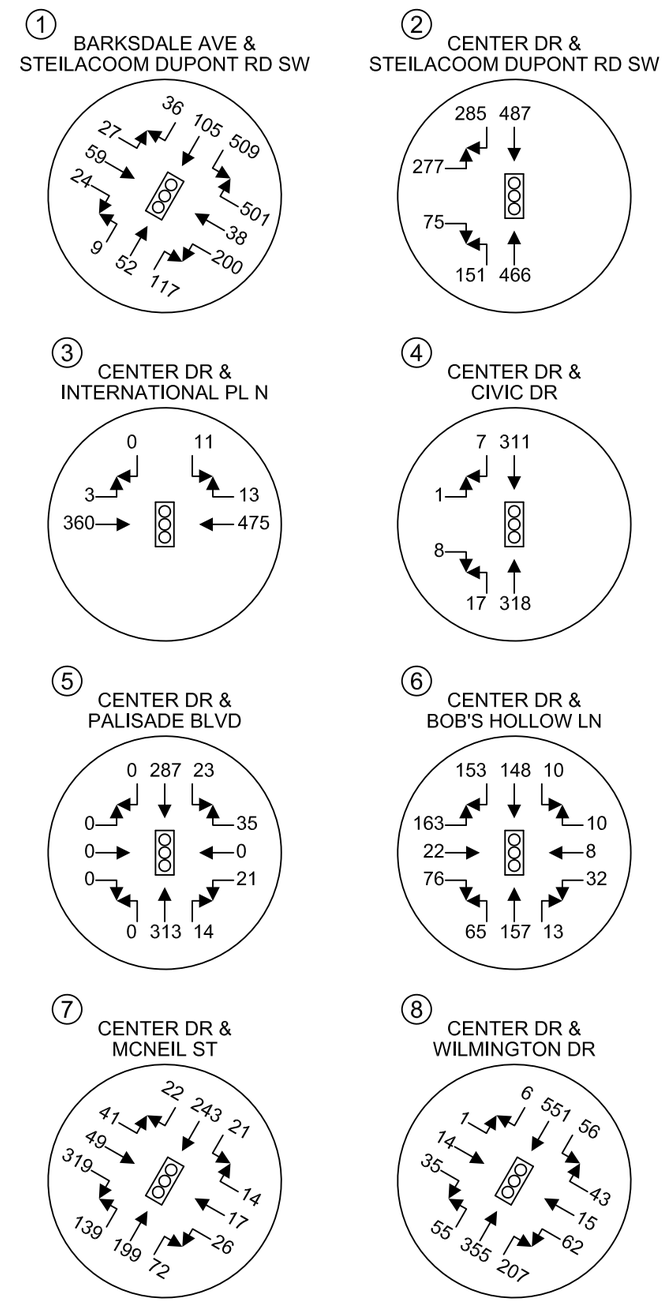
Data were available from 2019 for all locations with the exception of two intersections. These two intersections were from 2017 and have been adjusted via a two percent compound annual growth rate. Listed on the following page are the study intersections with respective AM and PM peak hour volumes illustrated in Figure 3A & 3B. Full count sheets and baseline volumes are included in the appendix.

1. Barksdale Ave & Steilacoom DuPont Rd
2. Center Drive & Steilacoom DuPont Rd
3. Center Drive & International Drive
4. Center Drive & Civic Drive
5. Center Drive & Palisade Drive
6. Center Drive & Bob's Hollow Lane
7. Center Drive & McNeil Street
8. Center Drive & Wilmington Drive

Study Intersections







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EXISTING AM PEAK HOUR VOLUMES
FIGURE 3A

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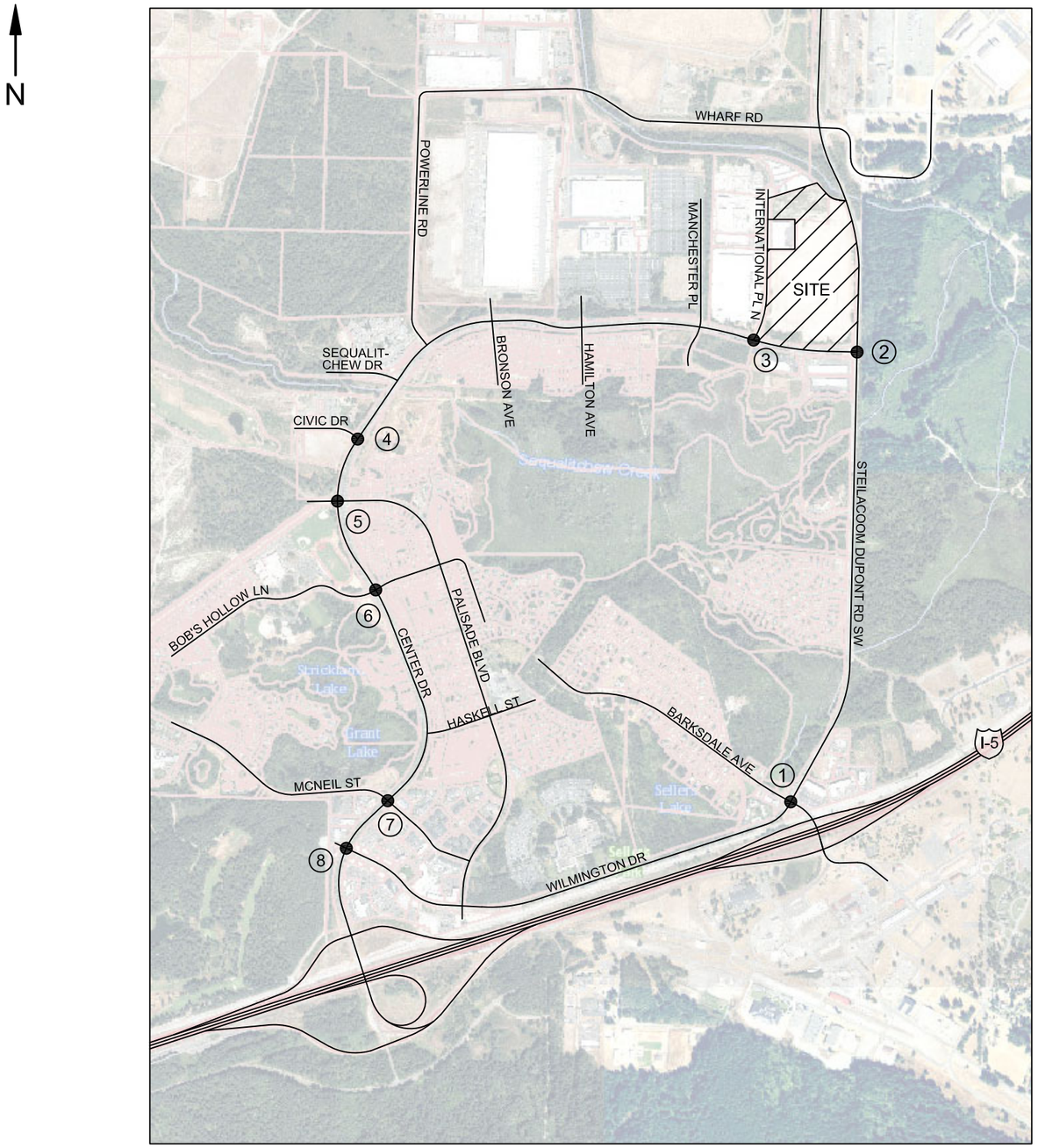

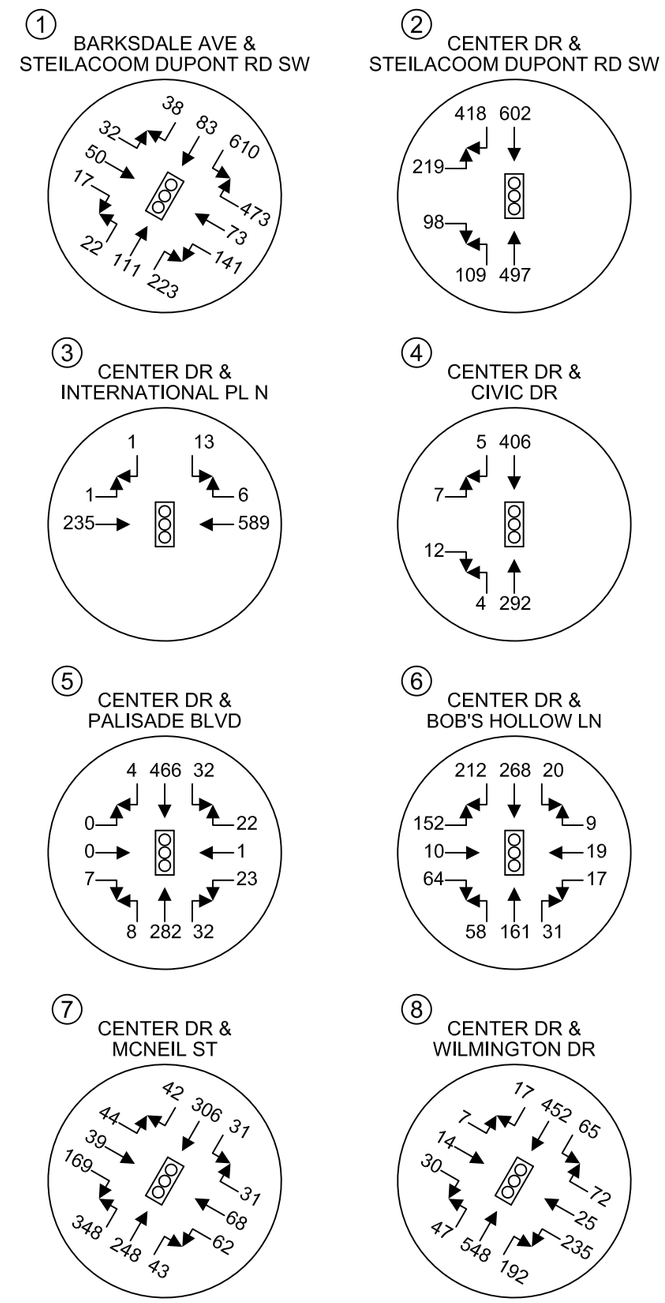

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EXISTING PM PEAK HOUR VOLUMES
FIGURE 3B

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3.6 Baseline Level of Service

Baseline peak hour 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 saturated conditions with heavy control delays. Detailed descriptions of intersection LOS are given in the *2016 Highway Capacity Manual*. Level of service calculations were made through the use of the *Synchro 10* analysis program. Table 2 below summarizes existing peak hour delays at the eight study intersections. For signalized control, LOS is determined as the overall average delay experienced by the intersection. Delays are reported in seconds per vehicle.

Table 2: Existing Peak Hour Level of Service

Map ID	Intersection	Control	Peak Hour	LOS	Delay
1	Barksdale Ave & Steilacoom DuPont Rd / Wilmington Dr	Signal	AM	C	24.0
			PM	C	24.4
2	Center Drive & Steilacoom DuPont Rd	Signal	AM	B	14.3
			PM	B	12.6
3	Center Drive & International Place N	Signal	AM	A	2.1
			PM	A	3.1
4	Center Drive & Civic Drive	Signal	AM	A	4.4
			PM	A	4.6
5	Center Drive & Palisade Blvd	Signal	AM	A	5.5
			PM	A	6.8
6	Center Drive & Bob's Hollow Ln	Signal	AM	B	12.0
			PM	B	10.7
7	Center Drive & McNeil Street	Signal	AM	B	11.1
			PM	C	29.2
8	Center Drive & Wilmington Drive	Signal	AM	A	8.9
			PM	B	12.9

[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

City of DuPont Level of Service Standards[2]: The city has an adopted standard of LOS D for most intersections within the City. Exemptions are allowed for Steilacoom DuPont Road's intersections with Barksdale Avenue and Center Drive, which may operate at LOS E.

As shown in Table 2 above, all study intersections are shown to meet City standards operating at LOS C of better for either the AM or PM peak hour periods.

4. FUTURE TRAFFIC CONDITIONS

4.1 Trip Generation

Trip generation can be defined by the number of vehicles entering or exiting a site within a particular time period such as a "peak hour" or an entire day. Vehicular volume estimates have been obtained from the client based on a number of similar hazmat fulfillment centers, which tend to function similarly. Table 3 below summarizes the average weekday daily trips (AWDT) and the AM and PM peak hour volumes. Classifications have been broken down to identify either passenger vehicle/delivery vans versus heavy vehicles (multi-axle).

Table 3: Project Trip Generation

Land Use	Vehicle Type	AWDT	AM Peak-Hour Trips			PM Peak-Hour Trips		
			In	Out	Total	In	Out	Total
Hazmat Fulfillment Center	Vehicle	**1942**	336	13	**349**	296	302	**598**
	Heavy Vehicle	**225**	7	7	**14**	3	3	**6**
Total		**2167**	343	20	**363**	299	305	**604**

Based on data provided by the client, the project can be anticipated to generate approximately 2,167 daily trips, 363 AM and 604 PM peak hour trips. As shown, the majority of trips would be in the form of employee or delivery vehicle/van with few heavy vehicle trips. It should be acknowledged that these volumes represent typical operations or "non-peak" volumes. During peak seasons (i.e., holiday season) volumes to and from the site would increase. According to the aggregated trip generation report, peak season AM peak hour volumes would close to double while peak PM volumes would increase by approximately 50 percent. These volumes, however, are not typical through most of the year. Also to consider, the hazmat fulfillment center's peak hours tend to be dissimilar with respect to the adjacent street. The AM peak hour tends to start at 6:00 or 6:30 AM while the PM peak hour tends to start at 5:30 PM. No volume adjustments were considered given the 7:00-9:00 AM and 4:00-6:00 PM study periods so as to remain conservative.

[2] 2015 Comprehensive Plan Periodic Update, City of DuPont – Chapter 9 Transportation

4.2 Trip Distribution and Assignment

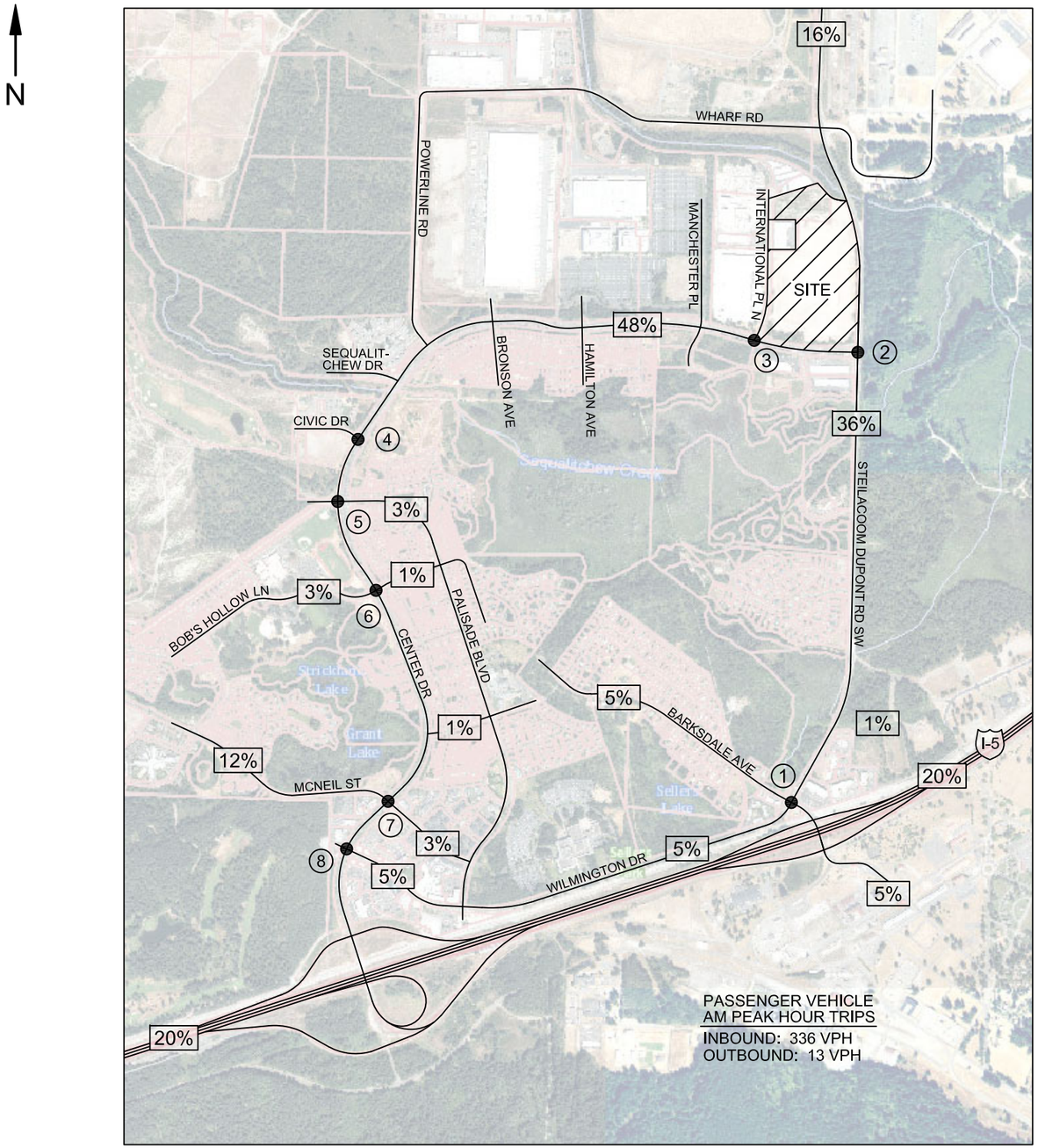
Trip distribution can be described as the travel routes to/from the subject site relative to the adjacent street system. The specific destinations and origins of the generated traffic primarily influences the key study intersections, which will effectively receive the bulk of project impacts. The trips generated by the project are expected to follow the general trip pattern as shown in Figures 4A & 4B and Figures 5A & 5B for the AM and PM peak hours, respectively. Separate distributions have been assigned to passenger and heavy vehicle trip types. Center Drive, west of the site, has a gross weight vehicle restriction of 14,000 pounds and therefore no heavy vehicles were routed to and from the west.

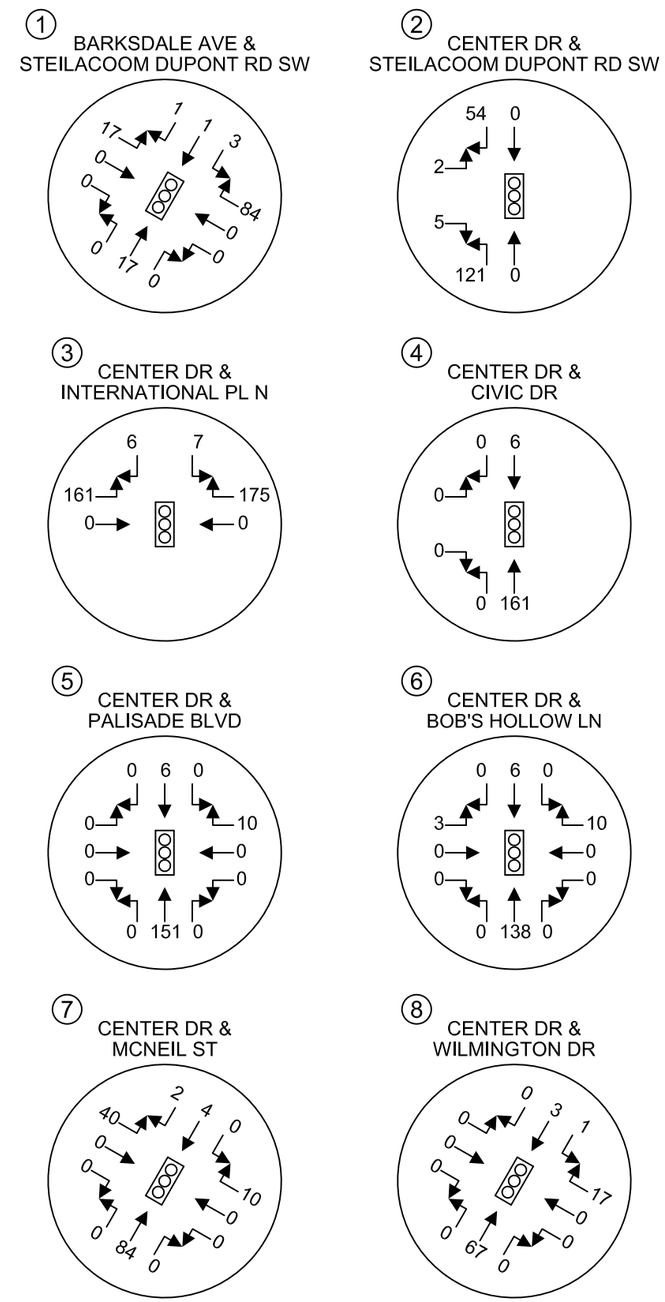
Additional trip distribution exhibits have been prepared under the following scenarios: Scenario 2 – With I-5 Interchange Project and Scenario 3 – Peak Season Volumes. These scenarios were provided as additional information for the City.

4.3 Future Peak Hour Volumes

A two-year horizon of 2022 was used for future delay analysis. The proposed building is already constructed and the developer would intend to occupy late 2021 or early 2022. Forecast 2022 background volumes were estimated by applying two assumptions: planned projects in the City that would act as pipeline; and a general background growth rate to account for other miscellaneous growth. Pipeline projects were obtained through the City and are included in the appendix. The aggregate AM and PM peak hour intersection pipeline volumes are illustrated in Figures 6A & 6B.

A general two percent compound annual growth rate was similarly applied to all existing volumes. Forecast 2022 AM and PM peak hour volumes without project (pipeline and background growth only) and with project are presented in Figures 7A & 7B and Figures 8A & 8B, respectively.





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AM PEAK HOUR TRIP DISTRIBUTION & ASSIGNMENT - PASSENGER VEHICLES

FIGURE 4A

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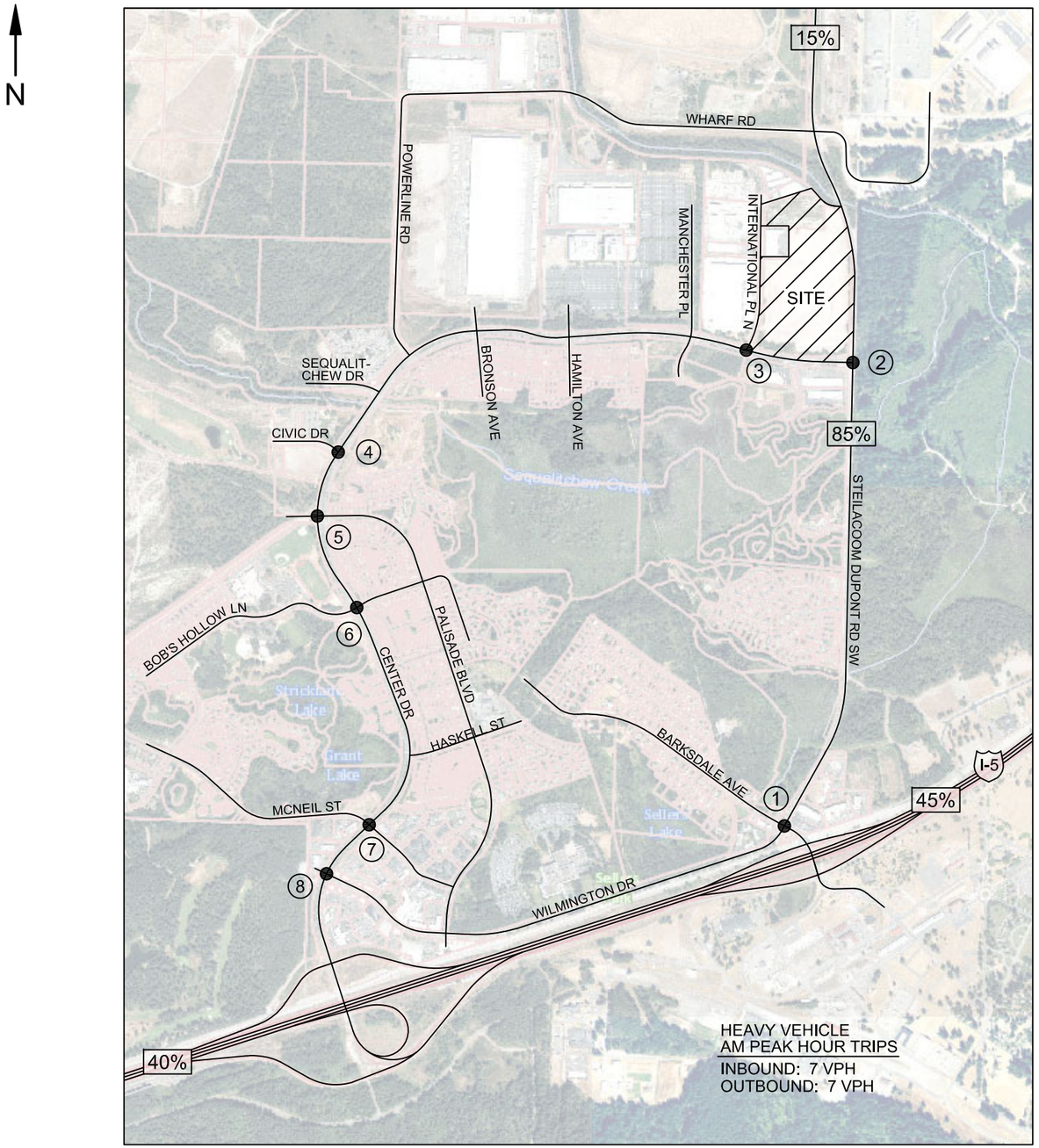

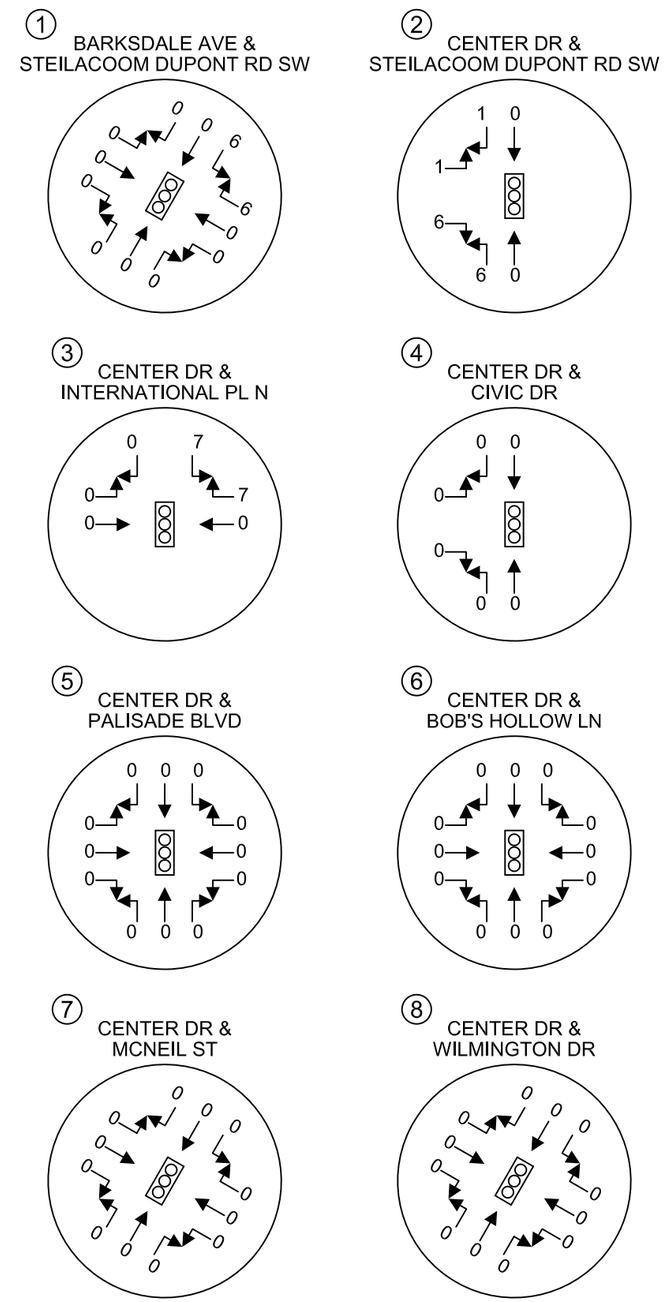

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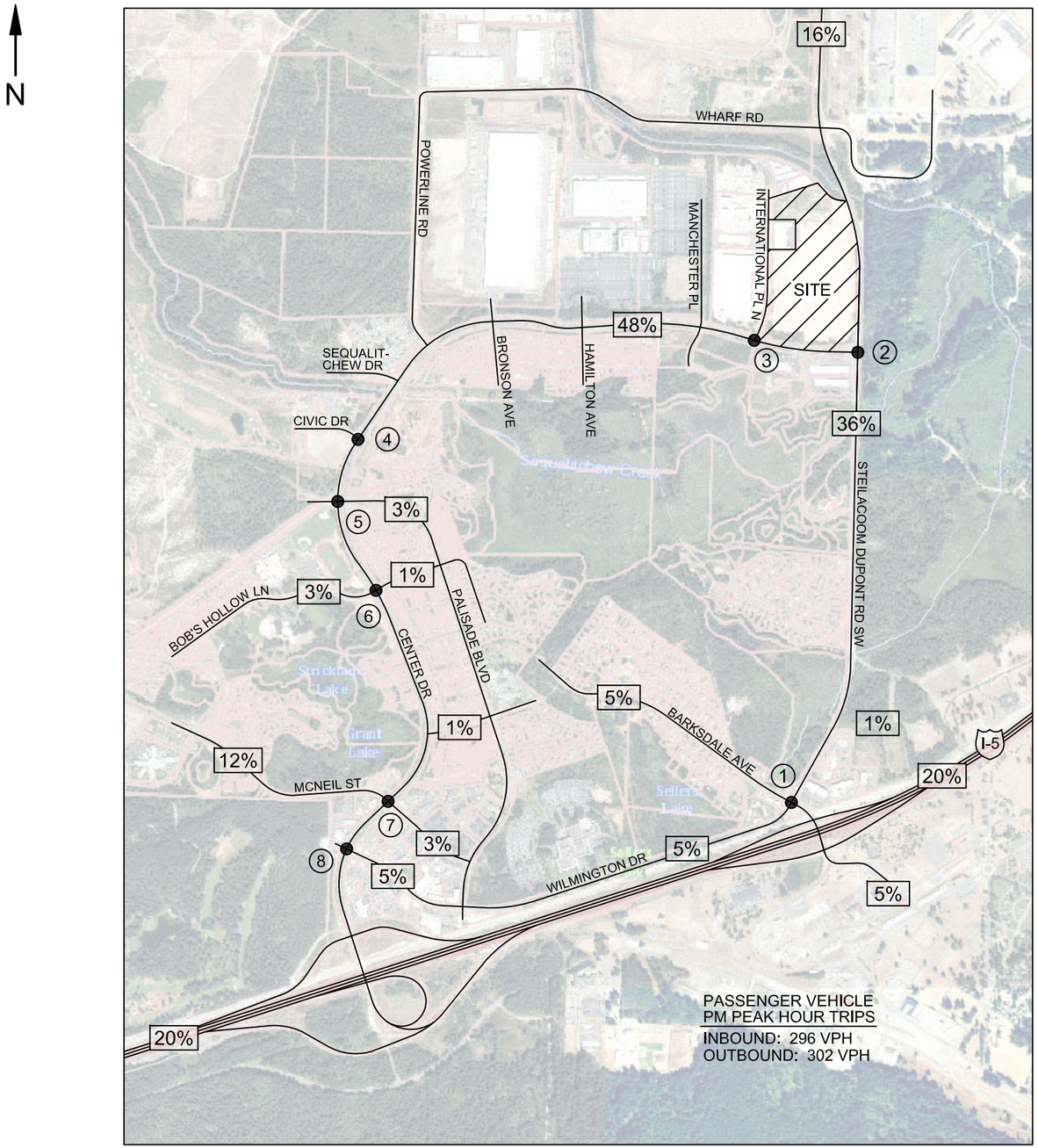
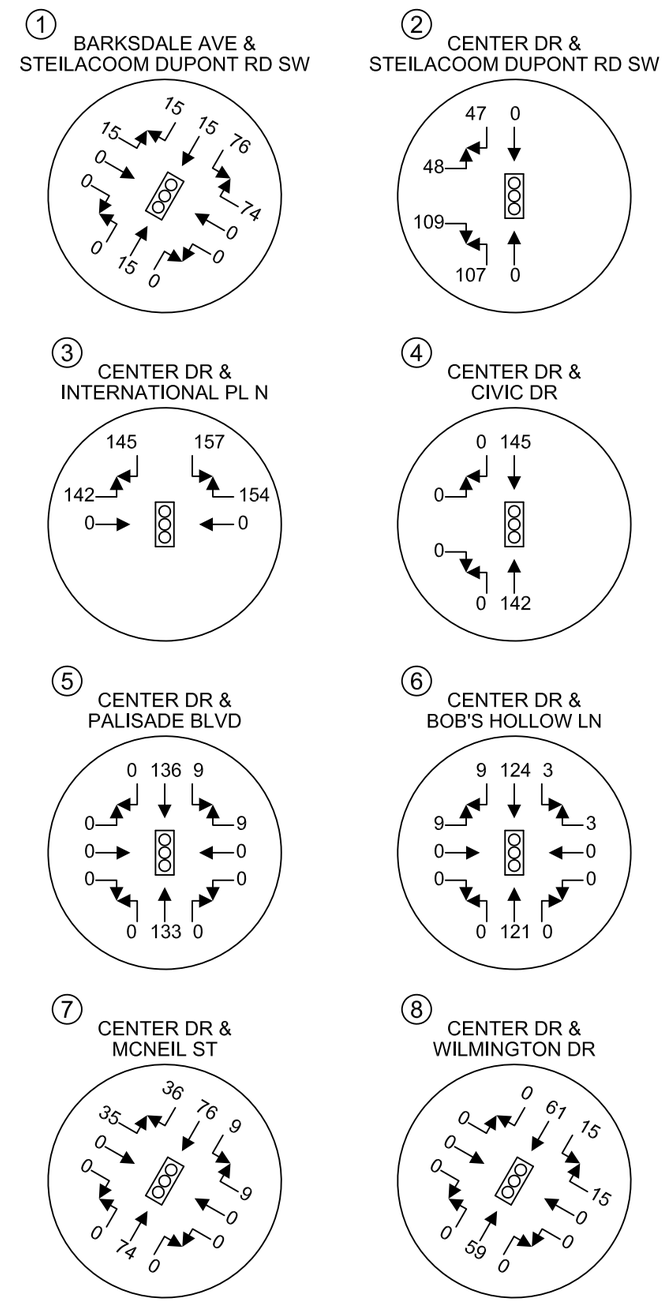
AM PEAK HOUR TRIP DISTRIBUTION & ASSIGNMENT - HEAVY VEHICLES

FIGURE 4B

2214 Tacoma Road Puyallup WA 98371 (253) 770 1401 Fax (253) 770 1473 heathtraffic.com





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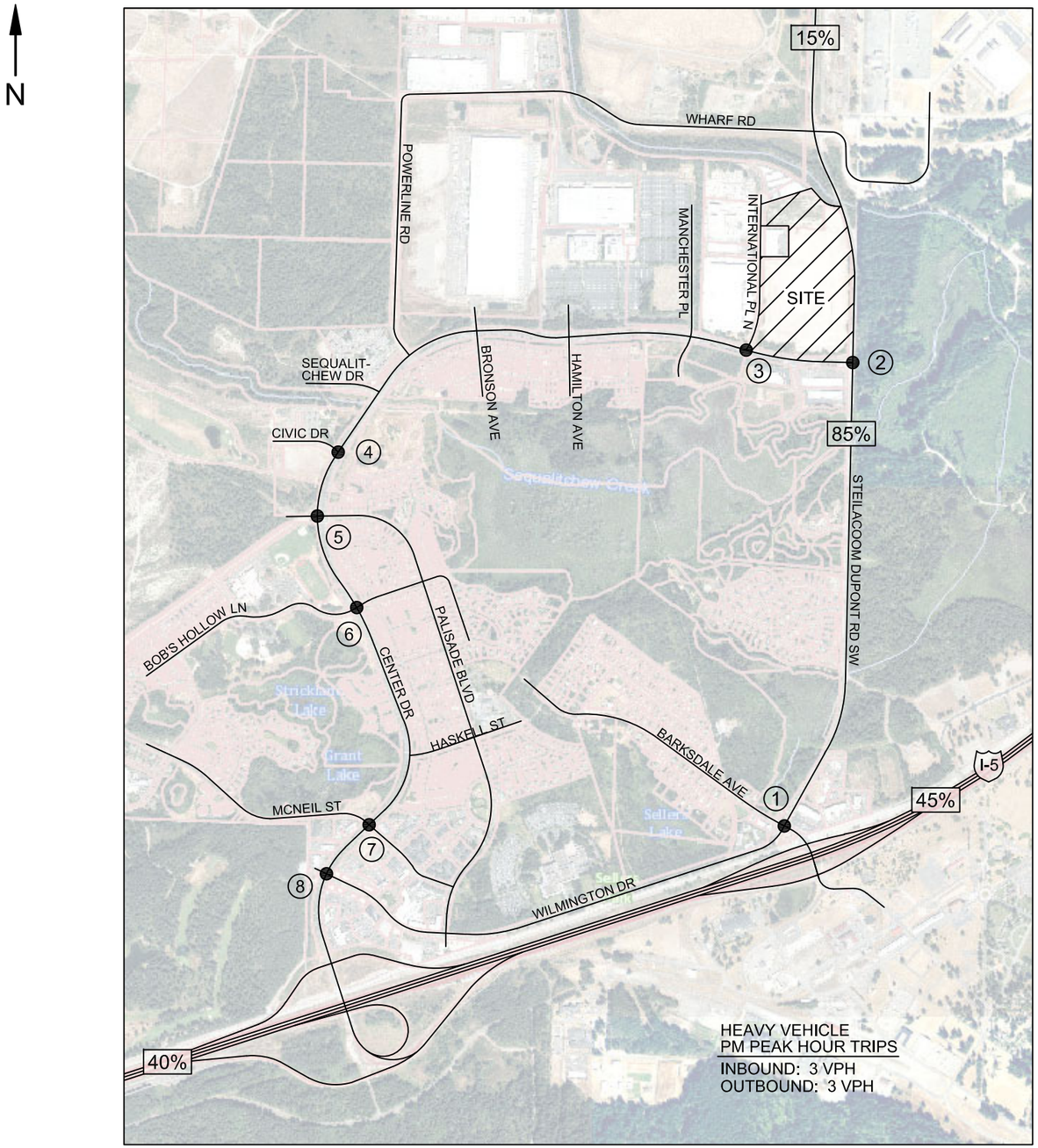
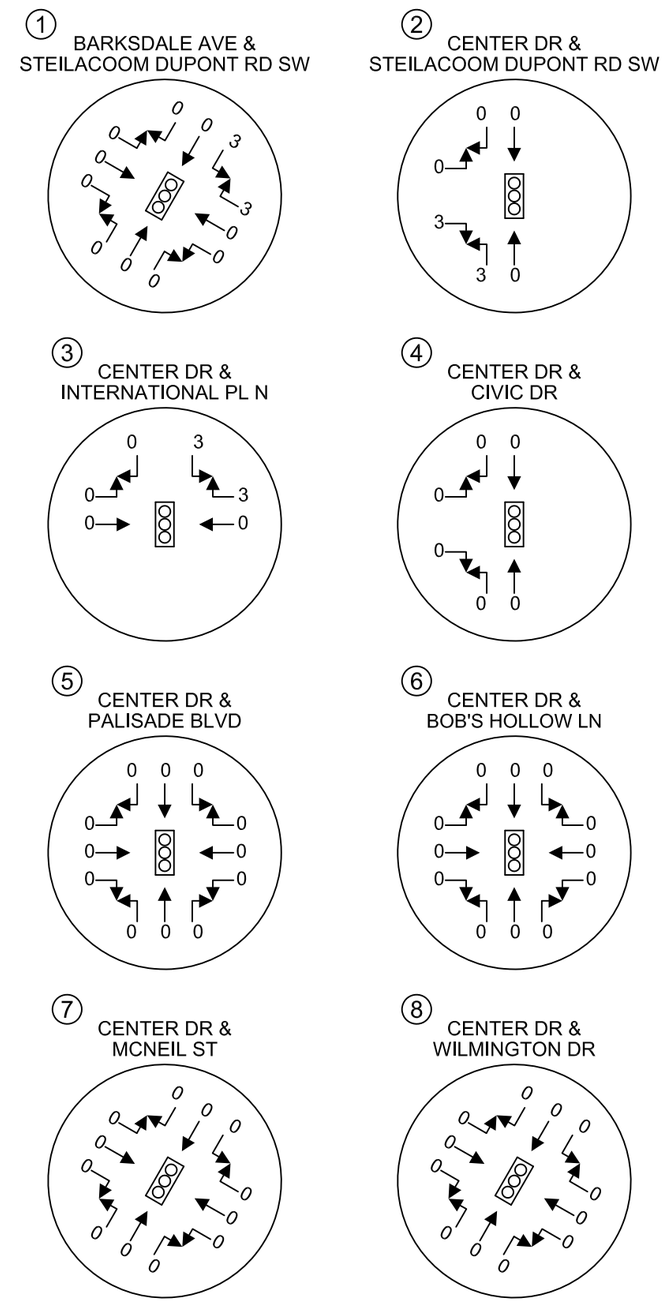
PM PEAK HOUR TRIP DISTRIBUTION & ASSIGNMENT - PASSENGER VEHICLES

FIGURE 5A

2214 Tacoma Road Puyallup WA 98371 (253) 770 1401 Fax (253) 770 1473 heathtraffic.com





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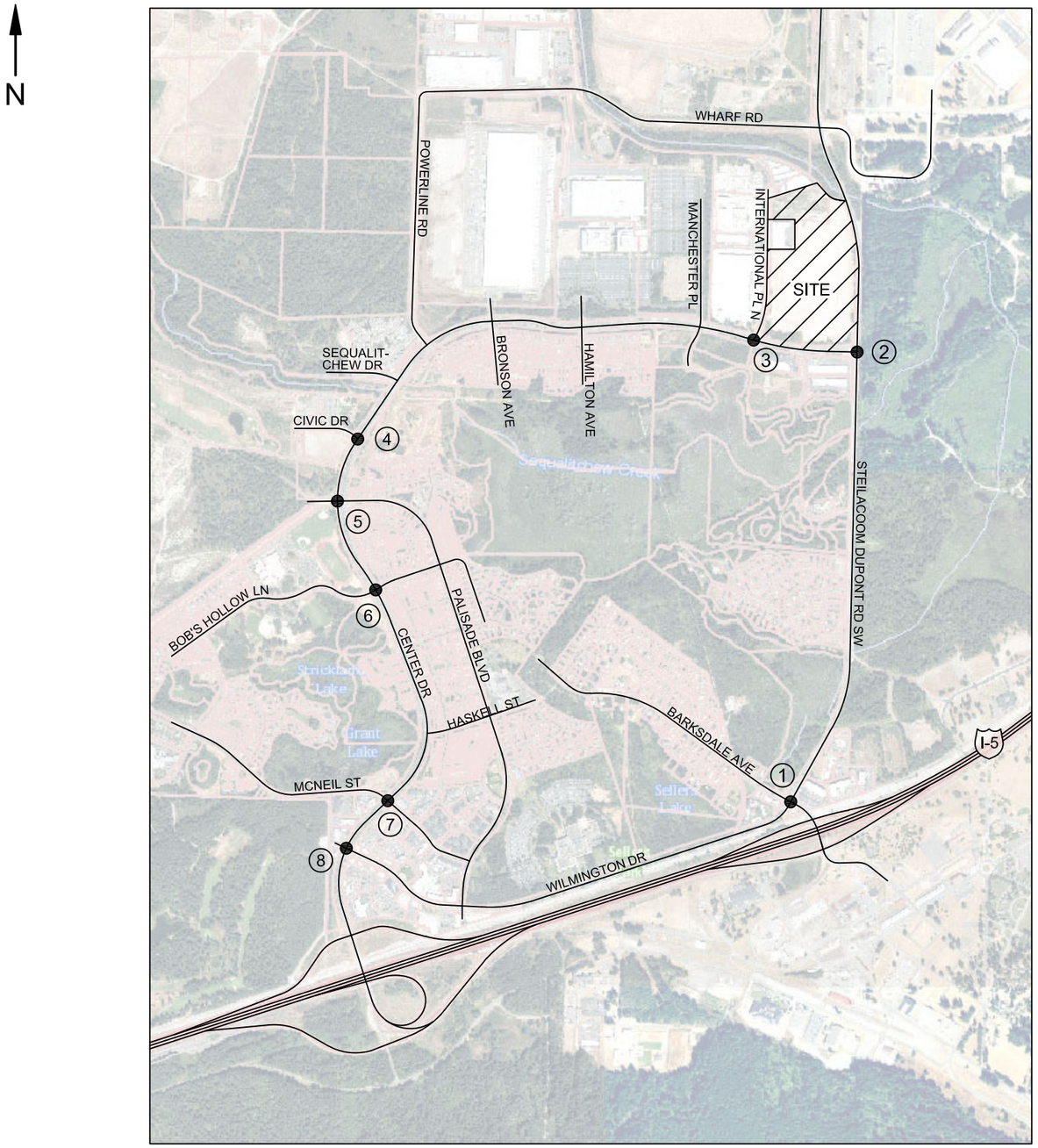
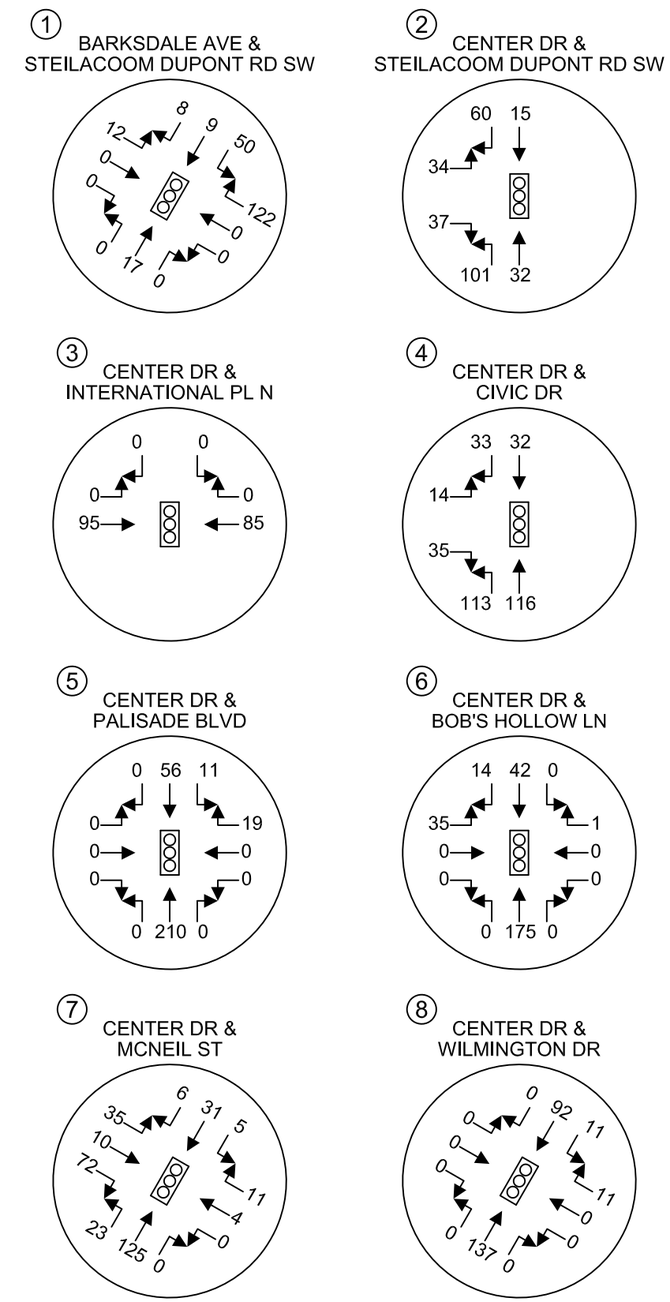
PM PEAK HOUR TRIP DISTRIBUTION & ASSIGNMENT - HEAVY VEHICLES

FIGURE 5B

2214 Tacoma Road Puyallup WA 98371 (253) 770 1401 Fax (253) 770 1473 heathtraffic.com





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AM PEAK HOUR PIPELINE VOLUMES
FIGURE 6A

