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# Tyee High School Traffic Impact Analysis

**Jurisdiction: City of SeaTac**

**October 2022**



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## 1. INTRODUCTION

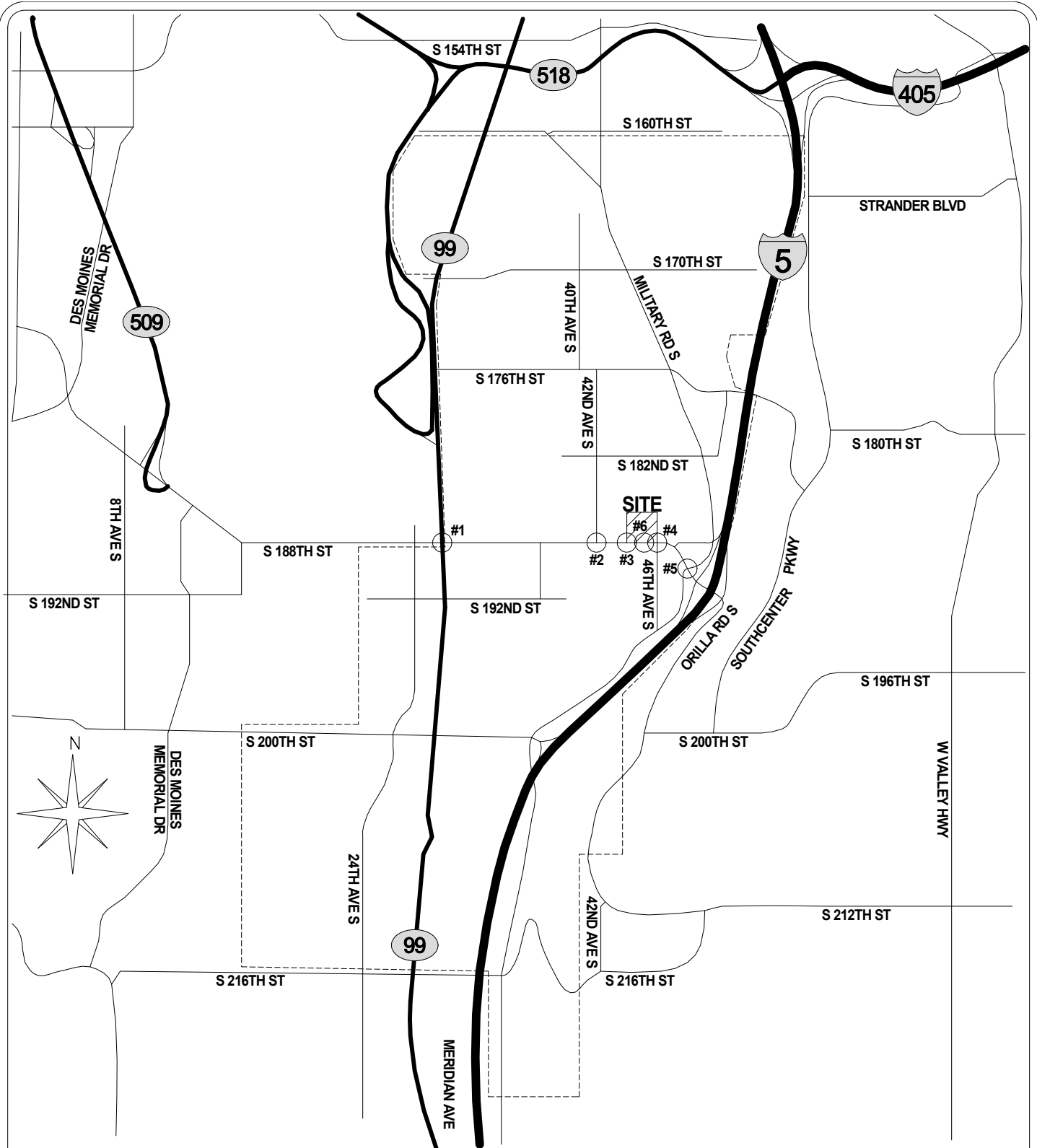
Kimley-Horn & Associates, Inc. has been retained to complete a traffic impact analysis (TIA) for the Tyee High School expansion. Matthew Palmer, responsible for the traffic analysis and report, is a licensed professional engineer (Civil) in the State of Washington and a current member of the Washington State section of ITE. Highline School District (HSD) is proposing to reconstruct/replace Tyee High School, which is located north of S 188<sup>th</sup> Street and west of 46<sup>th</sup> Avenue S in the city of SeaTac. A site vicinity map is included in Figure 1. The school will continue to be a high school serving grades 9<sup>th</sup> through 12<sup>th</sup>. The school currently has a capacity of 1,200 students and the maximum capacity will remain at 1,200 students after the expansion is complete. Due to the Covid-19 pandemic, about 52 (7%) of the students were enrolled in online learning. The district's estimated in-person enrollment at the school is 695 students. The school's hours are from 8:00 AM to 2:30 PM.