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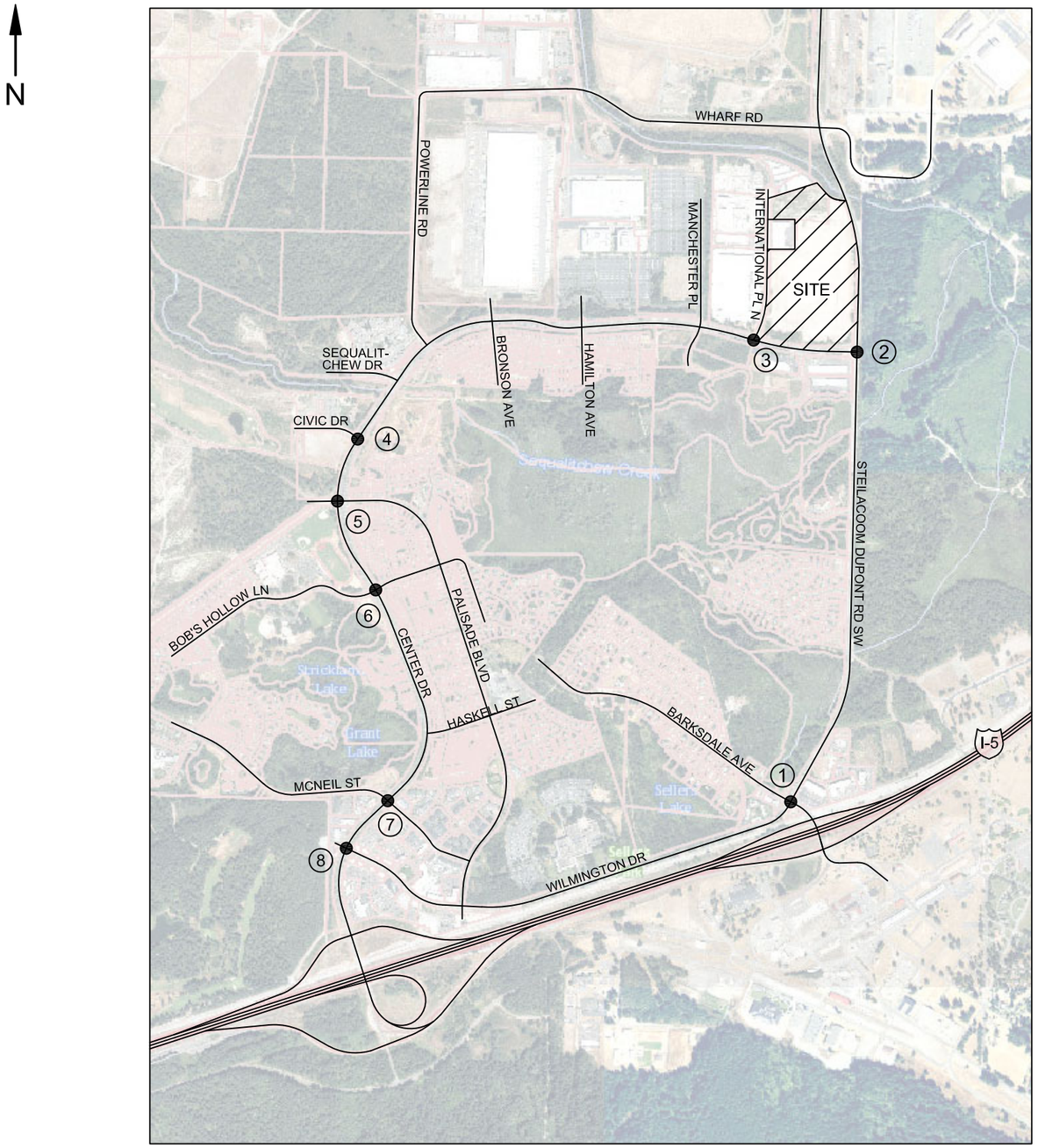

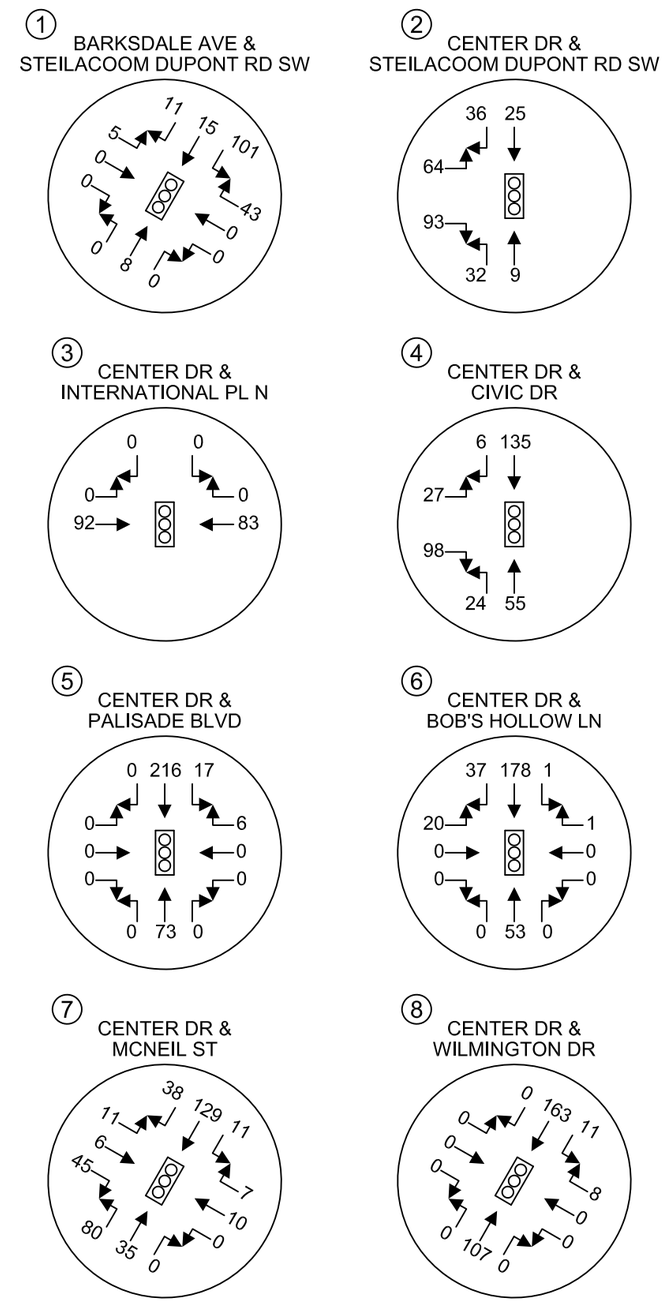

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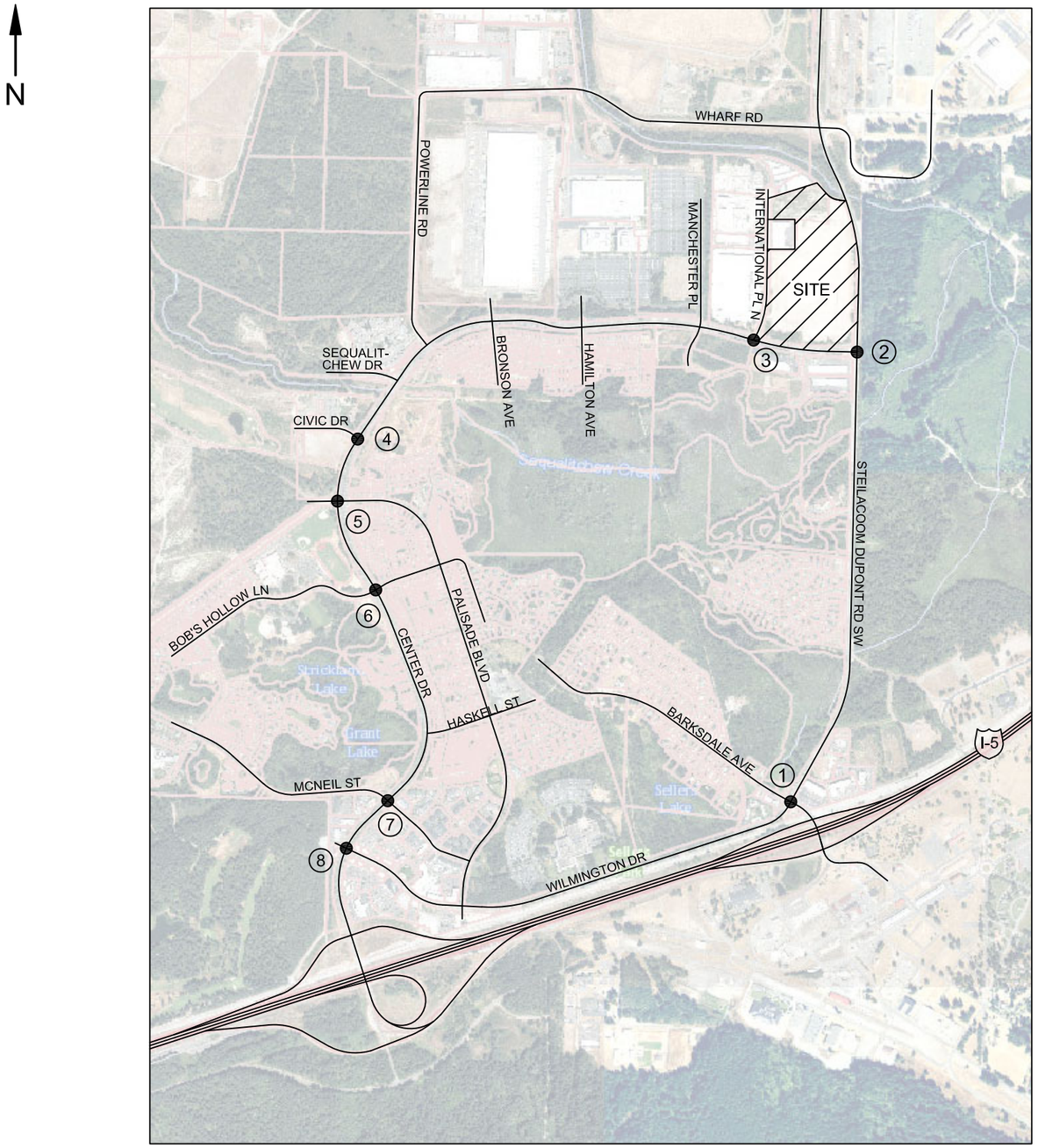
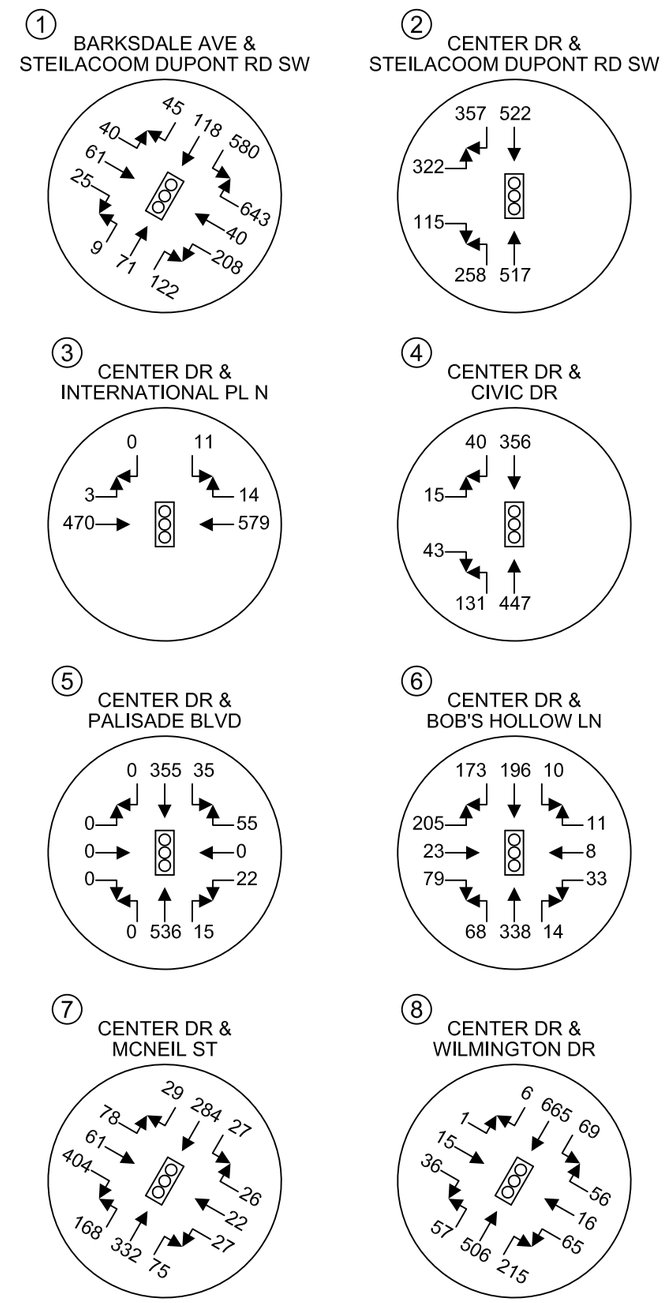
SNOW BLOSSOM FULFILLMENT CENTER

PM PEAK HOUR PIPELINE VOLUMES

FIGURE 6B

2214 Tacoma Road Puyallup WA 98371 (253) 770 1401 Fax (253) 770 1473 heathtraffic.com





HEATH & ASSOCIATES

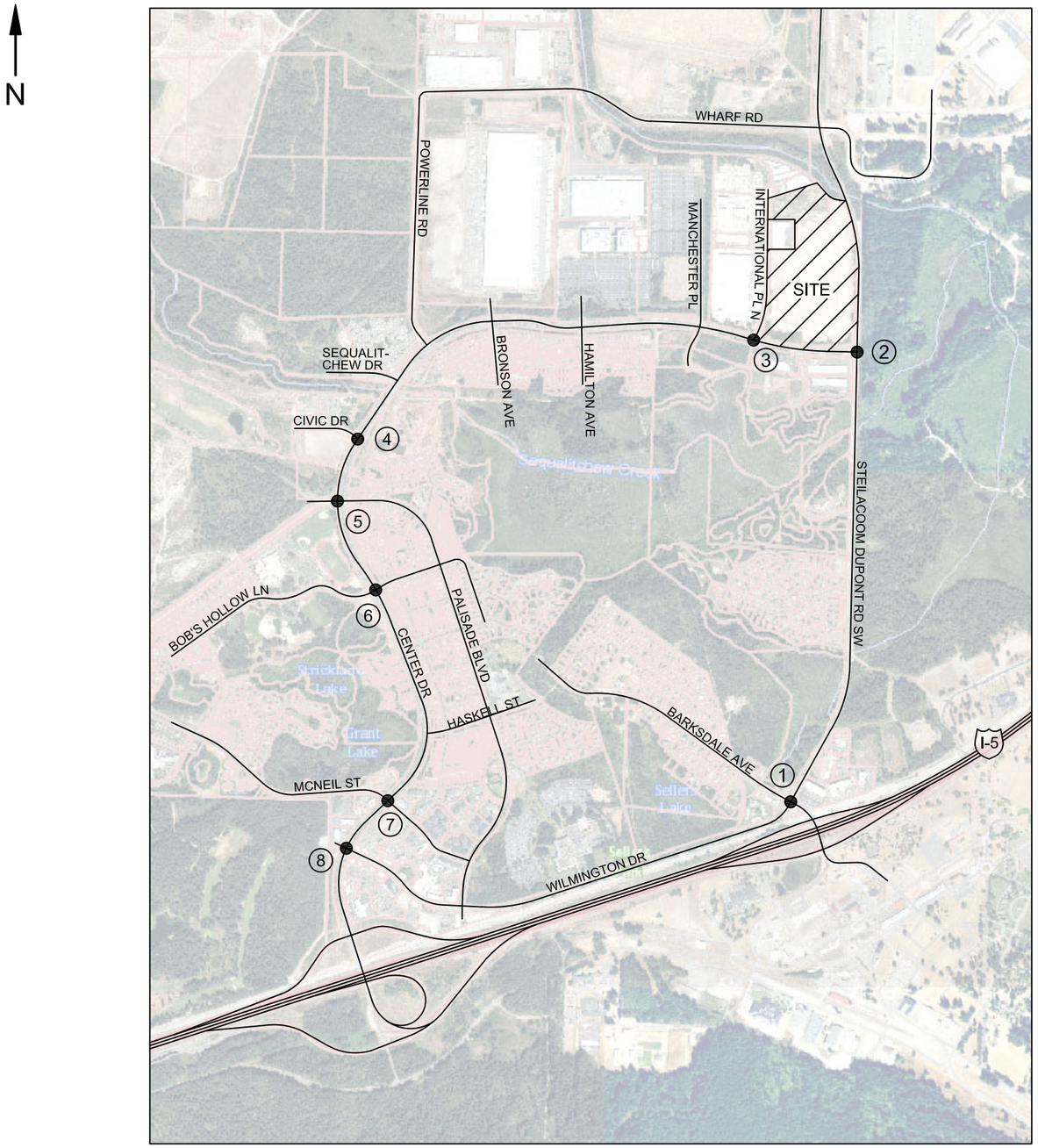
TRAFFIC AND CIVIL ENGINEERING

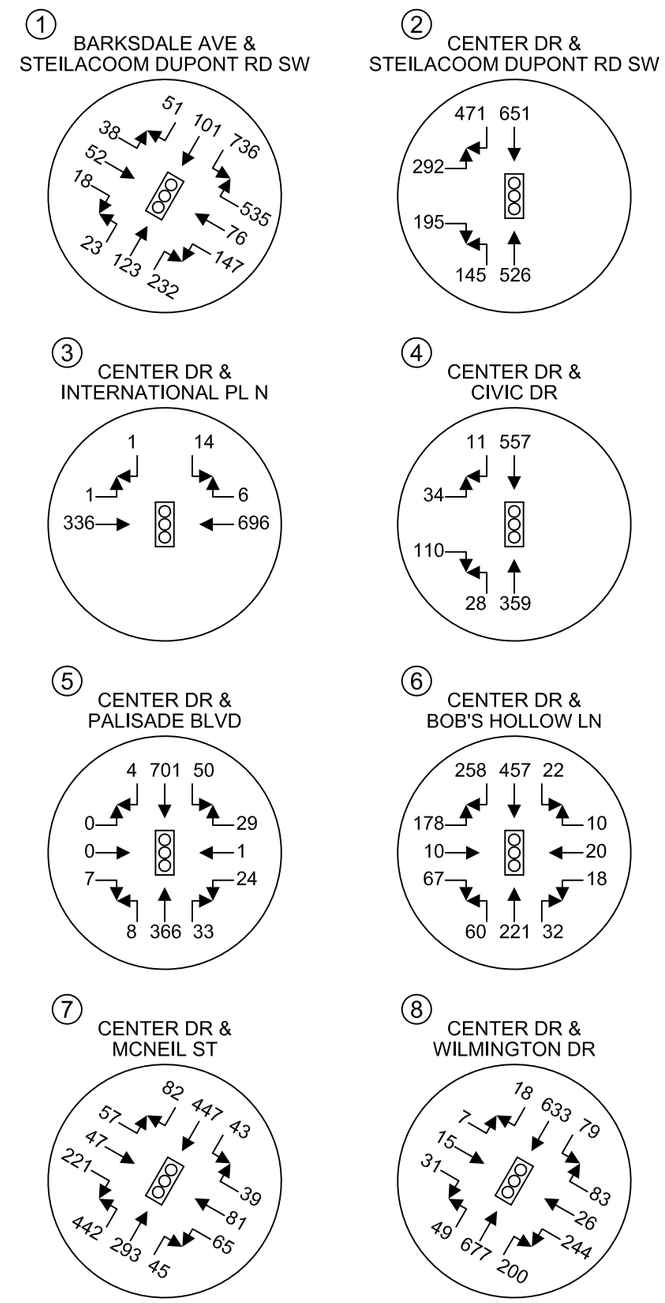
SNOW BLOSSOM FULFILLMENT CENTER

FORECAST 2022 AM PEAK HOUR BACKGROUND VOLUMES

FIGURE 7A

2214 Tacoma Road Puyallup WA 98371 (253) 770 1401 Fax (253) 770 1473 heathtraffic.com





HEATH & ASSOCIATES

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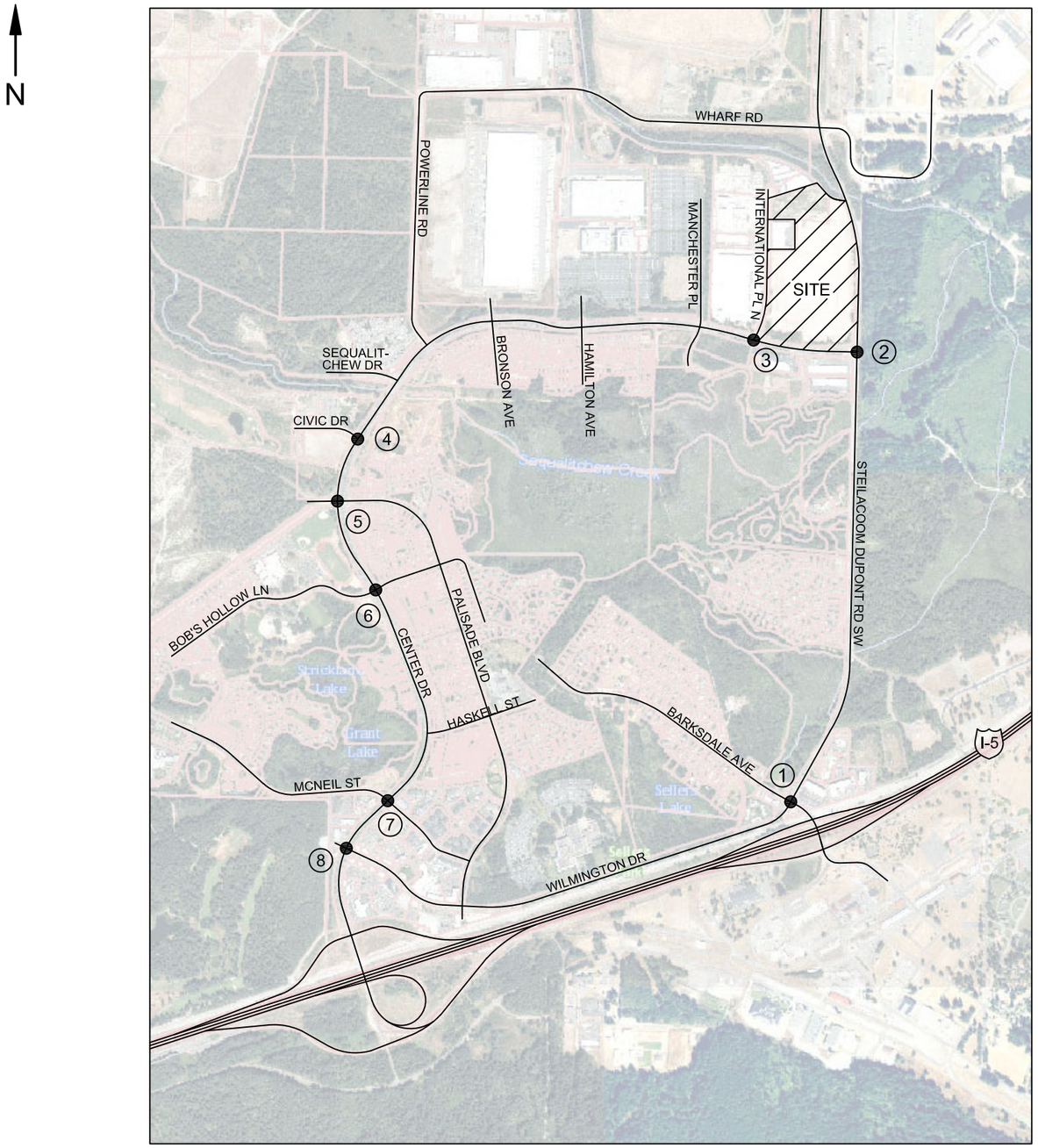
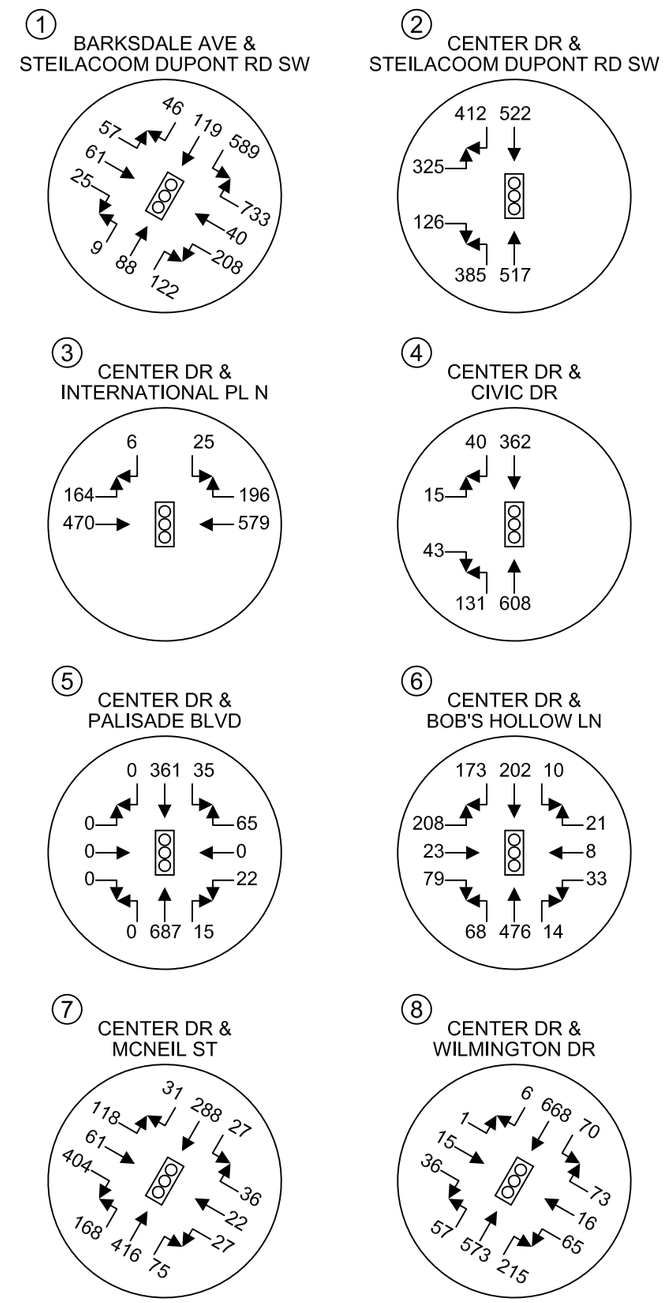
SNOW BLOSSOM FULFILLMENT CENTER

FORECAST 2022 PM PEAK HOUR BACKGROUND VOLUMES

FIGURE 7B

2214 Tacoma Road Puyallup WA 98371 (253) 770 1401 Fax (253) 770 1473 heathtraffic.com





HEATH & ASSOCIATES

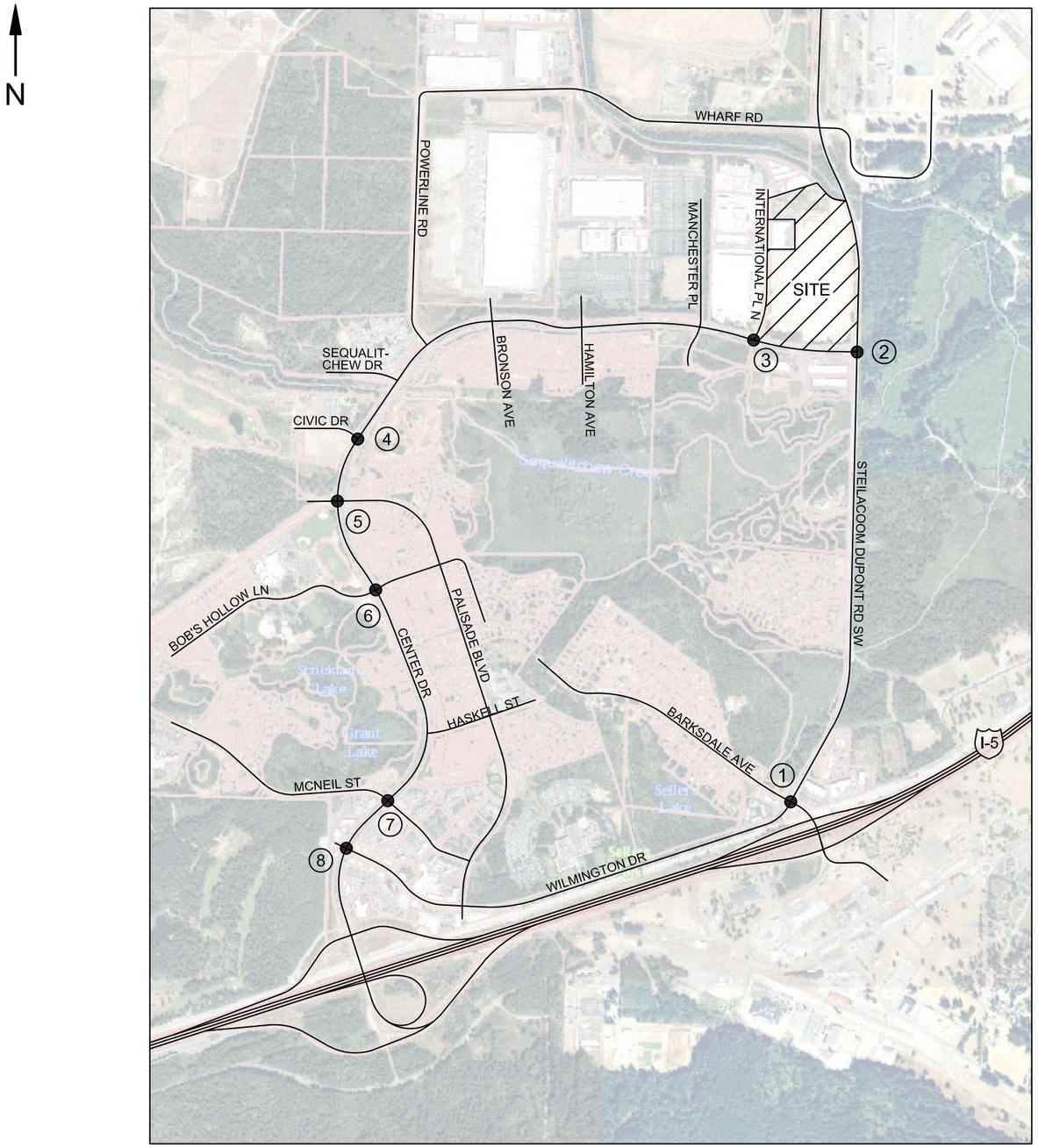
TRAFFIC AND CIVIL ENGINEERING

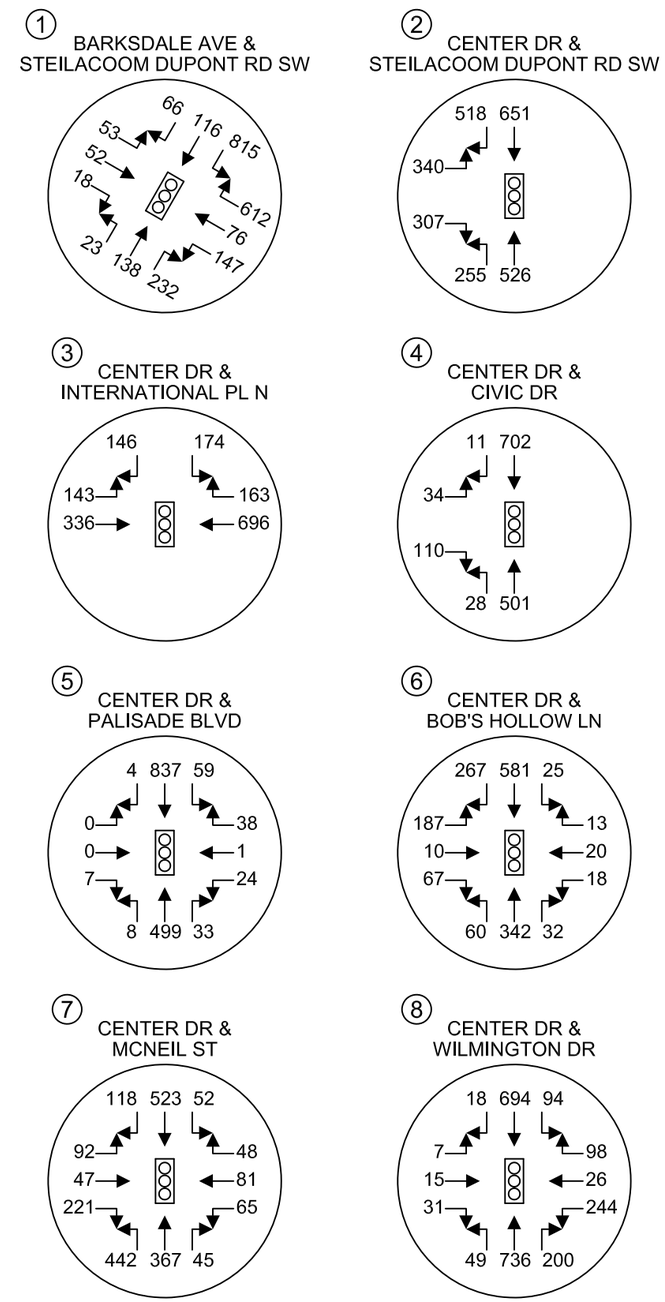
SNOW BLOSSOM FULFILLMENT CENTER

FORECAST 2022 AM PEAK HOUR VOLUMES WITH PROJECT

FIGURE 8A

2214 Tacoma Road Puyallup WA 98371 (253) 770 1401 Fax (253) 770 1473 heathtraffic.com





HEATH & ASSOCIATES

TRAFFIC AND CIVIL ENGINEERING

SNOW BLOSSOM FULFILLMENT CENTER

FORECAST 2022 PM PEAK HOUR VOLUMES WITH PROJECT

FIGURE 8B

2214 Tacoma Road Puyallup WA 98371 (253) 770 1401 Fax (253) 770 1473 heathtraffic.com

4.4 Future Level of Service

Level of Service calculations were made for future conditions without (background) and with project-generated traffic added to the adjacent street network. Table 4 below portrays forecast LOS delays for the intersections of study.

Table 4: Forecast 2022 Peak Hour Level of Service

Delays given in seconds per vehicle

				Without Project		With Project	
Map ID	Intersection	Control	Peak Hour	LOS	Delay	LOS	Delay
1	Barksdale Ave & Steilacoom DuPont Rd / Wilmington Dr	Signal	AM	C	26.2	C	27.0
			PM	C	26.8	C	28.9
2	Center Drive & Steilacoom DuPont Rd	Signal	AM	C	21.0	C	30.9
			PM	B	17.7	C	29.4
3	Center Drive & International Place N	Signal	AM	A	2.8	A	8.3
			PM	A	3.1	B	13.7
4	Center Drive & Civic Drive	Signal	AM	A	5.6	A	6.1
			PM	A	6.8	A	7.1
5	Center Drive & Palisade Blvd	Signal	AM	A	6.3	A	6.7
			PM	A	7.2	A	7.3
6	Center Drive & Bob's Hollow Ln	Signal	AM	B	13.4	B	13.6
			PM	B	12.2	B	12.8
7	Center Drive & McNeil Street	Signal	AM	B	14.9	C	26.1
			PM	C	30.7	D	42.3
8	Center Drive & Wilmington Drive	Signal	AM	A	9.1	A	9.2
			PM	B	14.0	B	14.4

As shown in Table 4, all study intersections are anticipated to remain meeting the city of DuPont's LOS D standards. No operational deficiencies are identified as a result of the project.

4.5 Queuing

As part of the project evaluation, the City requested two specific movements to examine in terms of vehicle queuing: northbound left-turns at Steilacoom DuPont Road & Center Drive and eastbound left-turns at Center Drive & International Place N. A queuing analysis can determine whether there is sufficient storage capacity to accommodate turning demands during peak periods and avoid any spillover to the advancing through lanes.

Queues were estimated through the use of *SimTraffic*, a traffic simulation modeling program, in conjunction with *Synchro 10*. Using peak hour volumes under forecast 2022 conditions, 5 one-hour simulations were performed under each scenario to determined average queue lengths. As requested, the project's "non-peak" and "peak" conditions were both evaluated. Queue outputs are summarized in the table below.

Table 5: Forecast 2022 Queuing

Center Street at	Approach	Non-Peak Season				Peak Season			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Avg.	95th	Avg.	95th	Avg.	95th	Avg.	95th
Steilacoom DuPont Rd	NB LT	267'	303'	221'	308'	270'	296'	255'	311'
International Place	WB LT	52'	92'	66'	113'	69'	71'	95'	157'

Center Street & Steilacoom DuPont Road: is a signalized intersection offering approximately 250-feet of storage for the northbound left-turn before the lane striping transitions into a two-way left-turn lane. The max queue was estimated at 311 feet, which exceeds the storage capacity. However, no driveways exist south of the intersection where blocking conflicts would occur. Additional green time allocation and signal timing adjustments for the northbound left-turn phase could be implemented, should queuing become an issue.

Also of note: intersection improvements are identified at this location under the City's Six Year Transportation Improvement Plan. A consideration may be for the City to examine the benefits of dual northbound left-turn lanes. Dual left-turn lanes are generally considered when left-turn volumes exceed 300 vehicles per hour[3] provided that opposing volumes are moderate to high. Dual left-turn lanes can also allow for a shorter cycle while increasing left-turn capacity and allocate green time to other critical movements. However, with no queuing conflicts and acceptable service levels, dual left-turn lanes may not be needed until further demand and growth occur.

Center Drive & International Place: has recently been converted from stop-control to signalization with a new stop-bar and crosswalk located along the west leg. The eastbound left-turn lane has approximately 125-feet of storage as delineated by the solid white lane marking. An additional approximately 50 feet is available as the deceleration area before the tapers begin which can also be used to store vehicles under congested conditions. In total, approximately 175-feet of storage capacity is available which is shown to accommodate forecast peak demands under all scenarios.

[3] Federal Highway Administration Research and Technology

5. SUMMARY

Snow Blossom Fulfillment Center proposes to occupy an existing warehouse and add a mezzanine (totaling 797,794 square feet) for the use of a hazmat fulfillment center. The subject site is located on the northwest corner of Steilacoom DuPont Road & Center Drive and has multiple access driveways along International Place N. A site plan illustrating the building and parking configuration is presented in Figure 2.

The site can be expected to generate approximately 2,167 average weekday daily trips with 363 trips occurring during the AM peak hour and 604 during the PM peak hour. These volume estimates were derived from data provided by the client from a number of similar facilities and are representative of typical operations. Additional volume increases would be expected during the peak holiday season with volume and distribution estimations supplied in the appendix. The majority of traffic would be in the form of employee vehicles and delivery vans with relatively low amounts of heavy vehicles. A total of eight intersections within the city were selected for examination as part of this impact analysis. Existing conditions and a list of the study intersections are summarized in Table 2.

A two-year horizon was analyzed to assess project impacts subsequent to occupancy. Background growth rates and traffic volumes from nearby planned developments were included in the forecast analysis. All study intersections are shown to continue to meet the City of DuPont's LOS D standards for both AM and PM peak hours. No intersection or operational deficiencies were identified as a result of the proposed tenant occupancy. Queuing analyses were performed for the northbound left-turn approach at Steilacoom DuPont Road & Center Drive and the eastbound left-turn approach at Center Drive and International Place N with findings summarized in Table 5. Queuing was shown to exceed the 250-foot storage capacity for the northbound left-turn lane along Steilacoom DuPont Road at Center Drive with approximately 311 feet during the PM peak season period. However, additional storage is available as the lane transitions into a two-way left turn lane with no nearby driveways that would be obstructed. The City may want to consider dual left-turn lanes though the forecast Level of Service was shown to be acceptable. Additional green time allocation or other signal adjustments may also mitigate the left-turn queues.

Based on the findings above, no offsite mitigation is identified at this time.

SNOW BLOSSOM FULFILLMENT CENTER
TRAFFIC IMPACT ANALYSIS

APPENDIX

INTERSECTION COUNT SHEETS

Prepared for: **Geralyn Reinart, P.E.**

Traffic Count Consultants, Inc.

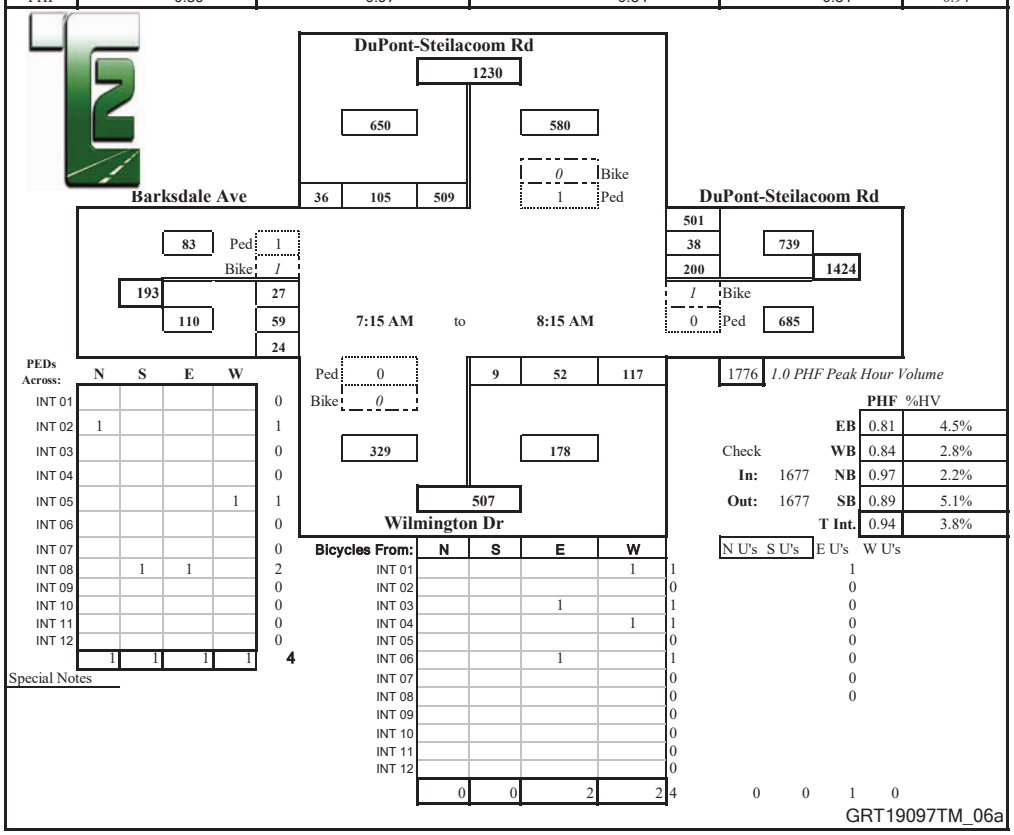
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: DuPont-Steilacoom Rd/Wilmington Dr & DuPont-Steilacoom Rd/Barksdale Ave **Date of Count:** Thurs 10/03/2019

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

Time Interval Ending at	From North on (SB) DuPont-Steilacoom Rd				From South on (NB) Wilmington Dr				From East on (WB) DuPont-Steilacoom Rd				From West on (EB) Barksdale Ave				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
7:15 A	2	112	8	8	1	0	6	32	6	43	14	136	0	6	12	2	379
7:30 A	2	108	30	10	1	3	10	32	4	57	10	154	0	10	16	4	444
7:45 A	10	136	23	7	1	1	11	31	8	47	5	151	0	4	16	4	436
8:00 A	12	137	33	13	1	2	13	31	2	56	12	98	3	8	8	6	417
8:15 A	9	128	19	6	1	3	18	23	7	40	11	98	2	5	19	10	380
8:30 A	11	105	19	10	0	3	14	41	3	36	9	106	0	12	12	3	370
8:45 A	14	120	14	12	0	7	16	49	3	27	16	106	1	11	13	8	399
9:00 A	3	90	12	10	1	5	10	34	5	35	11	126	1	10	16	10	369
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	63	936	158	76	6	24	98	273	38	341	88	975	7	66	112	47	3194
Peak Hour: 7:15 AM to 8:15 AM																	
Total	33	509	105	36	4	9	52	117	21	200	38	501	5	27	59	24	1677
Approach	650				178				739				110				1677
%HV	5.1%				2.2%				2.8%				4.5%				3.8%
PHF	0.89				0.97				0.84				0.81				0.94



Prepared for: **Geralyn Reinart, P.E.**

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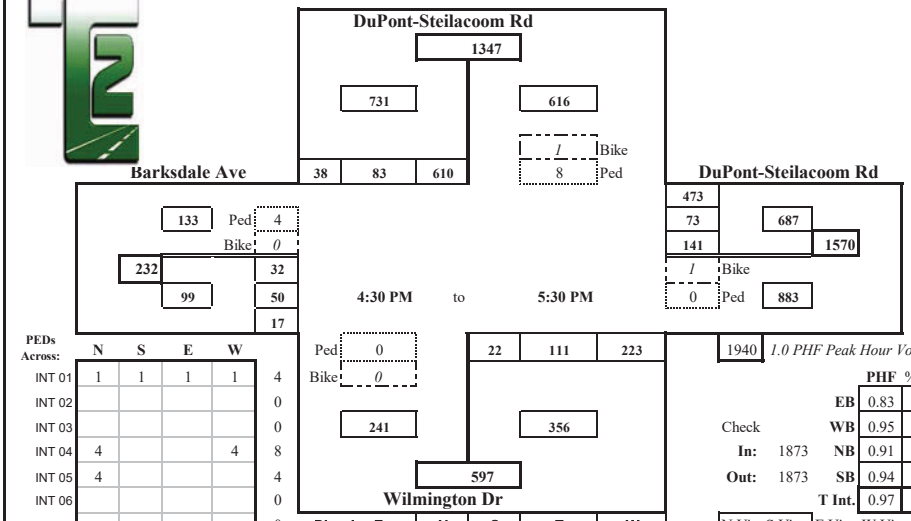
Ending at	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	7	131	9	5	2	8	25	54	2	32	16	110	1	11	20	7	428
4:30 P	4	167	13	10	0	4	12	31	1	36	20	114	0	10	19	5	441
4:45 P	4	167	16	7	1	4	23	61	5	26	20	119	1	6	8	3	460
5:00 P	0	146	20	15	2	9	41	48	6	38	10	132	1	8	14	4	485
5:15 P	4	160	26	8	0	5	28	46	3	31	19	117	0	8	12	6	466
5:30 P	4	137	21	8	0	4	19	68	4	46	24	105	0	10	16	4	462
5:45 P	3	124	15	8	1	3	27	57	1	46	21	123	1	8	11	5	448
6:00 P	3	97	15	2	0	2	13	34	3	38	18	125	1	10	12	8	374
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	29	1129	135	63	6	39	188	399	25	293	148	945	5	71	112	42	3564
	Peak Hour: 4:30 PM to 5:30 PM																
Total	12	610	83	38	3	22	111	223	18	141	73	473	2	32	50	17	1873
Approach	731				356				687				99				1873
%HV	1.6%				0.8%				2.6%				2.0%				1.9%
PHF	0.94				0.91				0.95				0.83				0.97



1940 *1.0 PHF Peak Hour Volume*

		PHF	%HV
	EB	0.83	2.0%
Check	WB	0.95	2.6%
In: 1873	NB	0.91	0.8%
Out: 1873	SB	0.94	1.6%
	T Int.	0.97	1.9%

PEDs Across:	N	S	E	W	
INT 01	1	1	1	1	4
INT 02					0
INT 03					0
INT 04	4			4	8
INT 05	4				4
INT 06					0
INT 07					0
INT 08					0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	9	1	1	5	16

Special Notes

Bicycles From:	N	S	E	W		N U's	S U's	E U's	W U's
INT 01			1		1	0			
INT 02					0	0			
INT 03			1		1	0			
INT 04					0	1			
INT 05					0	0			
INT 06	1				1	0			
INT 07	1				1	0			
INT 08				1	1	0			
INT 09					0				
INT 10					0				
INT 11					0				
INT 12					0				
	2	0	2	1	5	1	0	0	0

GRT19097TM_06p

Prepared for: **Geralyn Reinart, P.E.**

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WBE/DBE

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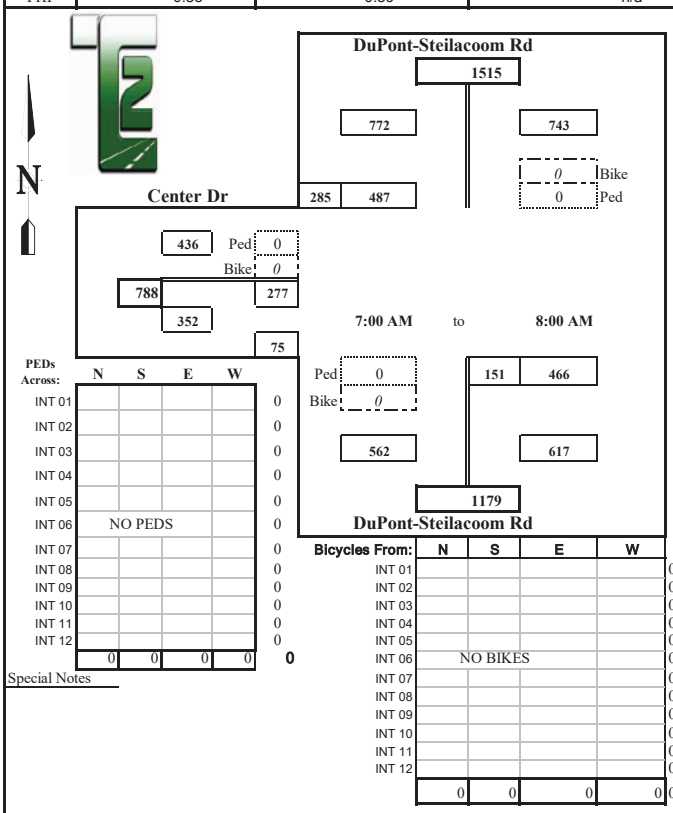
Location: DuPont, Washington
Date of Count: Thurs 10/03/2019
Checked By: Jess

Time Interval Ending at	From North on (SB) DuPont-Steilacoom Rd				From South on (NB) DuPont-Steilacoom Rd				From East on (WB) 0				From West on (EB) Center Dr				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
7:15 A	3	0	90	36	9	35	125	0	0	0	0	0	2	87	0	22	395
7:30 A	5	0	128	72	5	49	117	0	0	0	0	0	2	70	0	11	447
7:45 A	9	0	140	93	8	34	139	0	0	0	0	0	6	60	0	16	482
8:00 A	7	0	129	84	4	33	85	0	0	0	0	0	3	60	0	26	417
8:15 A	9	0	120	55	6	20	88	0	0	0	0	0	9	85	0	17	385
8:30 A	12	0	109	43	4	20	105	0	0	0	0	0	4	53	0	18	348
8:45 A	10	0	95	30	4	22	109	0	0	0	0	0	7	85	0	28	369
9:00 A	5	0	73	32	6	20	108	0	0	0	0	0	2	102	0	28	363
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	60	0	884	445	46	233	876	0	0	0	0	0	35	602	0	166	3206
	Peak Hour: 7:00 AM to 8:00 AM																
Total	24	0	487	285	26	151	466	0	0	0	0	0	13	277	0	75	1741
Approach	772				617				0				352				1741
%HV	3.1%				4.2%				n/a				3.7%				3.6%
PHF	0.83				0.89				n/a				0.81				0.90



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

Special Notes

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

1928 *1.0 PHF Peak Hour Volume*

		PHF	%HV
	EB	0.81	3.7%
Check	WB	n/a	n/a
In: 1741	NB	0.89	4.2%
Out: 1741	SB	0.83	3.1%
	T Int.	0.90	3.6%

Conditions:

GRT19097TM_05a

Prepared for: **Geralyn Reinart, P.E.**

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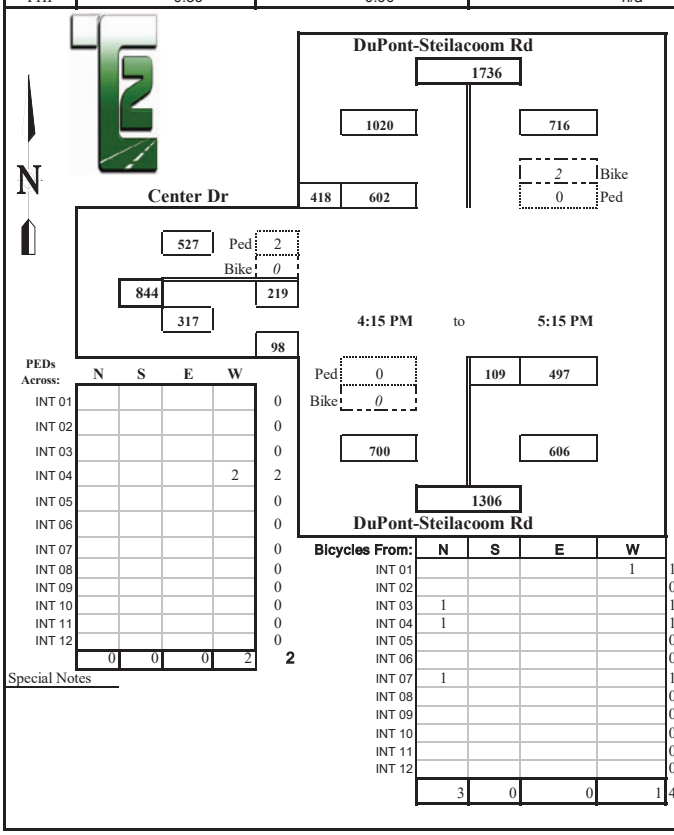
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	6	0	128	67	5	20	105	0	0	0	0	0	5	35	0	28	383
4:30 P	3	0	155	75	3	26	105	0	0	0	0	0	5	55	0	28	444
4:45 P	2	0	122	95	7	20	124	0	0	0	0	0	5	55	0	34	450
5:00 P	0	0	165	121	7	38	130	0	0	0	0	0	0	54	0	15	523
5:15 P	4	0	160	127	8	25	138	0	0	0	0	0	2	55	0	21	526
5:30 P	0	0	123	115	3	32	99	0	0	0	0	0	3	55	0	17	441
5:45 P	0	0	102	96	2	40	82	0	0	0	0	0	4	66	0	20	406
6:00 P	3	0	79	82	5	47	98	0	0	0	0	0	2	57	0	17	380
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	18	0	1034	778	40	248	881	0	0	0	0	0	26	432	0	180	3553
Peak Hour: 4:15 PM to 5:15 PM																	
Total	9	0	602	418	25	109	497	0	0	0	0	0	12	219	0	98	1943
Approach	1020				606				0				317				1943
%HV	0.9%				4.1%				n/a				3.8%				2.4%
PHF	0.89				0.90				n/a				0.89				0.92



PEDs Across:	N	S	E	W	
INT 01					0
INT 02					0
INT 03					0
INT 04				2	2
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	2	2

Special Notes

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

2104 *1.0 PHF Peak Hour Volume*

		PHF	%HV
	EB	0.89	3.8%
Check	WB	n/a	n/a
In: 1943	NB	0.90	4.1%
Out: 1943	SB	0.89	0.9%
	T Int.	0.92	2.4%

Conditions:

GRT19097TM_05p

Prepared for: **PH Consulting LLC**

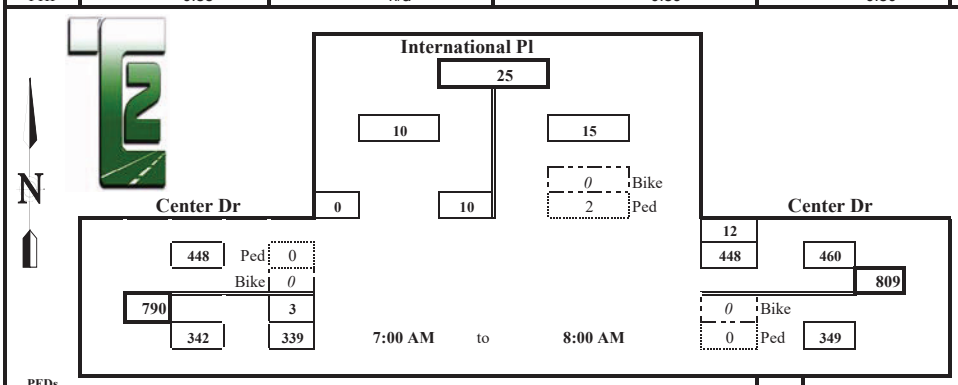
Traffic Count Consultants, Inc.

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

WBE/DBE

Intersection: International Pl & Center Dr
Location: Dupont, Washington
Date of Count: Tues 10/03/2017
Checked By: Jess

Time Interval Ending at	From North on (SB) International Pl				From South on (NB) 0				From East on (WB) Center Dr				From West on (EB) Center Dr				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
7:15 A	3	3	0	0	0	0	0	0	3	0	88	3	3	0	107	0	201
7:30 A	2	2	0	0	0	0	0	0	6	0	115	5	0	0	77	0	199
7:45 A	3	3	0	0	0	0	0	0	2	0	119	1	0	1	77	0	201
8:00 A	2	2	0	0	0	0	0	0	11	0	126	3	4	2	78	0	211
8:15 A	2	2	0	0	0	0	0	0	1	0	65	1	4	0	78	0	146
8:30 A	2	1	0	1	0	0	0	0	2	0	40	1	3	0	81	0	124
8:45 A	2	2	0	0	0	0	0	0	6	0	55	4	0	0	99	0	160
9:00 A	1	1	0	0	0	0	0	0	2	0	44	1	4	0	144	0	190
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	17	16	0	1	0	0	0	0	33	0	652	19	18	3	741	0	1432
Peak Hour: 7:00 AM to 8:00 AM																	
Total	10	10	0	0	0	0	0	0	22	0	448	12	7	3	339	0	812
Approach	10				0				460				342				812
%HV	100.0%				n/a				4.8%				2.0%				4.8%
PHF	0.83				n/a				0.89				0.80				0.96



844 *1.0 PHF Peak Hour Volume*

PEDs Across:	N	S	E	W	
INT 01					0
INT 02	2				2
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
	2	0	0	0	2

Special Notes

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

		PHF	%HV
	EB	0.80	2.0%
Check	WB	0.89	4.8%
In: 812	NB	n/a	n/a
Out: 812	SB	0.83	100.0%
	T Int.	0.96	4.8%

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

PHC17102M_01a

Prepared for: **PH Consulting LLC**

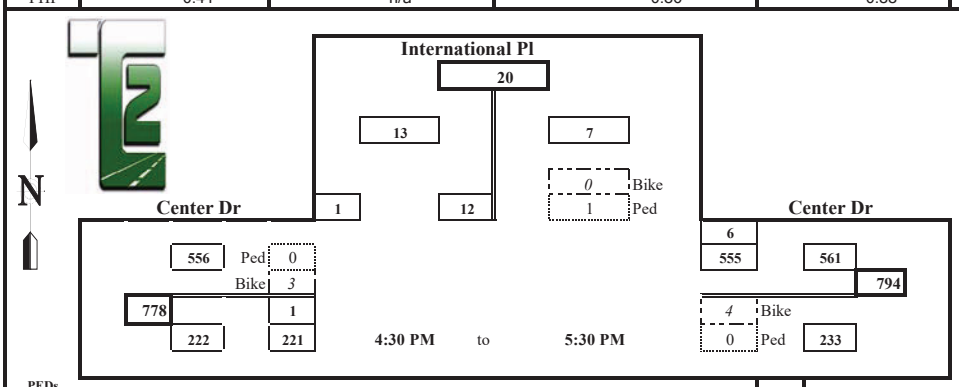
Traffic Count Consultants, Inc.

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

WBE/DBE

Intersection: International Pl & Center Dr
Location: Dupont, Washington
Date of Count: Tues 10/03/2017
Checked By: Jess

Time Interval Ending at	From North on (SB) International Pl				From South on (NB) 0				From East on (WB) Center Dr				From West on (EB) Center Dr				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	1	3	0	6	0	0	0	0	2	0	91	0	5	0	55	0	155
4:30 P	0	2	0	1	0	0	0	0	2	0	86	0	4	0	48	0	137
4:45 P	0	7	0	1	0	0	0	0	4	0	108	3	1	0	54	0	173
5:00 P	0	4	0	0	0	0	0	0	2	0	164	0	3	0	52	0	220
5:15 P	0	1	0	0	0	0	0	0	3	0	139	1	3	0	63	0	204
5:30 P	0	0	0	0	0	0	0	0	1	0	144	2	2	1	52	0	199
5:45 P	1	1	0	1	0	0	0	0	0	0	106	1	4	0	62	0	171
6:00 P	1	2	0	3	0	0	0	0	0	0	132	1	3	0	59	0	197
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	3	20	0	12	0	0	0	0	14	0	970	8	25	1	445	0	1456
Peak Hour: 4:30 PM to 5:30 PM																	
Total	0	12	0	1	0	0	0	0	10	0	555	6	9	1	221	0	796
Approach	13				0				561				222				796
%HV	n/a				n/a				1.8%				4.1%				2.4%
PHF	0.41				n/a				0.86				0.88				0.90



880 *1.0 PHF Peak Hour Volume*

	PHF	%HV
EB	0.88	4.1%
WB	0.86	1.8%
NB	n/a	n/a
SB	0.41	n/a
T Int.	0.90	2.4%

Check In: 796 Out: 796

PEDs Across:	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
	1	0	0	0	1

Special Notes

Bicycles From:	N	S	E	W	
INT 01				1	1
INT 02					0
INT 03			1	1	2
INT 04			1	1	2
INT 05					0
INT 06			2	1	3
INT 07	1		1		2
INT 08				1	1
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	1	0	5	5	11

PHC17102M_01p

Prepared for: **PH Consulting LLC**

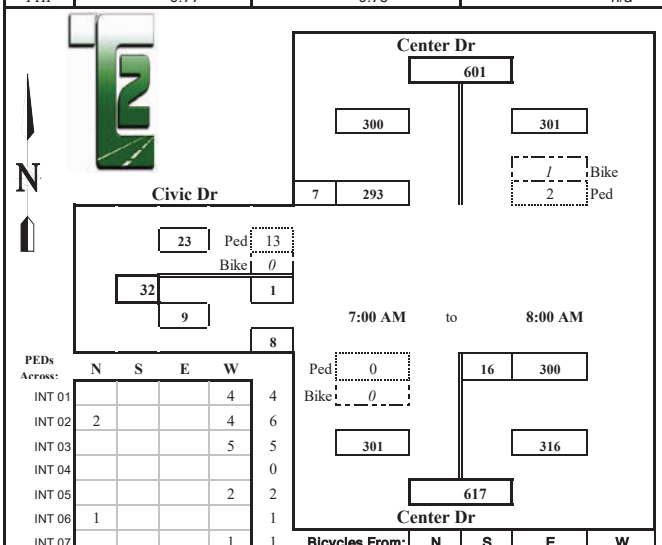
Traffic Count Consultants, Inc.

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

WBE/DBE

Intersection: Center Dr & Civic Dr
Location: Dupont, Washington
Date of Count: Tues 9/05/2017
Checked By: Jess

Time Interval Ending at	From North on (SB) Center Dr				From South on (NB) Center Dr				From East on (WB) 0				From West on (EB) Civic Dr				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
7:15 A	1	0	52	0	3	5	101	0	0	0	0	0	0	0	0	0	158
7:30 A	2	0	65	5	3	4	60	0	0	0	0	0	1	1	0	0	135
7:45 A	5	0	97	1	1	1	65	0	0	0	0	0	0	0	0	7	171
8:00 A	4	0	79	1	3	6	74	0	0	0	0	0	0	0	0	1	161
8:15 A	0	0	32	3	4	4	67	0	0	0	0	0	0	0	0	2	108
8:30 A	0	0	38	2	3	5	60	0	0	0	0	0	0	2	0	1	108
8:45 A	2	0	49	3	3	2	62	0	0	0	0	0	0	1	0	5	122
9:00 A	2	0	52	0	3	5	54	0	0	0	0	0	0	1	0	1	113
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	16	0	464	15	23	32	543	0	0	0	0	0	1	5	0	17	1076
Peak Hour: 7:00 AM to 8:00 AM																	
Total	12	0	293	7	10	16	300	0	0	0	0	0	1	1	0	8	625
Approach	300				316				0				9				625
%HV	4.0%				3.2%				n/a				11.1%				3.7%
PHF	0.77				0.75				n/a				0.32				0.91



684 *1.0 PHF Peak Hour Volume*

		PHF	%HV
	EB	0.32	11.1%
Check	WB	n/a	n/a
In: 625	NB	0.75	3.2%
Out: 625	SB	0.77	4.0%
	T Int.	0.91	3.7%

PEDs Across:	N	S	E	W	
INT 01				4	4
INT 02	2			4	6
INT 03				5	5
INT 04					0
INT 05				2	2
INT 06	1				1
INT 07				1	1
INT 08				1	1
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	3	0	0	17	20

Special Notes

Bicycles From:	N	S	E	W		N U's	S U's	E U's	W U's
INT 01					0	0			
INT 02					0	2			
INT 03					0	0			
INT 04	1				1	1			
INT 05		1			1	0			
INT 06					0	0			
INT 07	2	2			4	0			
INT 08	1				1	0			
INT 09					0				
INT 10					0				
INT 11					0				
INT 12					0				
	4	3	0	0	7	3	0	0	0

PHC17102M_05a

Prepared for: **PH Consulting LLC**

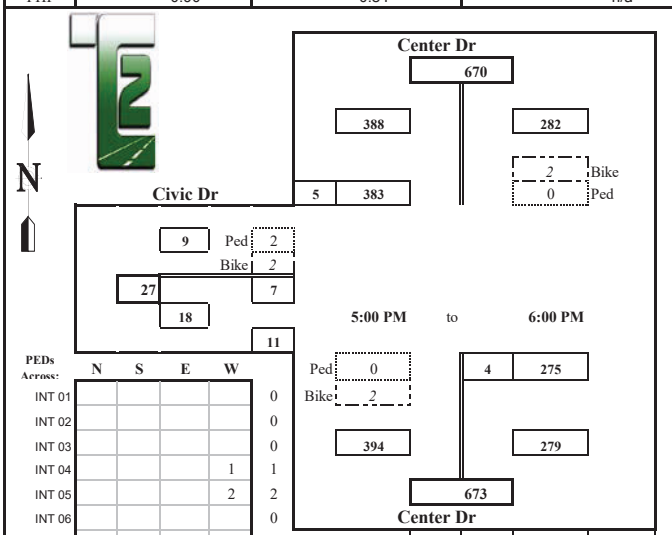
Traffic Count Consultants, Inc.

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

WBE/DBE

Intersection: Center Dr & Civic Dr
Location: Dupont, Washington
Date of Count: Tues 9/05/2017
Checked By: Jess

Time Interval Ending at	From North on (SB) Center Dr				From South on (NB) Center Dr				From East on (WB) 0				From West on (EB) Civic Dr				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	0	0	82	2	2	0	51	0	0	0	0	0	0	2	0	4	141
4:30 P	0	0	83	0	3	0	52	0	0	0	0	0	0	0	0	6	141
4:45 P	1	0	94	0	2	2	68	0	0	0	0	0	0	2	0	4	170
5:00 P	1	0	91	0	0	2	55	0	0	0	0	0	0	1	0	2	151
5:15 P	1	0	106	2	1	0	51	0	0	0	0	0	0	3	0	5	167
5:30 P	0	0	97	1	1	0	65	0	0	0	0	0	0	1	0	4	168
5:45 P	1	0	89	0	0	1	79	0	0	0	0	0	0	0	0	0	169
6:00 P	0	0	91	2	0	3	80	0	0	0	0	0	0	3	0	2	181
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	4	0	733	7	9	8	501	0	0	0	0	0	0	12	0	27	1288
Peak Hour: 5:00 PM to 6:00 PM																	
Total	2	0	383	5	2	4	275	0	0	0	0	0	0	7	0	11	685
Approach	388				279				0				18				685
%HV	0.5%				0.7%				n/a				n/a				0.6%
PHF	0.90				0.84				n/a				0.56				0.95



724 *1.0 PHF Peak Hour Volume*

		PHF	%HV
	EB	0.56	n/a
Check	WB	n/a	n/a
In: 685	NB	0.84	0.7%
Out: 685	SB	0.90	0.5%
	T Int.	0.95	0.6%

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

Special Notes

Bicycles From:	N	S	E	W		N U's	S U's	E U's	W U's
INT 01		1			1	0			
INT 02					0	0			
INT 03					0	2			
INT 04					0	0			
INT 05					0	0			
INT 06	2			2	4	0			
INT 07		1			1	1			
INT 08		1			1	0			
INT 09					0				
INT 10					0				
INT 11					0				
INT 12					0				
	2	3	0	2	7	3	0	0	0

PHC17102M_05p

Prepared for: **Geralyn Reinart, P.E.**

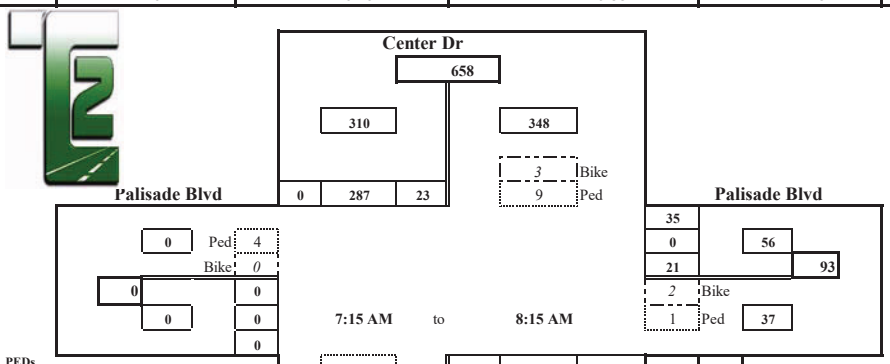
Traffic Count Consultants, Inc.

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

WBE/DBE

Intersection: Center Dr & Palisade Blvd
Location: DuPont, Washington
Date of Count: Thurs 10/03/2019
Checked By: Jess

Time Interval Ending at	From North on (SB) Center Dr				From South on (NB) Center Dr				From East on (WB) Palisade Blvd				From West on (EB) Palisade Blvd				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
7:15 A	0	6	30	0	0	0	90	2	0	5	0	7	0	0	0	0	140
7:30 A	2	4	46	0	0	0	96	7	0	5	0	7	0	0	0	0	165
7:45 A	7	5	91	0	0	0	67	3	0	7	0	9	0	0	0	0	182
8:00 A	7	6	101	0	1	0	69	2	0	5	0	10	0	0	0	0	193
8:15 A	0	8	49	0	6	0	81	2	1	4	0	9	0	0	0	0	153
8:30 A	1	6	44	0	1	0	62	5	0	6	0	2	0	0	0	0	125
8:45 A	1	3	48	0	1	1	92	7	0	4	0	9	0	0	0	0	164
9:00 A	2	5	56	0	3	0	105	5	0	9	0	6	0	0	0	0	186
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	20	43	465	0	12	1	662	33	1	45	0	59	0	0	0	0	1308
Peak Hour: 7:15 AM to 8:15 AM																	
Total	16	23	287	0	7	0	313	14	1	21	0	35	0	0	0	0	693
Approach	310				327				56				0				693
%HV	5.2%				2.1%				1.8%				n/a				3.5%
PHF	0.72				0.79				0.88				n/a				0.90



772 *1.0 PHF Peak Hour Volume*

		PHF	%HV
	EB	n/a	n/a
Check	WB	0.88	1.8%
In: 693	NB	0.79	2.1%
Out: 693	SB	0.72	5.2%
	T Int.	0.90	3.5%

PEDs Across:	N	S	E	W	
INT 01	1		2		3
INT 02					0
INT 03	1				1
INT 04	7	1		2	10
INT 05	1		1	2	4
INT 06			1	1	2
INT 07			1		1
INT 08			1	1	2
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	10	1	6	6	23

Special Notes

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

GRT19097TM_04a

Prepared for: **Geralyn Reinart, P.E.**

Traffic Count Consultants, Inc.

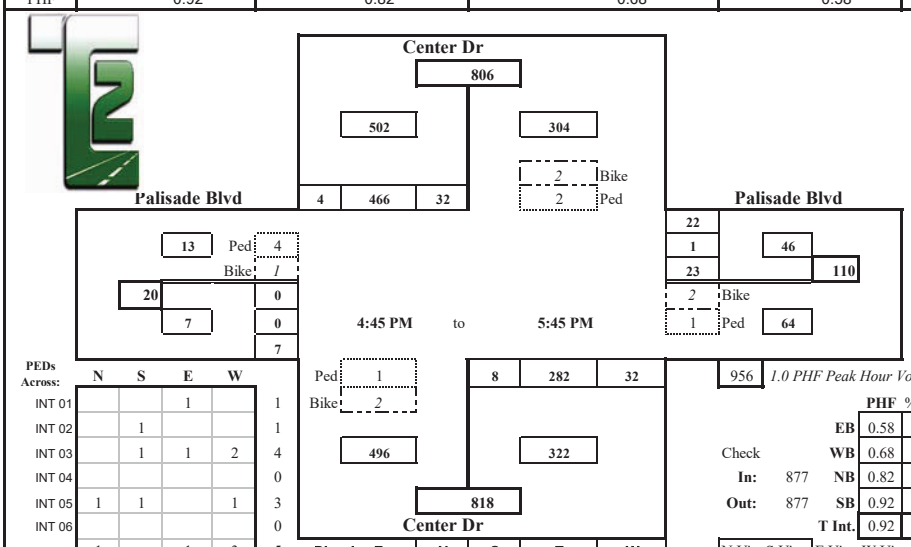
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Center Dr & Palisade Blvd **Date of Count:** Thurs 10/03/2019

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

Time Interval Ending at	From North on (SB) Center Dr				From South on (NB) Center Dr				From East on (WB) Palisade Blvd				From West on (EB) Palisade Blvd				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	2	6	83	0	3	0	48	2	0	7	0	7	0	0	0	1	154
4:30 P	1	5	83	0	2	0	57	8	1	2	0	10	0	0	0	0	165
4:45 P	0	7	94	2	3	1	57	9	0	6	0	6	0	0	0	0	182
5:00 P	0	11	114	1	0	3	55	7	0	7	0	3	0	0	0	2	203
5:15 P	0	4	128	1	1	1	64	9	0	5	1	2	0	0	0	1	216
5:30 P	0	8	128	0	1	2	75	8	0	7	0	10	0	0	0	1	239
5:45 P	0	9	96	2	1	2	88	8	0	4	0	7	0	0	0	3	219
6:00 P	1	6	72	0	0	0	83	2	0	4	0	8	0	0	0	0	175
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	4	56	798	6	11	9	527	53	1	42	1	53	0	0	0	8	1553
	Peak Hour: 4:45 PM to 5:45 PM																
Total	0	32	466	4	3	8	282	32	0	23	1	22	0	0	0	7	877
Approach	502				322				46				7				877
%HV	n/a				0.9%				n/a				n/a				0.3%
PHF	0.92				0.82				0.68				0.58				0.92



956 *1.0 PHF Peak Hour Volume*

		PHF	%HV
	EB	0.58	n/a
Check	WB	0.68	n/a
In: 877	NB	0.82	0.9%
Out: 877	SB	0.92	n/a
	T Int.	0.92	0.3%

PEDs Across:	N	S	E	W	
INT 01			1		1
INT 02		1			1
INT 03		1	1	2	4
INT 04					0
INT 05	1	1		1	3
INT 06					0
INT 07	1		1	3	5
INT 08	2		2	1	5
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	4	3	5	7	19

Special Notes

Bicycles From:	N	S	E	W		N U's	S U's	E U's	W U's
INT 01		1			1	0	0		
INT 02					0	0	0		
INT 03					0	0	1		
INT 04	1				1	1	0		
INT 05	1	1		1	3	1	1		
INT 06		1	1		2	0	0		
INT 07			1		1	0	0		
INT 08		2		5	7	0	0		
INT 09					0				
INT 10					0				
INT 11					0				
INT 12					0				
	2	5	2	6	15	2	2	0	0

GRT19097TM_04p

Prepared for: **Geralyn Reinart, P.E.**

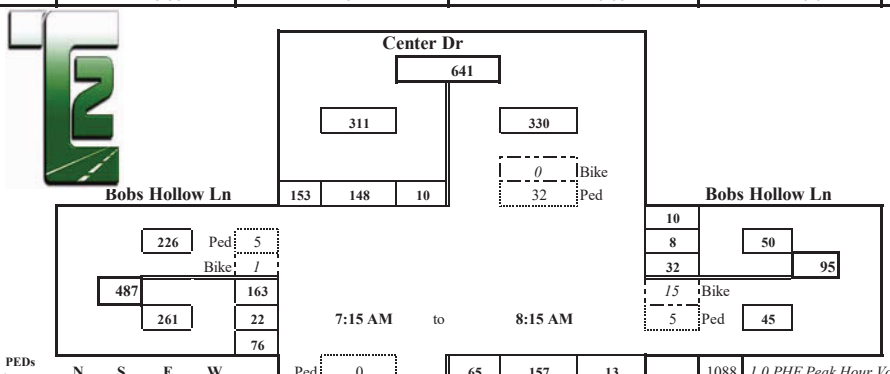
Traffic Count Consultants, Inc.

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

WBE/DBE

Intersection: Center Dr & Bobs Hollw Ln
Location: DuPont, Washington
Date of Count: Thurs 10/03/2019
Checked By: Jess

Time Interval Ending at	From North on (SB) Center Dr				From South on (NB) Center Dr				From East on (WB) Bobs Hollow Ln				From West on (EB) Bobs Hollow Ln				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
7:15 A	0	0	25	11	0	4	45	0	0	6	1	3	0	43	5	8	151
7:30 A	2	2	27	17	0	7	65	4	0	13	0	5	0	33	3	7	183
7:45 A	7	1	43	42	0	23	33	4	0	9	2	1	0	34	2	8	202
8:00 A	7	4	44	70	1	18	26	1	0	7	3	1	5	52	7	39	272
8:15 A	0	3	34	24	1	17	33	4	0	3	3	3	4	44	10	22	200
8:30 A	1	2	31	14	0	6	38	1	0	7	0	3	1	28	3	8	141
8:45 A	0	1	34	15	0	1	52	0	0	7	1	4	1	40	15	13	183
9:00 A	3	4	42	14	3	6	53	2	0	12	9	10	1	43	24	11	230
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	20	17	280	207	5	82	345	16	0	64	19	30	12	317	69	116	1562
Peak Hour: 7:15 AM to 8:15 AM																	
Total	16	10	148	153	2	65	157	13	0	32	8	10	9	163	22	76	857
Approach	311				235				50				261				857
%HV	5.1%				0.9%				n/a				3.4%				3.2%
PHF	0.66				0.77				0.69				0.67				0.79



1088 *1.0 PHF Peak Hour Volume*

	PHF	%HV
EB	0.67	3.4%
WB	0.69	n/a
NB	0.77	0.9%
SB	0.66	5.1%
T Int.	0.79	3.2%

Check In: 857 Out: 857

Conditions:

PEDs Across:	N	S	E	W	
INT 01			1		1
INT 02					0
INT 03	11		2		13
INT 04	18		2	4	24
INT 05	3		1	1	5
INT 06			2	1	3
INT 07	3		1		4
INT 08			2	1	3
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	35	0	11	7	53

Special Notes

Bicycles From:	N	S	E	W	
INT 01					0
INT 02					0
INT 03			6	1	7
INT 04		2	8		10
INT 05			1		1
INT 06		1			1
INT 07					0
INT 08					0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	0	3	15	1	19

GRT19097TM_03a

Prepared for: **Geralyn Reinart, P.E.**

Traffic Count Consultants, Inc.

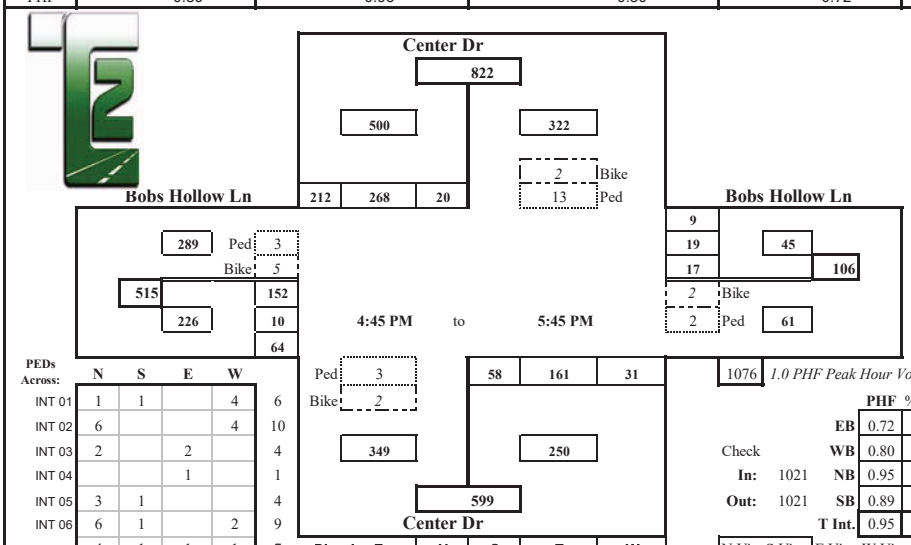
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Center Dr & Bobs Hollw Ln **Date of Count:** Thurs 10/03/2019

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

Time Interval Ending at	From North on (SB) Center Dr				From South on (NB) Center Dr				From East on (WB) Bobs Hollow Ln				From West on (EB) Bobs Hollow Ln				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	2	5	49	36	2	18	33	1	0	1	4	4	1	17	3	3	174
4:30 P	0	5	48	28	1	6	35	10	0	1	2	2	2	26	6	6	175
4:45 P	1	4	66	36	2	23	44	9	0	1	2	7	1	18	3	7	220
5:00 P	0	2	68	49	0	12	36	9	0	4	4	2	1	30	3	8	227
5:15 P	0	6	74	60	0	12	43	9	0	7	5	1	1	36	3	10	266
5:30 P	0	5	78	48	1	16	40	7	0	4	3	1	1	38	1	18	259
5:45 P	0	7	48	55	0	18	42	6	0	2	7	5	1	48	3	28	269
6:00 P	1	3	46	22	0	12	58	3	0	1	5	3	0	23	4	11	191
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	4	37	477	334	6	117	331	54	0	21	32	25	8	236	26	91	1781
	Peak Hour: 4:45 PM to 5:45 PM																
Total	0	20	268	212	1	58	161	31	0	17	19	9	4	152	10	64	1021
Approach	500				250				45				226				1021
%HV	n/a				0.4%				n/a				1.8%				0.5%
PHF	0.89				0.95				0.80				0.72				0.95



PEDs Across:	N	S	E	W	
INT 01	1	1		4	6
INT 02	6			4	10
INT 03	2		2		4
INT 04			1		1
INT 05	3	1			4
INT 06	6	1		2	9
INT 07	4	1	1	1	7
INT 08	7	1	3	1	12
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	29	5	7	12	53

Special Notes

Bicycles From:	N	S	E	W	
INT 01			1		1
INT 02		3			3
INT 03	1	3		2	6
INT 04	2		1		3
INT 05				2	2
INT 06		1	1	2	4
INT 07		1		1	2
INT 08	3	1			4
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	6	9	3	7	25

1076 *1.0 PHF Peak Hour Volume*

		PHF	%HV
	EB	0.72	1.8%
Check	WB	0.80	n/a
In: 1021	NB	0.95	0.4%
Out: 1021	SB	0.89	n/a
	T Int.	0.95	0.5%

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

GRT19097TM_03p

Prepared for: **Geralyn Reinart, P.E.**

Traffic Count Consultants, Inc.

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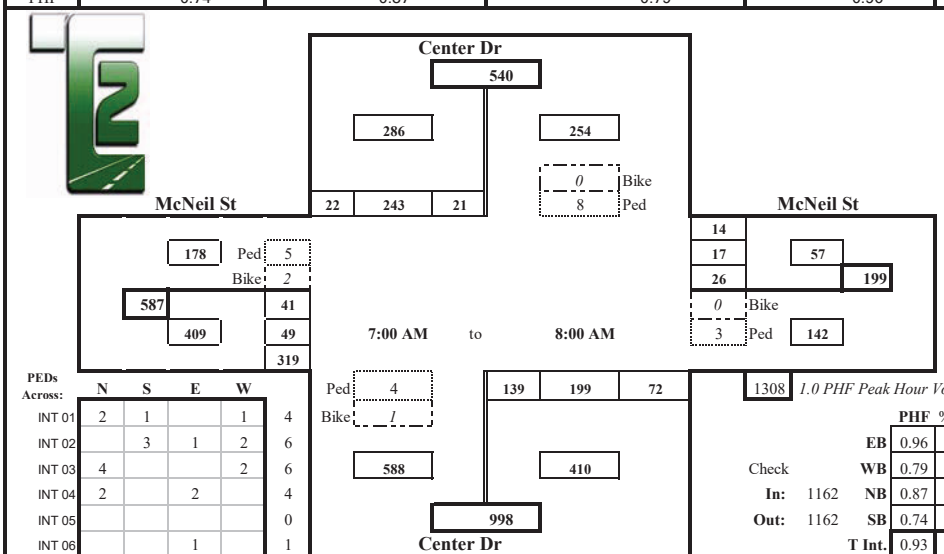
WBE/DBE

Intersection: Center Dr & McNeil St
Location: DuPont, Washington
Date of Count: Thurs 10/03/2019
Checked By: Jess

Time Interval Ending at	From North on (SB) Center Dr				From South on (NB) Center Dr				From East on (WB) McNeil St				From West on (EB) McNeil St				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
7:15 A	0	4	51	3	1	24	51	10	1	4	2	3	0	11	12	79	254
7:30 A	0	3	57	6	0	34	58	18	1	8	3	4	0	9	11	86	297
7:45 A	0	7	53	5	0	43	54	21	1	9	3	3	0	7	16	77	298
8:00 A	1	7	82	8	3	38	36	23	1	5	9	4	1	14	10	77	313
8:15 A	0	2	62	5	2	28	43	15	0	10	4	2	0	12	9	61	253
8:30 A	0	6	52	5	2	21	47	10	0	5	5	3	0	14	5	50	223
8:45 A	0	3	56	1	1	31	31	12	1	10	4	4	1	30	15	91	288
9:00 A	1	6	79	17	0	25	32	4	0	7	7	1	3	50	23	76	327
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	2	38	492	50	9	244	352	113	5	58	37	24	5	147	101	597	2253
Peak Hour:	7:00 AM to 8:00 AM																
Total	1	21	243	22	4	139	199	72	4	26	17	14	1	41	49	319	1162
Approach	286				410				57				409				1162
%HV	0.3%				1.0%				7.0%				0.2%				0.9%
PHF	0.74				0.87				0.79				0.96				0.93



1308 *1.0 PHF Peak Hour Volume*

	PHF	%HV
EB	0.96	0.2%
WB	0.79	7.0%
NB	0.87	1.0%
SB	0.74	0.3%
T Int.	0.93	0.9%

Check In: 1162 Out: 1162

Conditions:

PEDs Across:	N	S	E	W	
INT 01	2	1		1	4
INT 02		3	1	2	6
INT 03	4			2	6
INT 04	2		2		4
INT 05					0
INT 06			1		1
INT 07			1		1
INT 08	2	1	2	1	6
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	10	5	7	6	28

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

Special Notes

GRT19097TM_02a

Prepared for: **Geralyn Reinart, P.E.**

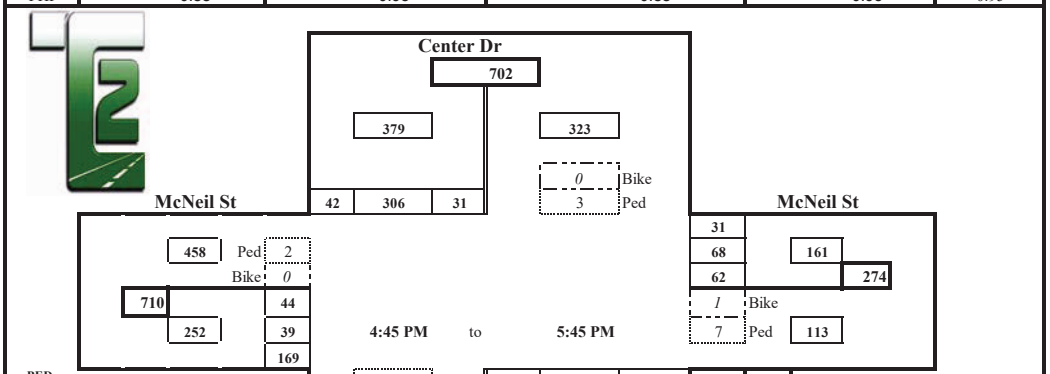
Traffic Count Consultants, Inc.

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

WBE/DBE

Intersection: Center Dr & McNeil St
Location: DuPont, Washington
Date of Count: Thurs 10/03/2019
Checked By: Jess

Time Interval Ending at	From North on (SB) Center Dr				From South on (NB) Center Dr				From East on (WB) McNeil St				From West on (EB) McNeil St				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	1	3	58	8	2	76	47	12	0	27	17	5	1	5	9	34	301
4:30 P	0	2	66	1	1	64	41	11	0	13	14	5	1	14	9	37	277
4:45 P	0	4	54	10	0	81	60	4	0	31	16	8	2	12	6	36	322
5:00 P	1	2	70	11	0	93	61	11	2	13	17	5	1	8	9	49	349
5:15 P	0	7	73	11	0	77	61	8	1	22	16	8	0	15	10	36	344
5:30 P	0	13	86	9	0	90	66	16	1	12	15	9	0	10	11	38	375
5:45 P	0	9	77	11	1	88	60	8	1	15	20	9	0	11	9	46	363
6:00 P	0	4	43	9	0	84	66	13	1	12	25	5	0	23	7	40	331
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	2	44	527	70	4	653	462	83	6	145	140	54	5	98	70	316	2662
Peak Hour: 4:45 PM to 5:45 PM																	
Total	1	31	306	42	1	348	248	43	5	62	68	31	1	44	39	169	1431
Approach	379				639				161				252				1431
%HV	0.3%				0.2%				3.1%				0.4%				0.6%
PHF	0.88				0.93				0.88				0.95				0.95



1500 *1.0 PHF Peak Hour Volume*

	PHF	%HV
EB	0.95	0.4%
WB	0.88	3.1%
NB	0.93	0.2%
SB	0.88	0.3%
T Int.	0.95	0.6%

Check In: 1431 Out: 1431

PEDs Across:	N	S	E	W	
INT 01	3	1	1	3	8
INT 02	1		1		2
INT 03	1	1	1	1	4
INT 04		3	3		6
INT 05	1	1			2
INT 06	1				1
INT 07	1	1	4	2	8
INT 08	1	2		3	6
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	9	9	10	9	37

Special Notes

Bicycles From:	N	S	E	W		N U's	S U's	E U's	W U's
INT 01					0		2		
INT 02		3	2		5		0		
INT 03			3		3		0		
INT 04		1	1		2		0		
INT 05		1			1		0		
INT 06					0		0		
INT 07					0		0		
INT 08		1			1		0		
INT 09					0				
INT 10					0				
INT 11					0				
INT 12					0				
	0	6	6	0	12	0	2	0	0

GRT19097TM_02p

Prepared for: **Geralyn Reinart, P.E.**

Traffic Count Consultants, Inc.

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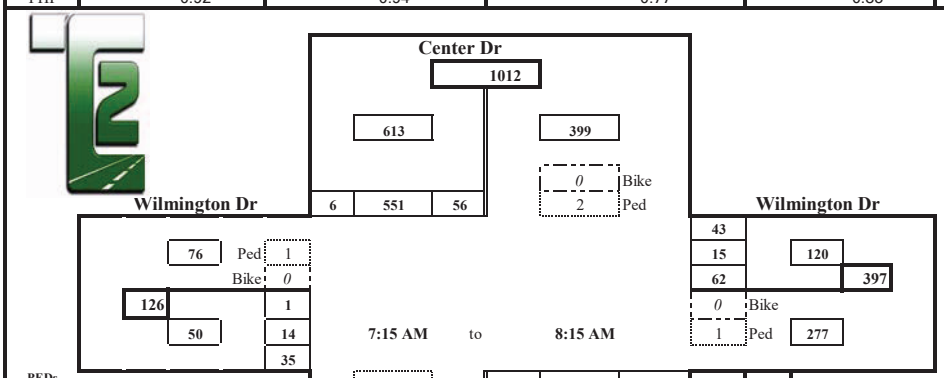
WBE/DBE

Intersection: Center Dr & Wilmington Dr
Location: DuPont, Washington
Date of Count: Thurs 10/03/2019
Checked By: Jess

Time Interval Ending at	From North on (SB) Center Dr				From South on (NB) Center Dr				From East on (WB) Wilmington Dr				From West on (EB) Wilmington Dr				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
7:15 A	1	5	122	4	2	10	66	27	0	27	5	7	0	1	2	9	285
7:30 A	2	9	155	2	1	7	97	52	0	12	3	8	0	1	6	8	360
7:45 A	1	19	126	1	2	6	101	57	0	19	6	14	0	0	3	12	364
8:00 A	2	18	147	1	3	17	85	54	1	13	4	9	0	0	2	5	355
8:15 A	0	10	123	2	2	25	72	44	0	18	2	12	0	0	3	10	321
8:30 A	0	13	96	5	2	13	62	56	0	22	5	13	0	3	2	14	304
8:45 A	1	9	160	6	1	17	60	47	0	34	3	9	0	3	4	9	361
9:00 A	1	21	147	8	0	11	46	43	0	13	5	9	0	4	3	7	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	8	104	1076	29	13	106	589	380	1	158	33	81	0	12	25	74	2667
Peak Hour: 7:15 AM to 8:15 AM																	
Total	5	56	551	6	8	55	355	207	1	62	15	43	0	1	14	35	1400
Approach	613				617				120				50				1400
%HV	0.8%				1.3%				0.8%				n/a				1.0%
PHF	0.92				0.94				0.77				0.83				0.96



1456 *1.0 PHF Peak Hour Volume*

PEDs Across:	N	S	E	W	
INT 01					0
INT 02					0
INT 03	1		1		2
INT 04					0
INT 05	1			1	2
INT 06	2		2		4
INT 07	2		3	2	7
INT 08					0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	6	0	6	3	15

	PHF	%HV
EB	0.83	n/a
WB	0.77	0.8%
NB	0.94	1.3%
SB	0.92	0.8%
T Int.	0.96	1.0%

Check In: 1400 Out: 1400

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

Special Notes

GRT19097TM_01a

Prepared for: **Geralyn Reinart, P.E.**

Traffic Count Consultants, Inc.