Chinook Middle School is directly to the west of Tyee High School and has a shared driveway. Additionally, the schools share the same bell schedule and students from both schools ride the same buses. Tyee High School's east driveway (46<sup>th</sup> Avenue S) is also an access for the Valley Ridge Community Center as well as an apartment complex. Additional video data was collected to determine which vehicle trips were associated with each school/use.

The primary scoping and analysis methodology for the Tyee High School is based on discussions with City of SeaTac staff and Highline School District personnel. This report summarizes Kimley-Horn's traffic analysis and findings.

## 2. PROPOSED SITE DEVELOPMENT & ACCESS

Tyee High School currently has an existing capacity of 1,200 students and the maximum capacity will remain at 1,200 students after the expansion is complete. The new site will provide one primary parent drop-off/pick-up loop with access to and from S 188<sup>th</sup> Street via 46<sup>th</sup> Avenue S on the east end of the site. The existing west driveway to S 188<sup>th</sup> Street will remain and primarily serve buses and staff parking. The west driveway will also serve trips to/from Chinook Middle School and the southern extents of the driveway. An additional access will be constructed between the two existing access points to allow westbound exiting students/parents to by-pass the 46<sup>th</sup> Avenue S signal. The additional access will be restricted to right-in/right-out only.



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**TYEE HIGH SCHOOL**

**FIGURE 1**  
**SITE VICINITY MAP**

**CITY OF SEATAC**

**LEGEND**



**DEVELOPMENT SITE**

### 3. METHODOLOGY & ANALYSIS SCOPING

A 2027 horizon year was assumed for the analysis to provide a 6-year forecast from existing data consistent with local TIP plans. Peak-hour level of service (LOS) is determined using the methodology described in the *Highway Capacity Manual 6<sup>th</sup> Edition* and *Synchro 11.1 Build 1* software developed by Trafficware. Traffic counts at the existing Tyee High School driveways showed trip generation rates for the AM and School PM peak hours within the typical range published in the Institute of Transportation Engineer's *Trip Generation Manual, 11<sup>th</sup> Edition (2021)*. Therefore, standard ITE trip generation data was used in the analysis.

Traffic congestion on roadways is generally measured in terms of LOS at critical intersections. In accordance with the *Highway Capacity Manual 6<sup>th</sup> Edition*, roadway facilities and intersections are rated between LOS A and F, with LOS A being free flow and LOS F being forced flow or over-capacity conditions. The LOS at signalized intersections and all-way stop-controlled intersections are based on the average stopped delay for all entering vehicles. The LOS at two-way stop-controlled intersections is based on stopped delay times for the critical approach or movement(s). Geometric characteristics and conflicting traffic movements are taken into consideration when determining LOS values. A summary of the level of service criteria has been included in Table 1.

**Table 1: Level of Service Criteria for Intersections**

Level of <sup>1</sup> Service	Expected Delay	Intersection Control Delay (Seconds per Vehicle)	
		Unsignalized Intersections	Signalized Intersections
<b>A</b>	Little/No Delay	≤10	≤10
<b>B</b>	Short Delays	>10 and ≤15	>10 and ≤20
<b>C</b>	Average Delays	>15 and ≤25	>20 and ≤35
<b>D</b>	Long Delays	>25 and ≤35	>35 and ≤55
<b>E</b>	Very Long Delays	>35 and ≤50	>55 and ≤80
<b>F</b>	Extreme Delays <sup>2</sup>	>50	>80

A 2.5% annual compounding growth rate to account for background traffic on public roads. Based on the scoping discussions, the AM and School PM peak-hour level of service was analyzed at six study intersections:

1. Pacific Highway S at S 188<sup>th</sup> Street – Signal
2. 42<sup>nd</sup> Avenue S at S 188<sup>th</sup> Street – Signal
3. Tyee High School West Driveway at S 188<sup>th</sup> Street – Minor-Leg Stop Control
4. 46<sup>th</sup> Avenue South at S 188<sup>th</sup> Street – Signal
5. Military Road S at S 188<sup>th</sup> Street – Signal
6. Tyee High School New Access at S 188<sup>th</sup> Street – Minor Leg Stop Control

The acceptable LOS for principle or minor arterials in the City of SeaTac is LOS E. The acceptable LOS for collector arterials and lower in the City of SeaTac is LOS D. The City’s Transportation Master Plan identifies the Pacific Highway S/International Boulevard at S 188<sup>th</sup> Street as an exception to the LOS E standard and may operate at a worse LOS when improvements are not desirable, feasible, or cost-effective.