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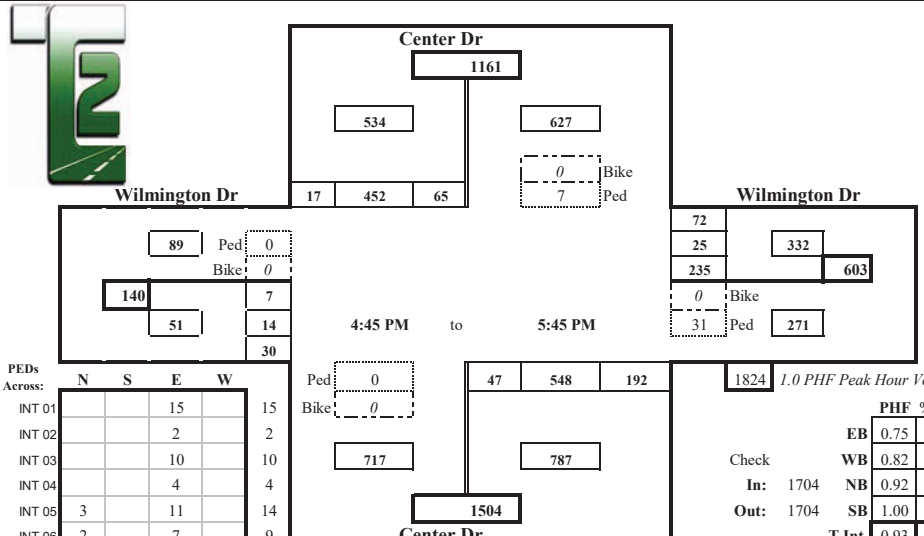
WBE/DBE

Intersection: Center Dr & Wilmington Dr
Location: DuPont, Washington
Date of Count: Thurs 10/03/2019
Checked By: Jess

Time Interval Ending at	From North on (SB) Center Dr				From South on (NB) Center Dr				From East on (WB) Wilmington Dr				From West on (EB) Wilmington Dr				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	0	14	102	3	2	11	117	40	3	57	5	17	0	1	2	10	379
4:30 P	0	19	102	5	1	19	100	38	0	46	11	12	0	2	4	7	365
4:45 P	0	14	106	1	2	6	142	29	1	61	6	11	0	1	6	10	393
5:00 P	4	21	110	3	3	17	138	58	1	62	6	15	0	2	5	10	447
5:15 P	1	16	109	9	1	9	131	40	0	64	6	19	0	2	1	5	411
5:30 P	1	13	118	3	0	4	143	34	0	37	4	18	0	1	5	10	390
5:45 P	1	15	115	2	2	17	136	60	0	72	9	20	0	2	3	5	456
6:00 P	2	18	83	2	2	11	135	31	0	42	12	24	0	2	5	4	369
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	9	130	845	28	13	94	1042	330	5	441	59	136	0	13	31	61	3210
Peak Hour: 4:45 PM to 5:45 PM																	
Total	7	65	452	17	6	47	548	192	1	235	25	72	0	7	14	30	1704
Approach	534				787				332				51				1704
%HV	1.3%				0.8%				0.3%				n/a				0.8%
PHF	1.00				0.92				0.82				0.75				0.93



1824 *1.0 PHF Peak Hour Volume*

	PHF	%HV
EB	0.75	n/a
WB	0.82	0.3%
NB	0.92	0.8%
SB	1.00	1.3%
T Int.	0.93	0.8%

Check In: 1704 Out: 1704

PEDs Across:	N	S	E	W	
INT 01			15		15
INT 02			2		2
INT 03			10		10
INT 04			4		4
INT 05	3		11		14
INT 06	2		7		9
INT 07	2		9		11
INT 08			6		6
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	7	0	64	0	71

Special Notes

Bicycles From:	N	S	E	W		N U's	S U's	E U's	W U's
INT 01					0	0	0		
INT 02					0	0	0		
INT 03					0	1	1		
INT 04					0	0	0		
INT 05					0	0	0		
INT 06	NO BIKES				0	0	0		
INT 07					0	0	0		
INT 08					0	0	1		
INT 09					0				
INT 10					0				
INT 11					0				
INT 12					0				
	0	0	0	0	0	1	2	0	0

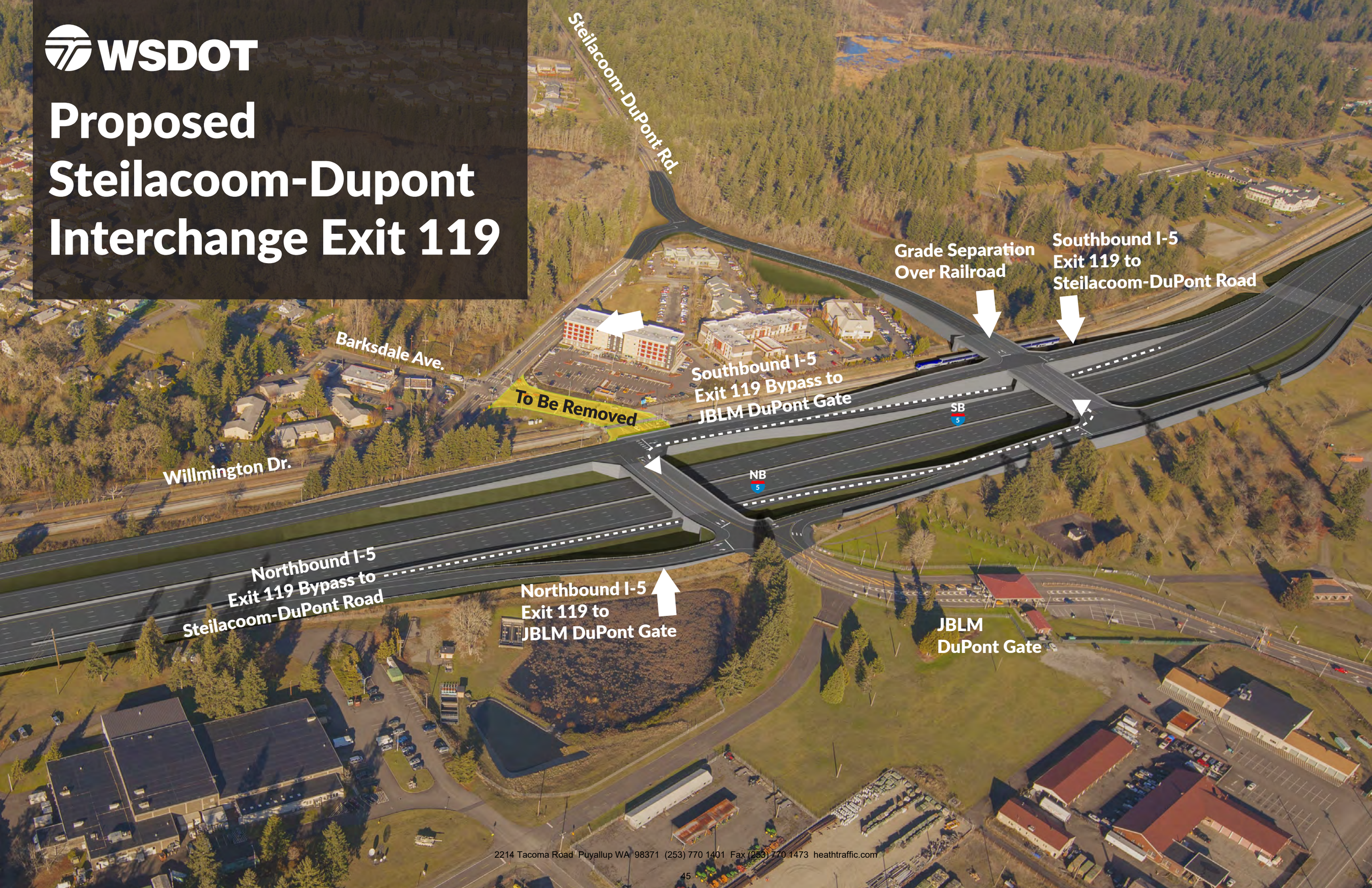
GRT19097TM_01p

APPENDIX

WSDOT I-5 EXIT 119 INTERCHANGE
DESIGN EXHIBITS

WSDOT

Proposed Steilacoom-Dupont Interchange Exit 119



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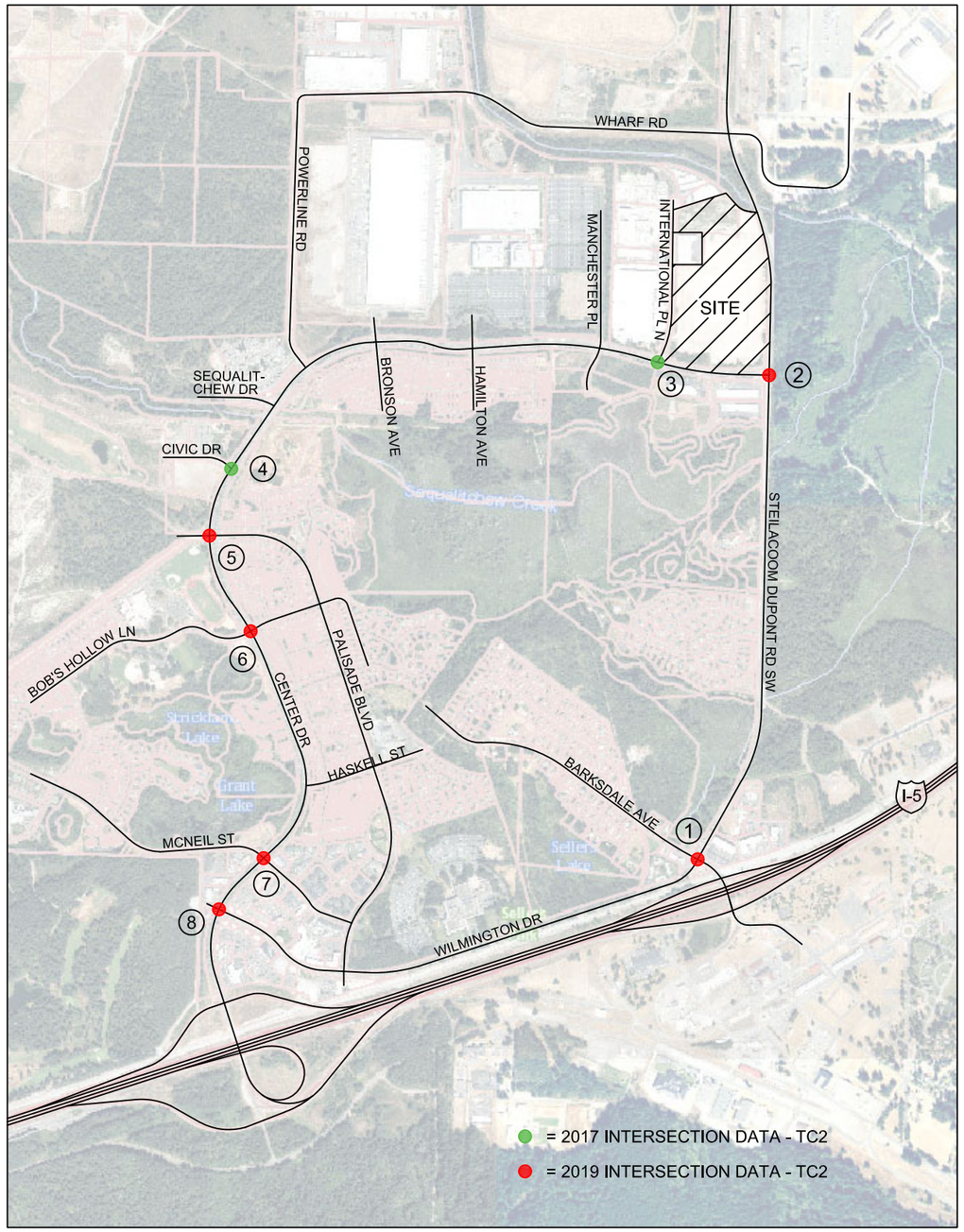
WSDOT

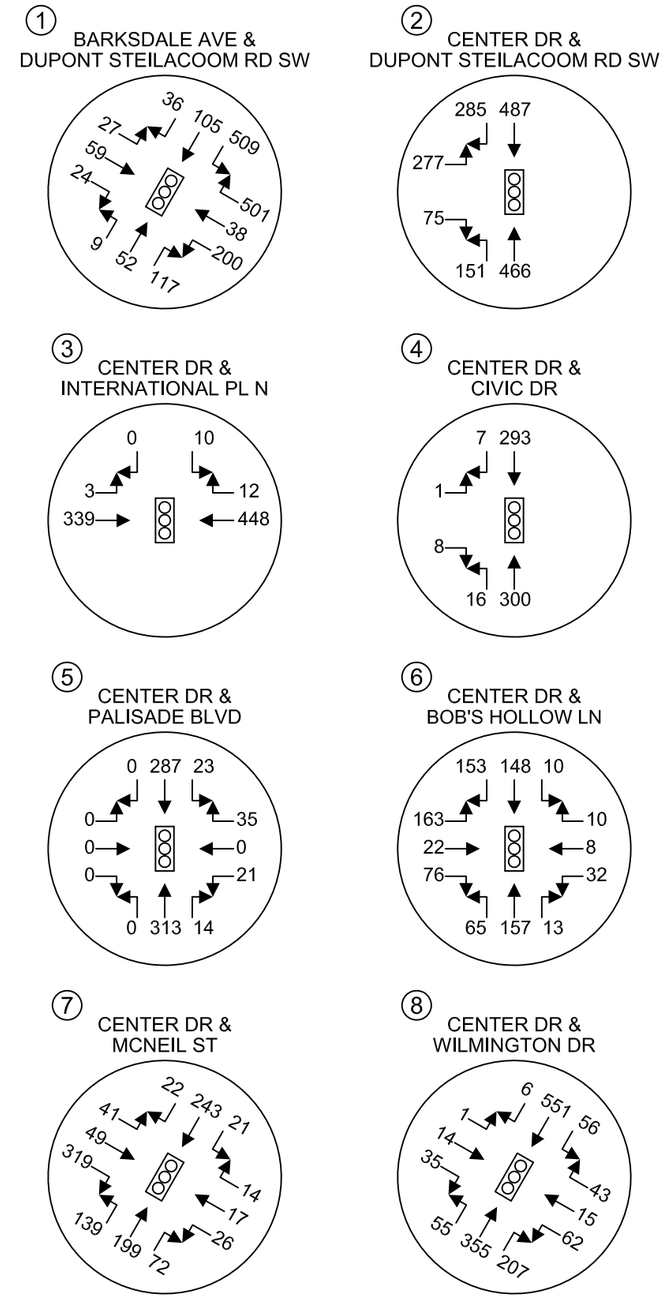
Proposed Steilacoom-Dupont Interchange Exit 119

APPENDIX

BASELINE VOLUMES &
INTERSECTION COMPARISON FIGURES

N





HEATH & ASSOCIATES

TRAFFIC AND CIVIL ENGINEERING

SNOW BLOSSOM FULFILLMENT CENTER

BASELINE AM PEAK HOUR INTERSECTION DATA
APPENDIX: FIGURE A

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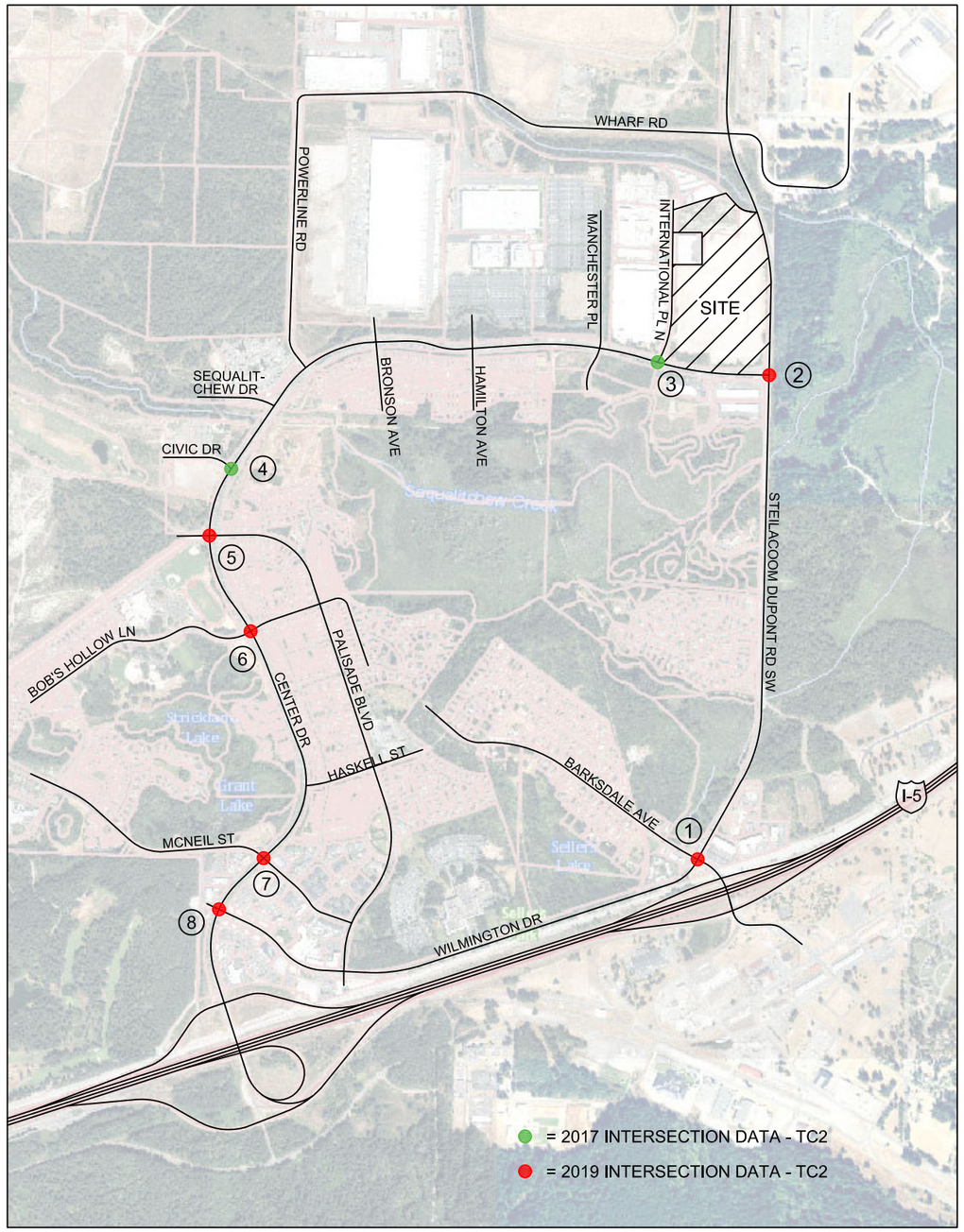
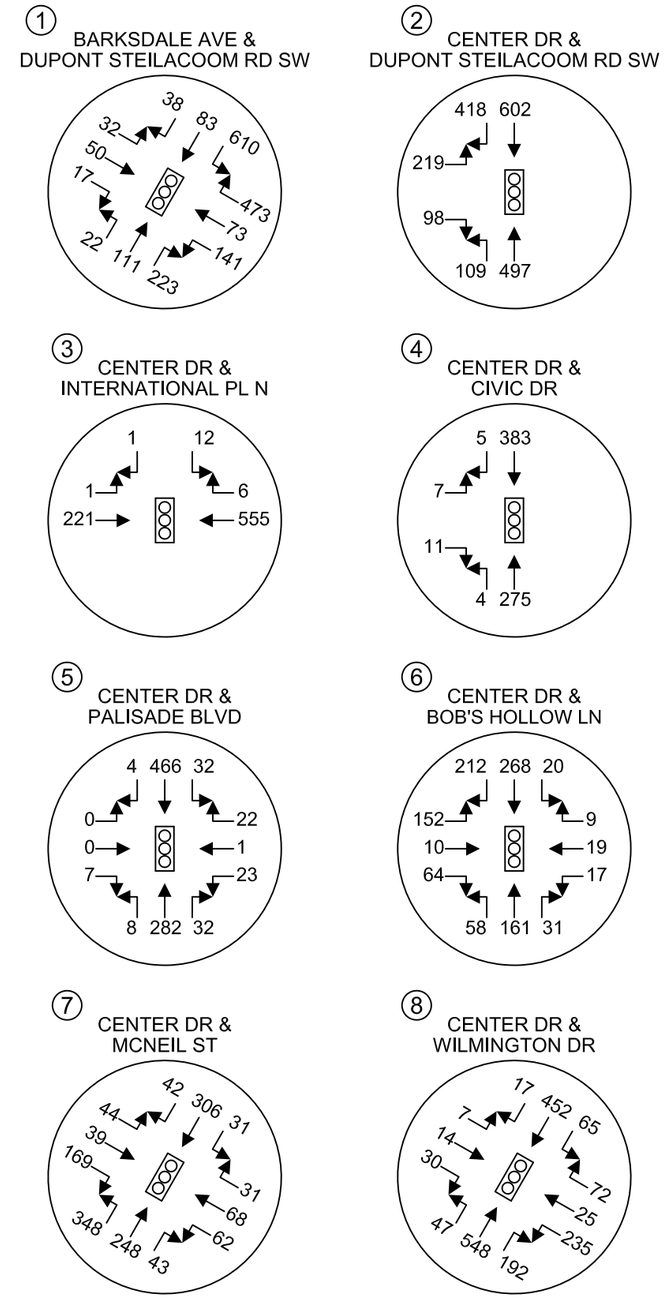
N





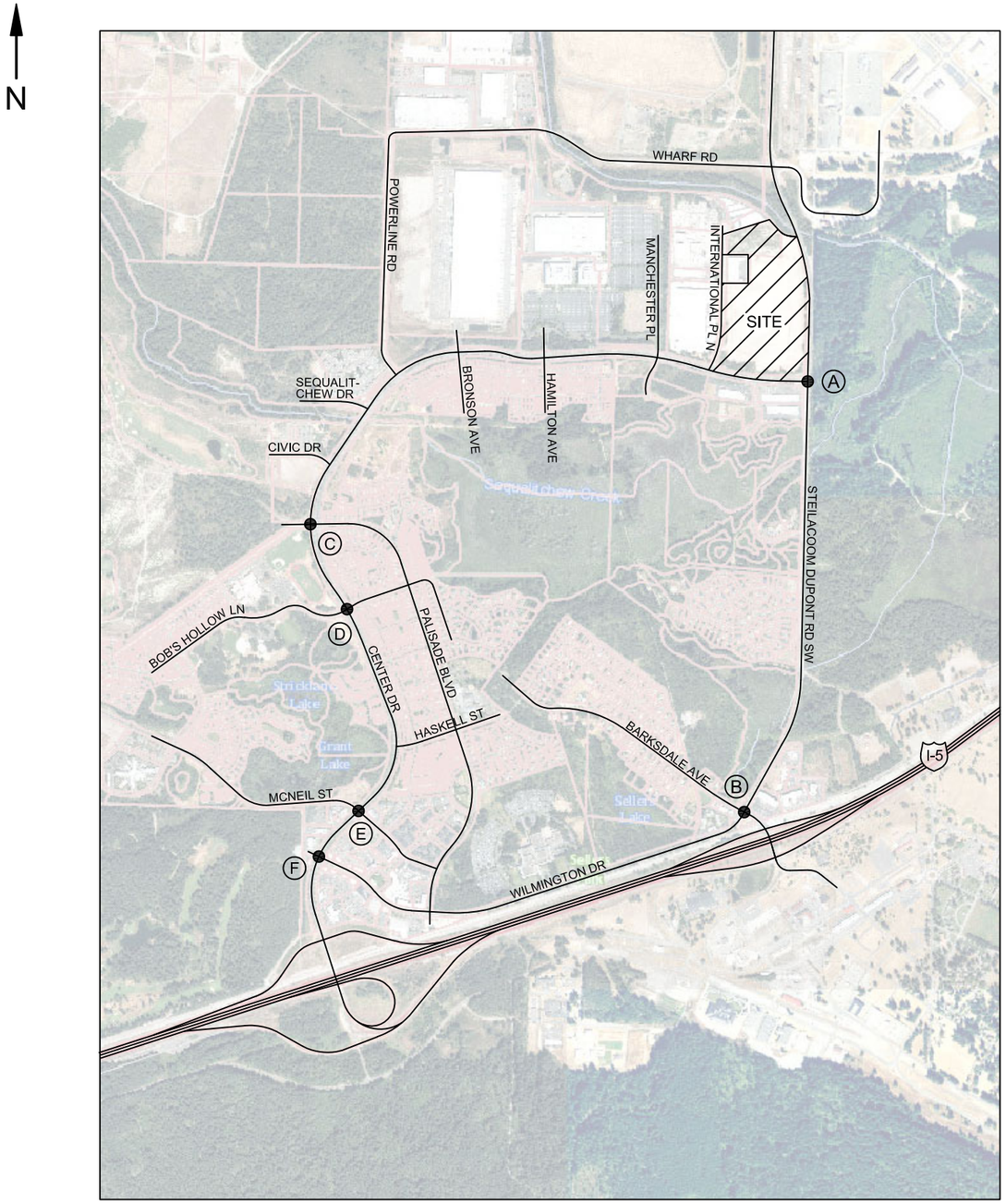
HEATH & ASSOCIATES

TRAFFIC AND CIVIL ENGINEERING

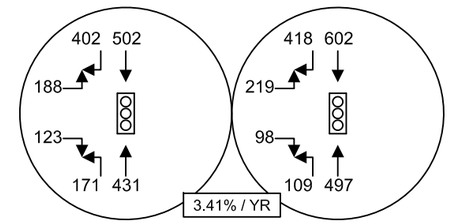
SNOW BLOSSOM FULFILLMENT CENTER

BASELINE PM PEAK HOUR INTERSECTION DATA
APPENDIX: FIGURE B

2214 Tacoma Road Puyallup WA 98371 (253) 770 1401 Fax (253) 770 1473 heathtraffic.com



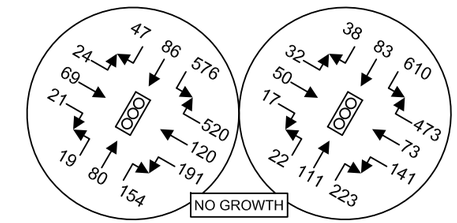
Ⓐ CENTER DR & DUPONT STEILACOOM RD SW



2017 VOLUMES
TOTAL VOL.: 1817

2019 VOLUMES
TOTAL VOL.: 1943

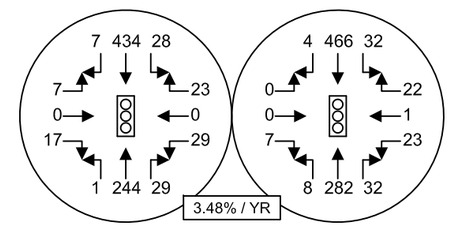
Ⓑ BARKSDALE AVE & STEILACOOM DUPONT RD SW



2017 VOLUMES
TOTAL VOL.: 1907

2019 VOLUMES
TOTAL VOL.: 1873

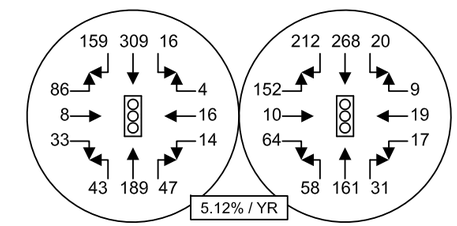
Ⓒ CENTER DR & PALISADE BLVD



2017 VOLUMES
TOTAL VOL.: 819

2019 VOLUMES
TOTAL VOL.: 877

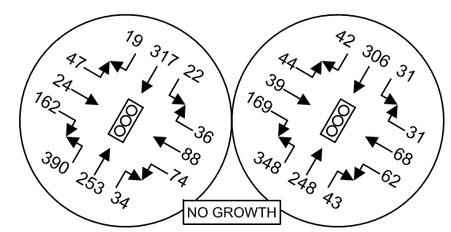
Ⓓ CENTER DR & BOB'S HOLLOW LN



2017 VOLUMES
TOTAL VOL.: 924

2019 VOLUMES
TOTAL VOL.: 1021

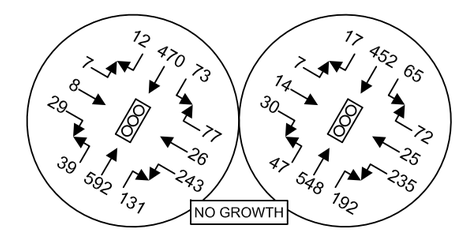
Ⓔ CENTER DR & MCNEIL ST



2017 VOLUMES
TOTAL VOL.: 1466

2019 VOLUMES
TOTAL VOL.: 1431

Ⓕ CENTER DR & WILMINGTON DR



2017 VOLUMES
TOTAL VOL.: 1707

2019 VOLUMES
TOTAL VOL.: 1704

HEATH & ASSOCIATES
TRAFFIC AND CIVIL ENGINEERING

SNOW BLOSSOM FULFILLMENT CENTER

2017-2019 PM PEAK HOUR INTERSECTION VOLUME COMPARISON
APPENDIX: FIGURE C

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APPENDIX

TRIP GENERATION MODEL

HAZMAT FC - Non Peak Season

TRAFFIC DATA FOR ENTITLMENT USE

Headcount

Headcount - Day Shift	486
Headcount Night Shift	486

Shift Structure

	Start	End	
Day Shift Inbound Employees	7:00:00 AM	5:30:00 PM	Inbound Are Employees Working Receiving Side of Operation
Day Shift Outbound Employees	7:30:00 AM	6:00:00 PM	Outbound Are Employees Working Shipping Side of Operation
Night Shift Inbound Employees	6:00:00 PM	4:30:00 AM	
Night Shift Outbound Employees	6:30:00 PM	5:00:00 AM	

Adjustment below accounts for mass transit and carpool users. Adjust as needed for local jurisdiction.

Net Cars Factor 95%

Traffic Schedule

Cars

Average Weekday - Non Peak

	In	Out	Total
00:00	2	3	5
01:00	1	2	3
02:00	3	7	10
03:00	4	7	11
04:00	9	93	102
05:00	19	246	265
06:00	14	8	22
06:15	38	9	47
06:30	66	5	71
06:45	88	3	91
07:00	87	5	92
07:15	113	2	115
07:30	17	3	20
07:45	4	3	7
08:00	13	9	22
09:00	8	5	13
10:00	11	9	20
11:00	20	21	41
12:00	6	9	15
13:00	7	7	14
14:00	6	13	19
15:00	15	19	34
16:00	23	17	40
17:00	14	17	31
17:15	26	8	34
17:30	57	66	123
17:45	74	38	112
18:00	92	128	220
18:15	89	86	175
18:30	12	57	69
18:45	3	21	24
19:00	9	18	27
20:00	4	4	8
21:00	8	8	16
22:00	9	11	20
23:00	1	3	4
	972	970	1,942

Trucks

Average Weekday - Non Peak

	In	Out	Total
00:00	7	6	14
01:00	6	6	12
02:00	6	6	12
03:00	8	7	15
04:00	7	6	14
05:00	9	8	17
06:00	2	2	3
06:15	2	2	3
06:30	2	2	3
06:45	2	2	3
07:00	2	2	3
07:15	1	1	2
07:30	1	1	2
07:45	1	1	2
08:00	5	4	9
09:00	5	5	10
10:00	5	4	9
11:00	5	4	9
12:00	5	5	10
13:00	5	4	9
14:00	4	3	7
15:00	4	3	7
16:00	3	2	5
17:00	1	1	2
17:15	1	1	2
17:30	1	1	2
17:45	0	0	0
18:00	1	1	2
18:15	1	1	2
18:30	1	1	2
18:45	0	0	0
19:00	4	3	7
20:00	2	2	3
21:00	3	2	5
22:00	4	3	7
23:00	6	6	12
	119	106	225

Total

Average Weekday - Non Peak

	In	Out	Total
00:00	9	9	18
01:00	7	8	15
02:00	9	12	22
03:00	12	14	26
04:00	16	95	111
05:00	27	242	269
06:00	15	9	24
06:15	38	10	48
06:30	65	6	71
06:45	85	4	90
07:00	84	6	91
07:15	108	3	111
07:30	17	4	21
07:45	5	4	8
08:00	17	13	29
09:00	13	10	23
10:00	15	13	28
11:00	24	24	48
12:00	11	13	25
13:00	11	11	22
14:00	9	16	25
15:00	18	21	39
16:00	25	19	43
17:00	14	17	31
17:15	26	8	34
17:30	55	64	119
17:45	70	36	106
18:00	88	122	211
18:15	85	83	168
18:30	12	55	67
18:45	3	20	23
19:00	12	20	33
20:00	6	5	11
21:00	10	10	20
22:00	12	14	26
23:00	7	9	16
	1,042	1,028	2,070

APPENDIX

PIPELINE VOLUMES

PIPELINE TRIPS AT CRITICAL INTERSECTIONS
(AM PEAK HOUR)

1. Center Drive/Wilmington Drive

Development	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Village IV (2)	0	0	0	0	0	1	0	4	0	2	16	0
Williamson Pl. (3)	0	0	0	0	0	0	0	12	0	0	3	0
Patriot's Lndng. (1)	0	0	0	0	0	1	0	17	0	4	50	0
Civic Ctr. Phase 2	0	0	0	0	0	5	0	28	0	3	4	0
Civic Ctr. Phase 3	0	0	0	0	0	1	0	27	0	0	4	0
DuPont Corp. Ctr.	0	0	0	0	0	3	0	23	0	1	9	0
DuPont Industrial	0	0	0	0	0	0	0	21	0	0	6	0
Barksdale Sta. (1)	0	0	0	0	0	0	0	0	0	0	0	0
PW Facility	0	0	0	0	0	0	0	5	0	1	0	0
Total	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**137**	**0**	**11**	**92**	**0**

(1) – estimated trips; assignment not available or not provided in TIA
(2) – assignment revised to reflect modified trip generation for partial build-out
(3) – modified from original TIA to reflect scaled-back SEPA proposal

2. Center Drive/McNeil Street

Development	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Village IV (2)	0	2	18	0	1	0	5	0	0	0	0	0
Williamson Pl. (3)	17	0	0	0	0	3	0	12	0	0	3	2
Patriot's Lndng. (1)	2	8	54	0	3	0	18	0	0	0	0	1
Civic Ctr. Phase 2	3	0	0	0	0	4	0	33	0	3	7	0
Civic Ctr. Phase 3	3	0	0	0	0	2	0	28	0	0	4	0
DuPont Corp. Ctr.	7	0	0	0	0	2	0	26	0	1	10	2
DuPont Industrial	2	0	0	0	0	0	0	21	0	0	6	0
Barksdale Sta. (1)	0	0	0	0	0	0	0	0	0	0	0	0
PW Facility	1	0	0	0	0	0	0	5	0	1	1	1
Total	**35**	**10**	**72**	**0**	**4**	**11**	**23**	**125**	**0**	**5**	**31**	**6**

(1) – estimated trips; assignment not available or not provided in TIA
(2) – assignment revised to reflect modified trip generation for partial build-out
(3) – modified from original TIA to reflect scaled-back SEPA proposal

Revised 07/08/2020

3. Center Drive/Bob's Hollow Lane

Development	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Village IV (2)	7	0	0	0	0	0	0	0	0	0	0	2
Williamson Pl. (3)	0	0	0	0	0	0	0	35	0	0	5	0
Patriot's Lndng. (1)	5	0	0	0	0	0	0	2	0	0	1	2
Civic Ctr. Phase 2	12	0	0	0	0	0	0	40	0	0	10	6
Civic Ctr. Phase 3	6	0	0	0	0	0	0	33	0	0	4	1
DuPont Corp. Ctr.	2	0	0	0	0	1	0	35	0	0	13	1
DuPont Industrial	2	0	0	0	0	0	0	23	0	0	6	1
Barksdale Sta. (1)	0	0	0	0	0	0	0	0	0	0	0	0
PW Facility	1	0	0	0	0	0	0	7	0	0	3	1
Total	**35**	**0**	**0**	**0**	**0**	**1**	**0**	**175**	**0**	**0**	**42**	**14**

(1) – estimated trips; assignment not available or not provided in TIA
(2) – assignment revised to reflect modified trip generation for partial build-out
(3) – modified from original TIA to reflect scaled-back SEPA proposal

4. Center Drive/Palisade Blvd.

Development	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Village IV (2)	0	0	0	0	0	0	0	7	0	0	2	0
Williamson Pl. (3)	0	0	0	0	0	3	0	35	0	0	5	0
Patriot's Lndng. (1)	0	0	0	0	0	0	0	7	0	0	3	0
Civic Ctr. Phase 2	0	0	0	0	0	10	0	52	0	7	16	0
Civic Ctr. Phase 3	0	0	0	0	0	4	0	39	0	1	5	0
DuPont Corp. Ctr.	0	0	0	0	0	1	0	38	0	1	14	0
DuPont Industrial	0	0	0	0	0	0	0	25	0	0	7	0
Barksdale Sta. (1)	0	0	0	0	0	0	0	0	0	0	0	0
PW Facility	0	0	0	0	0	1	0	7	0	2	4	0
Total	**0**	**0**	**0**	**0**	**0**	**19**	**0**	**210**	**0**	**11**	**56**	**0**

(1) – estimated trips; assignment not available or not provided in TIA
(2) – assignment revised to reflect modified trip generation for partial build-out
(3) – modified from original TIA to reflect scaled-back SEPA proposal

5. Center Drive/Civic

Development	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Village IV (2)	0		0				0	7			2	0
Williamson Pl. (3)	0		0				0	38			5	0
Patriot's Lndng. (1)	0		0				0	7			3	0
Civic Ctr. Phase 2	8		23				62	0			0	18
Civic Ctr. Phase 3	2		6				43	0			0	11
DuPont Corp. Ctr.	0		0				0	39			15	0
DuPont Industrial	0		0				0	25			7	0
Barksdale Sta. (1)	0		0				0	0			0	0
PW Facility	4		6				8	0			0	4
Total	**14**		**35**				**113**	**116**			**32**	**33**

(1) – estimated trips; assignment not available or not provided in TIA
(2) – assignment revised to reflect modified trip generation for partial build-out
(3) – modified from original TIA to reflect scaled-back SEPA proposal

Revised 07/08/2020

6. Center Drive/International Place

Development	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Village IV (1,2)	0	10	0	0	6	0	0	0	0	0	0	0
Williamson Pl. (3)	0	38	0	0	5	0	0	0	0	0	0	0
Patriot's Lndg. (1)	0	12	0	0	4	0	0	0	0	0	0	0
Civic Ctr. Phs. 2	0	8	0	0	18	0	0	0	0	0	0	0
Civic Ctr. Phs. 3	0	2	0	0	11	0	0	0	0	0	0	0
DuPont Corp. Ctr.	0	7	0	0	18	0	0	0	0	0	0	0
DuPont Industrial	0	3	0	0	8	0	0	0	0	0	0	0
Barksdale Sta. (1)	0	12	0	0	11	0	0	0	0	0	0	0
PW Facility	0	3	0	0	4	0	0	0	0	0	0	0
Total	**0**	**95**	**0**	**0**	**85**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

(1) – estimated trips; assignment not available or not provided in TIA
(2) – assignment revised to reflect modified trip generation for partial build-out
(3) – modified from original TIA to reflect scaled-back SEPA proposal

7. Center Drive/DuPont Steilacoom Road

Development	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Village IV (1,2)	8		2				2	0			0	4
Williamson Pl. (3)	4		10				61	0			0	20
Patriot's Lndg. (1)	12		0				0	0			0	4
Civic Ctr. Phase 2	4		4				6	0			0	12
Civic Ctr. Phase 3	1		1				3	0			0	8
DuPont Corp. Ctr.	3		4				9	27			10	9
DuPont Ind. (1)	1		2				6	0			0	2
Barksdale Sta.	0		12				11	5			5	0
PW Facility	1		2				3	0			0	1
Total	**34**		**37**				**101**	**32**			**15**	**60**

(1) – estimated trips; assignment not available or not provided in TIA
(2) – assignment revised to reflect modified trip generation for partial build-out
(3) – modified from original TIA to reflect scaled-back SEPA proposal

8. Barksdale Avenue/DuPont-Steilacoom Road

Development	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Village IV (1,2)	0	0	0	0	0	2	0	0	0	2	0	0
Williamson Pl. (3)	6	0	0	0	0	49	0	6	0	8	0	2
Patriot's Lndg. (1)	0	0	0	0	0	0	0	0	0	0	0	0
Civic Ctr. Phs. 2 (1)	0	0	0	0	0	3	0	0	0	2	0	0
Civic Ctr. Phs. 3 (1)	0	0	0	0	0	2	0	0	0	0	0	0
DuPont Corp. Ctr.	3	0	0	0	0	30	0	3	0	11	1	1
DuPont Ind. (1)	0	0	0	0	0	6	0	0	0	2	0	0
Barksdale Sta.	3	0	0	0	0	27	0	8	0	25	8	3
PW Facility	0	0	0	0	0	3	0	0	0	0	0	2
Total	**12**	**0**	**0**	**0**	**0**	**122**	**0**	**17**	**0**	**50**	**9**	**8**

(1) – estimated trips; assignment not available or not provided in TIA
(2) – assignment revised to reflect modified trip generation for partial build-out
(3) – modified from original TIA to reflect scaled-back SEPA proposal
(4) – includes pass-by trip volumes
Barksdale Avenue considered the east-west street

Revised 07/08/2020

(PM PEAK HOUR)

1. Center Drive/Wilmington Drive

Development	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Village IV (2)	0	0	0	0	0	1	0	18	0	1	8	0
Williamson Pl. (3)	0	0	0	0	0	0	0	3	0	0	12	0
Patriot's Lndng. (1)	0	0	0	0	0	4	0	57	0	3	33	0
Civic Ctr. Phase 2	0	0	0	0	0	1	0	5	0	2	25	0
Civic Ctr. Phase 3	0	0	0	0	0	0	0	4	0	1	25	0
DuPont Corp. Ctr.	0	0	0	0	0	2	0	12	0	4	30	0
DuPont Industrial	0	0	0	0	0	0	0	8	0	0	23	0
Barksdale Sta. (1)	0	0	0	0	0	0	0	0	0	0	0	0
PW Facility	0	0	0	0	0	0	0	0	0	0	7	0
Total	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**107**	**0**	**11**	**163**	**0**

(1) – estimated trips; assignment not available or not provided in TIA
(2) – assignment revised to reflect modified trip generation for partial build-out
(3) – modified from original TIA to reflect scaled-back SEPA proposal

2. Center Drive/McNeil Street

Development	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Village IV (2)	0	1	9	0	1	0	19	0	0	0	0	0
Williamson Pl. (3)	3	0	0	0	0	3	0	3	0	3	12	17
Patriot's Lndng. (1)	2	5	36	0	9	0	61	0	0	0	0	3
Civic Ctr. Phase 2	1	0	0	0	0	2	0	6	0	3	27	3
Civic Ctr. Phase 3	1	0	0	0	0	1	0	4	0	2	26	3
DuPont Corp. Ctr.	3	0	0	0	0	1	0	14	0	2	34	9
DuPont Industrial	1	0	0	0	0	0	0	8	0	0	23	2
Barksdale Sta. (1)	0	0	0	0	0	0	0	0	0	0	0	0
PW Facility	0	0	0	0	0	0	0	0	0	1	7	1
Total	**11**	**6**	**45**	**0**	**10**	**7**	**80**	**35**	**0**	**11**	**129**	**38**

(1) – estimated trips; assignment not available or not provided in TIA
(2) – assignment revised to reflect modified trip generation for partial build-out
(3) – modified from original TIA to reflect scaled-back SEPA proposal

Revised 07/08/2020

3. Center Drive/Bob's Hollow Lane

Development	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Village IV (2)	8	0	0	0	0	0	0	0	0	0	0	10
Williamson Pl. (3)	0	0	0	0	0	0	0	9	0	0	32	0
Patriot's Lndng. (1)	6	0	0	0	0	0	0	2	0	0	3	10
Civic Ctr. Phase 2	3	0	0	0	0	0	0	9	0	0	33	7
Civic Ctr. Phase 3	1	0	0	0	0	0	0	6	0	0	31	5
DuPont Corp. Ctr.	1	0	0	0	0	1	0	18	0	1	45	2
DuPont Industrial	1	0	0	0	0	0	0	9	0	0	25	2
Barksdale Sta. (1)	0	0	0	0	0	0	0	0	0	0	0	0
PW Facility	0	0	0	0	0	0	0	0	0	0	9	1
Total	**20**	**0**	**0**	**0**	**0**	**1**	**0**	**53**	**0**	**1**	**178**	**37**

(1) – estimated trips; assignment not available or not provided in TIA
(2) – assignment revised to reflect modified trip generation for partial build-out
(3) – modified from original TIA to reflect scaled-back SEPA proposal

4. Center Drive/Palisade Blvd.

Development	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Village IV (2)	0	0	0	0	0	0	0	8	0	0	10	0
Williamson Pl. (3)	0	0	0	0	0	0	0	9	0	3	32	0
Patriot's Lndng. (1)	0	0	0	0	0	0	0	8	0	0	13	0
Civic Ctr. Phase 2	0	0	0	0	0	4	0	12	0	7	40	0
Civic Ctr. Phase 3	0	0	0	0	0	1	0	7	0	4	36	0
DuPont Corp. Ctr.	0	0	0	0	0	1	0	19	0	2	48	0
DuPont Industrial	0	0	0	0	0	0	0	10	0	0	27	0
Barksdale Sta. (1)	0	0	0	0	0	0	0	0	0	0	0	0
PW Facility	0	0	0	0	0	0	0	0	0	1	10	0
Total	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**73**	**0**	**17**	**216**	**0**

(1) – estimated trips; assignment not available or not provided in TIA
(2) – assignment revised to reflect modified trip generation for partial build-out
(3) – modified from original TIA to reflect scaled-back SEPA proposal

5. Center Drive/Civic Drive

Development	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Village IV (2)	0		0				0	8			10	0
Williamson Pl. (3)	0		0				0	9			35	0
Patriot's Lndng. (1)	0		0				0	8			13	0
Civic Ctr. Phase 2	12		47				16	0			0	4
Civic Ctr. Phase 3	10		40				8	0			0	2
DuPont Corp. Ctr.	0		0				0	20			50	0
DuPont Industrial	0		0				0	10			27	0
Barksdale Sta. (1)	0		0				0	0			0	0
PW Facility	5		11				0	0			0	0
Total	**27**		**98**				**24**	**55**			**135**	**6**

(1) – estimated trips; assignment not available or not provided in TIA
(2) – assignment revised to reflect modified trip generation for partial build-out
(3) – modified from original TIA to reflect scaled-back SEPA proposal

Revised 07/08/2020

6. Center Drive/International Place

Development	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Village IV (1,2)	0	8	0	0	10	0	0	0	0	0	0	0
Williamson Pl. (3)	0	9	0	0	35	0	0	0	0	0	0	0
Patriot's Lndg. (1)	0	8	0	0	13	0	0	0	0	0	0	0
Civic Ctr. Phs. 2	0	12	0	0	4	0	0	0	0	0	0	0
Civic Ctr. Phs. 3	0	10	0	0	2	0	0	0	0	0	0	0
DuPont Corp. Ctr.	0	24	0	0	10	0	0	0	0	0	0	0
DuPont Industrial	0	9	0	0	3	0	0	0	0	0	0	0
Barksdale Sta.	0	7	0	0	6	0	0	0	0	0	0	0
PW Facility	0	5	0	0	0	0	0	0	0	0	0	0
Total	**0**	**92**	**0**	**0**	**83**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

(1) – estimated trips; assignment not available or not provided in TIA
(2) – assignment revised to reflect modified trip generation for partial build-out
(3) – modified from original TIA to reflect scaled-back SEPA proposal

7. Center Drive/DuPont Steilacoom Road

Development	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Village IV (1,2)	6		2				2	0			0	8
Williamson Pl. (3)	17		57				14	0			0	6
Patriot's Lndg. (1)	8		0				0	0			0	13
Civic Ctr. Phase 2	9		3				2	0			0	2
Civic Ctr. Phase 3	8		2				1	0			0	1
DuPont Corp. Ctr.	12		12				5	9			21	5
DuPont Ind. (1)	3		6				2	0			0	1
Barksdale Sta. (1)	0		7				6	0			4	0
PW Facility	1		4				0	0			0	0
Total	**64**		**93**				**32**	**9**			**25**	**36**

(1) – estimated trips; assignment not available or not provided in TIA
(2) – assignment revised to reflect modified trip generation for partial build-out
(3) – modified from original TIA to reflect scaled-back SEPA proposal

8. Barksdale Avenue/DuPont-Steilacoom Road

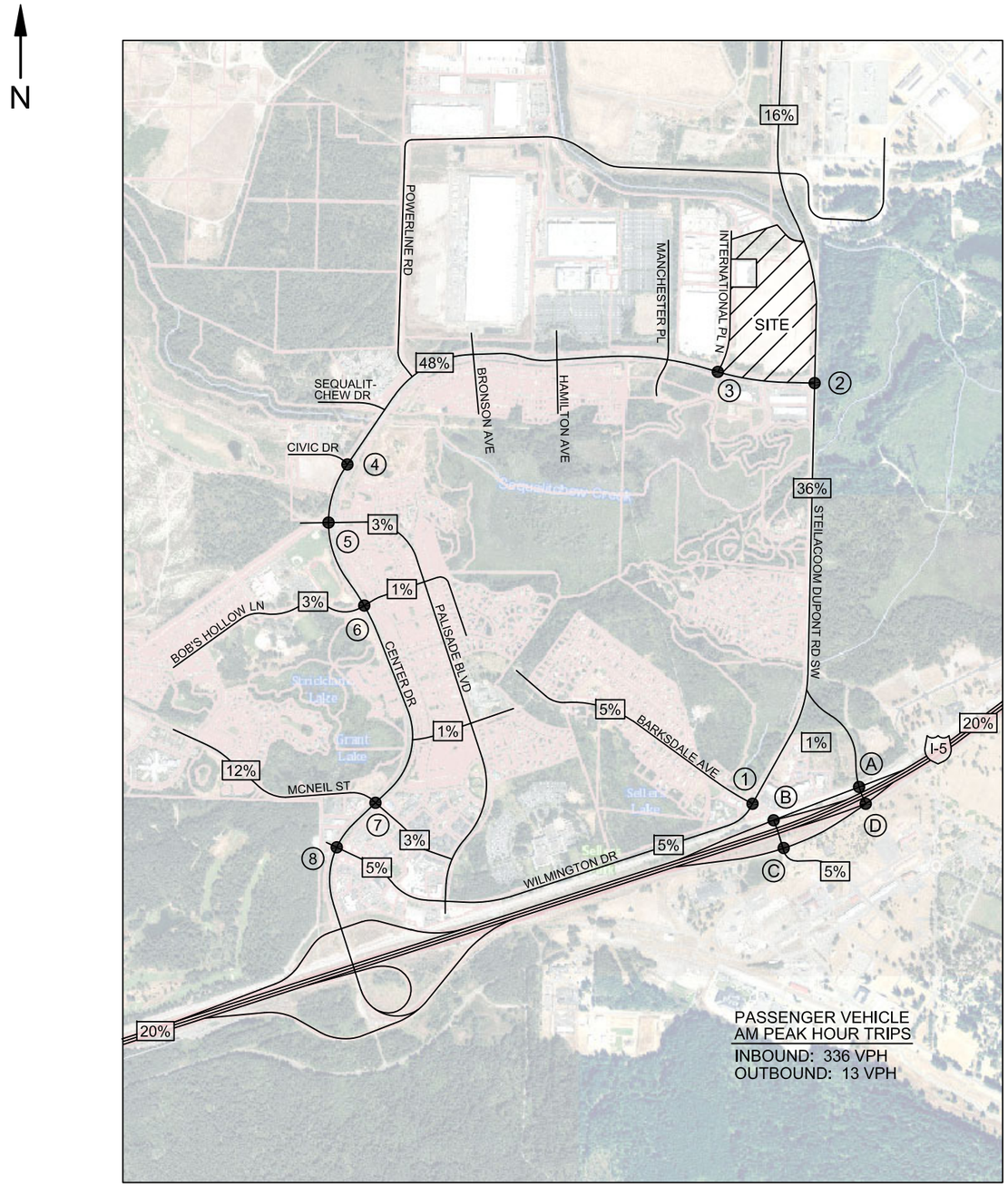
Development	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Village IV (1,2)	0	0	0	0	0	2	0	0	0	2	0	0
Williamson Pl. (3)	1	0	0	0	0	12	0	1	0	46	6	5
Patriot's Lndg. (1)	0	0	0	0	0	0	0	0	0	0	0	0
Civic Ctr. Phs. 2 (1)	0	0	0	0	0	1	0	0	0	2	0	0
Civic Ctr. Phs. 3 (1)	0	0	0	0	0	0	0	0	0	1	0	0
DuPont Corp. Ctr.	2	0	0	0	0	10	0	2	0	24	4	4
DuPont Ind. (1)	0	0	0	0	0	2	0	0	0	6	0	0
Barksdale Sta. (1)	2	0	0	0	0	16	0	5	0	16	5	2
PW Facility	0	0	0	0	0	0	0	0	0	4	0	0
Total	**5**	**0**	**0**	**0**	**0**	**43**	**0**	**8**	**0**	**101**	**15**	**11**

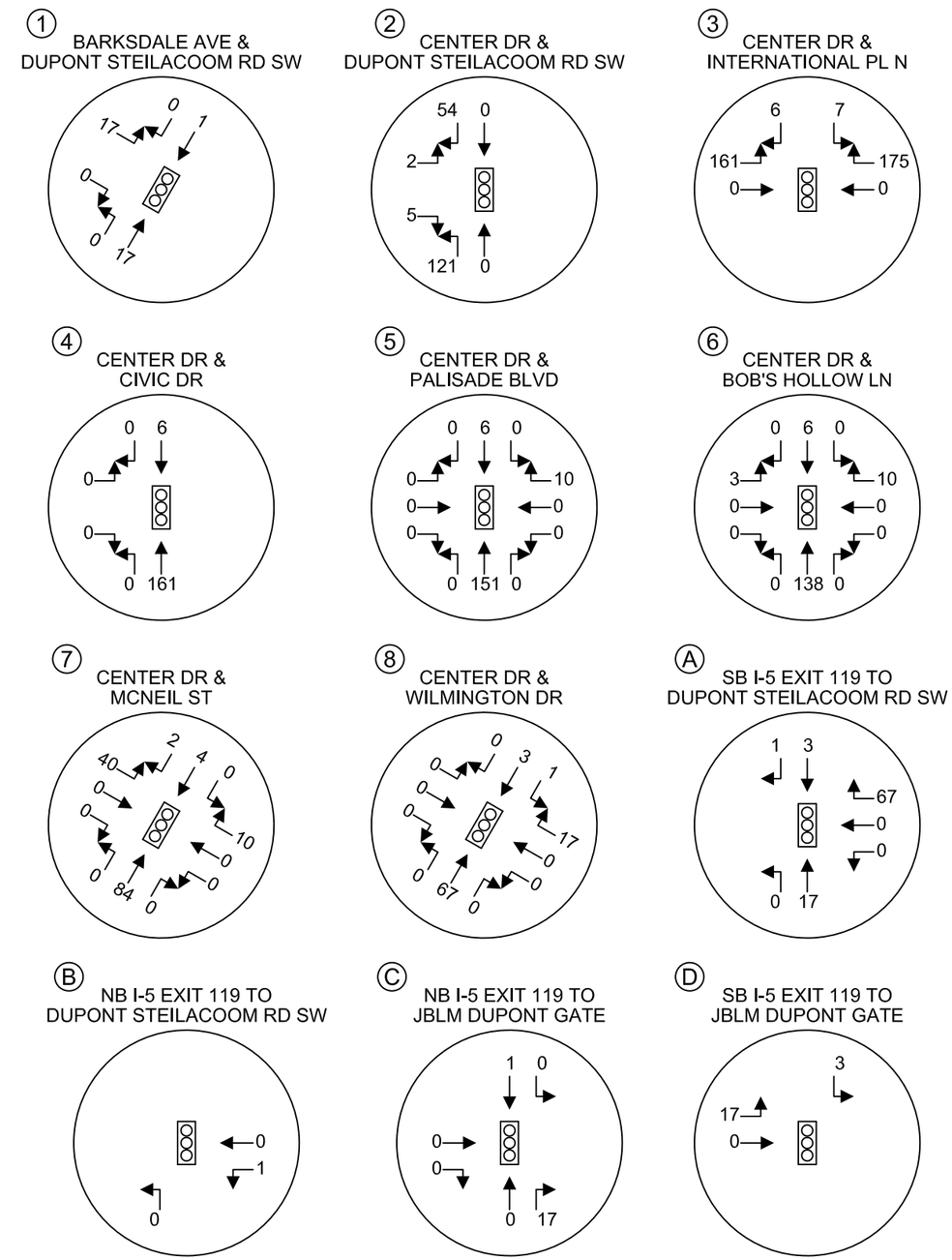
(1) – estimated trips; assignment not available or not provided in TIA
(2) – assignment revised to reflect modified trip generation for partial build-out
(3) – modified from original TIA to reflect scaled-back SEPA proposal
Barksdale Avenue considered the east-west street

Revised 07/08/2020

APPENDIX

TRIP DISTRIBUTION & ASSIGNMENT
SCENARIO 2: WITH I-5 EXIT 119 INTERCHANGE PROJECT





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SNOW BLOSSOM FULFILLMENT CENTER

AM PEAK HOUR TRIP DISTRIBUTION & ASSIGNMENT - PASSENGER VEHICLES
SCENARIO 2: WITH I-5 EXIT 119 INTERCHANGE PROJECT
FIGURE D

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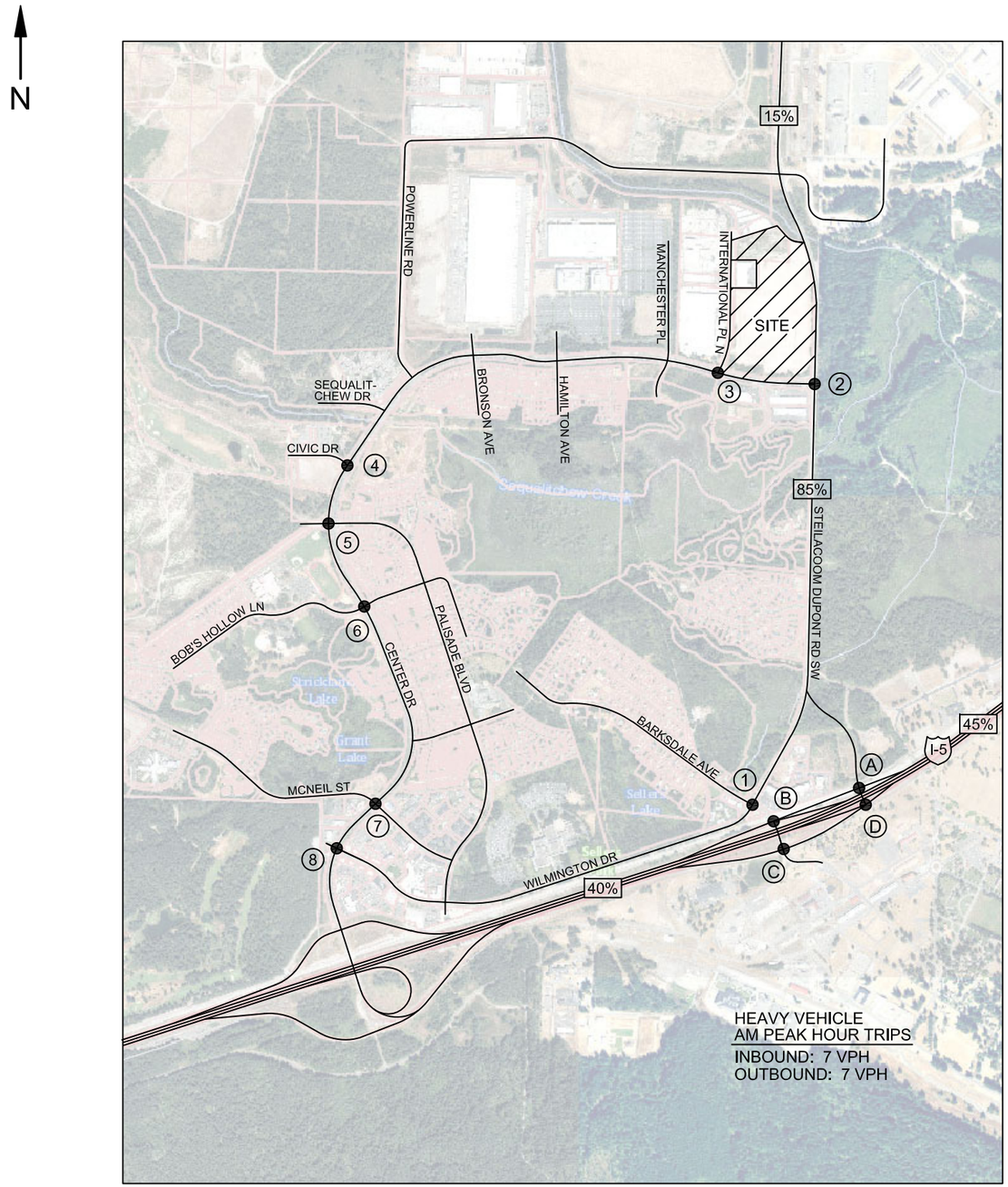

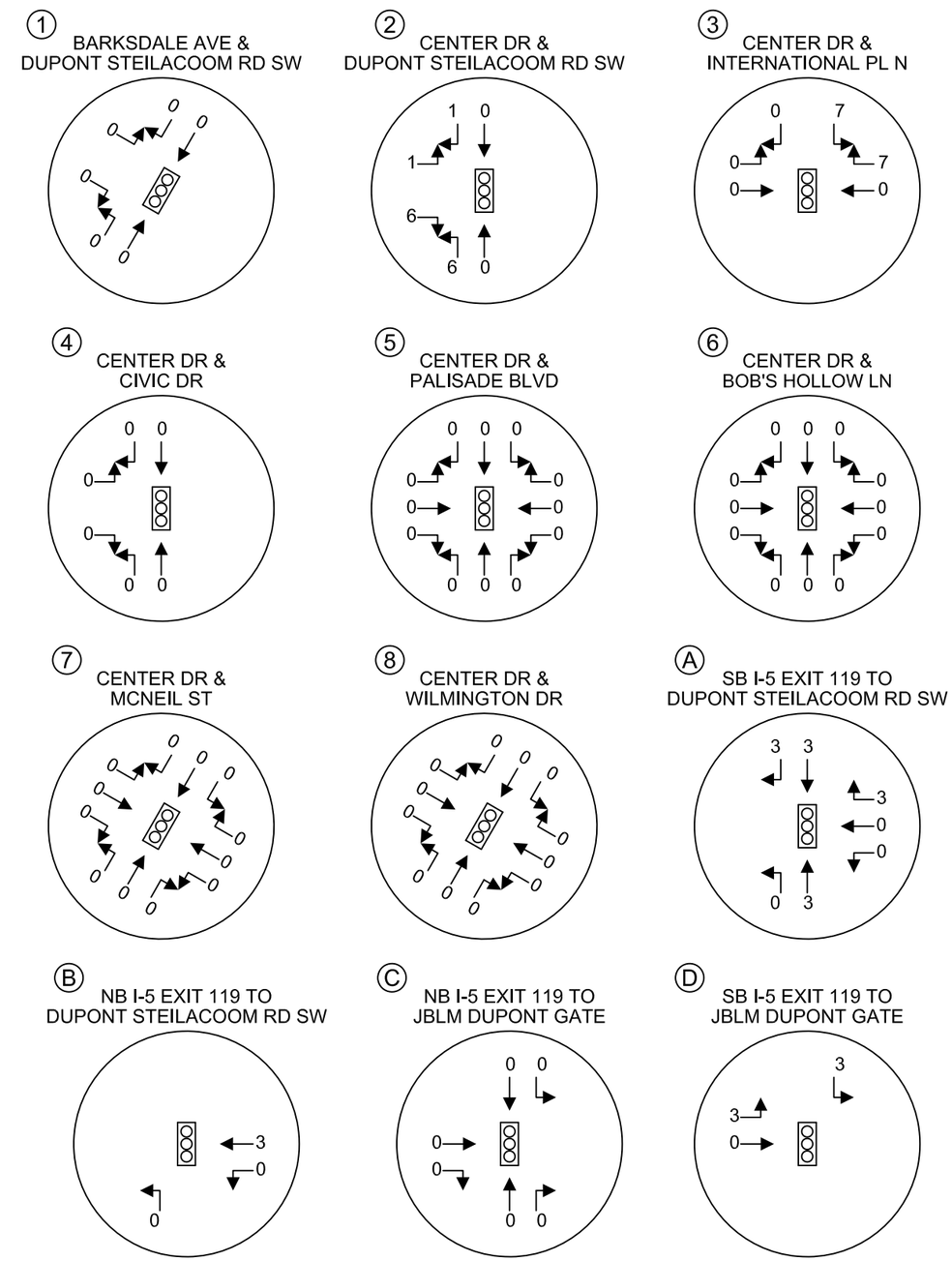

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AM PEAK HOUR TRIP DISTRIBUTION & ASSIGNMENT - HEAVY VEHICLES
SCENARIO 2: WITH I-5 EXIT 119 INTERCHANGE PROJECT
FIGURE E

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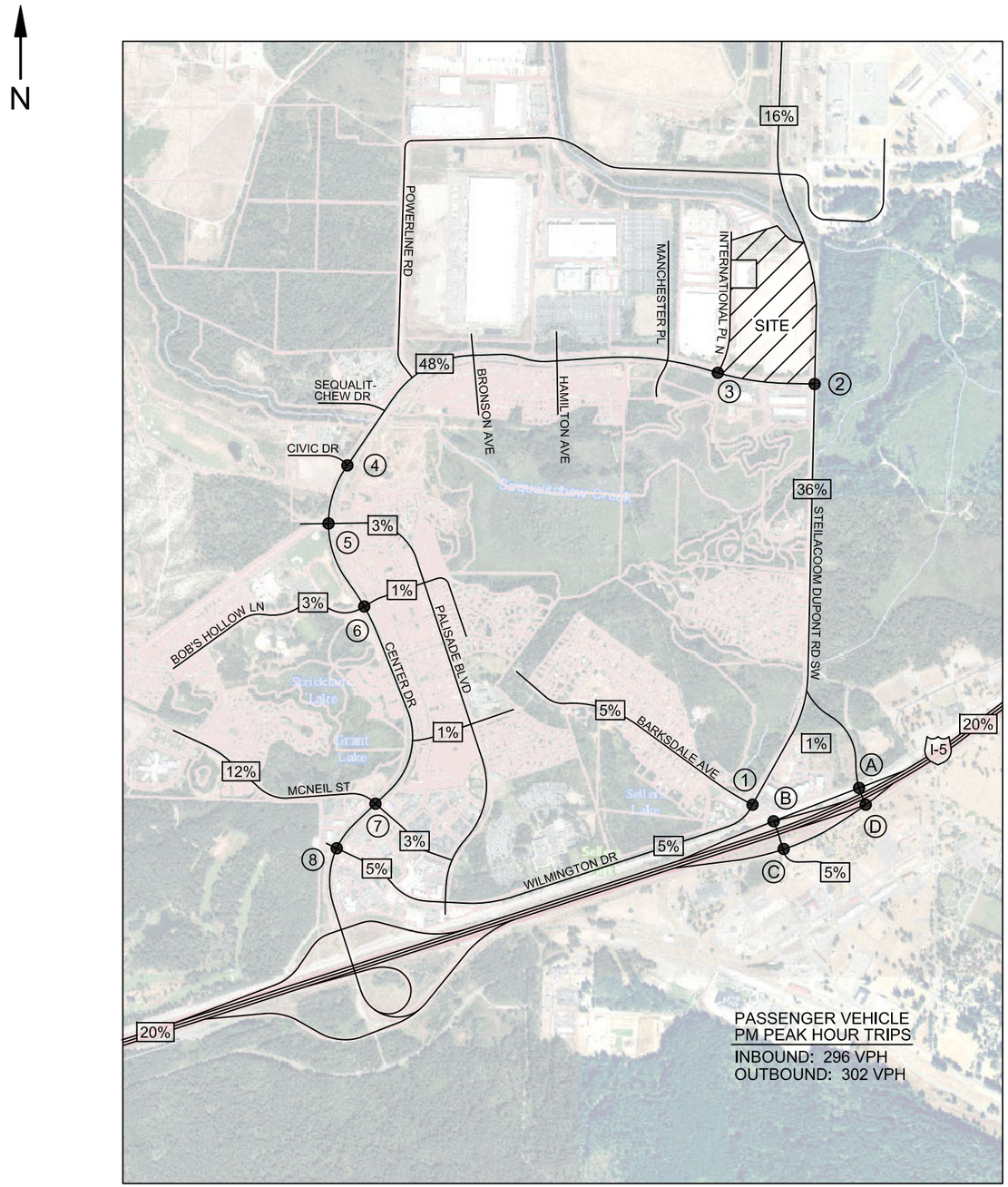

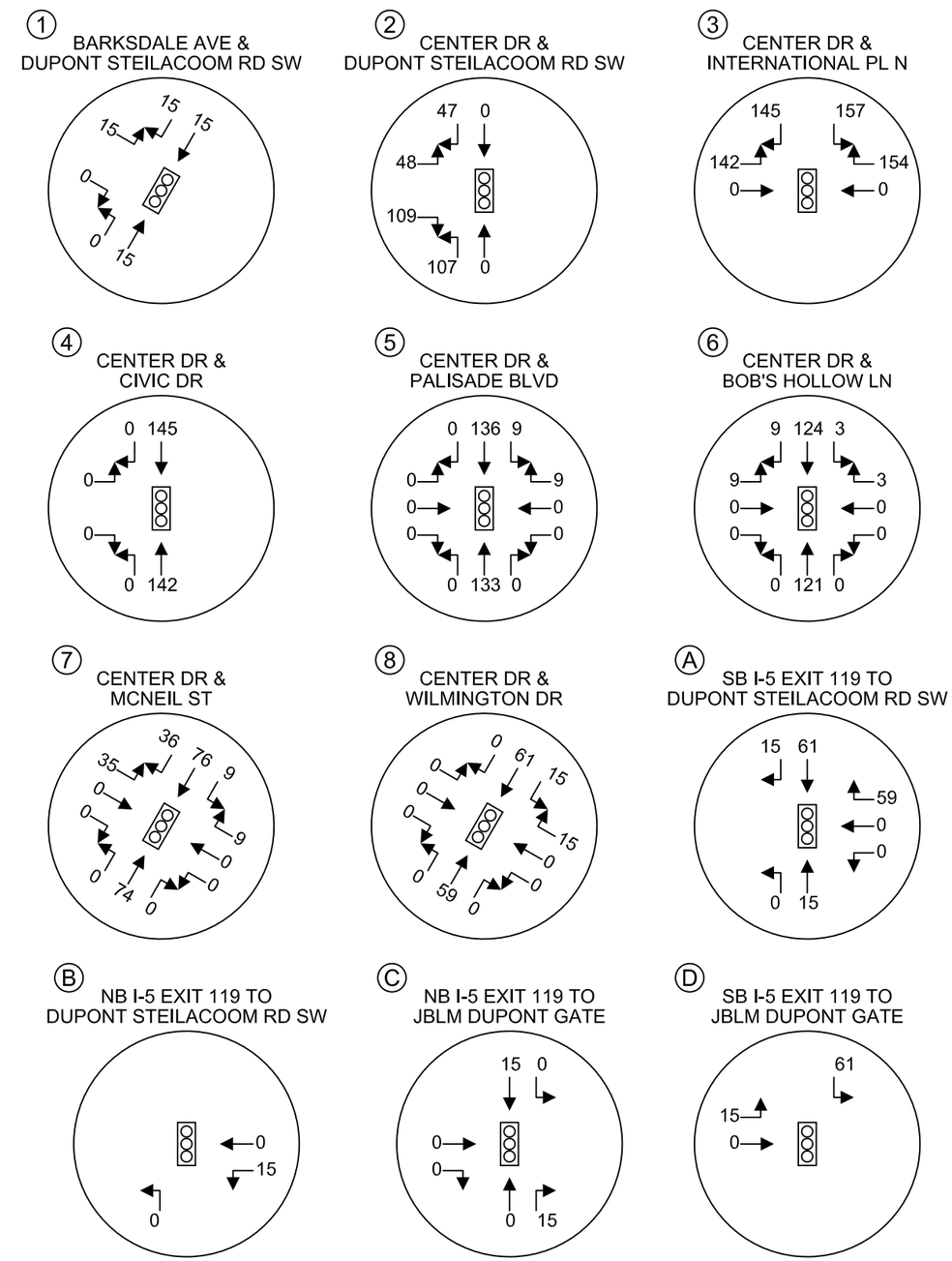

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PM PEAK HOUR TRIP DISTRIBUTION & ASSIGNMENT - PASSENGER VEHICLES
SCENARIO 2: WITH I-5 EXIT 119 INTERCHANGE PROJECT
FIGURE F

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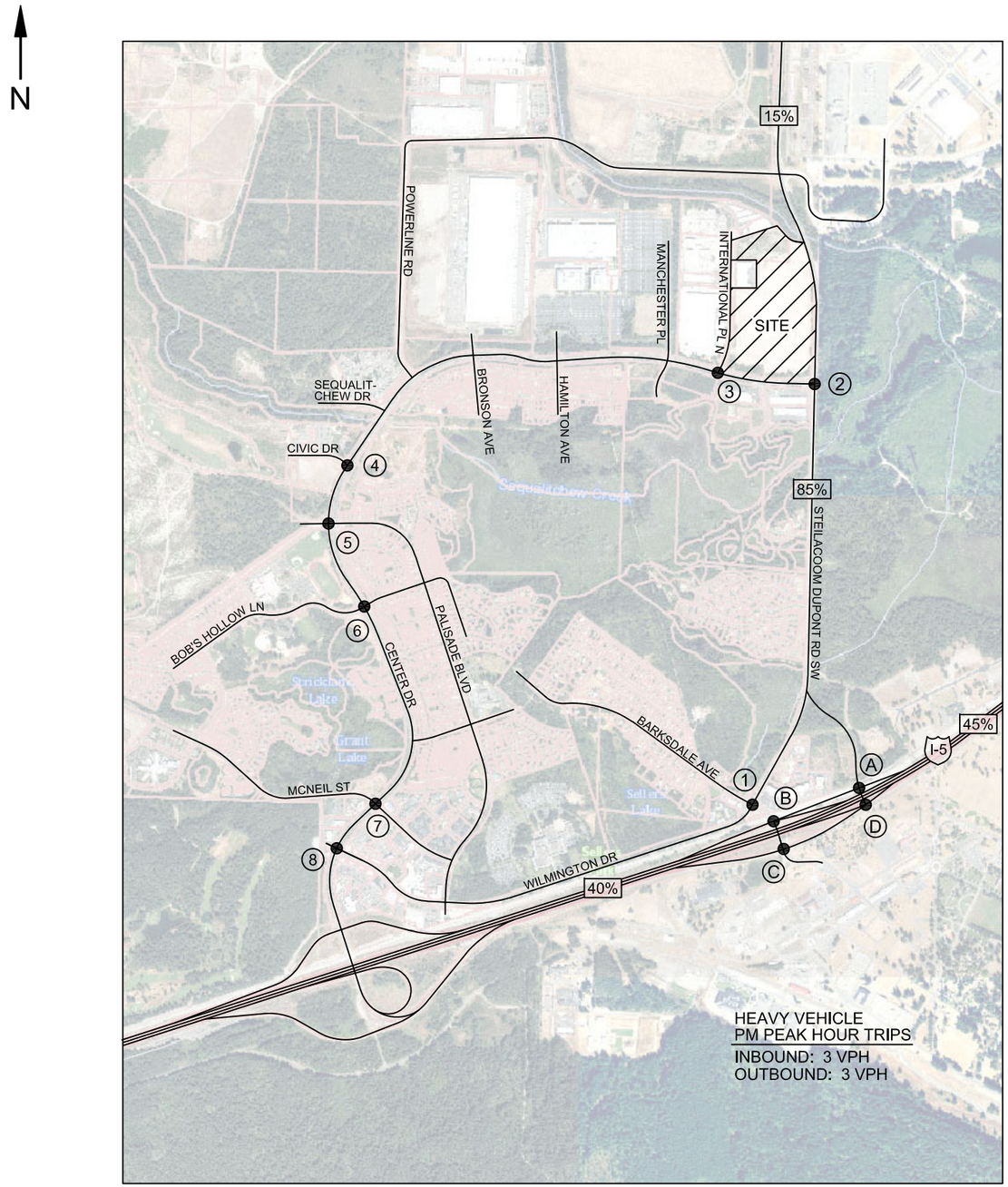

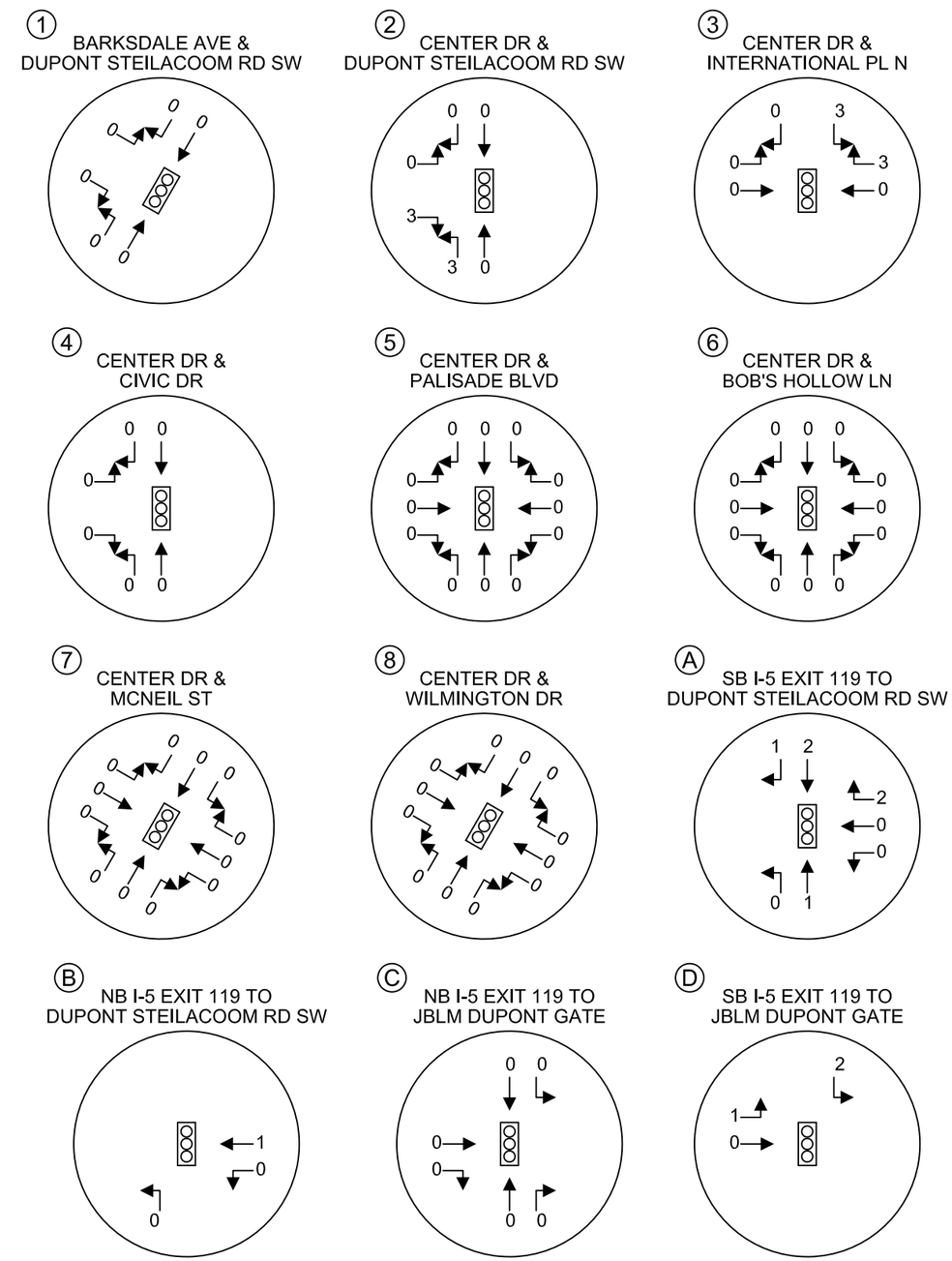

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PM PEAK HOUR TRIP DISTRIBUTION & ASSIGNMENT - HEAVY VEHICLES
SCENARIO 2: WITH I-5 EXIT 119 INTERCHANGE PROJECT
FIGURE G

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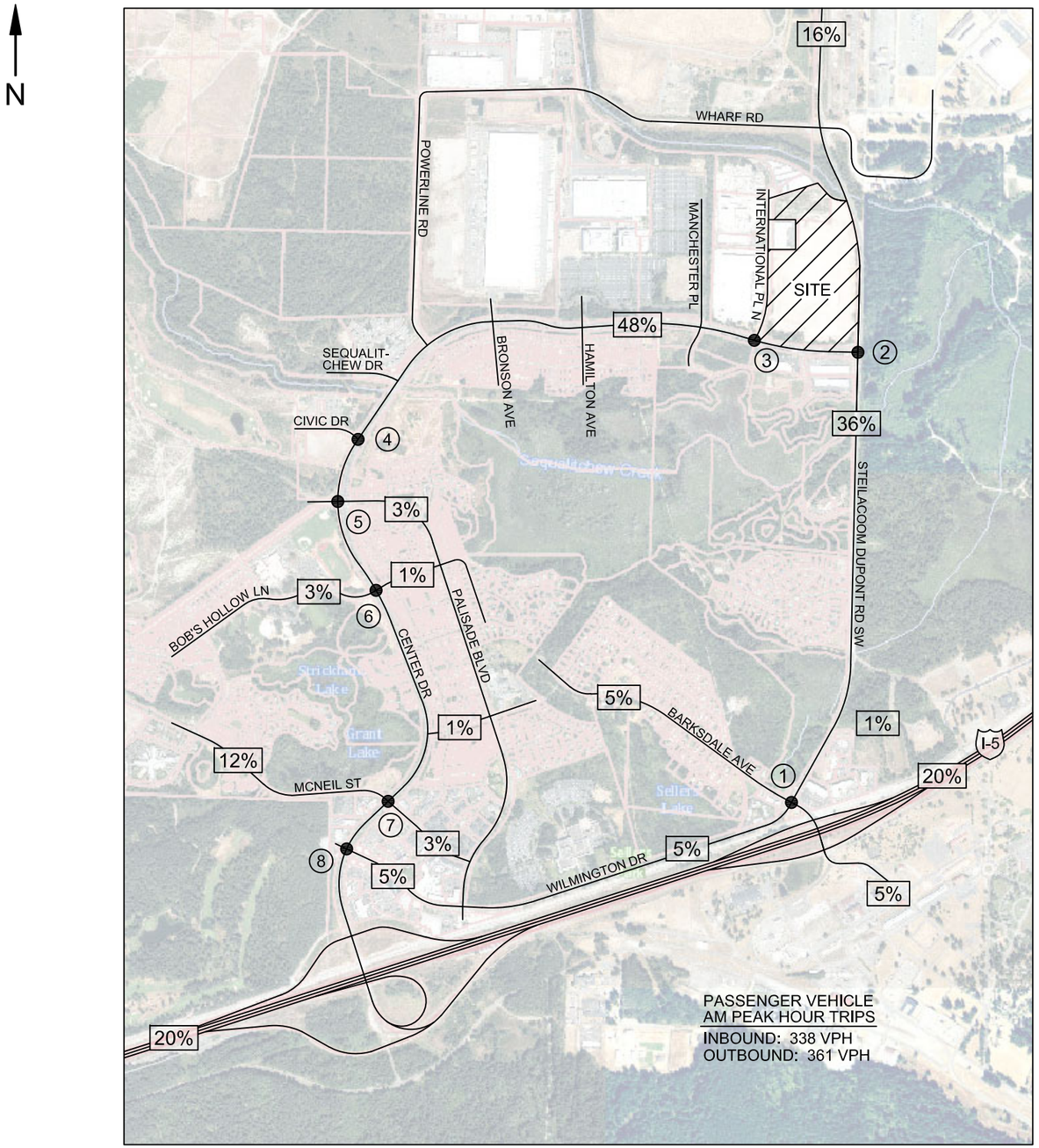
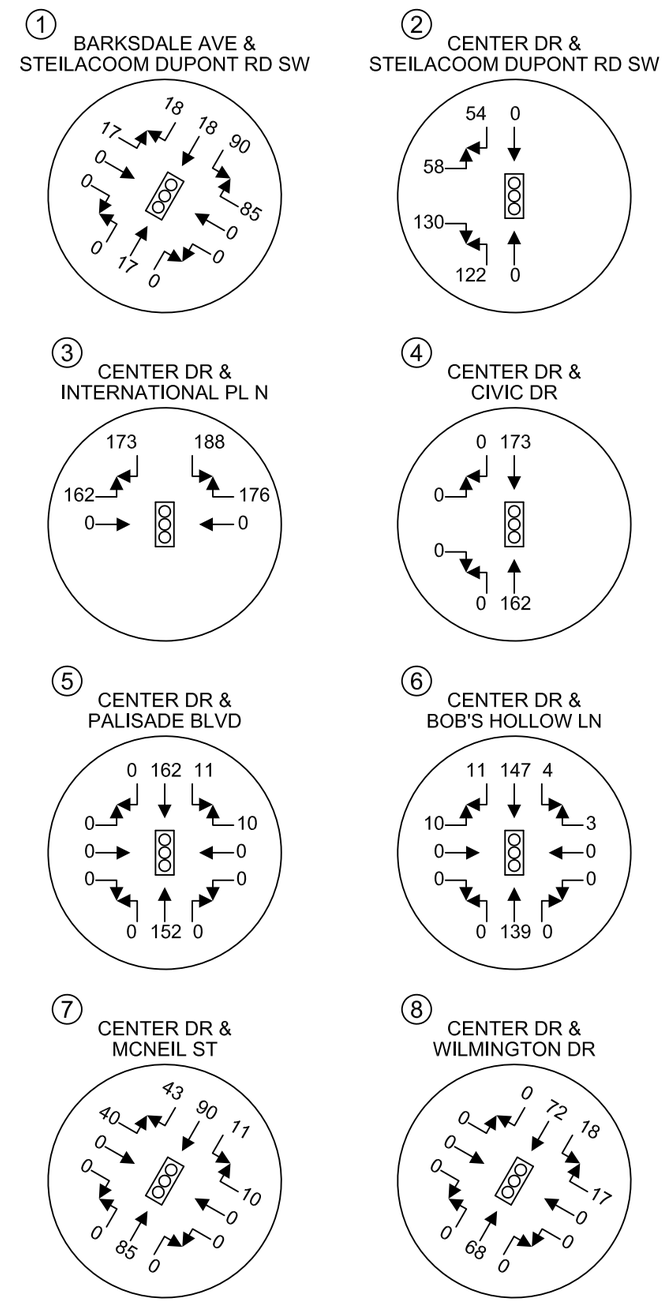
APPENDIX

TRIP DISTRIBUTION & ASSIGNMENT
SCENARIO 3: PEAK SEASON VOLUMES





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AM PEAK HOUR TRIP DISTRIBUTION & ASSIGNMENT - PASSENGER VEHICLES
SCENARIO 3: PEAK SEASON VOLUMES
FIGURE H

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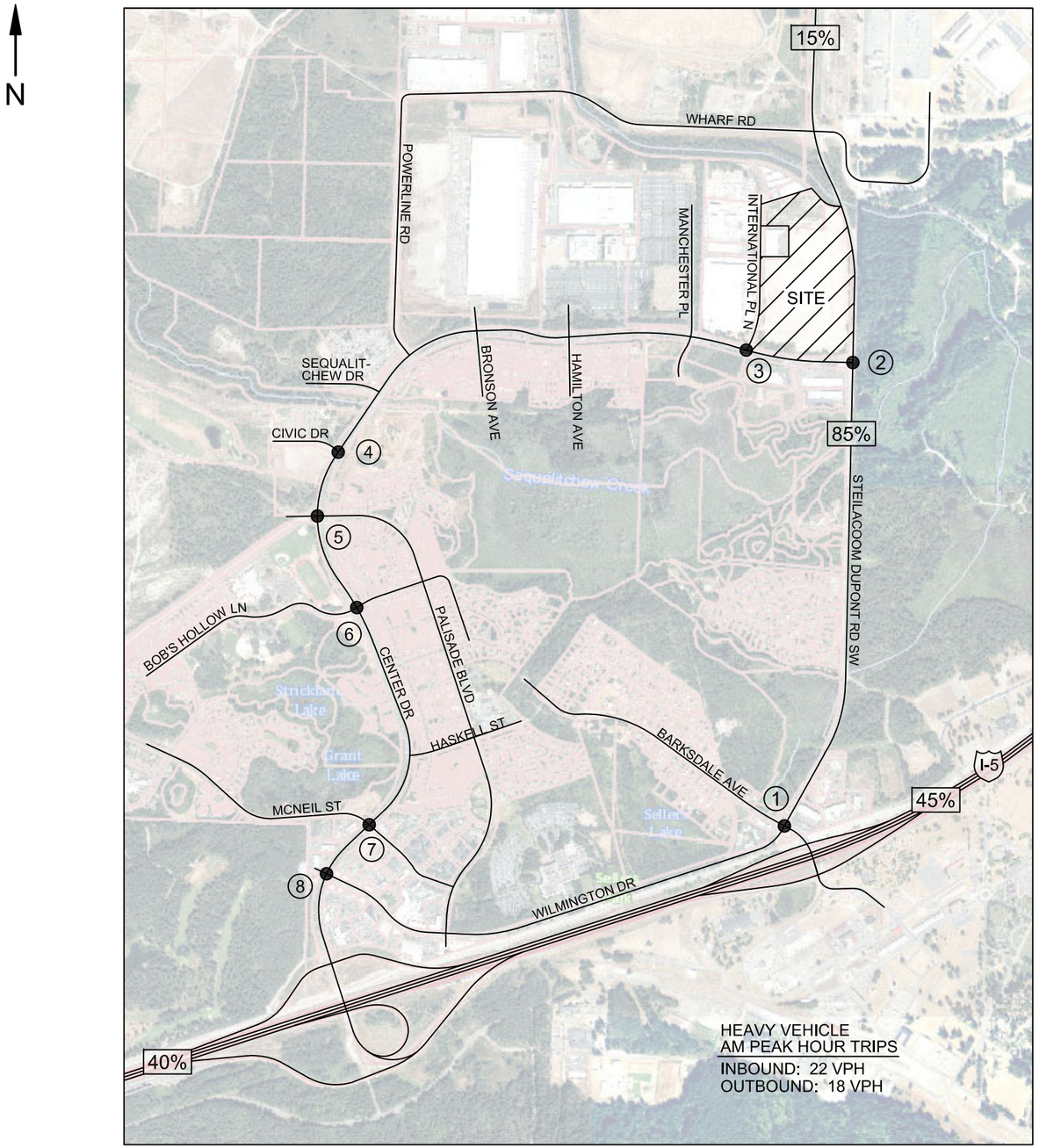

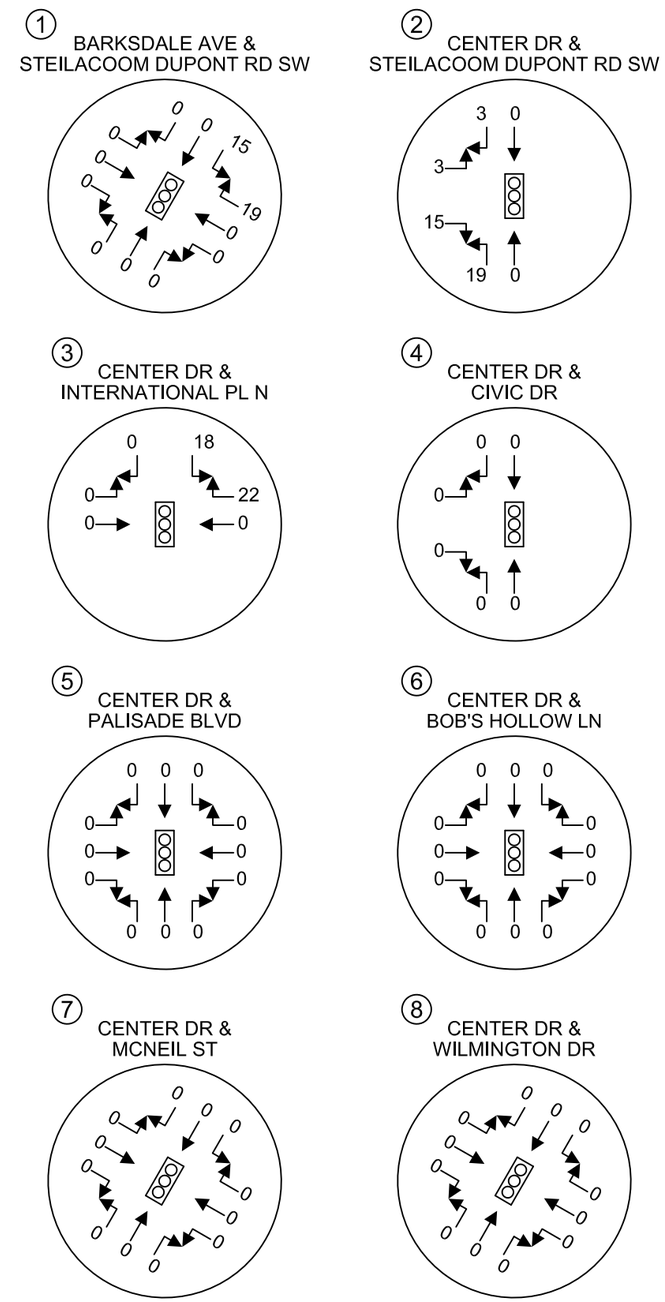

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SNOW BLOSSOM FULFILLMENT CENTER

AM PEAK HOUR TRIP DISTRIBUTION & ASSIGNMENT - HEAVY VEHICLES
SCENARIO 3: PEAK SEASON VOLUMES
FIGURE I

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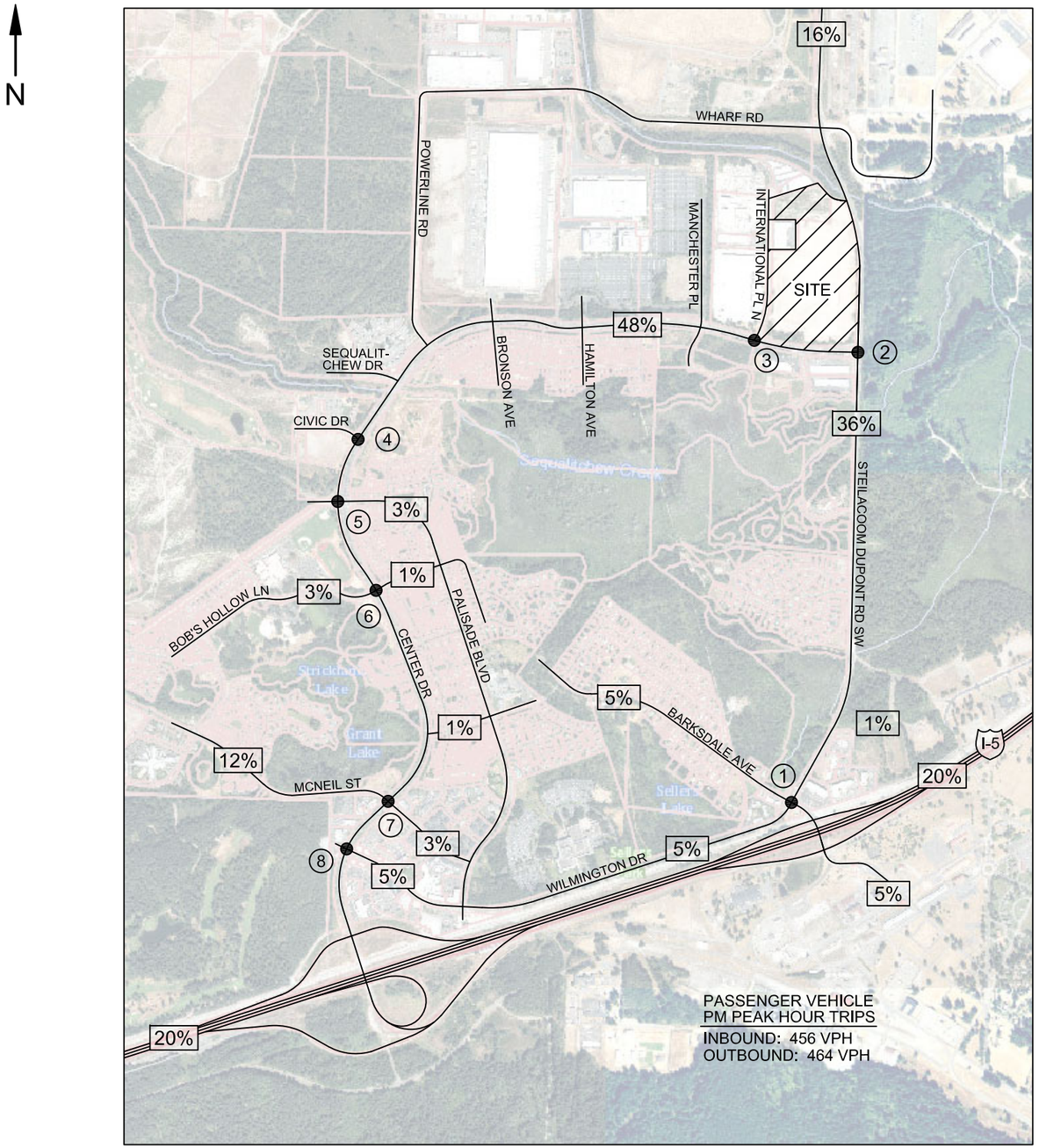