<sup>1</sup> **Source:** *Highway Capacity Manual 6<sup>th</sup> Edition.*

- LOS A: Free-flow traffic conditions, with minimal delay to stopped vehicles (no vehicle is delayed longer than one cycle at signalized intersection).
- LOS B: Generally stable traffic flow conditions.
- LOS C: Occasional back-ups may develop, but delay to vehicles is short term and still tolerable.
- LOS D: During short periods of the peak hour, delays to approaching vehicles may be substantial but are tolerable during times of less demand (i.e. vehicles delayed one cycle or less at signal).
- LOS E: Intersections operate at or near capacity, with long queues developing on all approaches and long delays.
- LOS F: Jammed conditions on all approaches with excessively long delays and vehicles unable to move at times.

<sup>2</sup> When demand volume exceeds the capacity of the lane, extreme delays will be encountered with queuing which may cause severe congestion affecting other traffic movements in the intersection.

## 4. EXISTING CONDITIONS

### 4.1 Transit Service

King County Metro Transit provides public transit service within King County. There are two existing King County metro stops at the S 188<sup>th</sup> Street and 46<sup>th</sup> Avenue S intersection. The stops serve King County Metro Route 161 and Sound Transit Route 574. King County Metro Route 161 provides service with 15-30 minute headways between the hours of 5 AM and 1 AM. Sound Transit Route 574 provides service with 20-60 minute headways between the hours of 4:30 AM and 11:30 PM. Detailed route schedules are included in the attachments.

Additionally, Tyee High School and Chinook Middle School share bus service. There are 5 full size bus routes and 5 special education bus routes currently serving the school. Busing information provided by the school district is included in the attachments.

### 4.2 Roadway Network

S 188<sup>th</sup> Street is a 5-lane principal arterial with a posted speed limit of 35 mph in the vicinity of Tyee High School. There are no school zone speed limit signs in the vicinity of Tyee High School on S 188<sup>th</sup> Street. S 188<sup>th</sup> Street has sidewalk on both sides of the street. Military Road is a 2-lane Minor Arterial with a posted speed limit of 35 mph. 46<sup>th</sup> Avenue S is a 2-lane local road with a posted speed limit of 25 mph. The signalized intersection of S 188<sup>th</sup> Street at 46<sup>th</sup> Avenue S has marked crosswalks on the south, west, and north legs.

### 4.3 Collision Analysis

Collision data from WSDOT was reviewed for the study intersections for the latest 5.5 years available (January 1, 2016 through June 30, 2021). Statistics for the study intersections are summarized in Table 2.

**Table 2: 5.5-Year Collision Rate Calculation (2016-June 2021)**

Intersection	Intersection Control	Estimated ADT	Total Collisions	Injury/Fatal Collisions	Collision Rate <sup>3</sup>	Collision Frequency <sup>4</sup>
1. S 188 <sup>th</sup> St @ Pacific Hwy S	Signalized	38,420	116	35/0	1.50	21.09
2. S 188 <sup>th</sup> St @ 42 <sup>nd</sup> Ave S	Signalized	20,850	14	7/0	0.33	0.33
3. S 188 <sup>th</sup> St @ Tyee HS West Dwy	Unsignalized	18,620	5	3/0	0.13	0.13
4. S 188 <sup>th</sup> St @ 46 <sup>th</sup> Ave S	Signalized	19,790	19	8/0	0.48	0.48
5. S 188 <sup>th</sup> St @ Military Rd S	Signalized	27,890	75	26/0	1.34	13.64

<sup>3</sup> Collisions Per Million Entering Vehicles (MEV)