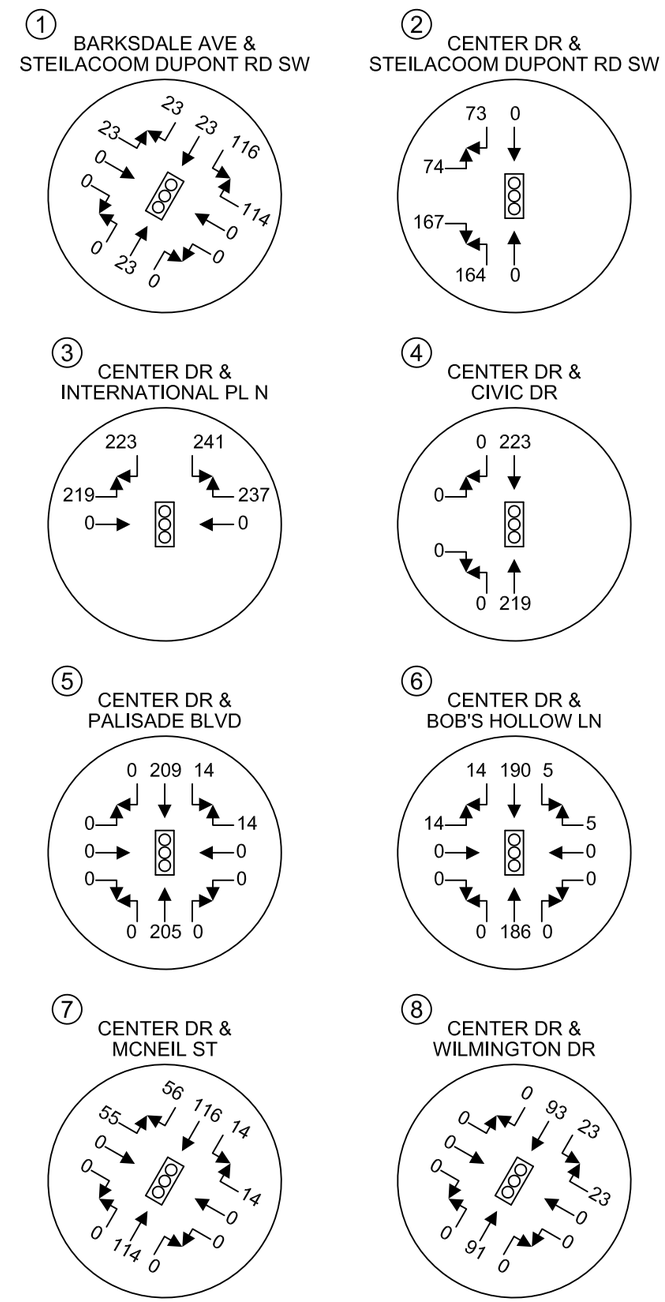

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SNOW BLOSSOM FULFILLMENT CENTER

PM PEAK HOUR TRIP DISTRIBUTION & ASSIGNMENT - PASSENGER VEHICLES
SCENARIO 3: PEAK SEASON VOLUMES
FIGURE J

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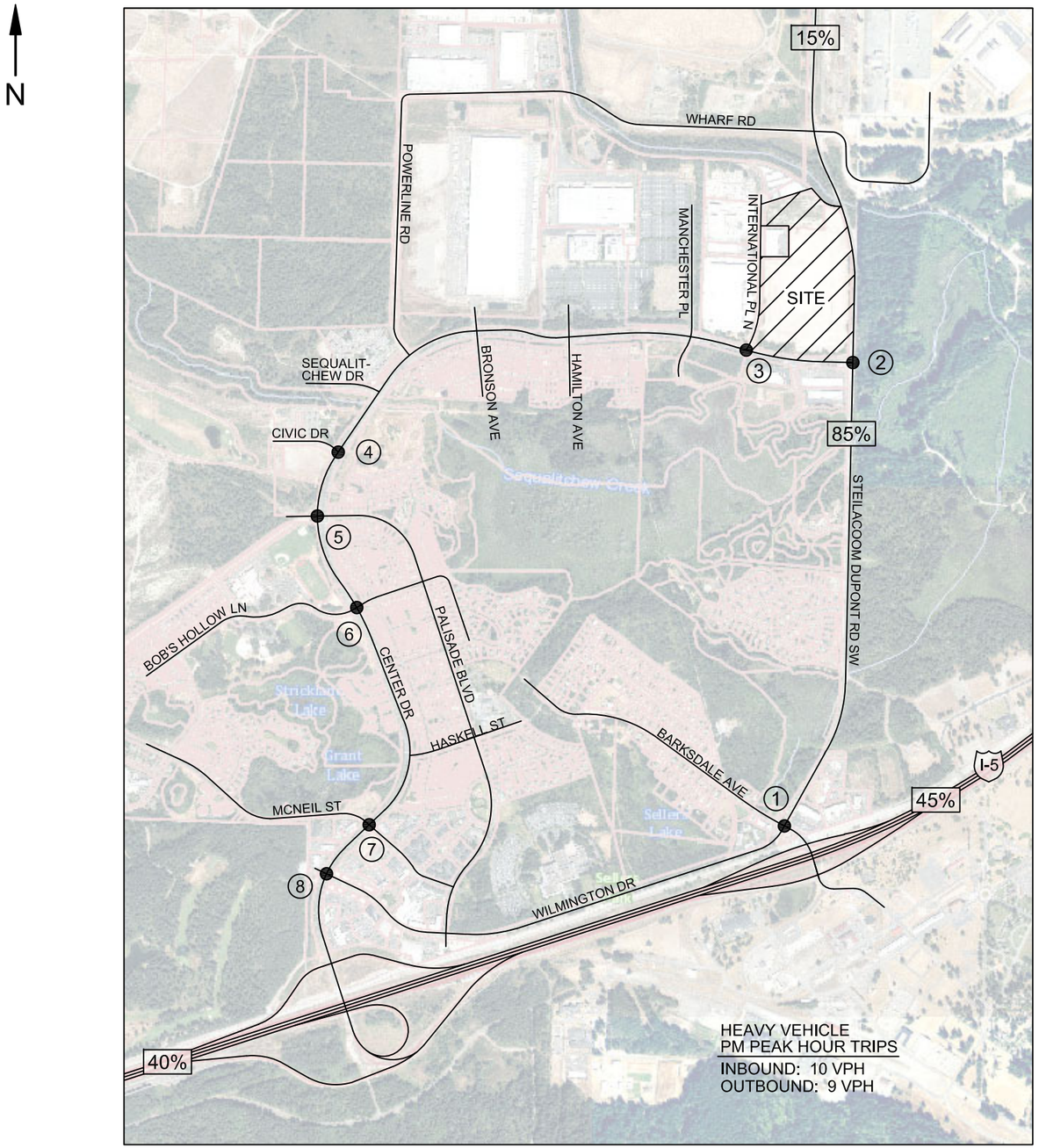

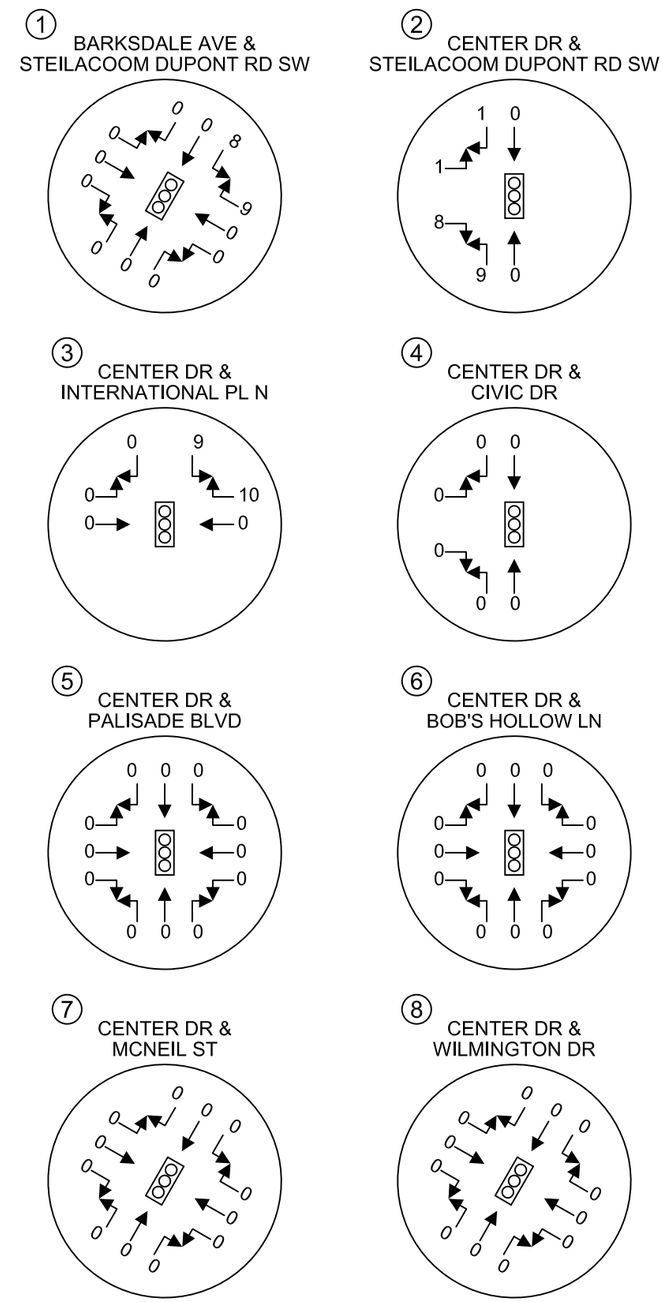

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SCENARIO 3: PEAK SEASON VOLUMES
FIGURE K

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APPENDIX

LEVEL OF SERVICE

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	59	24	200	38	501	9	52	117	509	105	36
Future Volume (vph)	27	59	24	200	38	501	9	52	117	509	105	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	125		125	100		75	0		0
Storage Lanes	1		0	1		0	1		1	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	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor	0.99	0.99		0.99		0.97	0.99		0.97	0.99	0.99	
Frt		0.956				0.850			0.850		0.983	
Flt Protected	0.950			0.950			0.950			0.950	0.973	
Satd. Flow (prot)	1719	1714	0	1752	1845	1568	1770	1863	1583	1633	1639	0
Flt Permitted	0.950			0.950			0.950			0.950	0.973	
Satd. Flow (perm)	1702	1714	0	1737	1845	1519	1758	1863	1533	1618	1630	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15				533			134		5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		355			383			251			690	
Travel Time (s)		8.1			8.7			5.7			15.7	
Confl. Peds. (#/hr)	3		3	3		3	3		3	3		3
Confl. Bikes (#/hr)			1			1			1			1
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 (%)	5%	5%	5%	3%	3%	3%	2%	2%	2%	5%	5%	5%
Adj. Flow (vph)	29	63	26	213	40	533	10	55	124	541	112	38
Shared Lane Traffic (%)										36%		
Lane Group Flow (vph)	29	89	0	213	40	533	10	55	124	346	345	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases						8			2			
Total Split (s)	14.5	26.5		29.5	24.6	24.6	27.5	27.5	27.5	39.5	39.5	
Total Lost Time (s)	4.5	4.5		4.5	4.6	4.6	4.5	4.5	4.5	4.5	4.5	
Act Effct Green (s)	8.4	10.8		16.7	23.6	23.6	13.4	13.4	13.4	24.5	24.5	
Actuated g/C Ratio	0.11	0.14		0.22	0.32	0.32	0.18	0.18	0.18	0.33	0.33	
v/c Ratio	0.15	0.34		0.54	0.07	0.63	0.03	0.17	0.32	0.65	0.64	
Control Delay	42.9	35.3		37.6	24.7	6.7	37.3	37.4	9.1	32.5	31.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	42.9	35.3		37.6	24.7	6.7	37.3	37.4	9.1	32.5	31.8	
LOS	D	D		D	C	A	D	D	A	C	C	
Approach Delay		37.2			16.0			18.9			32.2	
Approach LOS		D			B			B			C	
Queue Length 50th (ft)	13	33		93	12	0	4	24	0	149	146	
Queue Length 95th (ft)	51	98		220	48	89	22	74	46	348	343	
Internal Link Dist (ft)		275			303			171			610	
Turn Bay Length (ft)	75			125		125	100		75			
Base Capacity (vph)	283	631		722	1025	1081	671	706	664	878	883	
Starvation Cap Reductn	0	0		0	0	17	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.10	0.14		0.30	0.04	0.50	0.01	0.08	0.19	0.39	0.39	

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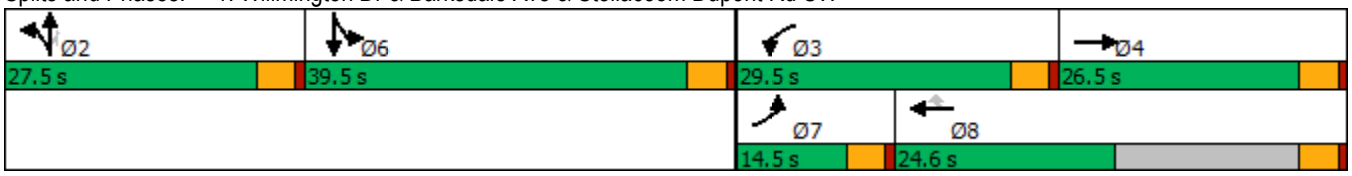
Intersection Summary	
Area Type: Other	
Cycle Length: 123	
Actuated Cycle Length: 74.8	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 24.0	Intersection LOS: C
Intersection Capacity Utilization 56.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Wilimington Dr & Barksdale Ave & Steilacoom Dupont Rd SW



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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	277	75	151	466	487	285
Future Volume (veh/h)	277	75	151	466	487	285
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1856	1856
Adj Flow Rate, veh/h	308	83	168	518	541	317
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	4	4	4	4	3	3
Cap, veh/h	399	355	224	1093	718	595
Arrive On Green	0.23	0.23	0.13	0.59	0.39	0.39
Sat Flow, veh/h	1753	1560	1753	1841	1856	1538
Grp Volume(v), veh/h	308	83	168	518	541	317
Grp Sat Flow(s),veh/h/ln	1753	1560	1753	1841	1856	1538
Q Serve(g_s), s	8.3	2.2	4.7	8.0	12.7	8.0
Cycle Q Clear(g_c), s	8.3	2.2	4.7	8.0	12.7	8.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	399	355	224	1093	718	595
V/C Ratio(X)	0.77	0.23	0.75	0.47	0.75	0.53
Avail Cap(c_a), veh/h	1392	1239	1392	2193	2210	1832
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	18.2	15.9	21.2	5.8	13.4	11.9
Incr Delay (d2), s/veh	3.2	0.3	5.0	0.3	1.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	2.1	1.9	1.6	4.2	2.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.5	16.2	26.2	6.1	15.0	12.7
LnGrp LOS	C	B	C	A	B	B
Approach Vol, veh/h	391			686	858	
Approach Delay, s/veh	20.3			11.0	14.1	
Approach LOS	C			B	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		34.9		15.5	10.4	24.5
Change Period (Y+Rc), s		5.0		4.0	4.0	5.0
Max Green Setting (Gmax), s		60.0		40.0	40.0	60.0
Max Q Clear Time (g_c+I1), s		10.0		10.3	6.7	14.7
Green Ext Time (p_c), s		3.3		1.2	0.4	4.8

Intersection Summary	
HCM 6th Ctrl Delay	14.3
HCM 6th LOS	B

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	3	360	475	13	11	0
Future Volume (vph)	3	360	475	13	11	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor	1.00		1.00		1.00	
Frt			0.996			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	3360	0	902	0
Flt Permitted	0.394				0.950	
Satd. Flow (perm)	732	3539	3360	0	899	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			3			
Link Speed (mph)		35	35		25	
Link Distance (ft)		687	519		307	
Travel Time (s)		13.4	10.1		8.4	
Confl. Peds. (#/hr)	2			2	2	2
Confl. Bikes (#/hr)				1		1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	5%	75%	100%	0%
Adj. Flow (vph)	3	375	495	14	11	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	375	509	0	11	0
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases	2					
Total Split (s)	26.0	93.0	67.0		27.0	
Total Lost Time (s)	4.5	4.5	4.5		4.5	
Act Effct Green (s)	26.4	30.8	29.5		6.5	
Actuated g/C Ratio	0.81	0.94	0.90		0.20	
v/c Ratio	0.00	0.11	0.17		0.06	
Control Delay	1.7	1.0	2.6		16.4	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	1.7	1.0	2.6		16.4	
LOS	A	A	A		B	
Approach Delay		1.0	2.6		16.4	
Approach LOS		A	A		B	
Queue Length 50th (ft)	0	0	0		1	
Queue Length 95th (ft)	2	26	71		16	
Internal Link Dist (ft)		607	439		227	
Turn Bay Length (ft)	150					
Base Capacity (vph)	1337	3539	3360		679	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.00	0.11	0.15		0.02	

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Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 32.7	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.17	
Intersection Signal Delay: 2.1	Intersection LOS: A
Intersection Capacity Utilization 26.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: Center Drive & International Pl

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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	8	17	318	311	7
Future Volume (veh/h)	1	8	17	318	311	7
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1737	1737	1856	1856	1841	1841
Adj Flow Rate, veh/h	1	9	19	349	342	8
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	11	11	3	3	4	4
Cap, veh/h	22	20	624	1916	1037	24
Arrive On Green	0.01	0.01	0.03	0.54	0.30	0.30
Sat Flow, veh/h	1654	1472	1767	3618	3583	81
Grp Volume(v), veh/h	1	9	19	349	171	179
Grp Sat Flow(s),veh/h/ln	1654	1472	1767	1763	1749	1823
Q Serve(g_s), s	0.0	0.1	0.1	1.0	1.5	1.6
Cycle Q Clear(g_c), s	0.0	0.1	0.1	1.0	1.5	1.6
Prop In Lane	1.00	1.00	1.00			0.04
Lane Grp Cap(c), veh/h	22	20	624	1916	519	542
V/C Ratio(X)	0.04	0.45	0.03	0.18	0.33	0.33
Avail Cap(c_a), veh/h	407	362	2102	15009	5551	5788
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	9.9	9.9	3.8	2.3	5.6	5.6
Incr Delay (d2), s/veh	0.8	15.2	0.0	0.0	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	0.2	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.7	25.2	3.8	2.4	5.9	5.9
LnGrp LOS	B	C	A	A	A	A
Approach Vol, veh/h	10			368	350	
Approach Delay, s/veh	23.7			2.5	5.9	
Approach LOS	C			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		15.5		4.8	5.0	10.5
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		86.5		5.0	17.5	64.5
Max Q Clear Time (g_c+I1), s		3.0		2.1	2.1	3.6
Green Ext Time (p_c), s		2.5		0.0	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	4.4
HCM 6th LOS	A

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	21	0	35	0	313	14	23	287	0
Future Volume (veh/h)	0	0	0	21	0	35	0	313	14	23	287	0
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	0.98		0.98	1.00		0.97	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	1900	1900	1900	1870	1900	1870	1900	1870	1870	1826	1826	1900
Adj Flow Rate, veh/h	0	0	0	23	0	39	0	348	16	26	319	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	5	5	0
Cap, veh/h	0	136	0	373	0	111	7	1360	62	46	2045	0
Arrive On Green	0.00	0.00	0.00	0.07	0.00	0.07	0.00	0.39	0.39	0.03	0.59	0.00
Sat Flow, veh/h	0	1900	0	1416	0	1550	1810	3455	158	1739	3561	0
Grp Volume(v), veh/h	0	0	0	23	0	39	0	178	186	26	319	0
Grp Sat Flow(s),veh/h/ln	0	1900	0	1416	0	1550	1810	1777	1837	1739	1735	0
Q Serve(g_s), s	0.0	0.0	0.0	0.4	0.0	0.6	0.0	1.8	1.8	0.4	1.1	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.4	0.0	0.6	0.0	1.8	1.8	0.4	1.1	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.09	1.00		0.00
Lane Grp Cap(c), veh/h	0	136	0	373	0	111	7	699	723	46	2045	0
V/C Ratio(X)	0.00	0.00	0.00	0.06	0.00	0.35	0.00	0.26	0.26	0.57	0.16	0.00
Avail Cap(c_a), veh/h	0	2148	0	1872	0	1752	1364	4018	4153	1311	7844	0
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)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	11.6	0.0	11.7	0.0	5.4	5.4	12.8	2.5	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	1.9	0.0	0.2	0.2	10.6	0.0	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	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.3	0.3	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	11.7	0.0	13.6	0.0	5.6	5.6	23.4	2.5	0.0
LnGrp LOS	A	A	A	B	A	B	A	A	A	C	A	A
Approach Vol, veh/h		0			62			364			345	
Approach Delay, s/veh		0.0			12.9			5.6			4.1	
Approach LOS					B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.2	14.9		6.4	0.0	20.1		6.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.0	60.0		30.0	20.0	60.0		30.0
Max Q Clear Time (g_c+I1), s	2.4	3.8		0.0	0.0	3.1		2.6
Green Ext Time (p_c), s	0.0	2.2		0.0	0.0	2.2		0.2

Intersection Summary	
HCM 6th Ctrl Delay	5.5
HCM 6th LOS	A

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	163	22	76	32	8	10	65	157	13	10	148	153
Future Volume (veh/h)	163	22	76	32	8	10	65	157	13	10	148	153
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.98		0.97	0.99		0.92
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	1856	1856	1856	1885	1885	1885	1885	1885	1885	1826	1826	1826
Adj Flow Rate, veh/h	206	28	96	41	10	13	82	199	16	13	187	194
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	3	3	3	1	1	1	1	1	1	5	5	5
Cap, veh/h	399	61	130	405	103	93	493	1151	92	521	477	391
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.09	0.34	0.34	0.02	0.27	0.27
Sat Flow, veh/h	846	200	429	861	340	306	1795	3351	267	1739	1735	1424
Grp Volume(v), veh/h	330	0	0	64	0	0	82	105	110	13	187	194
Grp Sat Flow(s),veh/h/ln	1476	0	0	1506	0	0	1795	1791	1827	1739	1735	1424
Q Serve(g_s), s	7.1	0.0	0.0	0.0	0.0	0.0	1.2	1.7	1.7	0.2	3.6	4.7
Cycle Q Clear(g_c), s	8.2	0.0	0.0	1.0	0.0	0.0	1.2	1.7	1.7	0.2	3.6	4.7
Prop In Lane	0.62		0.29	0.64		0.20	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	589	0	0	600	0	0	493	615	627	521	477	391
V/C Ratio(X)	0.56	0.00	0.00	0.11	0.00	0.00	0.17	0.17	0.17	0.02	0.39	0.50
Avail Cap(c_a), veh/h	1209	0	0	1197	0	0	1207	2615	2667	1333	2533	2079
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	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.7	0.0	0.0	10.3	0.0	0.0	8.9	9.4	9.4	10.3	12.1	12.5
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.1	0.0	0.0	0.2	0.1	0.1	0.0	0.5	1.0
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	2.4	0.0	0.0	0.4	0.0	0.0	0.4	0.5	0.5	0.1	1.2	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.6	0.0	0.0	10.4	0.0	0.0	9.1	9.5	9.6	10.3	12.6	13.5
LnGrp LOS	B	A	A	B	A	A	A	A	A	B	B	B
Approach Vol, veh/h		330			64			297			394	
Approach Delay, s/veh		13.6			10.4			9.4			13.0	
Approach LOS		B			B			A			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.4	18.7		16.9	8.2	15.9		16.9
Change Period (Y+Rc), s	4.6	4.6		4.5	4.6	4.6		4.5
Max Green Setting (Gmax), s	20.0	60.0		30.0	20.0	60.0		30.0
Max Q Clear Time (g_c+I1), s	2.2	3.7		10.2	3.2	6.7		3.0
Green Ext Time (p_c), s	0.0	1.3		2.1	0.1	2.6		0.3

Intersection Summary	
HCM 6th Ctrl Delay	12.0
HCM 6th LOS	B

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Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	41	49	319	26	17	14	139	199	72	21	243	22
Future Volume (veh/h)	41	49	319	26	17	14	139	199	72	21	243	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.96
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	1885	1885	1885	1796	1796	1796	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	44	53	343	28	18	15	149	214	77	23	261	24
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
Percent Heavy Veh, %	1	1	1	7	7	7	1	1	1	1	1	1
Cap, veh/h	311	317	655	340	177	476	237	755	262	62	644	59
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.13	0.29	0.29	0.03	0.19	0.19
Sat Flow, veh/h	563	1116	1566	610	625	1493	1795	2583	896	1795	3307	301
Grp Volume(v), veh/h	97	0	343	46	0	15	149	146	145	23	140	145
Grp Sat Flow(s),veh/h/ln	1679	0	1566	1235	0	1493	1795	1791	1689	1795	1791	1817
Q Serve(g_s), s	0.0	0.0	5.7	0.0	0.0	0.2	2.7	2.2	2.3	0.4	2.4	2.4
Cycle Q Clear(g_c), s	1.3	0.0	5.7	1.3	0.0	0.2	2.7	2.2	2.3	0.4	2.4	2.4
Prop In Lane	0.45		1.00	0.61		1.00	1.00		0.53	1.00		0.17
Lane Grp Cap(c), veh/h	628	0	655	518	0	476	237	523	493	62	349	354
V/C Ratio(X)	0.15	0.00	0.52	0.09	0.00	0.03	0.63	0.28	0.29	0.37	0.40	0.41
Avail Cap(c_a), veh/h	1568	0	1566	1193	0	1344	1036	3100	2923	1036	3100	3145
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.4	0.0	7.6	9.1	0.0	8.1	14.2	9.5	9.5	16.4	12.2	12.2
Incr Delay (d2), s/veh	0.1	0.0	0.6	0.1	0.0	0.0	2.7	0.3	0.3	3.7	0.7	0.8
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	0.5	0.0	1.2	0.2	0.0	0.1	1.0	0.6	0.6	0.2	0.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.5	0.0	8.2	9.2	0.0	8.2	17.0	9.7	9.8	20.1	12.9	13.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	C	B	B
Approach Vol, veh/h		440			61			440			308	
Approach Delay, s/veh		8.5			8.9			12.2			13.5	
Approach LOS		A			A			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		14.3	5.7	14.6		14.3	9.1	11.2				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		30.0	20.0	60.0		30.0	20.0	60.0				
Max Q Clear Time (g_c+I1), s		3.3	2.4	4.3		7.7	4.7	4.4				
Green Ext Time (p_c), s		0.3	0.0	1.8		1.8	0.3	1.7				

Intersection Summary	
HCM 6th Ctrl Delay	11.1
HCM 6th LOS	B

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	14	35	62	15	43	55	355	207	56	551	6
Future Volume (veh/h)	1	14	35	62	15	43	55	355	207	56	551	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
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	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	1	15	36	65	16	45	57	370	216	58	574	6
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	408	78	188	417	69	195	525	730	419	513	1224	13
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.06	0.34	0.34	0.06	0.34	0.34
Sat Flow, veh/h	1348	486	1167	1360	431	1212	1795	2171	1245	1795	3630	38
Grp Volume(v), veh/h	1	0	51	65	0	61	57	304	282	58	283	297
Grp Sat Flow(s),veh/h/ln	1348	0	1653	1360	0	1643	1795	1791	1625	1795	1791	1877
Q Serve(g_s), s	0.0	0.0	0.8	1.3	0.0	1.0	0.6	4.2	4.3	0.6	3.8	3.8
Cycle Q Clear(g_c), s	1.0	0.0	0.8	2.2	0.0	1.0	0.6	4.2	4.3	0.6	3.8	3.8
Prop In Lane	1.00		0.71	1.00		0.74	1.00		0.77	1.00		0.02
Lane Grp Cap(c), veh/h	408	0	266	417	0	265	525	602	547	513	604	633
V/C Ratio(X)	0.00	0.00	0.19	0.16	0.00	0.23	0.11	0.50	0.52	0.11	0.47	0.47
Avail Cap(c_a), veh/h	1506	0	1612	1525	0	1603	1581	3494	3171	1566	3494	3663
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.7	0.0	11.2	12.1	0.0	11.2	6.0	8.2	8.2	6.0	8.0	8.0
Incr Delay (d2), s/veh	0.0	0.0	0.3	0.2	0.0	0.4	0.1	0.7	0.8	0.1	0.6	0.5
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	0.0	0.0	0.3	0.3	0.0	0.3	0.1	1.1	1.0	0.1	1.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.7	0.0	11.5	12.3	0.0	11.7	6.1	8.8	8.9	6.1	8.6	8.6
LnGrp LOS	B	A	B	B	A	B	A	A	A	A	A	A
Approach Vol, veh/h		52			126			643			638	
Approach Delay, s/veh		11.5			12.0			8.6			8.4	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.5	14.8		9.5	6.4	14.9		9.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.0	60.0		30.0	20.0	60.0		30.0
Max Q Clear Time (g_c+I1), s	2.6	6.3		3.0	2.6	5.8		4.2
Green Ext Time (p_c), s	0.1	4.1		0.2	0.1	3.8		0.5

Intersection Summary	
HCM 6th Ctrl Delay	8.9
HCM 6th LOS	A

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	50	17	141	73	473	22	111	223	610	83	38
Future Volume (vph)	32	50	17	141	73	473	22	111	223	610	83	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	125		125	100		75	0		0
Storage Lanes	1		0	1		0	1		1	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	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor	0.98	0.99		0.98		0.96	0.99		0.96	0.99	0.99	
Frt		0.961				0.850			0.850		0.984	
Flt Protected	0.950			0.950			0.950			0.950	0.968	
Satd. Flow (prot)	1770	1772	0	1752	1845	1568	1787	1881	1599	1681	1679	0
Flt Permitted	0.950			0.950			0.950			0.950	0.968	
Satd. Flow (perm)	1742	1772	0	1725	1845	1508	1769	1881	1537	1657	1663	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12				488			230		5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		355			383			251			690	
Travel Time (s)		8.1			8.7			5.7			15.7	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Confl. Bikes (#/hr)			1			1			1			1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	33	52	18	145	75	488	23	114	230	629	86	39
Shared Lane Traffic (%)										40%		
Lane Group Flow (vph)	33	70	0	145	75	488	23	114	230	377	377	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases						8			2			
Total Split (s)	14.5	26.5		29.5	24.6	24.6	27.5	27.5	27.5	39.5	39.5	
Total Lost Time (s)	4.5	4.5		4.5	4.6	4.6	4.5	4.5	4.5	4.5	4.5	
Act Effct Green (s)	7.7	9.5		12.5	16.7	16.7	12.6	12.6	12.6	24.5	24.5	
Actuated g/C Ratio	0.10	0.13		0.17	0.22	0.22	0.17	0.17	0.17	0.33	0.33	
v/c Ratio	0.18	0.30		0.50	0.18	0.68	0.08	0.36	0.51	0.69	0.69	
Control Delay	41.2	33.7		39.6	29.3	8.7	34.5	37.6	10.0	31.8	31.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	41.2	33.7		39.6	29.3	8.7	34.5	37.6	10.0	31.8	31.3	
LOS	D	C		D	C	A	C	D	A	C	C	
Approach Delay		36.1			17.2			20.1			31.6	
Approach LOS		D			B			C			C	
Queue Length 50th (ft)	14	25		61	29	0	9	48	0	152	150	
Queue Length 95th (ft)	53	77		155	79	90	38	126	68	354	350	
Internal Link Dist (ft)		275			303			171			610	
Turn Bay Length (ft)	75			125		125	100		75			
Base Capacity (vph)	257	575		637	991	1035	598	629	667	856	857	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.13	0.12		0.23	0.08	0.47	0.04	0.18	0.34	0.44	0.44	

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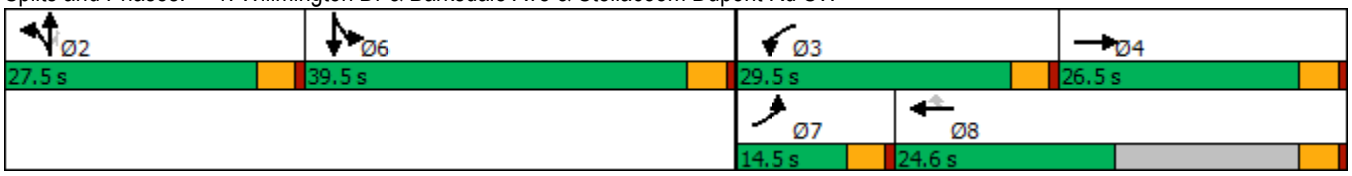
Intersection Summary	
Area Type: Other	
Cycle Length: 123	
Actuated Cycle Length: 75.2	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 24.4	Intersection LOS: C
Intersection Capacity Utilization 55.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Wilimington Dr & Barksdale Ave & Steilacoom Dupont Rd SW



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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	219	98	109	497	602	418
Future Volume (veh/h)	219	98	109	497	602	418
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1885	1885
Adj Flow Rate, veh/h	238	107	118	540	654	454
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	1	1
Cap, veh/h	329	292	158	1163	869	720
Arrive On Green	0.19	0.19	0.09	0.63	0.46	0.46
Sat Flow, veh/h	1753	1560	1753	1841	1885	1561
Grp Volume(v), veh/h	238	107	118	540	654	454
Grp Sat Flow(s),veh/h/ln	1753	1560	1753	1841	1885	1561
Q Serve(g_s), s	6.3	3.0	3.3	7.6	14.2	11.0
Cycle Q Clear(g_c), s	6.3	3.0	3.3	7.6	14.2	11.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	329	292	158	1163	869	720
V/C Ratio(X)	0.72	0.37	0.75	0.46	0.75	0.63
Avail Cap(c_a), veh/h	1410	1255	1410	2221	2274	1883
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	19.0	17.6	22.1	4.8	11.1	10.2
Incr Delay (d2), s/veh	3.0	0.8	6.9	0.3	1.3	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.1	1.4	1.3	4.2	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.0	18.4	29.0	5.1	12.4	11.1
LnGrp LOS	C	B	C	A	B	B
Approach Vol, veh/h	345			658	1108	
Approach Delay, s/veh	20.9			9.4	11.9	
Approach LOS	C			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		36.4		13.3	8.5	27.9
Change Period (Y+Rc), s		5.0		4.0	4.0	5.0
Max Green Setting (Gmax), s		60.0		40.0	40.0	60.0
Max Q Clear Time (g_c+I1), s		9.6		8.3	5.3	16.2
Green Ext Time (p_c), s		3.5		1.1	0.3	6.7

Intersection Summary	
HCM 6th Ctrl Delay	12.6
HCM 6th LOS	B

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	235	589	6	13	1
Future Volume (vph)	1	235	589	6	13	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor	1.00		1.00		1.00	
Frt			0.998		0.991	
Flt Protected	0.950				0.955	
Satd. Flow (prot)	1736	3471	3531	0	1761	0
Flt Permitted	0.349				0.955	
Satd. Flow (perm)	637	3471	3531	0	1757	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			1		1	
Link Speed (mph)		30	30		30	
Link Distance (ft)		687	519		294	
Travel Time (s)		15.6	11.8		6.7	
Confl. Peds. (#/hr)	1			1	1	1
Confl. Bikes (#/hr)				4		4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	4%	2%	2%	2%	2%
Adj. Flow (vph)	1	261	654	7	14	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1	261	661	0	15	0
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	7	4	8		6	
Permitted Phases	4					
Total Split (s)	16.0	91.0	75.0		29.0	
Total Lost Time (s)	4.5	4.5	4.5		4.5	
Act Effct Green (s)	31.4	36.3	35.2		7.9	
Actuated g/C Ratio	0.81	0.93	0.90		0.20	
v/c Ratio	0.00	0.08	0.21		0.04	
Control Delay	3.0	1.7	3.4		16.9	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	3.0	1.7	3.4		16.9	
LOS	A	A	A		B	
Approach Delay		1.7	3.4		16.9	
Approach LOS		A	A		B	
Queue Length 50th (ft)	0	0	0		2	
Queue Length 95th (ft)	2	34	128		20	
Internal Link Dist (ft)		607	439		214	
Turn Bay Length (ft)	150					
Base Capacity (vph)	897	3471	3453		1311	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.00	0.08	0.19		0.01	

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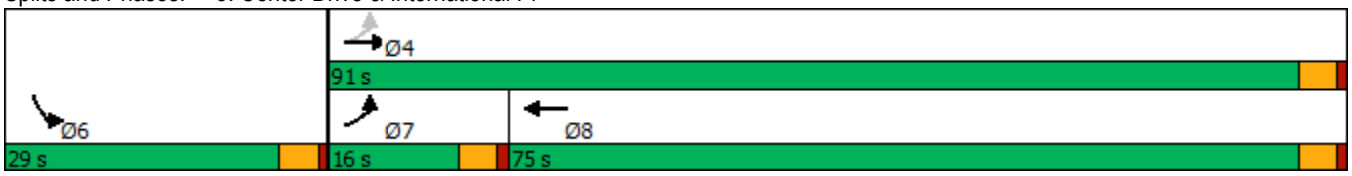
Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 38.9	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.21	
Intersection Signal Delay: 3.1	Intersection LOS: A
Intersection Capacity Utilization 28.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: Center Drive & International Pl



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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	7	12	4	292	406	5
Future Volume (veh/h)	7	12	4	292	406	5
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	7	13	4	307	427	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1
Cap, veh/h	47	42	581	1959	1189	14
Arrive On Green	0.03	0.03	0.01	0.55	0.33	0.33
Sat Flow, veh/h	1795	1598	1795	3676	3719	42
Grp Volume(v), veh/h	7	13	4	307	211	221
Grp Sat Flow(s),veh/h/ln	1795	1598	1795	1791	1791	1876
Q Serve(g_s), s	0.1	0.2	0.0	0.9	1.9	1.9
Cycle Q Clear(g_c), s	0.1	0.2	0.0	0.9	1.9	1.9
Prop In Lane	1.00	1.00	1.00			0.02
Lane Grp Cap(c), veh/h	47	42	581	1959	587	615
V/C Ratio(X)	0.15	0.31	0.01	0.16	0.36	0.36
Avail Cap(c_a), veh/h	2001	1781	1891	14865	5734	6007
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	10.0	10.1	3.8	2.4	5.4	5.4
Incr Delay (d2), s/veh	1.4	4.1	0.0	0.0	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.0	0.0	0.3	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.5	14.2	3.8	2.4	5.8	5.8
LnGrp LOS	B	B	A	A	A	A
Approach Vol, veh/h	20			311	432	
Approach Delay, s/veh	13.2			2.4	5.8	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		16.0		5.1	4.6	11.4
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		87.5		23.5	15.5	67.5
Max Q Clear Time (g_c+I1), s		2.9		2.2	2.0	3.9
Green Ext Time (p_c), s		2.1		0.0	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	4.6
HCM 6th LOS	A

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	7	23	1	22	8	282	32	32	466	4
Future Volume (veh/h)	0	0	7	23	1	22	8	282	32	32	466	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		0.98	1.00		0.97	1.00		0.97
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	1900	1900	1900	1885	1900	1885	1900	1885	1885	1885	1885	1900
Adj Flow Rate, veh/h	0	0	8	25	1	24	9	307	35	35	507	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	1	0	1	0	1	1	1	1	0
Cap, veh/h	0	0	105	352	3	104	18	1253	141	62	1501	12
Arrive On Green	0.00	0.00	0.07	0.07	0.07	0.07	0.01	0.39	0.39	0.03	0.41	0.41
Sat Flow, veh/h	0	0	1577	1272	51	1565	1810	3234	365	1795	3641	29
Grp Volume(v), veh/h	0	0	8	26	0	24	9	169	173	35	249	262
Grp Sat Flow(s),veh/h/ln	0	0	1577	1323	0	1565	1810	1791	1808	1795	1791	1879
Q Serve(g_s), s	0.0	0.0	0.1	0.5	0.0	0.4	0.1	1.7	1.7	0.5	2.5	2.5
Cycle Q Clear(g_c), s	0.0	0.0	0.1	0.6	0.0	0.4	0.1	1.7	1.7	0.5	2.5	2.5
Prop In Lane	0.00		1.00	0.96		1.00	1.00		0.20	1.00		0.02
Lane Grp Cap(c), veh/h	0	0	105	356	0	104	18	694	701	62	738	774
V/C Ratio(X)	0.00	0.00	0.08	0.07	0.00	0.23	0.51	0.24	0.25	0.57	0.34	0.34
Avail Cap(c_a), veh/h	0	0	1793	1882	0	1779	1372	4073	4112	1361	4073	4274
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)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	11.6	11.8	0.0	11.7	13.0	5.5	5.5	12.5	5.3	5.3
Incr Delay (d2), s/veh	0.0	0.0	0.3	0.1	0.0	1.1	21.4	0.2	0.2	8.0	0.3	0.3
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	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.3	0.3	0.3	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	11.9	11.9	0.0	12.8	34.4	5.6	5.7	20.5	5.6	5.6
LnGrp LOS	A	A	B	B	A	B	C	A	A	C	A	A
Approach Vol, veh/h		8			50			351			546	
Approach Delay, s/veh		11.9			12.3			6.4			6.5	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.4	14.7		6.3	4.8	15.4		6.3
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.0	60.0		30.0	20.0	60.0		30.0
Max Q Clear Time (g_c+I1), s	2.5	3.7		2.1	2.1	4.5		2.6
Green Ext Time (p_c), s	0.0	2.1		0.0	0.0	3.2		0.2

Intersection Summary	
HCM 6th Ctrl Delay	6.8
HCM 6th LOS	A

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	152	10	64	17	19	9	58	161	31	20	268	212
Future Volume (veh/h)	152	10	64	17	19	9	58	161	31	20	268	212
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	1.00		0.98	0.99		0.97	0.99		0.96
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	160	11	67	18	20	9	61	169	33	21	282	223
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	1	1	1
Cap, veh/h	381	41	100	244	232	80	492	1030	196	613	571	434
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.08	0.35	0.35	0.03	0.30	0.30
Sat Flow, veh/h	884	168	412	434	960	330	1795	2983	568	1795	1898	1443
Grp Volume(v), veh/h	238	0	0	47	0	0	61	100	102	21	265	240
Grp Sat Flow(s),veh/h/ln	1465	0	0	1725	0	0	1795	1791	1760	1795	1791	1550
Q Serve(g_s), s	4.5	0.0	0.0	0.0	0.0	0.0	0.8	1.4	1.4	0.3	4.4	4.6
Cycle Q Clear(g_c), s	5.2	0.0	0.0	0.7	0.0	0.0	0.8	1.4	1.4	0.3	4.4	4.6
Prop In Lane	0.67		0.28	0.38		0.19	1.00		0.32	1.00		0.93
Lane Grp Cap(c), veh/h	522	0	0	555	0	0	492	618	608	613	538	466
V/C Ratio(X)	0.46	0.00	0.00	0.08	0.00	0.00	0.12	0.16	0.17	0.03	0.49	0.51
Avail Cap(c_a), veh/h	1375	0	0	1488	0	0	1355	2993	2942	1556	2993	2591
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	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.2	0.0	0.0	10.6	0.0	0.0	7.5	8.1	8.2	8.1	10.3	10.4
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.7	0.9
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	0.0	0.0	0.2	0.0	0.0	0.2	0.4	0.4	0.1	1.3	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.9	0.0	0.0	10.7	0.0	0.0	7.6	8.3	8.3	8.1	11.0	11.3
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	B	B
Approach Vol, veh/h		238			47			263			526	
Approach Delay, s/veh		12.9			10.7			8.1			11.0	
Approach LOS		B			B			A			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.7	17.0		13.2	7.3	15.4		13.2
Change Period (Y+Rc), s	4.6	4.6		4.5	4.6	4.6		4.5
Max Green Setting (Gmax), s	20.0	60.0		30.0	20.0	60.0		30.0
Max Q Clear Time (g_c+I1), s	2.3	3.4		7.2	2.8	6.6		2.7
Green Ext Time (p_c), s	0.0	1.2		1.5	0.1	3.5		0.2

Intersection Summary	
HCM 6th Ctrl Delay	10.7
HCM 6th LOS	B

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Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	44	39	169	62	68	31	348	248	43	31	306	42
Future Volume (veh/h)	44	39	169	62	68	31	348	248	43	31	306	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.96
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	1885	1885	1885	1856	1856	1856	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	46	41	178	65	72	33	366	261	45	33	322	44
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	3	3	1	1	1	1	1	1
Cap, veh/h	90	58	1016	86	69	707	405	1067	181	71	517	70
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.23	0.35	0.35	0.04	0.16	0.16
Sat Flow, veh/h	27	139	1570	23	166	1546	1795	3047	517	1795	3152	426
Grp Volume(v), veh/h	87	0	178	137	0	33	366	152	154	33	181	185
Grp Sat Flow(s),veh/h/ln	166	0	1570	189	0	1546	1795	1791	1773	1795	1791	1787
Q Serve(g_s), s	1.0	0.0	3.2	1.0	0.0	0.8	13.9	4.2	4.3	1.3	6.6	6.7
Cycle Q Clear(g_c), s	29.1	0.0	3.2	29.1	0.0	0.8	13.9	4.2	4.3	1.3	6.6	6.7
Prop In Lane	0.53		1.00	0.47		1.00	1.00		0.29	1.00		0.24
Lane Grp Cap(c), veh/h	148	0	1016	155	0	707	405	627	621	71	294	293
V/C Ratio(X)	0.59	0.00	0.18	0.88	0.00	0.05	0.90	0.24	0.25	0.47	0.62	0.63
Avail Cap(c_a), veh/h	167	0	1035	173	0	726	514	1538	1523	514	1538	1535
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.2	0.0	5.0	22.8	0.0	10.5	26.3	16.1	16.2	32.8	27.2	27.2
Incr Delay (d2), s/veh	4.2	0.0	0.1	35.7	0.0	0.0	16.5	0.2	0.2	4.7	2.1	2.2
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	1.0	0.0	0.9	3.8	0.0	0.3	7.3	1.6	1.6	0.6	2.8	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	0.0	5.1	58.5	0.0	10.6	42.8	16.3	16.4	37.6	29.3	29.5
LnGrp LOS	C	A	A	E	A	B	D	B	B	D	C	C
Approach Vol, veh/h		265			170			672			399	
Approach Delay, s/veh		11.1			49.2			30.8			30.1	
Approach LOS		B			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.3	29.3		34.1	20.5	16.1		34.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.0	60.0		30.0	20.0	60.0		30.0
Max Q Clear Time (g_c+I1), s	3.3	6.3		31.1	15.9	8.7		31.1
Green Ext Time (p_c), s	0.0	1.9		0.0	0.5	2.3		0.0

Intersection Summary	
HCM 6th Ctrl Delay	29.2
HCM 6th LOS	C

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	14	30	235	25	72	47	548	192	65	452	17
Future Volume (veh/h)	7	14	30	235	25	72	47	548	192	65	452	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.98	1.00		0.96	0.99		0.97	1.00		0.96
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	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	8	15	32	253	27	77	51	589	206	70	486	18
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
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	460	154	328	522	121	346	487	924	322	383	1300	48
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.05	0.36	0.36	0.06	0.37	0.37
Sat Flow, veh/h	1269	530	1130	1366	417	1190	1795	2584	902	1795	3517	130
Grp Volume(v), veh/h	8	0	47	253	0	104	51	408	387	70	247	257
Grp Sat Flow(s),veh/h/ln	1269	0	1659	1366	0	1607	1795	1791	1694	1795	1791	1856
Q Serve(g_s), s	0.2	0.0	1.0	7.8	0.0	2.3	0.8	8.9	8.9	1.1	4.7	4.7
Cycle Q Clear(g_c), s	2.5	0.0	1.0	8.8	0.0	2.3	0.8	8.9	8.9	1.1	4.7	4.7
Prop In Lane	1.00		0.68	1.00		0.74	1.00		0.53	1.00		0.07
Lane Grp Cap(c), veh/h	460	0	482	522	0	467	487	641	606	383	662	686
V/C Ratio(X)	0.02	0.00	0.10	0.48	0.00	0.22	0.10	0.64	0.64	0.18	0.37	0.37
Avail Cap(c_a), veh/h	903	0	1062	999	0	1028	1160	2291	2168	1034	2291	2375
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	0.0	12.1	15.3	0.0	12.6	8.6	12.5	12.5	9.1	10.8	10.8
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.7	0.0	0.2	0.1	1.1	1.1	0.2	0.3	0.3
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	0.1	0.0	0.3	2.2	0.0	0.8	0.3	3.0	2.8	0.3	1.5	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.6	0.0	12.2	16.0	0.0	12.9	8.7	13.6	13.7	9.3	11.2	11.1
LnGrp LOS	B	A	B	B	A	B	A	B	B	A	B	B
Approach Vol, veh/h		55			357			846			574	
Approach Delay, s/veh		12.4			15.1			13.3			10.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.5	21.3		18.1	6.9	21.8		18.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.0	60.0		30.0	20.0	60.0		30.0
Max Q Clear Time (g_c+I1), s	3.1	10.9		4.5	2.8	6.7		10.8
Green Ext Time (p_c), s	0.1	5.9		0.2	0.1	3.2		1.4

Intersection Summary	
HCM 6th Ctrl Delay	12.9
HCM 6th LOS	B

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	61	25	208	40	643	9	71	122	580	118	45
Future Volume (vph)	40	61	25	208	40	643	9	71	122	580	118	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	125		125	100		75	0		0
Storage Lanes	1		0	1		0	1		1	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	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor	0.99	0.99		0.99		0.97	0.99		0.97	0.99	0.99	
Frt		0.956				0.850			0.850		0.982	
Flt Protected	0.950			0.950			0.950			0.950	0.973	
Satd. Flow (prot)	1719	1714	0	1752	1845	1568	1770	1863	1583	1633	1636	0
Flt Permitted	0.950			0.950			0.950			0.950	0.973	
Satd. Flow (perm)	1702	1714	0	1737	1845	1519	1759	1863	1533	1618	1628	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15				684			134		6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		355			383			251			690	
Travel Time (s)		8.1			8.7			5.7			15.7	
Confl. Peds. (#/hr)	3		3	3		3	3		3	3		3
Confl. Bikes (#/hr)			1			1			1			1
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 (%)	5%	5%	5%	3%	3%	3%	2%	2%	2%	5%	5%	5%
Adj. Flow (vph)	43	65	27	221	43	684	10	76	130	617	126	48
Shared Lane Traffic (%)										36%		
Lane Group Flow (vph)	43	92	0	221	43	684	10	76	130	395	396	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases						8			2			
Total Split (s)	14.5	26.5		29.5	24.6	24.6	27.5	27.5	27.5	39.5	39.5	
Total Lost Time (s)	4.5	4.5		4.5	4.6	4.6	4.5	4.5	4.5	4.5	4.5	
Act Effct Green (s)	8.0	10.3		16.7	21.3	21.3	12.1	12.1	12.1	28.3	28.3	
Actuated g/C Ratio	0.10	0.12		0.20	0.26	0.26	0.15	0.15	0.15	0.34	0.34	
v/c Ratio	0.26	0.41		0.63	0.09	0.76	0.04	0.28	0.39	0.71	0.71	
Control Delay	46.3	39.1		42.6	28.2	9.0	38.9	41.0	10.9	35.0	34.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	46.3	39.1		42.6	28.2	9.0	38.9	41.0	10.9	35.0	34.3	
LOS	D	D		D	C	A	D	D	B	C	C	
Approach Delay		41.4			17.7			22.8			34.6	
Approach LOS		D			B			C			C	
Queue Length 50th (ft)	21	38		108	18	0	5	37	0	182	180	
Queue Length 95th (ft)	68	102		228	52	110	22	95	51	#434	#429	
Internal Link Dist (ft)		275			303			171			610	
Turn Bay Length (ft)	75			125		125	100		75			
Base Capacity (vph)	222	498		566	880	1082	526	554	550	739	744	
Starvation Cap Reductn	0	0		1	0	8	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.19	0.18		0.39	0.05	0.64	0.02	0.14	0.24	0.53	0.53	

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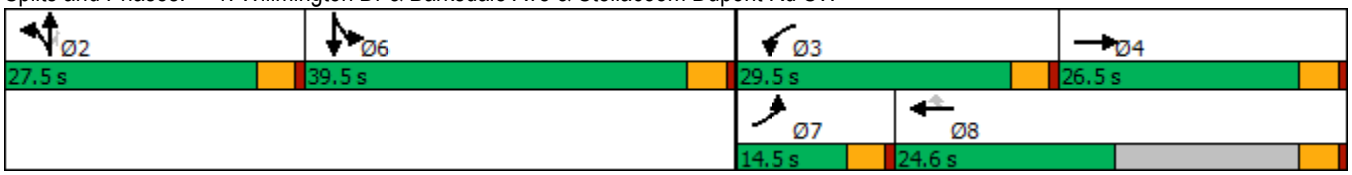
Intersection Summary	
Area Type: Other	
Cycle Length: 123	
Actuated Cycle Length: 83.2	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 26.2	Intersection LOS: C
Intersection Capacity Utilization 65.4%	ICU Level of Service C
Analysis Period (min) 15	

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Wilimington Dr & Barksdale Ave & Steilacoom Dupont Rd SW



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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	322	115	258	517	522	357
Future Volume (veh/h)	322	115	258	517	522	357
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1856	1856
Adj Flow Rate, veh/h	358	128	287	574	580	397
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	4	4	4	4	3	3
Cap, veh/h	425	379	342	1167	712	590
Arrive On Green	0.24	0.24	0.20	0.63	0.38	0.38
Sat Flow, veh/h	1753	1560	1753	1841	1856	1538
Grp Volume(v), veh/h	358	128	287	574	580	397
Grp Sat Flow(s),veh/h/ln	1753	1560	1753	1841	1856	1538
Q Serve(g_s), s	14.2	4.9	11.5	12.1	20.4	15.6
Cycle Q Clear(g_c), s	14.2	4.9	11.5	12.1	20.4	15.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	425	379	342	1167	712	590
V/C Ratio(X)	0.84	0.34	0.84	0.49	0.81	0.67
Avail Cap(c_a), veh/h	1010	899	842	2577	1604	1329
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	26.3	22.8	28.2	7.1	20.1	18.6
Incr Delay (d2), s/veh	4.6	0.5	5.5	0.3	2.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	4.6	4.9	3.3	8.0	5.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.8	23.3	33.7	7.4	22.5	20.0
LnGrp LOS	C	C	C	A	C	B
Approach Vol, veh/h	486			861	977	
Approach Delay, s/veh	28.8			16.2	21.5	
Approach LOS	C			B	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		51.2		21.7	18.2	33.0
Change Period (Y+Rc), s		5.0		4.0	4.0	5.0
Max Green Setting (Gmax), s		102.0		42.0	35.0	63.0
Max Q Clear Time (g_c+I1), s		14.1		16.2	13.5	22.4
Green Ext Time (p_c), s		3.8		1.5	0.8	5.5

Intersection Summary	
HCM 6th Ctrl Delay	21.0
HCM 6th LOS	C

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	3	470	579	14	11	0
Future Volume (vph)	3	470	579	14	11	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor	1.00		1.00		1.00	
Frt			0.996			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	3368	0	902	0
Flt Permitted	0.363				0.950	
Satd. Flow (perm)	675	3539	3368	0	899	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			3			
Link Speed (mph)		35	35		25	
Link Distance (ft)		687	519		294	
Travel Time (s)		15.6	11.8		6.7	
Confl. Peds. (#/hr)	2			2	2	2
Confl. Bikes (#/hr)				1		1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	5%	75%	100%	0%
Adj. Flow (vph)	3	490	603	15	11	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	490	618	0	11	0
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	7	4	8		6	
Permitted Phases	4					
Total Split (s)	18.0	88.0	70.0		32.0	
Total Lost Time (s)	4.5	4.5	4.5		4.5	
Act Effct Green (s)	31.0	36.0	35.0		8.2	
Actuated g/C Ratio	0.80	0.93	0.91		0.21	
v/c Ratio	0.00	0.15	0.20		0.06	
Control Delay	2.7	1.7	3.4		18.1	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	2.7	1.7	3.4		18.1	
LOS	A	A	A		B	
Approach Delay		1.7	3.4		18.1	
Approach LOS		A	A		B	
Queue Length 50th (ft)	0	0	0		1	
Queue Length 95th (ft)	3	62	121		17	
Internal Link Dist (ft)		607	439		214	
Turn Bay Length (ft)	150					
Base Capacity (vph)	1000	3539	3249		758	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.00	0.14	0.19		0.01	

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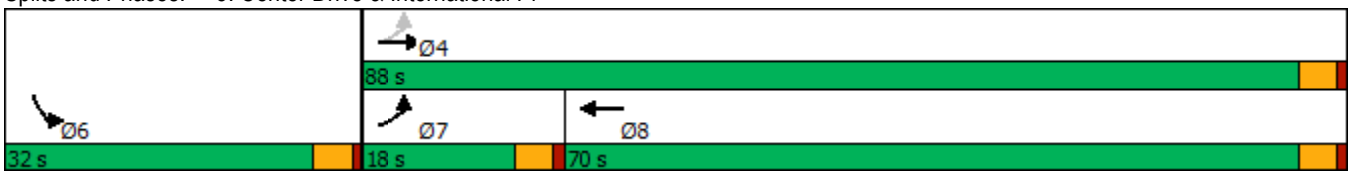
Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 38.6	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.20	
Intersection Signal Delay: 2.8	Intersection LOS: A
Intersection Capacity Utilization 29.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: Center Drive & International Pl



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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	15	43	131	447	356	40
Future Volume (veh/h)	15	43	131	447	356	40
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1737	1737	1856	1856	1841	1841
Adj Flow Rate, veh/h	16	47	144	491	391	44
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	11	11	3	3	4	4
Cap, veh/h	116	103	675	2078	935	104
Arrive On Green	0.07	0.07	0.12	0.59	0.30	0.30
Sat Flow, veh/h	1654	1472	1767	3618	3253	353
Grp Volume(v), veh/h	16	47	144	491	215	220
Grp Sat Flow(s),veh/h/ln	1654	1472	1767	1763	1749	1765
Q Serve(g_s), s	0.2	0.8	1.2	1.8	2.6	2.6
Cycle Q Clear(g_c), s	0.2	0.8	1.2	1.8	2.6	2.6
Prop In Lane	1.00	1.00	1.00			0.20
Lane Grp Cap(c), veh/h	116	103	675	2078	517	522
V/C Ratio(X)	0.14	0.46	0.21	0.24	0.42	0.42
Avail Cap(c_a), veh/h	313	278	1627	11539	4268	4308
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	11.5	11.8	4.2	2.6	7.5	7.5
Incr Delay (d2), s/veh	0.5	3.1	0.2	0.1	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.1	0.0	0.6	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.1	14.9	4.3	2.6	8.0	8.0
LnGrp LOS	B	B	A	A	A	A
Approach Vol, veh/h	63			635	435	
Approach Delay, s/veh	14.2			3.0	8.0	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		20.1		6.4	7.8	12.3
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		86.5		5.0	17.5	64.5
Max Q Clear Time (g_c+I1), s		3.8		2.8	3.2	4.6
Green Ext Time (p_c), s		3.6		0.0	0.3	2.8

Intersection Summary	
HCM 6th Ctrl Delay	5.6
HCM 6th LOS	A

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	22	0	55	0	536	15	35	355	0
Future Volume (veh/h)	0	0	0	22	0	55	0	536	15	35	355	0
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	0.99		0.98	1.00		0.97	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	1900	1900	1900	1870	1900	1870	1900	1870	1870	1826	1826	1900
Adj Flow Rate, veh/h	0	0	0	24	0	61	0	596	17	39	394	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	5	5	0
Cap, veh/h	0	162	0	385	0	132	7	1349	38	65	2030	0
Arrive On Green	0.00	0.00	0.00	0.09	0.00	0.09	0.00	0.38	0.38	0.04	0.59	0.00
Sat Flow, veh/h	0	1900	0	1420	0	1549	1810	3525	100	1739	3561	0
Grp Volume(v), veh/h	0	0	0	24	0	61	0	300	313	39	394	0
Grp Sat Flow(s),veh/h/ln	0	1900	0	1420	0	1549	1810	1777	1849	1739	1735	0
Q Serve(g_s), s	0.0	0.0	0.0	0.4	0.0	1.0	0.0	3.4	3.4	0.6	1.5	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.4	0.0	1.0	0.0	3.4	3.4	0.6	1.5	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.05	1.00		0.00
Lane Grp Cap(c), veh/h	0	162	0	385	0	132	7	680	708	65	2030	0
V/C Ratio(X)	0.00	0.00	0.00	0.06	0.00	0.46	0.00	0.44	0.44	0.60	0.19	0.00
Avail Cap(c_a), veh/h	0	2087	0	1823	0	1702	1325	3904	4062	1274	7622	0
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)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	11.6	0.0	11.9	0.0	6.3	6.3	12.9	2.7	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	2.5	0.0	0.5	0.4	8.5	0.0	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	0.0	0.0	0.0	0.1	0.0	0.4	0.0	0.7	0.7	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	11.7	0.0	14.4	0.0	6.7	6.7	21.4	2.7	0.0
LnGrp LOS	A	A	A	B	A	B	A	A	A	C	A	A
Approach Vol, veh/h		0			85			613			433	
Approach Delay, s/veh		0.0			13.6			6.7			4.4	
Approach LOS					B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.5	15.0		6.8	0.0	20.5		6.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.0	60.0		30.0	20.0	60.0		30.0
Max Q Clear Time (g_c+I1), s	2.6	5.4		0.0	0.0	3.5		3.0
Green Ext Time (p_c), s	0.1	4.0		0.0	0.0	2.8		0.3

Intersection Summary	
HCM 6th Ctrl Delay	6.3
HCM 6th LOS	A

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	205	23	79	33	8	11	68	338	14	10	196	173
Future Volume (veh/h)	205	23	79	33	8	11	68	338	14	10	196	173
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.98		0.97	1.00		0.92
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	1856	1856	1856	1885	1885	1885	1885	1885	1885	1826	1826	1826
Adj Flow Rate, veh/h	259	29	100	42	10	14	86	428	18	13	248	219
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	3	3	3	1	1	1	1	1	1	5	5	5
Cap, veh/h	445	49	127	414	103	105	450	1221	51	427	490	403
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.09	0.35	0.35	0.02	0.28	0.28
Sat Flow, veh/h	942	146	378	857	309	314	1795	3497	147	1739	1735	1426
Grp Volume(v), veh/h	388	0	0	66	0	0	86	219	227	13	248	219
Grp Sat Flow(s),veh/h/ln	1465	0	0	1480	0	0	1795	1791	1853	1739	1735	1426
Q Serve(g_s), s	9.8	0.0	0.0	0.0	0.0	0.0	1.4	4.2	4.2	0.2	5.5	6.0
Cycle Q Clear(g_c), s	11.0	0.0	0.0	1.2	0.0	0.0	1.4	4.2	4.2	0.2	5.5	6.0
Prop In Lane	0.67		0.26	0.64		0.21	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	621	0	0	623	0	0	450	625	647	427	490	403
V/C Ratio(X)	0.63	0.00	0.00	0.11	0.00	0.00	0.19	0.35	0.35	0.03	0.51	0.54
Avail Cap(c_a), veh/h	1071	0	0	1059	0	0	1070	2321	2401	1143	2248	1848
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	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.8	0.0	0.0	10.6	0.0	0.0	9.9	11.2	11.2	11.4	13.9	14.1
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.1	0.0	0.0	0.2	0.3	0.3	0.0	0.8	1.1
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	3.3	0.0	0.0	0.4	0.0	0.0	0.5	1.4	1.4	0.1	1.9	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.8	0.0	0.0	10.7	0.0	0.0	10.1	11.5	11.5	11.4	14.7	15.2
LnGrp LOS	B	A	A	B	A	A	B	B	B	B	B	B
Approach Vol, veh/h		388			66			532			480	
Approach Delay, s/veh		14.8			10.7			11.3			14.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.5	20.8		20.0	8.6	17.7		20.0
Change Period (Y+Rc), s	4.6	4.6		4.5	4.6	4.6		4.5
Max Green Setting (Gmax), s	20.0	60.0		30.0	20.0	60.0		30.0
Max Q Clear Time (g_c+I1), s	2.2	6.2		13.0	3.4	8.0		3.2
Green Ext Time (p_c), s	0.0	2.8		2.4	0.2	3.3		0.3

Intersection Summary	
HCM 6th Ctrl Delay	13.4
HCM 6th LOS	B

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Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	78	61	404	27	22	26	168	332	75	27	284	29
Future Volume (veh/h)	78	61	404	27	22	26	168	332	75	27	284	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.96
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	1885	1885	1885	1796	1796	1796	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	84	66	434	29	24	28	181	357	81	29	305	31
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
Percent Heavy Veh, %	1	1	1	7	7	7	1	1	1	1	1	1
Cap, veh/h	199	125	847	164	101	667	233	775	173	69	578	58
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.13	0.27	0.27	0.04	0.18	0.18
Sat Flow, veh/h	196	308	1570	112	248	1496	1795	2888	646	1795	3271	329
Grp Volume(v), veh/h	150	0	434	53	0	28	181	219	219	29	166	170
Grp Sat Flow(s),veh/h/ln	504	0	1570	360	0	1496	1795	1791	1743	1795	1791	1810
Q Serve(g_s), s	2.5	0.0	8.3	0.7	0.0	0.5	4.6	4.8	4.9	0.7	4.0	4.0
Cycle Q Clear(g_c), s	17.3	0.0	8.3	16.4	0.0	0.5	4.6	4.8	4.9	0.7	4.0	4.0
Prop In Lane	0.56		1.00	0.55		1.00	1.00		0.37	1.00		0.18
Lane Grp Cap(c), veh/h	324	0	847	265	0	667	233	480	467	69	316	320
V/C Ratio(X)	0.46	0.00	0.51	0.20	0.00	0.04	0.78	0.46	0.47	0.42	0.52	0.53
Avail Cap(c_a), veh/h	878	0	1407	667	0	1202	1734	2376	2312	438	1083	1095
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.1	0.0	7.0	10.7	0.0	7.4	19.8	14.4	14.4	22.1	17.6	17.6
Incr Delay (d2), s/veh	1.0	0.0	0.5	0.4	0.0	0.0	5.5	0.7	0.7	4.0	1.3	1.4
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	0.9	0.0	1.9	0.3	0.0	0.1	2.0	1.7	1.7	0.4	1.5	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.2	0.0	7.5	11.1	0.0	7.4	25.3	15.1	15.2	26.2	18.9	19.0
LnGrp LOS	B	A	A	B	A	A	C	B	B	C	B	B
Approach Vol, veh/h		584			81			619			365	
Approach Delay, s/veh		9.4			9.8			18.1			19.5	
Approach LOS		A			A			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.9	6.4	17.4		24.9	10.8	13.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		36.0	11.5	62.5		36.0	45.5	28.5				
Max Q Clear Time (g_c+I1), s		18.4	2.7	6.9		19.3	6.6	6.0				
Green Ext Time (p_c), s		0.3	0.0	2.8		2.4	0.5	1.8				

Intersection Summary	
HCM 6th Ctrl Delay	14.9
HCM 6th LOS	B

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	15	36	65	16	56	57	506	215	69	665	6
Future Volume (veh/h)	1	15	36	65	16	56	57	506	215	69	665	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
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	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	1	16	38	68	17	58	59	527	224	72	693	6
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	359	76	180	378	57	196	509	938	397	490	1437	12
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.06	0.39	0.39	0.07	0.40	0.40
Sat Flow, veh/h	1331	490	1163	1356	370	1263	1795	2432	1029	1795	3638	31
Grp Volume(v), veh/h	1	0	54	68	0	75	59	387	364	72	341	358
Grp Sat Flow(s),veh/h/ln	1331	0	1653	1356	0	1633	1795	1791	1671	1795	1791	1879
Q Serve(g_s), s	0.0	0.0	1.0	1.6	0.0	1.4	0.7	5.9	6.0	0.8	5.0	5.0
Cycle Q Clear(g_c), s	1.4	0.0	1.0	2.6	0.0	1.4	0.7	5.9	6.0	0.8	5.0	5.0
Prop In Lane	1.00		0.70	1.00		0.77	1.00		0.62	1.00		0.02
Lane Grp Cap(c), veh/h	359	0	256	378	0	253	509	690	644	490	707	742
V/C Ratio(X)	0.00	0.00	0.21	0.18	0.00	0.30	0.12	0.56	0.56	0.15	0.48	0.48
Avail Cap(c_a), veh/h	1298	0	1423	1335	0	1405	1427	3083	2876	1391	3083	3234
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.7	0.0	12.9	14.0	0.0	13.0	5.8	8.4	8.4	5.9	7.9	7.9
Incr Delay (d2), s/veh	0.0	0.0	0.4	0.2	0.0	0.6	0.1	0.7	0.8	0.1	0.5	0.5
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	0.0	0.0	0.3	0.4	0.0	0.5	0.1	1.5	1.5	0.2	1.3	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.7	0.0	13.3	14.2	0.0	13.7	5.9	9.1	9.2	6.0	8.4	8.4
LnGrp LOS	B	A	B	B	A	B	A	A	A	A	A	A
Approach Vol, veh/h		55			143			810			771	
Approach Delay, s/veh		13.3			13.9			8.9			8.2	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.0	17.9		9.9	6.7	18.3		9.9
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.0	60.0		30.0	20.0	60.0		30.0
Max Q Clear Time (g_c+I1), s	2.8	8.0		3.4	2.7	7.0		4.6
Green Ext Time (p_c), s	0.1	5.5		0.3	0.1	4.7		0.6

Intersection Summary	
HCM 6th Ctrl Delay	9.1
HCM 6th LOS	A

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	52	18	147	76	535	23	123	232	736	101	51
Future Volume (vph)	38	52	18	147	76	535	23	123	232	736	101	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	125		125	100		75	0		0
Storage Lanes	1		0	1		0	1		1	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	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor	0.98	0.99		0.98		0.96	0.99		0.96	0.99	0.99	
Frt		0.961				0.850			0.850		0.983	
Flt Protected	0.950			0.950			0.950			0.950	0.968	
Satd. Flow (prot)	1770	1772	0	1752	1845	1568	1787	1881	1599	1681	1677	0
Flt Permitted	0.950			0.950			0.950			0.950	0.968	
Satd. Flow (perm)	1742	1772	0	1725	1845	1508	1771	1881	1537	1657	1661	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12				552			239		6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		355			383			251			690	
Travel Time (s)		8.1			8.7			5.7			15.7	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Confl. Bikes (#/hr)			1			1			1			1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	39	54	19	152	78	552	24	127	239	759	104	53
Shared Lane Traffic (%)										40%		
Lane Group Flow (vph)	39	73	0	152	78	552	24	127	239	455	461	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases						8			2			
Total Split (s)	11.0	24.6		23.4	37.0	37.0	25.0	25.0	25.0	50.0	50.0	
Total Lost Time (s)	4.5	4.5		4.5	4.6	4.6	4.5	4.5	4.5	4.5	4.5	
Act Effct Green (s)	7.0	9.9		13.4	18.7	18.7	13.6	13.6	13.6	30.5	30.5	
Actuated g/C Ratio	0.08	0.12		0.16	0.22	0.22	0.16	0.16	0.16	0.36	0.36	
v/c Ratio	0.26	0.33		0.54	0.19	0.72	0.08	0.42	0.53	0.74	0.75	
Control Delay	50.9	39.3		46.1	32.4	9.3	38.9	43.1	10.6	33.3	33.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	50.9	39.3		46.1	32.4	9.3	38.9	43.1	10.6	33.3	33.3	
LOS	D	D		D	C	A	D	D	B	C	C	
Approach Delay		43.3			18.8			22.9			33.3	
Approach LOS		D			B			C			C	
Queue Length 50th (ft)	20	30		73	35	0	11	62	0	207	208	
Queue Length 95th (ft)	67	88		180	89	102	41	152	73	443	447	
Internal Link Dist (ft)		275			303			171			610	
Turn Bay Length (ft)	75			125		125	100		75			
Base Capacity (vph)	153	484		441	797	965	488	514	594	1019	1019	
Starvation Cap Reductn	0	0		0	0	3	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.25	0.15		0.34	0.10	0.57	0.05	0.25	0.40	0.45	0.45	

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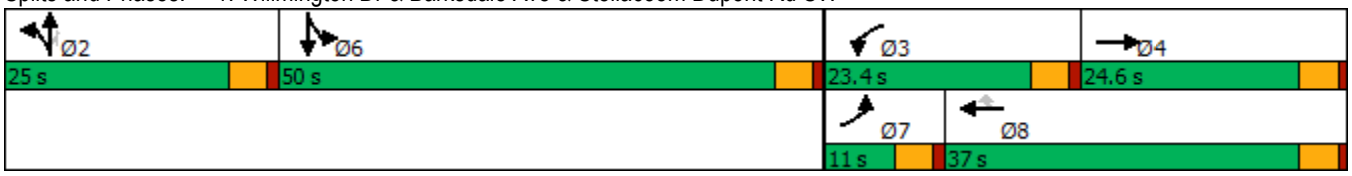
Intersection Summary	
Area Type: Other	
Cycle Length: 123	
Actuated Cycle Length: 83.6	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 26.8	Intersection LOS: C
Intersection Capacity Utilization 60.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Wilimington Dr & Barksdale Ave & Steilacoom Dupont Rd SW



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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	292	195	145	526	651	471
Future Volume (veh/h)	292	195	145	526	651	471
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1885	1885
Adj Flow Rate, veh/h	317	212	158	572	708	512
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	1	1
Cap, veh/h	395	352	203	1181	879	728
Arrive On Green	0.23	0.23	0.12	0.64	0.47	0.47
Sat Flow, veh/h	1753	1560	1753	1841	1885	1561
Grp Volume(v), veh/h	317	212	158	572	708	512
Grp Sat Flow(s),veh/h/ln	1753	1560	1753	1841	1885	1561
Q Serve(g_s), s	11.6	8.2	5.9	10.9	21.7	17.6
Cycle Q Clear(g_c), s	11.6	8.2	5.9	10.9	21.7	17.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	395	352	203	1181	879	728
V/C Ratio(X)	0.80	0.60	0.78	0.48	0.81	0.70
Avail Cap(c_a), veh/h	1036	922	612	2830	2129	1763
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	24.8	23.5	29.1	6.3	15.4	14.3
Incr Delay (d2), s/veh	3.8	1.7	6.3	0.3	1.8	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	7.2	2.6	2.7	7.8	5.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.6	25.1	35.4	6.6	17.2	15.6
LnGrp LOS	C	C	D	A	B	B
Approach Vol, veh/h	529			730	1220	
Approach Delay, s/veh	27.2			12.8	16.5	
Approach LOS	C			B	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		48.4		19.3	11.8	36.6
Change Period (Y+Rc), s		5.0		4.0	4.0	5.0
Max Green Setting (Gmax), s		104.0		40.0	23.6	76.4
Max Q Clear Time (g_c+I1), s		12.9		13.6	7.9	23.7
Green Ext Time (p_c), s		3.8		1.7	0.3	7.9

Intersection Summary	
HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	336	696	6	14	1
Future Volume (vph)	1	336	696	6	14	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor	1.00		1.00		1.00	
Frt			0.999		0.992	
Flt Protected	0.950				0.955	
Satd. Flow (prot)	1736	3471	3535	0	1763	0
Flt Permitted	0.309				0.955	
Satd. Flow (perm)	564	3471	3535	0	1760	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			1		1	
Link Speed (mph)		35	35		25	
Link Distance (ft)		687	519		294	
Travel Time (s)		13.4	10.1		8.0	
Confl. Peds. (#/hr)	1			1	1	1
Confl. Bikes (#/hr)				4		4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	4%	2%	2%	2%	2%
Adj. Flow (vph)	1	373	773	7	16	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1	373	780	0	17	0
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	7	4	8		6	
Permitted Phases	4					
Total Split (s)	21.0	72.0	51.0		48.0	
Total Lost Time (s)	4.5	4.5	4.5		4.5	
Act Effct Green (s)	32.2	37.0	36.0		8.0	
Actuated g/C Ratio	0.81	0.93	0.91		0.20	
v/c Ratio	0.00	0.12	0.24		0.05	
Control Delay	3.0	1.7	3.5		17.3	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	3.0	1.7	3.5		17.3	
LOS	A	A	A		B	
Approach Delay		1.7	3.5		17.3	
Approach LOS		A	A		B	
Queue Length 50th (ft)	0	0	0		2	
Queue Length 95th (ft)	2	47	154		22	
Internal Link Dist (ft)		607	439		214	
Turn Bay Length (ft)	150					
Base Capacity (vph)	1027	3368	3243		1604	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.00	0.11	0.24		0.01	

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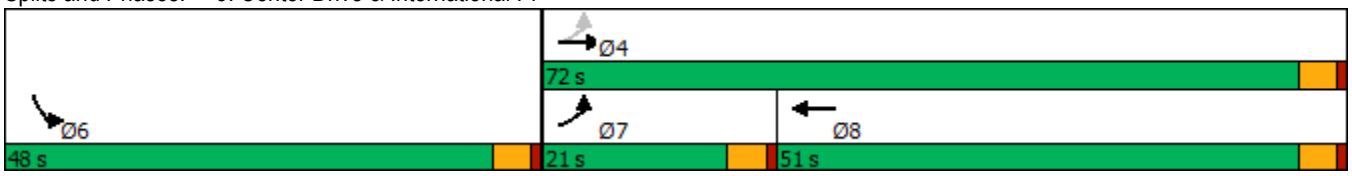
Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 39.7	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.24	
Intersection Signal Delay: 3.1	Intersection LOS: A
Intersection Capacity Utilization 31.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: Center Drive & International Pl



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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	34	110	28	359	557	11
Future Volume (veh/h)	34	110	28	359	557	11
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	36	116	29	378	586	12
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1
Cap, veh/h	223	199	512	1975	1268	26
Arrive On Green	0.12	0.12	0.04	0.55	0.35	0.35
Sat Flow, veh/h	1795	1598	1795	3676	3681	73
Grp Volume(v), veh/h	36	116	29	378	292	306
Grp Sat Flow(s),veh/h/ln	1795	1598	1795	1791	1791	1870
Q Serve(g_s), s	0.5	1.9	0.2	1.5	3.5	3.5
Cycle Q Clear(g_c), s	0.5	1.9	0.2	1.5	3.5	3.5
Prop In Lane	1.00	1.00	1.00			0.04
Lane Grp Cap(c), veh/h	223	199	512	1975	633	661
V/C Ratio(X)	0.16	0.58	0.06	0.19	0.46	0.46
Avail Cap(c_a), veh/h	1520	1352	1449	11288	4354	4545
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	10.9	11.5	4.7	3.1	6.9	6.9
Incr Delay (d2), s/veh	0.3	2.7	0.0	0.0	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.8	0.0	0.1	0.8	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.2	14.2	4.7	3.2	7.5	7.4
LnGrp LOS	B	B	A	A	A	A
Approach Vol, veh/h	152			407	598	
Approach Delay, s/veh	13.5			3.3	7.5	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		19.8		8.0	5.5	14.3
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		87.5		23.5	15.5	67.5
Max Q Clear Time (g_c+I1), s		3.5		3.9	2.2	5.5
Green Ext Time (p_c), s		2.7		0.4	0.0	3.9

Intersection Summary	
HCM 6th Ctrl Delay	6.8
HCM 6th LOS	A

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	7	24	1	29	8	366	33	50	701	4
Future Volume (veh/h)	0	0	7	24	1	29	8	366	33	50	701	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		0.98	1.00		0.97	1.00		0.97
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	1900	1900	1900	1885	1900	1885	1900	1885	1885	1885	1885	1900
Adj Flow Rate, veh/h	0	0	8	26	1	32	9	398	36	54	762	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	1	0	1	0	1	1	1	1	0
Cap, veh/h	0	0	114	350	4	113	17	1281	115	88	1556	8
Arrive On Green	0.00	0.00	0.07	0.07	0.07	0.07	0.01	0.39	0.39	0.05	0.43	0.43
Sat Flow, veh/h	0	0	1576	1283	49	1564	1810	3315	298	1795	3653	19
Grp Volume(v), veh/h	0	0	8	27	0	32	9	214	220	54	374	392
Grp Sat Flow(s),veh/h/ln	0	0	1576	1332	0	1564	1810	1791	1822	1795	1791	1881
Q Serve(g_s), s	0.0	0.0	0.1	0.5	0.0	0.5	0.1	2.3	2.3	0.8	4.1	4.1
Cycle Q Clear(g_c), s	0.0	0.0	0.1	0.6	0.0	0.5	0.1	2.3	2.3	0.8	4.1	4.1
Prop In Lane	0.00		1.00	0.96		1.00	1.00		0.16	1.00		0.01
Lane Grp Cap(c), veh/h	0	0	114	354	0	113	17	692	704	88	763	801
V/C Ratio(X)	0.00	0.00	0.07	0.08	0.00	0.28	0.51	0.31	0.31	0.61	0.49	0.49
Avail Cap(c_a), veh/h	0	0	1725	1812	0	1711	1320	3919	3988	1310	3919	4117
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)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	11.9	12.2	0.0	12.0	13.5	5.9	5.9	12.8	5.7	5.7
Incr Delay (d2), s/veh	0.0	0.0	0.3	0.1	0.0	1.4	21.5	0.3	0.3	6.7	0.5	0.5
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	0.0	0.0	0.0	0.1	0.0	0.2	0.1	0.4	0.4	0.4	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	12.1	12.2	0.0	13.4	35.0	6.1	6.1	19.4	6.2	6.2
LnGrp LOS	A	A	B	B	A	B	C	A	A	B	A	A
Approach Vol, veh/h		8			59			443			820	
Approach Delay, s/veh		12.1			12.9			6.7			7.1	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.8	15.1		6.5	4.8	16.2		6.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.0	60.0		30.0	20.0	60.0		30.0
Max Q Clear Time (g_c+I1), s	2.8	4.3		2.1	2.1	6.1		2.6
Green Ext Time (p_c), s	0.1	2.7		0.0	0.0	5.3		0.2

Intersection Summary	
HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	10	67	18	20	10	60	221	32	22	457	258
Future Volume (veh/h)	178	10	67	18	20	10	60	221	32	22	457	258
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	1.00		0.98	1.00		0.97	1.00		0.96
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	187	11	71	19	21	11	63	233	34	23	481	272
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	1	1	1
Cap, veh/h	378	33	98	228	229	95	423	1259	181	617	789	443
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.07	0.40	0.40	0.03	0.36	0.36
Sat Flow, veh/h	945	129	385	458	899	373	1795	3129	449	1795	2176	1223
Grp Volume(v), veh/h	269	0	0	51	0	0	63	132	135	23	395	358
Grp Sat Flow(s),veh/h/ln	1459	0	0	1731	0	0	1795	1791	1788	1795	1791	1607
Q Serve(g_s), s	6.4	0.0	0.0	0.0	0.0	0.0	0.9	2.1	2.2	0.3	8.0	8.1
Cycle Q Clear(g_c), s	7.4	0.0	0.0	1.0	0.0	0.0	0.9	2.1	2.2	0.3	8.0	8.1
Prop In Lane	0.70		0.26	0.37		0.22	1.00		0.25	1.00		0.76
Lane Grp Cap(c), veh/h	509	0	0	552	0	0	423	721	719	617	650	583
V/C Ratio(X)	0.53	0.00	0.00	0.09	0.00	0.00	0.15	0.18	0.19	0.04	0.61	0.61
Avail Cap(c_a), veh/h	1116	0	0	1217	0	0	1104	2431	2426	1370	2431	2182
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	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.9	0.0	0.0	12.6	0.0	0.0	8.1	8.5	8.5	8.2	11.5	11.5
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.1	0.0	0.0	0.2	0.1	0.1	0.0	0.9	1.1
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	2.3	0.0	0.0	0.4	0.0	0.0	0.3	0.6	0.6	0.1	2.6	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.8	0.0	0.0	12.7	0.0	0.0	8.3	8.6	8.7	8.2	12.4	12.6
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	B	B
Approach Vol, veh/h		269			51			330			776	
Approach Delay, s/veh		15.8			12.7			8.6			12.4	
Approach LOS		B			B			A			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.1	22.4		15.7	7.8	20.6		15.7
Change Period (Y+Rc), s	4.6	4.6		4.5	4.6	4.6		4.5
Max Green Setting (Gmax), s	20.0	60.0		30.0	20.0	60.0		30.0
Max Q Clear Time (g_c+I1), s	2.3	4.2		9.4	2.9	10.1		3.0
Green Ext Time (p_c), s	0.0	1.6		1.7	0.1	5.6		0.2

Intersection Summary	
HCM 6th Ctrl Delay	12.2
HCM 6th LOS	B

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Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	57	47	221	65	81	39	442	293	45	43	447	82
Future Volume (veh/h)	57	47	221	65	81	39	442	293	45	43	447	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.96
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	1885	1885	1885	1856	1856	1856	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	60	49	233	68	85	41	465	308	47	45	471	86
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	3	3	1	1	1	1	1	1
Cap, veh/h	88	49	901	82	73	519	513	1403	211	93	654	118
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.29	0.45	0.45	0.05	0.22	0.22
Sat Flow, veh/h	0	171	1566	0	256	1542	1795	3108	468	1795	3008	545
Grp Volume(v), veh/h	109	0	233	153	0	41	465	176	179	45	279	278
Grp Sat Flow(s),veh/h/ln	171	0	1566	256	0	1542	1795	1791	1785	1795	1791	1763
Q Serve(g_s), s	0.0	0.0	4.8	0.0	0.0	1.2	15.8	3.8	3.9	1.5	9.2	9.3
Cycle Q Clear(g_c), s	18.0	0.0	4.8	18.0	0.0	1.2	15.8	3.8	3.9	1.5	9.2	9.3
Prop In Lane	0.55		1.00	0.44		1.00	1.00		0.26	1.00		0.31
Lane Grp Cap(c), veh/h	137	0	901	155	0	519	513	808	806	93	389	383
V/C Ratio(X)	0.80	0.00	0.26	0.99	0.00	0.08	0.91	0.22	0.22	0.48	0.72	0.73
Avail Cap(c_a), veh/h	137	0	901	155	0	519	552	907	904	181	537	528
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	0.0	6.9	23.7	0.0	14.4	21.8	10.6	10.6	29.2	23.0	23.1
Incr Delay (d2), s/veh	27.4	0.0	0.2	68.6	0.0	0.1	17.9	0.1	0.1	3.9	2.8	3.1
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	2.7	0.0	1.3	5.2	0.0	0.4	8.5	1.3	1.3	0.7	3.8	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.4	0.0	7.0	92.4	0.0	14.4	39.7	10.7	10.7	33.1	25.8	26.2
LnGrp LOS	D	A	A	F	A	B	D	B	B	C	C	C
Approach Vol, veh/h		342			194			820			602	
Approach Delay, s/veh		21.2			75.9			27.2			26.5	
Approach LOS		C			E			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.5	7.8	33.1		22.5	22.6	18.3				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.0	6.4	32.1		18.0	19.5	19.0				
Max Q Clear Time (g_c+I1), s		20.0	3.5	5.9		20.0	17.8	11.3				
Green Ext Time (p_c), s		0.0	0.0	2.0		0.0	0.3	2.0				

Intersection Summary	
HCM 6th Ctrl Delay	30.7
HCM 6th LOS	C

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	15	31	244	26	83	49	677	200	79	633	18
Future Volume (veh/h)	7	15	31	244	26	83	49	677	200	79	633	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.98	1.00		0.96	1.00		0.97	1.00		0.97
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	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	8	16	33	262	28	89	53	728	215	85	681	19
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
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	421	155	319	494	109	347	430	1073	317	358	1466	41
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.05	0.40	0.40	0.07	0.41	0.41
Sat Flow, veh/h	1254	543	1119	1363	383	1217	1795	2708	800	1795	3555	99
Grp Volume(v), veh/h	8	0	49	262	0	117	53	481	462	85	343	357
Grp Sat Flow(s),veh/h/ln	1254	0	1661	1363	0	1600	1795	1791	1716	1795	1791	1863
Q Serve(g_s), s	0.3	0.0	1.2	9.4	0.0	3.0	0.9	11.9	11.9	1.4	7.5	7.5
Cycle Q Clear(g_c), s	3.3	0.0	1.2	10.6	0.0	3.0	0.9	11.9	11.9	1.4	7.5	7.5
Prop In Lane	1.00		0.67	1.00		0.76	1.00		0.47	1.00		0.05
Lane Grp Cap(c), veh/h	421	0	474	494	0	457	430	710	680	358	738	768
V/C Ratio(X)	0.02	0.00	0.10	0.53	0.00	0.26	0.12	0.68	0.68	0.24	0.46	0.46
Avail Cap(c_a), veh/h	764	0	928	866	0	893	1007	2001	1917	907	2001	2081
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.1	0.0	14.1	18.0	0.0	14.8	8.9	13.4	13.4	9.7	11.5	11.5
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.9	0.0	0.3	0.1	1.1	1.2	0.3	0.5	0.4
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	0.1	0.0	0.4	2.8	0.0	1.0	0.3	4.1	4.0	0.5	2.5	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.1	0.0	14.2	18.9	0.0	15.1	9.0	14.5	14.6	10.0	11.9	11.9
LnGrp LOS	B	A	B	B	A	B	A	B	B	B	B	B
Approach Vol, veh/h		57			379			996			785	
Approach Delay, s/veh		14.5			17.7			14.3			11.7	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.1	25.8		19.8	7.2	26.6		19.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.0	60.0		30.0	20.0	60.0		30.0
Max Q Clear Time (g_c+I1), s	3.4	13.9		5.3	2.9	9.5		12.6
Green Ext Time (p_c), s	0.2	7.4		0.2	0.1	4.8		1.4

Intersection Summary	
HCM 6th Ctrl Delay	14.0
HCM 6th LOS	B

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	61	25	208	40	733	9	88	122	589	119	46
Future Volume (vph)	57	61	25	208	40	733	9	88	122	589	119	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	125		125	100		75	0		0
Storage Lanes	1		0	1		0	1		1	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	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor	0.99	0.99		0.99		0.97	0.99		0.97	0.99	0.99	
Frt		0.956				0.850			0.850		0.982	
Flt Protected	0.950			0.950			0.950			0.950	0.973	
Satd. Flow (prot)	1719	1714	0	1752	1845	1553	1770	1863	1583	1618	1628	0
Flt Permitted	0.950			0.950			0.950			0.950	0.973	
Satd. Flow (perm)	1702	1714	0	1737	1845	1504	1759	1863	1533	1603	1619	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15				780			134		6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		355			383			251			690	
Travel Time (s)		8.1			8.7			5.7			15.7	
Confl. Peds. (#/hr)	3		3	3		3	3		3	3		3
Confl. Bikes (#/hr)			1			1			1			1
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 (%)	5%	5%	5%	3%	3%	4%	2%	2%	2%	6%	5%	5%
Adj. Flow (vph)	61	65	27	221	43	780	10	94	130	627	127	49
Shared Lane Traffic (%)										36%		
Lane Group Flow (vph)	61	92	0	221	43	780	10	94	130	401	402	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases						8			2			
Total Split (s)	14.5	26.5		29.5	24.6	24.6	27.5	27.5	27.5	39.5	39.5	
Total Lost Time (s)	4.5	4.5		4.5	4.6	4.6	4.5	4.5	4.5	4.5	4.5	
Act Effct Green (s)	8.6	10.3		16.8	18.4	18.4	12.2	12.2	12.2	29.2	29.2	
Actuated g/C Ratio	0.10	0.12		0.20	0.22	0.22	0.14	0.14	0.14	0.35	0.35	
v/c Ratio	0.35	0.41		0.64	0.11	0.83	0.04	0.35	0.39	0.72	0.71	
Control Delay	48.0	39.7		43.3	29.9	11.5	39.0	42.5	10.9	35.4	34.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	48.0	39.7		43.3	29.9	11.5	39.0	42.5	10.9	35.4	34.5	
LOS	D	D		D	C	B	D	D	B	D	C	
Approach Delay		43.0			19.0			24.8			35.0	
Approach LOS		D			B			C			C	
Queue Length 50th (ft)	31	39		111	19	0	5	48	0	187	184	
Queue Length 95th (ft)	88	102		228	52	127	22	114	51	#448	#441	
Internal Link Dist (ft)		275			303			171			610	
Turn Bay Length (ft)	75			125		125	100		75			
Base Capacity (vph)	218	490		557	865	1119	517	544	543	720	727	
Starvation Cap Reductn	0	0		1	0	6	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.28	0.19		0.40	0.05	0.70	0.02	0.17	0.24	0.56	0.55	

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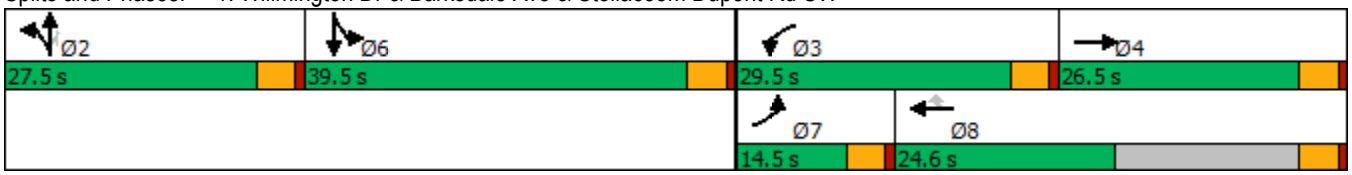
Intersection Summary	
Area Type: Other	
Cycle Length: 123	
Actuated Cycle Length: 84.4	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 27.0	Intersection LOS: C
Intersection Capacity Utilization 71.0%	ICU Level of Service C
Analysis Period (min) 15	

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Wilimington Dr & Barksdale Ave & Steilacoom Dupont Rd SW



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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	325	126	385	517	522	412
Future Volume (veh/h)	325	126	385	517	522	412
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1826	1826	1841	1856	1856
Adj Flow Rate, veh/h	361	140	428	574	580	458
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	4	5	5	4	3	3
Cap, veh/h	410	362	469	1244	679	562
Arrive On Green	0.23	0.23	0.27	0.68	0.37	0.37
Sat Flow, veh/h	1753	1547	1739	1841	1856	1537
Grp Volume(v), veh/h	361	140	428	574	580	458
Grp Sat Flow(s),veh/h/ln	1753	1547	1739	1841	1856	1537
Q Serve(g_s), s	19.8	7.6	23.7	14.6	28.7	26.8
Cycle Q Clear(g_c), s	19.8	7.6	23.7	14.6	28.7	26.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	410	362	469	1244	679	562
V/C Ratio(X)	0.88	0.39	0.91	0.46	0.85	0.81
Avail Cap(c_a), veh/h	705	622	699	1244	1119	927
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	36.8	32.1	35.2	7.6	29.1	28.5
Incr Delay (d2), s/veh	6.8	0.7	12.0	0.3	3.6	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	0.1	11.0	4.6	12.5	9.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	43.6	32.8	47.2	7.9	32.7	31.5
LnGrp LOS	D	C	D	A	C	C
Approach Vol, veh/h	501			1002	1038	
Approach Delay, s/veh	40.5			24.6	32.2	
Approach LOS	D			C	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		72.2		27.3	30.8	41.4
Change Period (Y+Rc), s		5.0		4.0	4.0	5.0
Max Green Setting (Gmax), s		60.0		40.0	40.0	60.0
Max Q Clear Time (g_c+I1), s		16.6		21.8	25.7	30.7
Green Ext Time (p_c), s		3.8		1.5	1.1	5.7

Intersection Summary	
HCM 6th Ctrl Delay	30.9
HCM 6th LOS	C

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	164	470	579	196	25	6
Future Volume (vph)	164	470	579	196	25	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor	1.00		0.99		0.99	
Frt			0.962		0.975	
Flt Protected	0.950				0.961	
Satd. Flow (prot)	1770	3539	3247	0	1103	0
Flt Permitted	0.237				0.961	
Satd. Flow (perm)	441	3539	3247	0	1099	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			54		6	
Link Speed (mph)		35	35		25	
Link Distance (ft)		687	519		294	
Travel Time (s)		13.4	10.1		8.0	
Confl. Peds. (#/hr)	2			2	2	2
Confl. Bikes (#/hr)				1		1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	5%	10%	75%	0%
Adj. Flow (vph)	171	490	603	204	26	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	171	490	807	0	32	0
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	7	4	8		6	
Permitted Phases	4					
Total Split (s)	27.0	90.0	63.0		30.0	
Total Lost Time (s)	4.5	4.5	4.5		4.5	
Act Effct Green (s)	38.4	41.9	22.6		8.3	
Actuated g/C Ratio	0.79	0.87	0.47		0.17	
v/c Ratio	0.26	0.16	0.52		0.16	
Control Delay	4.0	2.6	12.3		19.6	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	4.0	2.6	12.3		19.6	
LOS	A	A	B		B	
Approach Delay		3.0	12.3		19.6	
Approach LOS		A	B		B	
Queue Length 50th (ft)	0	0	48		5	
Queue Length 95th (ft)	51	63	204		30	
Internal Link Dist (ft)		607	439		214	
Turn Bay Length (ft)	150					
Base Capacity (vph)	1015	3539	3112		628	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.17	0.14	0.26		0.05	

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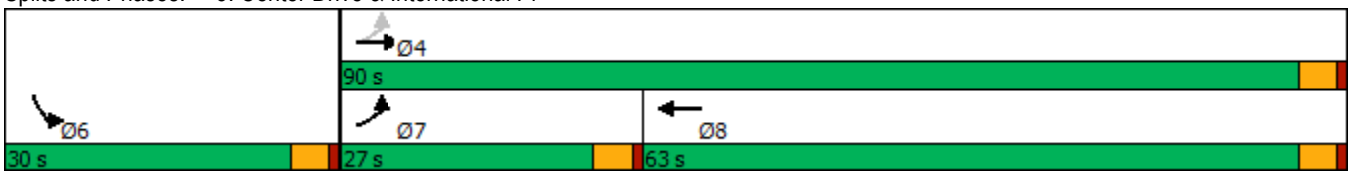
Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 48.4	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 8.3	Intersection LOS: A
Intersection Capacity Utilization 47.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: Center Drive & International Pl



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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	15	43	131	608	362	40
Future Volume (veh/h)	15	43	131	608	362	40
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1737	1737	1856	1856	1841	1841
Adj Flow Rate, veh/h	16	47	144	668	398	44
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	11	11	3	3	4	4
Cap, veh/h	116	103	673	2083	944	104
Arrive On Green	0.07	0.07	0.12	0.59	0.30	0.30
Sat Flow, veh/h	1654	1472	1767	3618	3259	348
Grp Volume(v), veh/h	16	47	144	668	219	223
Grp Sat Flow(s),veh/h/ln	1654	1472	1767	1763	1749	1767
Q Serve(g_s), s	0.2	0.8	1.2	2.5	2.7	2.7
Cycle Q Clear(g_c), s	0.2	0.8	1.2	2.5	2.7	2.7
Prop In Lane	1.00	1.00	1.00			0.20
Lane Grp Cap(c), veh/h	116	103	673	2083	521	527
V/C Ratio(X)	0.14	0.46	0.21	0.32	0.42	0.42
Avail Cap(c_a), veh/h	312	277	1621	11490	4250	4293
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	11.6	11.9	4.2	2.7	7.5	7.5
Incr Delay (d2), s/veh	0.5	3.1	0.2	0.1	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.1	0.0	0.6	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.1	15.0	4.3	2.8	8.0	8.0
LnGrp LOS	B	B	A	A	A	A
Approach Vol, veh/h	63			812	442	
Approach Delay, s/veh	14.3			3.1	8.0	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		20.2		6.4	7.8	12.4
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		86.5		5.0	17.5	64.5
Max Q Clear Time (g_c+I1), s		4.5		2.8	3.2	4.7
Green Ext Time (p_c), s		5.2		0.0	0.3	2.8

Intersection Summary	
HCM 6th Ctrl Delay	6.1
HCM 6th LOS	A

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	22	0	65	0	687	15	35	361	0
Future Volume (veh/h)	0	0	0	22	0	65	0	687	15	35	361	0
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	0.99		0.98	1.00		0.97	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	1900	1900	1900	1870	1900	1870	1900	1870	1870	1826	1826	1900
Adj Flow Rate, veh/h	0	0	0	24	0	72	0	763	17	39	401	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	2	0	2	0	2	2	5	5	0
Cap, veh/h	0	169	0	368	0	138	6	1498	33	64	2115	0
Arrive On Green	0.00	0.00	0.00	0.09	0.00	0.09	0.00	0.42	0.42	0.04	0.61	0.00
Sat Flow, veh/h	0	1900	0	1421	0	1548	1810	3551	79	1739	3561	0
Grp Volume(v), veh/h	0	0	0	24	0	72	0	382	398	39	401	0
Grp Sat Flow(s),veh/h/ln	0	1900	0	1421	0	1548	1810	1777	1854	1739	1735	0
Q Serve(g_s), s	0.0	0.0	0.0	0.5	0.0	1.3	0.0	4.7	4.7	0.7	1.5	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.5	0.0	1.3	0.0	4.7	4.7	0.7	1.5	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.04	1.00		0.00
Lane Grp Cap(c), veh/h	0	169	0	368	0	138	6	750	782	64	2115	0
V/C Ratio(X)	0.00	0.00	0.00	0.07	0.00	0.52	0.00	0.51	0.51	0.61	0.19	0.00
Avail Cap(c_a), veh/h	0	1909	0	1669	0	1555	1212	3571	3725	1165	6972	0
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)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	12.6	0.0	13.0	0.0	6.4	6.4	14.2	2.6	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	3.0	0.0	0.5	0.5	8.8	0.0	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	0.0	0.0	0.0	0.1	0.0	0.5	0.0	0.9	1.0	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	12.7	0.0	16.0	0.0	6.9	6.9	23.0	2.6	0.0
LnGrp LOS	A	A	A	B	A	B	A	A	A	C	A	A
Approach Vol, veh/h		0			96			780			440	
Approach Delay, s/veh		0.0			15.2			6.9			4.4	
Approach LOS					B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.6	17.1		7.2	0.0	22.7		7.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.0	60.0		30.0	20.0	60.0		30.0
Max Q Clear Time (g_c+I1), s	2.7	6.7		0.0	0.0	3.5		3.3
Green Ext Time (p_c), s	0.1	5.5		0.0	0.0	2.9		0.3

Intersection Summary	
HCM 6th Ctrl Delay	6.7
HCM 6th LOS	A

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	208	23	79	33	8	21	68	476	14	10	202	173
Future Volume (veh/h)	208	23	79	33	8	21	68	476	14	10	202	173
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.98		0.97	1.00		0.92
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	1856	1856	1856	1885	1885	1885	1885	1885	1885	1826	1826	1826
Adj Flow Rate, veh/h	263	29	100	42	10	27	86	603	18	13	256	219
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	3	3	3	1	1	1	1	1	1	5	5	5
Cap, veh/h	448	48	126	358	101	177	447	1240	37	358	496	400
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.09	0.35	0.35	0.02	0.28	0.28
Sat Flow, veh/h	946	142	372	711	298	524	1795	3547	106	1739	1751	1414
Grp Volume(v), veh/h	392	0	0	79	0	0	86	304	317	13	253	222
Grp Sat Flow(s),veh/h/ln	1460	0	0	1533	0	0	1795	1791	1862	1739	1735	1430
Q Serve(g_s), s	9.8	0.0	0.0	0.0	0.0	0.0	1.5	6.2	6.2	0.2	5.7	6.1
Cycle Q Clear(g_c), s	11.2	0.0	0.0	1.5	0.0	0.0	1.5	6.2	6.2	0.2	5.7	6.1
Prop In Lane	0.67		0.26	0.53		0.34	1.00		0.06	1.00		0.99
Lane Grp Cap(c), veh/h	621	0	0	635	0	0	447	626	651	358	491	405
V/C Ratio(X)	0.63	0.00	0.00	0.12	0.00	0.00	0.19	0.49	0.49	0.04	0.52	0.55
Avail Cap(c_a), veh/h	1056	0	0	1067	0	0	1060	2298	2390	1067	2226	1835
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	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.8	0.0	0.0	10.7	0.0	0.0	10.0	11.9	11.9	11.5	14.1	14.2
Incr Delay (d2), s/veh	1.1	0.0	0.0	0.1	0.0	0.0	0.2	0.6	0.6	0.0	0.8	1.2
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	3.3	0.0	0.0	0.5	0.0	0.0	0.5	2.1	2.1	0.1	2.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.9	0.0	0.0	10.8	0.0	0.0	10.2	12.5	12.5	11.6	14.9	15.4
LnGrp LOS	B	A	A	B	A	A	B	B	B	B	B	B
Approach Vol, veh/h		392			79			707			488	
Approach Delay, s/veh		14.9			10.8			12.2			15.0	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.5	20.9		20.3	8.6	17.8		20.3
Change Period (Y+Rc), s	4.6	4.6		4.5	4.6	4.6		4.5
Max Green Setting (Gmax), s	20.0	60.0		30.0	20.0	60.0		30.0
Max Q Clear Time (g_c+I1), s	2.2	8.2		13.2	3.5	8.1		3.5
Green Ext Time (p_c), s	0.0	4.1		2.4	0.2	3.3		0.4

Intersection Summary	
HCM 6th Ctrl Delay	13.6
HCM 6th LOS	B

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Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	118	61	404	27	22	36	168	416	75	27	288	31
Future Volume (veh/h)	118	61	404	27	22	36	168	416	75	27	288	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.96
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	1885	1885	1885	1796	1796	1796	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	127	66	434	29	24	39	181	447	81	29	310	33
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
Percent Heavy Veh, %	1	1	1	7	7	7	1	1	1	1	1	1
Cap, veh/h	131	43	826	122	65	651	233	812	146	73	586	62
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.13	0.27	0.27	0.04	0.18	0.18
Sat Flow, veh/h	0	109	1570	0	165	1496	1795	3015	542	1795	3254	343
Grp Volume(v), veh/h	193	0	434	53	0	39	181	264	264	29	169	174
Grp Sat Flow(s),veh/h/ln	109	0	1570	165	0	1496	1795	1791	1766	1795	1791	1807
Q Serve(g_s), s	0.0	0.0	8.3	0.0	0.0	0.7	4.5	5.8	5.9	0.7	3.9	4.0
Cycle Q Clear(g_c), s	18.0	0.0	8.3	18.0	0.0	0.7	4.5	5.8	5.9	0.7	3.9	4.0
Prop In Lane	0.66		1.00	0.55		1.00	1.00		0.31	1.00		0.19
Lane Grp Cap(c), veh/h	174	0	826	187	0	651	233	483	476	73	323	325
V/C Ratio(X)	1.11	0.00	0.53	0.28	0.00	0.06	0.78	0.55	0.55	0.40	0.52	0.53
Avail Cap(c_a), veh/h	174	0	826	187	0	651	374	883	870	236	745	752
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.5	0.0	7.1	11.6	0.0	7.5	19.2	14.3	14.3	21.4	16.9	17.0
Incr Delay (d2), s/veh	101.2	0.0	0.6	0.8	0.0	0.0	5.5	1.0	1.0	3.5	1.3	1.4
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	6.6	0.0	1.9	0.3	0.0	0.2	2.0	2.0	2.0	0.3	1.5	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	119.7	0.0	7.8	12.4	0.0	7.5	24.7	15.3	15.3	24.9	18.3	18.3
LnGrp LOS	F	A	A	B	A	A	C	B	B	C	B	B
Approach Vol, veh/h		627			92			709			372	
Approach Delay, s/veh		42.2			10.3			17.7			18.8	
Approach LOS		D			B			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.5	6.3	16.8		22.5	10.4	12.7				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.0	6.0	22.5		18.0	9.5	19.0				
Max Q Clear Time (g_c+I1), s		20.0	2.7	7.9		20.0	6.5	6.0				
Green Ext Time (p_c), s		0.0	0.0	2.7		0.0	0.1	1.5				

Intersection Summary	
HCM 6th Ctrl Delay	26.1
HCM 6th LOS	C

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	15	36	65	16	73	57	573	215	70	668	6
Future Volume (veh/h)	1	15	36	65	16	73	57	573	215	70	668	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
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	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	1	16	38	68	17	76	59	597	224	73	696	6
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	331	75	179	366	46	204	516	1028	385	474	1513	13
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.06	0.41	0.41	0.07	0.42	0.42
Sat Flow, veh/h	1310	490	1163	1356	296	1324	1795	2531	948	1795	3638	31
Grp Volume(v), veh/h	1	0	54	68	0	93	59	422	399	73	343	359
Grp Sat Flow(s),veh/h/ln	1310	0	1652	1356	0	1620	1795	1791	1688	1795	1791	1879
Q Serve(g_s), s	0.0	0.0	1.0	1.7	0.0	1.9	0.7	6.7	6.7	0.8	5.1	5.1
Cycle Q Clear(g_c), s	1.9	0.0	1.0	2.7	0.0	1.9	0.7	6.7	6.7	0.8	5.1	5.1
Prop In Lane	1.00		0.70	1.00		0.82	1.00		0.56	1.00		0.02
Lane Grp Cap(c), veh/h	331	0	254	366	0	249	516	727	685	474	745	781
V/C Ratio(X)	0.00	0.00	0.21	0.19	0.00	0.37	0.11	0.58	0.58	0.15	0.46	0.46
Avail Cap(c_a), veh/h	1202	0	1353	1269	0	1327	1385	2934	2765	1326	2934	3077
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.8	0.0	13.6	14.8	0.0	13.9	5.7	8.5	8.5	5.9	7.7	7.7
Incr Delay (d2), s/veh	0.0	0.0	0.4	0.2	0.0	0.9	0.1	0.7	0.8	0.1	0.4	0.4
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	0.0	0.0	0.4	0.5	0.0	0.7	0.2	1.8	1.7	0.2	1.3	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.8	0.0	14.0	15.0	0.0	14.8	5.8	9.2	9.2	6.1	8.2	8.1
LnGrp LOS	B	A	B	B	A	B	A	A	A	A	A	A
Approach Vol, veh/h		55			161			880			775	
Approach Delay, s/veh		14.0			14.9			9.0			8.0	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.1	19.4		10.1	6.8	19.7		10.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.0	60.0		30.0	20.0	60.0		30.0
Max Q Clear Time (g_c+I1), s	2.8	8.7		3.9	2.7	7.1		4.7
Green Ext Time (p_c), s	0.1	6.1		0.3	0.1	4.8		0.7

Intersection Summary	
HCM 6th Ctrl Delay	9.2
HCM 6th LOS	A

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	52	18	147	76	612	23	138	232	815	101	66
Future Volume (vph)	53	52	18	147	76	612	23	138	232	815	101	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	125		125	100		75	0		0
Storage Lanes	1		0	1		0	1		1	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	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor	0.98	0.99		0.98		0.96	0.99		0.96	0.99	0.99	
Frt		0.961				0.850			0.850		0.980	
Flt Protected	0.950			0.950			0.950			0.950	0.968	
Satd. Flow (prot)	1770	1772	0	1752	1845	1553	1787	1881	1599	1665	1659	0
Flt Permitted	0.950			0.950			0.950			0.950	0.968	
Satd. Flow (perm)	1742	1772	0	1725	1845	1494	1772	1881	1537	1641	1644	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12				631			239		7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		355			383			251			690	
Travel Time (s)		8.1			8.7			5.7			15.7	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Confl. Bikes (#/hr)			1			1			1			1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	2%	3%	3%	4%	1%	1%	1%	3%	2%	2%
Adj. Flow (vph)	55	54	19	152	78	631	24	142	239	840	104	68
Shared Lane Traffic (%)										40%		
Lane Group Flow (vph)	55	73	0	152	78	631	24	142	239	504	508	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases						8			2			
Total Split (s)	11.1	23.7		23.4	36.0	36.0	25.9	25.9	25.9	50.0	50.0	
Total Lost Time (s)	4.5	4.5		4.5	4.6	4.6	4.5	4.5	4.5	4.5	4.5	
Act Effct Green (s)	7.1	10.2		13.6	16.6	16.6	14.3	14.3	14.3	34.8	34.8	
Actuated g/C Ratio	0.08	0.11		0.15	0.19	0.19	0.16	0.16	0.16	0.39	0.39	
v/c Ratio	0.39	0.34		0.57	0.23	0.80	0.08	0.47	0.53	0.78	0.78	
Control Delay	57.2	41.5		49.7	36.2	11.6	40.3	45.8	10.6	35.3	35.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	57.2	41.5		49.7	36.2	11.6	40.3	45.8	10.6	35.3	35.2	
LOS	E	D		D	D	B	D	D	B	D	D	
Approach Delay		48.2			20.6			24.7			35.2	
Approach LOS		D			C			C			D	
Queue Length 50th (ft)	31	34		82	39	0	12	77	0	252	251	
Queue Length 95th (ft)	#101	88		184	90	115	42	168	72	#560	#562	
Internal Link Dist (ft)		275			303			171			610	
Turn Bay Length (ft)	75			125		125	100		75			
Base Capacity (vph)	145	432		411	720	968	475	500	584	942	941	
Starvation Cap Reductn	0	0		0	0	4	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.38	0.17		0.37	0.11	0.65	0.05	0.28	0.41	0.54	0.54	

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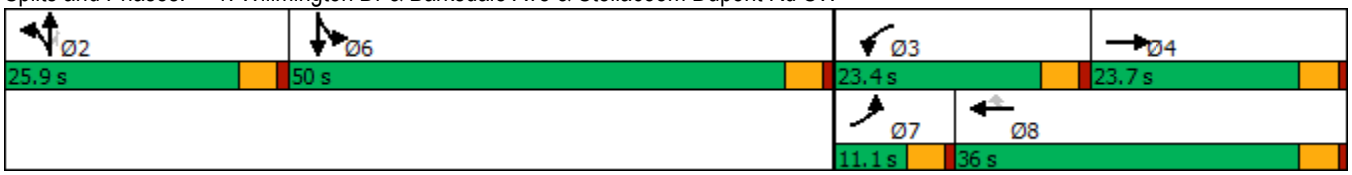
Intersection Summary	
Area Type: Other	
Cycle Length: 123	
Actuated Cycle Length: 89	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 28.9	Intersection LOS: C
Intersection Capacity Utilization 64.1%	ICU Level of Service C
Analysis Period (min) 15	

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Wilimington Dr & Barksdale Ave & Steilacoom Dupont Rd SW



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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	340	307	255	526	651	518
Future Volume (veh/h)	340	307	255	526	651	518
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1826	1826	1841	1885	1885
Adj Flow Rate, veh/h	370	334	277	572	708	563
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	5	5	4	1	1
Cap, veh/h	437	386	316	1214	825	683
Arrive On Green	0.25	0.25	0.18	0.66	0.44	0.44
Sat Flow, veh/h	1753	1547	1739	1841	1885	1561
Grp Volume(v), veh/h	370	334	277	572	708	563
Grp Sat Flow(s),veh/h/ln	1753	1547	1739	1841	1885	1561
Q Serve(g_s), s	19.9	20.5	15.3	15.2	33.5	31.4
Cycle Q Clear(g_c), s	19.9	20.5	15.3	15.2	33.5	31.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	437	386	316	1214	825	683
V/C Ratio(X)	0.85	0.87	0.88	0.47	0.86	0.82
Avail Cap(c_a), veh/h	708	625	562	1934	1295	1072
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	35.3	35.6	39.4	8.3	25.1	24.5
Incr Delay (d2), s/veh	5.3	7.2	7.6	0.3	3.6	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	16.8	6.9	4.9	14.3	11.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.6	42.8	47.0	8.6	28.7	27.6
LnGrp LOS	D	D	D	A	C	C
Approach Vol, veh/h	704			849	1271	
Approach Delay, s/veh	41.7			21.1	28.2	
Approach LOS	D			C	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		70.3		28.7	22.0	48.3
Change Period (Y+Rc), s		5.0		4.0	4.0	5.0
Max Green Setting (Gmax), s		104.0		40.0	32.0	68.0
Max Q Clear Time (g_c+I1), s		17.2		22.5	17.3	35.5
Green Ext Time (p_c), s		3.8		2.2	0.7	7.8

Intersection Summary	
HCM 6th Ctrl Delay	29.4
HCM 6th LOS	C

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Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	143	336	696	163	174	146
Future Volume (veh/h)	143	336	696	163	174	146
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1841	1841	1870	1856	1856	1870
Adj Flow Rate, veh/h	159	373	773	181	193	162
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	4	4	2	3	3	2
Cap, veh/h	386	1988	1131	265	236	198
Arrive On Green	0.09	0.57	0.40	0.40	0.26	0.26
Sat Flow, veh/h	1753	3589	2935	665	900	755
Grp Volume(v), veh/h	159	373	483	471	356	0
Grp Sat Flow(s),veh/h/ln	1753	1749	1777	1730	1660	0
Q Serve(g_s), s	2.5	2.7	11.9	11.9	10.7	0.0
Cycle Q Clear(g_c), s	2.5	2.7	11.9	11.9	10.7	0.0
Prop In Lane	1.00			0.38	0.54	0.46
Lane Grp Cap(c), veh/h	386	1988	707	689	435	0
V/C Ratio(X)	0.41	0.19	0.68	0.68	0.82	0.00
Avail Cap(c_a), veh/h	815	4521	1559	1519	1331	0
HCM Platoon Ratio	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	0.00
Uniform Delay (d), s/veh	9.2	5.5	13.2	13.2	18.4	0.0
Incr Delay (d2), s/veh	0.7	0.0	1.2	1.2	3.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.7	4.0	3.9	4.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.9	5.6	14.4	14.4	22.2	0.0
LnGrp LOS	A	A	B	B	C	A
Approach Vol, veh/h		532	954		356	
Approach Delay, s/veh		6.9	14.4		22.2	
Approach LOS		A	B		C	

Timer - Assigned Phs		4		6	7	8
Phs Duration (G+Y+Rc), s		34.6		18.4	9.0	25.6
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		68.5		42.5	17.5	46.5
Max Q Clear Time (g_c+I1), s		4.7		12.7	4.5	13.9
Green Ext Time (p_c), s		2.6		1.2	0.3	7.1

Intersection Summary	
HCM 6th Ctrl Delay	13.7
HCM 6th LOS	B

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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	34	110	28	501	702	11
Future Volume (veh/h)	34	110	28	501	702	11
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	36	116	29	527	739	12
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1
Cap, veh/h	213	190	478	2099	1452	24
Arrive On Green	0.12	0.12	0.04	0.59	0.40	0.40
Sat Flow, veh/h	1795	1598	1795	3676	3699	59
Grp Volume(v), veh/h	36	116	29	527	367	384
Grp Sat Flow(s),veh/h/ln	1795	1598	1795	1791	1791	1873
Q Serve(g_s), s	0.5	2.1	0.2	2.2	4.7	4.7
Cycle Q Clear(g_c), s	0.5	2.1	0.2	2.2	4.7	4.7
Prop In Lane	1.00	1.00	1.00			0.03
Lane Grp Cap(c), veh/h	213	190	478	2099	721	754
V/C Ratio(X)	0.17	0.61	0.06	0.25	0.51	0.51
Avail Cap(c_a), veh/h	1384	1232	1327	10282	3966	4147
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	12.1	12.8	4.6	3.1	6.8	6.8
Incr Delay (d2), s/veh	0.4	3.2	0.1	0.1	0.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.0	0.0	0.1	1.0	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.4	15.9	4.6	3.1	7.4	7.4
LnGrp LOS	B	B	A	A	A	A
Approach Vol, veh/h	152			556	751	
Approach Delay, s/veh	15.1			3.2	7.4	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		22.4		8.1	5.6	16.8
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		87.5		23.5	15.5	67.5
Max Q Clear Time (g_c+I1), s		4.2		4.1	2.2	6.7
Green Ext Time (p_c), s		3.9		0.4	0.0	5.2

Intersection Summary	
HCM 6th Ctrl Delay	7.1
HCM 6th LOS	A

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	7	24	1	38	8	499	33	59	837	4
Future Volume (veh/h)	0	0	7	24	1	38	8	499	33	59	837	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		0.98	1.00		0.97	1.00		0.98
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	1900	1900	1900	1885	1900	1885	1900	1885	1885	1885	1885	1900
Adj Flow Rate, veh/h	0	0	8	26	1	41	9	542	36	64	910	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	1	0	1	0	1	1	1	1	0
Cap, veh/h	0	0	119	330	4	119	17	1445	96	99	1719	8
Arrive On Green	0.00	0.00	0.08	0.08	0.08	0.08	0.01	0.42	0.42	0.05	0.47	0.47
Sat Flow, veh/h	0	0	1575	1289	50	1562	1810	3403	226	1795	3657	16
Grp Volume(v), veh/h	0	0	8	27	0	41	9	285	293	64	446	468
Grp Sat Flow(s),veh/h/ln	0	0	1575	1338	0	1562	1810	1791	1838	1795	1791	1882
Q Serve(g_s), s	0.0	0.0	0.1	0.5	0.0	0.8	0.2	3.3	3.3	1.1	5.3	5.3
Cycle Q Clear(g_c), s	0.0	0.0	0.1	0.7	0.0	0.8	0.2	3.3	3.3	1.1	5.3	5.3
Prop In Lane	0.00		1.00	0.96		1.00	1.00		0.12	1.00		0.01
Lane Grp Cap(c), veh/h	0	0	119	334	0	119	17	761	781	99	842	885
V/C Ratio(X)	0.00	0.00	0.07	0.08	0.00	0.35	0.52	0.37	0.38	0.65	0.53	0.53
Avail Cap(c_a), veh/h	0	0	1555	1635	0	1543	1192	3538	3630	1182	3538	3717
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)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	13.0	13.4	0.0	13.3	15.0	6.0	6.0	14.1	5.7	5.7
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.1	0.0	1.7	21.7	0.3	0.3	7.0	0.5	0.5
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	0.0	0.0	0.0	0.2	0.0	0.3	0.2	0.6	0.7	0.5	0.9	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	13.3	13.5	0.0	15.0	36.7	6.3	6.3	21.0	6.2	6.2
LnGrp LOS	A	A	B	B	A	B	D	A	A	C	A	A
Approach Vol, veh/h		8			68			587			978	
Approach Delay, s/veh		13.3			14.4			6.7			7.2	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.2	17.4		6.8	4.8	18.8		6.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.0	60.0		30.0	20.0	60.0		30.0
Max Q Clear Time (g_c+I1), s	3.1	5.3		2.1	2.2	7.3		2.8
Green Ext Time (p_c), s	0.1	3.8		0.0	0.0	6.8		0.2

Intersection Summary	
HCM 6th Ctrl Delay	7.3
HCM 6th LOS	A

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	187	10	67	18	20	13	60	342	32	25	581	267
Future Volume (veh/h)	187	10	67	18	20	13	60	342	32	25	581	267
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	1.00		0.98	1.00		0.97	1.00		0.96
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	197	11	71	19	21	14	63	360	34	26	612	281
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	1	1	1
Cap, veh/h	374	28	95	209	214	113	388	1419	133	570	932	428
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.07	0.43	0.43	0.04	0.40	0.40
Sat Flow, veh/h	977	110	371	430	839	444	1795	3300	310	1795	2353	1080
Grp Volume(v), veh/h	279	0	0	54	0	0	63	194	200	26	466	427
Grp Sat Flow(s),veh/h/ln	1457	0	0	1714	0	0	1795	1791	1818	1795	1791	1642
Q Serve(g_s), s	7.4	0.0	0.0	0.0	0.0	0.0	1.0	3.4	3.5	0.4	10.4	10.4
Cycle Q Clear(g_c), s	8.6	0.0	0.0	1.1	0.0	0.0	1.0	3.4	3.5	0.4	10.4	10.4
Prop In Lane	0.71		0.25	0.35		0.26	1.00		0.17	1.00		0.66
Lane Grp Cap(c), veh/h	496	0	0	536	0	0	388	770	782	570	709	650
V/C Ratio(X)	0.56	0.00	0.00	0.10	0.00	0.00	0.16	0.25	0.26	0.05	0.66	0.66
Avail Cap(c_a), veh/h	1003	0	0	1093	0	0	992	2186	2219	1235	2186	2004
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	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.7	0.0	0.0	14.1	0.0	0.0	8.5	9.0	9.0	8.1	12.1	12.1
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.1	0.0	0.0	0.2	0.2	0.2	0.0	1.0	1.1
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	2.7	0.0	0.0	0.4	0.0	0.0	0.3	1.1	1.1	0.1	3.4	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.7	0.0	0.0	14.2	0.0	0.0	8.7	9.1	9.1	8.1	13.2	13.3
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	B	B
Approach Vol, veh/h		279			54			457			919	
Approach Delay, s/veh		17.7			14.2			9.1			13.1	
Approach LOS		B			B			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	25.7		17.0	8.1	24.1		17.0				
Change Period (Y+Rc), s	4.6	4.6		4.5	4.6	4.6		4.5				
Max Green Setting (Gmax), s	20.0	60.0		30.0	20.0	60.0		30.0				
Max Q Clear Time (g_c+I1), s	2.4	5.5		10.6	3.0	12.4		3.1				
Green Ext Time (p_c), s	0.0	2.4		1.7	0.1	7.0		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		12.8
HCM 6th LOS		B

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Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	92	47	221	65	81	48	442	367	45	52	523	118
Future Volume (veh/h)	92	47	221	65	81	48	442	367	45	52	523	118
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.97
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	1885	1885	1885	1856	1856	1856	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	97	49	233	68	85	51	465	386	47	55	551	124
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	3	3	1	1	1	1	1	1
Cap, veh/h	90	29	877	78	70	509	508	1499	181	103	698	156
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.28	0.47	0.47	0.06	0.24	0.24
Sat Flow, veh/h	0	106	1566	0	256	1541	1795	3206	387	1795	2886	647
Grp Volume(v), veh/h	146	0	233	153	0	51	465	214	219	55	341	334
Grp Sat Flow(s),veh/h/ln	106	0	1566	256	0	1541	1795	1791	1802	1795	1791	1741
Q Serve(g_s), s	0.0	0.0	5.2	0.0	0.0	1.5	16.6	4.8	4.9	2.0	11.8	11.9
Cycle Q Clear(g_c), s	18.0	0.0	5.2	18.0	0.0	1.5	16.6	4.8	4.9	2.0	11.8	11.9
Prop In Lane	0.66		1.00	0.44		1.00	1.00		0.21	1.00		0.37
Lane Grp Cap(c), veh/h	119	0	877	148	0	509	508	837	843	103	433	421
V/C Ratio(X)	1.23	0.00	0.27	1.03	0.00	0.10	0.91	0.26	0.26	0.53	0.79	0.79
Avail Cap(c_a), veh/h	119	0	877	148	0	509	528	867	872	173	513	499
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.9	0.0	7.7	25.3	0.0	15.4	23.0	10.7	10.7	30.4	23.5	23.6
Incr Delay (d2), s/veh	155.6	0.0	0.2	83.3	0.0	0.1	20.2	0.2	0.2	4.2	6.8	7.3
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	7.0	0.0	1.4	5.8	0.0	0.5	9.2	1.7	1.7	0.9	5.4	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	184.5	0.0	7.9	108.6	0.0	15.5	43.2	10.8	10.9	34.6	30.3	30.9
LnGrp LOS	F	A	A	F	A	B	D	B	B	C	C	C
Approach Vol, veh/h		379			204			898			730	
Approach Delay, s/veh		75.9			85.3			27.6			30.9	
Approach LOS		E			F			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.5	8.3	35.5		22.5	23.3	20.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.0	6.4	32.1		18.0	19.5	19.0				
Max Q Clear Time (g_c+I1), s		20.0	4.0	6.9		20.0	18.6	13.9				
Green Ext Time (p_c), s		0.0	0.0	2.5		0.0	0.2	1.8				

Intersection Summary	
HCM 6th Ctrl Delay	42.3
HCM 6th LOS	D

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	15	31	244	26	98	49	736	200	94	694	18
Future Volume (veh/h)	7	15	31	244	26	98	49	736	200	94	694	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.98	1.00		0.96	1.00		0.97	1.00		0.97
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	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	8	16	33	262	28	105	53	791	215	101	746	19
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
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	393	153	315	480	94	353	415	1139	310	351	1540	39
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.05	0.41	0.41	0.07	0.43	0.43
Sat Flow, veh/h	1237	542	1119	1363	335	1255	1795	2766	752	1795	3565	91
Grp Volume(v), veh/h	8	0	49	262	0	133	53	512	494	101	375	390
Grp Sat Flow(s),veh/h/ln	1237	0	1661	1363	0	1590	1795	1791	1727	1795	1791	1865
Q Serve(g_s), s	0.3	0.0	1.2	10.0	0.0	3.7	0.9	13.4	13.4	1.8	8.6	8.6
Cycle Q Clear(g_c), s	4.0	0.0	1.2	11.3	0.0	3.7	0.9	13.4	13.4	1.8	8.6	8.6
Prop In Lane	1.00		0.67	1.00		0.79	1.00		0.44	1.00		0.05
Lane Grp Cap(c), veh/h	393	0	467	480	0	447	415	738	711	351	774	806
V/C Ratio(X)	0.02	0.00	0.10	0.55	0.00	0.30	0.13	0.69	0.69	0.29	0.48	0.48
Avail Cap(c_a), veh/h	696	0	875	814	0	837	955	1886	1818	856	1886	1964
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	0.0	15.2	19.3	0.0	16.1	9.0	13.8	13.8	10.0	11.6	11.6
Incr Delay (d2), s/veh	0.0	0.0	0.1	1.0	0.0	0.4	0.1	1.2	1.2	0.4	0.5	0.5
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	0.1	0.0	0.5	3.1	0.0	1.3	0.3	4.7	4.5	0.6	2.9	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.7	0.0	15.3	20.3	0.0	16.4	9.2	15.0	15.0	10.5	12.1	12.1
LnGrp LOS	B	A	B	C	A	B	A	B	B	B	B	B
Approach Vol, veh/h		57			395			1059			866	
Approach Delay, s/veh		15.6			19.0			14.7			11.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.5	28.0		20.5	7.3	29.1		20.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.0	60.0		30.0	20.0	60.0		30.0
Max Q Clear Time (g_c+I1), s	3.8	15.4		6.0	2.9	10.6		13.3
Green Ext Time (p_c), s	0.2	8.0		0.2	0.1	5.3		1.5

Intersection Summary	
HCM 6th Ctrl Delay	14.4
HCM 6th LOS	B

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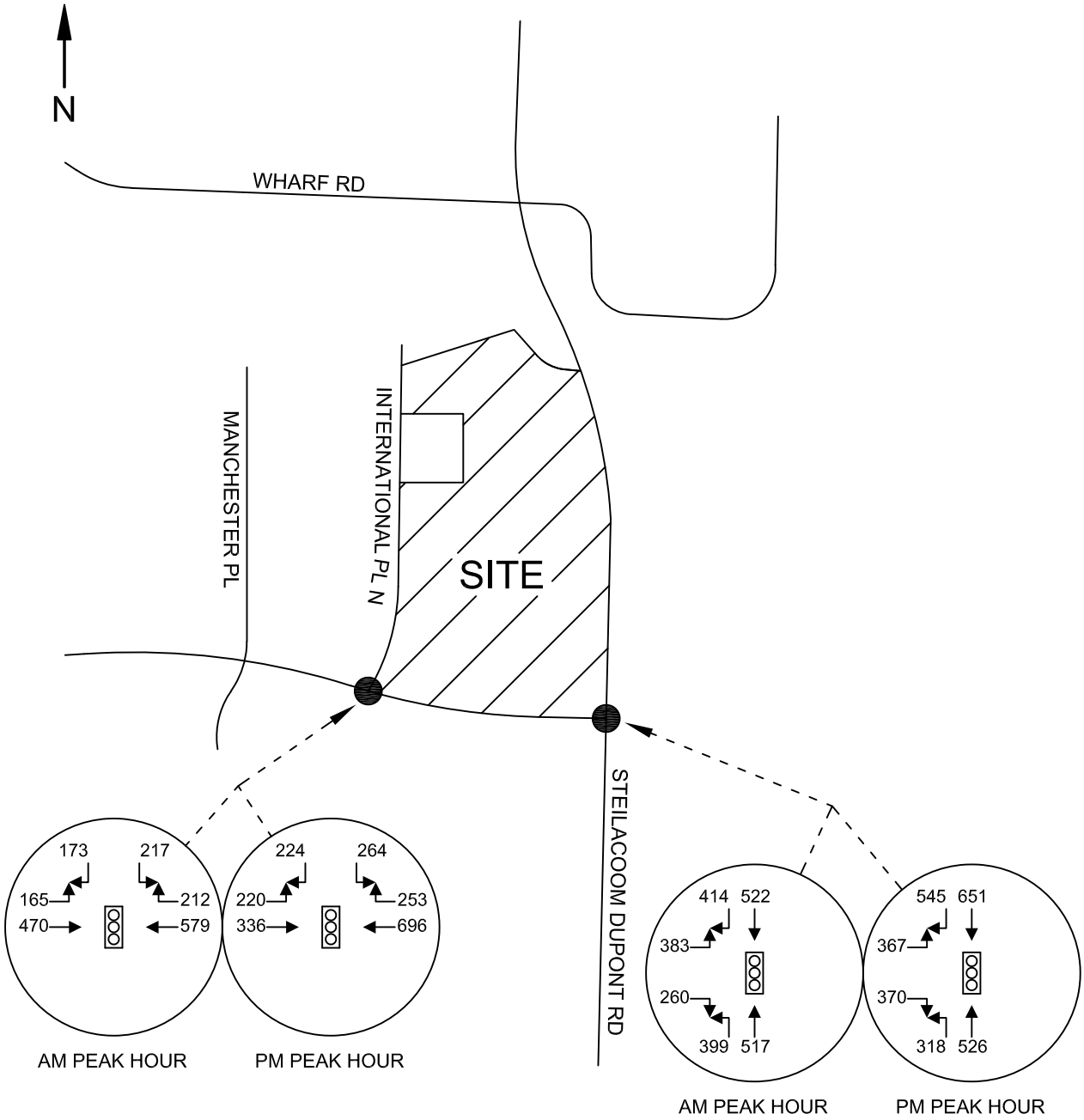
APPENDIX

QUEUING ANALYSIS



HEATH & ASSOCIATES

TRAFFIC AND CIVIL ENGINEERING

SNOW BLOSSOM FULFILLMENT CENTER

FORECAST 2022 PEAK HOUR VOLUMES - PEAK SEASON QUEUING

FIGURE L

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Intersection: 3: Center Drive & Steilacoom-Dupont Rd

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	479	105	275	1318	1054	250
Average Queue (ft)	290	47	267	854	776	226
95th Queue (ft)	438	88	303	1540	1258	320
Link Distance (ft)	1070	1070		1274	1004	
Upstream Blk Time (%)				14	23	
Queuing Penalty (veh)				0	0	
Storage Bay Dist (ft)			250			225
Storage Blk Time (%)			40	1	37	2
Queuing Penalty (veh)			227	4	168	9

Intersection: 4: Center Drive & International Place

Movement	EB	EB	EB	WB	WB	SB
Directions Served	L	T	T	T	TR	LR
Maximum Queue (ft)	117	101	38	151	208	104
Average Queue (ft)	52	22	9	42	77	38
95th Queue (ft)	92	66	32	106	150	89
Link Distance (ft)		919	919	1070	1070	319
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	200					
Storage Blk Time (%)						
Queuing Penalty (veh)						

Network Summary

Network wide Queuing Penalty: 408

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Intersection: 3: Center Drive & Steilacoom-Dupont Rd

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	657	389	275	1333	1035	250
Average Queue (ft)	419	139	270	1157	672	214
95th Queue (ft)	725	339	296	1660	1152	326
Link Distance (ft)	1070	1070		1274	1004	
Upstream Blk Time (%)				46	11	
Queuing Penalty (veh)				0	0	
Storage Bay Dist (ft)			250			225
Storage Blk Time (%)			54	0	33	0
Queuing Penalty (veh)			306	2	149	2

Intersection: 4: Center Drive & International Place

Movement	EB	EB	EB	WB	WB	SB
Directions Served	L	T	T	T	TR	LR
Maximum Queue (ft)	152	153	140	256	279	316
Average Queue (ft)	69	71	58	116	152	176
95th Queue (ft)	124	129	112	222	261	290
Link Distance (ft)		919	919	1070	1070	319
Upstream Blk Time (%)						1
Queuing Penalty (veh)						0
Storage Bay Dist (ft)	200					
Storage Blk Time (%)	0					
Queuing Penalty (veh)	1					

Network Summary

Network wide Queuing Penalty: 460

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Intersection: 3: Center Drive & Steilacoom-Dupont Rd

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	503	335	274	592	1048	250
Average Queue (ft)	283	154	221	225	978	227
95th Queue (ft)	433	270	308	467	1240	318
Link Distance (ft)	1070	1070		1274	1004	
Upstream Blk Time (%)					39	
Queuing Penalty (veh)					0	
Storage Bay Dist (ft)			250			225
Storage Blk Time (%)			10	2	36	1
Queuing Penalty (veh)			56	5	201	8

Intersection: 4: Center Drive & International Place

Movement	EB	EB	EB	WB	WB	SB
Directions Served	L	T	T	T	TR	LR
Maximum Queue (ft)	140	123	109	245	275	319
Average Queue (ft)	66	49	49	123	156	157
95th Queue (ft)	113	102	95	214	254	280
Link Distance (ft)		919	919	1070	1070	319
Upstream Blk Time (%)						0
Queuing Penalty (veh)						0
Storage Bay Dist (ft)	200					
Storage Blk Time (%)						
Queuing Penalty (veh)						

Network Summary

Network wide Queuing Penalty: 270

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Intersection: 3: Center Drive & Steilacoom-Dupont Rd

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	494	330	275	1107	1049	250
Average Queue (ft)	301	182	255	446	980	229
95th Queue (ft)	458	299	311	954	1229	315
Link Distance (ft)	1070	1070		1274	1004	
Upstream Blk Time (%)				1	42	
Queuing Penalty (veh)				0	0	
Storage Bay Dist (ft)			250			225
Storage Blk Time (%)			26	2	39	2
Queuing Penalty (veh)			151	6	233	15

Intersection: 4: Center Drive & International Place

Movement	EB	EB	EB	WB	WB	SB
Directions Served	L	T	T	T	TR	LR
Maximum Queue (ft)	196	132	124	264	308	365
Average Queue (ft)	95	46	48	142	180	297
95th Queue (ft)	157	97	101	246	290	410
Link Distance (ft)		919	919	1070	1070	319
Upstream Blk Time (%)						39
Queuing Penalty (veh)						0
Storage Bay Dist (ft)	200					
Storage Blk Time (%)	0					
Queuing Penalty (veh)	1					

Network Summary

Network wide Queuing Penalty: 406

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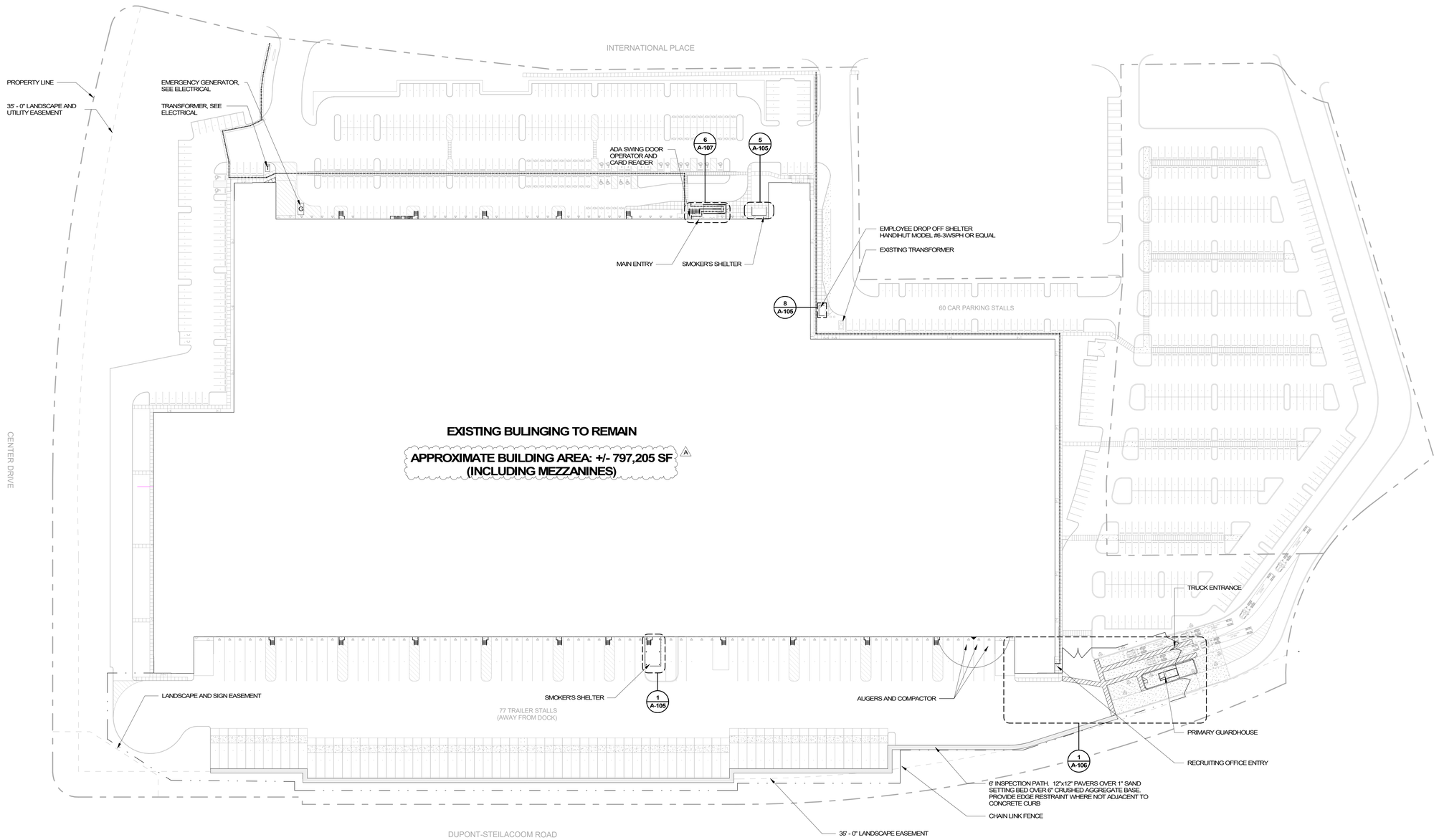

1 A-101 OVERALL SITE PLAN
1" = 60'-0"

GENERAL NOTES

A. LIMITED LANDSCAPE EASEMENTS SHOWN ON ARCHITECTURAL SITE PLAN FOR REFERENCE ONLY. SEE CIVIL FOR ALL EASEMENT AND SETBACK INFORMATION, INCLUDING UTILITY AND POWER EASEMENTS.

LEGEND

	CROSSWALK FROM MAIN GUARD SHACK TO BUILDING. 12" STRIPING OUTLINE, 6'-0" WIDE, 26" O.C. HATCH FILL. COLOR: "SAFETY YELLOW" THERMAL PAVEMENT STRIPS, TO BE VISIBLE AT NIGHT, NON-SLIP
	SECURE TRUCK YARD FENCE
	LANDSCAPE EASEMENT, SHOWN FOR REFERENCE ONLY. SEE CIVIL
	PROPERTY LINE
	ACCESSIBLE ACCESS TO THE PUBLIC WAY

PARKING SUMMARY

PARKING REQUIRED (MAX. EMPLOYEE/SHIFT) = 912 STALLS
PARKING PROVIDED = 912 STALLS
847 STANDARD STALLS
19 ACCESSIBLE STALLS
46 HOV STALLS

TOTAL TRUCK LOADING PROVIDED = 50 DOCK DOORS
47 DOCK DOORS
3 DRIVE IN DOORS

TRAILER STALLS = 77 STALLS

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NORTHWEST LOGISTIC CENTER, BUILDING 2. INTERNATIONAL PLACE, DUPONT, WA

Consultant

12243 REGISTERED ARCHITECT
MARY ALISON HONGLAND
STATE OF WASHINGTON

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REVISION SCHEDULE

Delta	Issued As	Issue Date
A	SEPA Rev 1	9/25/2020
B	Misc. Changes	TBD

SHEET TITLE:
OVERALL SITE PLAN

DRAWN BY: KSY

CHECKED BY: JAB

SHEET
A-101

JOB NO. **2200159.00**

PERMIT SET 09/25/20

C:\Users\jab\Documents\Revit Projects\220159 AMZ Dupont Hzmt\159-AMZ_Dupont_Hzmt-v20-L.rvt 9/25/2020 3:17:33 PM As indicated

BARGHAUSEN

September 28, 2020

Lisa Klein
AHBL
c/o City of DuPont
Planning Division
1700 Civic Drive
DuPont, WA 98327

RE: Minor Site Plan Amendment Type I Application and SEPA Addendum for
Northwest Logistics Center II – Trailer Lot Expansion located at
3230 International Place North, DuPont, Pierce County, Washington
Related to City of DuPont Application Nos PLNG2020-012, -013, -014, SEPA2020-001
Our Job No. 21227

Dear Lisa,

Near to the time of the submittal of the initial Major Site Plan Amendment – Type II for the Northwest Logistics Center II project, a structural design revision necessitated an increased separation from the exterior walls than what was initially shown on the architectural plans that were included with the original submittal under Application Nos. PLNG2020-012 and 013. The structural revision resulted in the following changes to the floor areas:

Main Floor – no change	628,640 sq. ft.
Aerosol Mezzanine (- 139 sf / 0.3% smaller)	51,080 sq. ft.
F&CL Mezzanine (- 450 sf / 0.4% smaller)	117,485 sq. ft.

This resulted in a revised total building size of 797,205 square foot. In order to amend the SEPA Determination and Site Plan Amendment to correct the building size, the City of DuPont has directed the Applicant to submit a Type I Site Plan Amendment to the city for processing. Further, the City has directed that the application materials should include the following documents.

1. Three (3) each new Land Use Application
2. One (1) each check in the amount of $1,500 for Type I Application Fee for Minor Site Plan Amendment (previously paid by Panattoni Development)
3. Three (3) each Cover Letter Addressing Correct Building Size
4. Three (3) each updated Traffic Impact Analysis
5. Three (3) each updated Architectural Site Plan
6. One (1) each electronic copy Application, Plans and Documents

All other application materials associated with the initial Type II Land Use package (PLNG2020-012, -013, -014 and SEPA2020-001) will remain applicable.

We believe that the enclosed plans and documents constitute a complete package to address the Minor Site Plan Amendment – Type I and SEPA Addendum review. Please review at your earliest convenience and please feel free to contact me if you have any questions or need any additional information. Thank you.

Sincerely,

Ben Eldridge, P.E.
Senior Project Engineer

BE/bd
21227c.004.doc
enc: As Noted
cc: Brian Mattson, Panattoni Development Company
Bjorn Brynestad, Panattoni Development Company
Dan Balmelli, Barghausen Consulting Engineers, Inc.
Betsy Dyer, Barghausen Consulting Engineers, Inc.