<sup>4</sup> Collisions Per Year



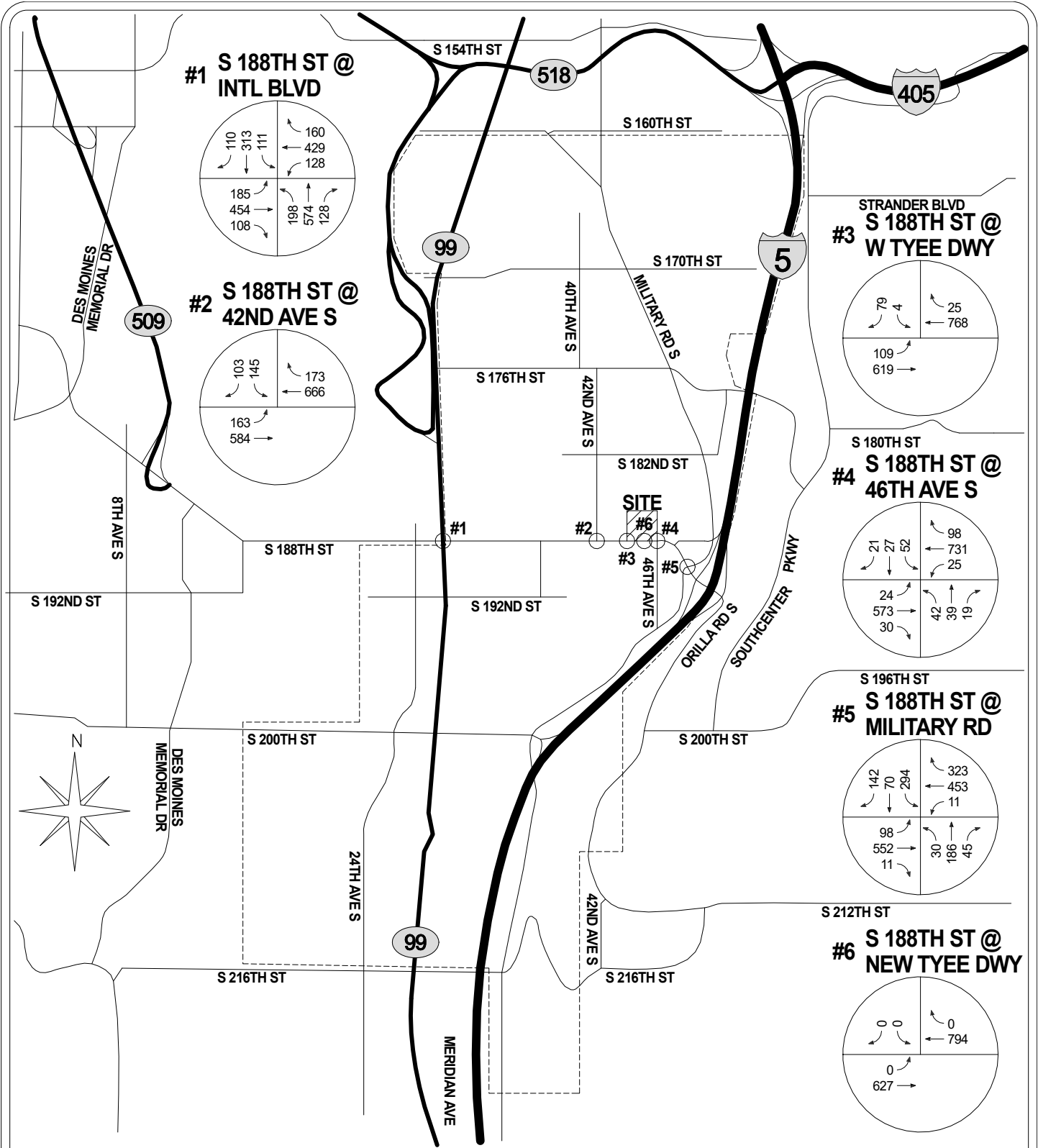
The collision data shows only two intersections had collision rates above 1.0 collision per million entering vehicles (MEV) and had more than 10 collisions per year—S 188<sup>th</sup> Street at Pacific Highway S and S 188<sup>th</sup> Street at Military Road S. Neither intersection had a fatality collision reported.

The intersection of S 188<sup>th</sup> Street at Pacific Highway South had 5 reported serious injury collisions all of which involved a pedestrian and single vehicle. There was no consistent trend in direction, time of day, contributing circumstances, or weather that contributed to a larger trend in the collisions. The intersection has marked pedestrian crossings and pedestrian signal heads on all approaches. Potential improvements in the future could include leading pedestrian intervals, restricting right turns on red, and/or increasing red clearance times at the intersection. The data shows 50 of the 116 reported collisions (43%) were rear-end collisions which was the most common collision type reported.

The intersection of S 188<sup>th</sup> Street at Military Road S only had 1 reported suspected serious injury collision in the 5.5 years indicating there is not a trend of serious injury collisions at the intersection. The data shows 33 of the 75 reported collisions (44%) were rear-end collisions which was the most common collision type at the intersection.

#### **4.4 Existing Volumes and Level of Service**

Existing turning movement counts at all the study intersections were obtained by the independent count firm, Idax Data on Tuesday December 14, 2021. All study intersections currently operate at acceptable levels of service. The existing peak-hour turning movement volumes are shown at the study intersections during the AM peak-hour (7-9 AM) and School PM peak-hour (2-4 PM) in Figure 2 and Figure 3, respectively. Analysis was conducted during the peak hour of school trips (7:30-8:30 AM) and (2:30-3:30 PM). The existing level of service for the AM peak-hour and School PM peak-hour is summarized in Table 3 and Table 4 respectively. The existing level of service calculations are included in the attachments.



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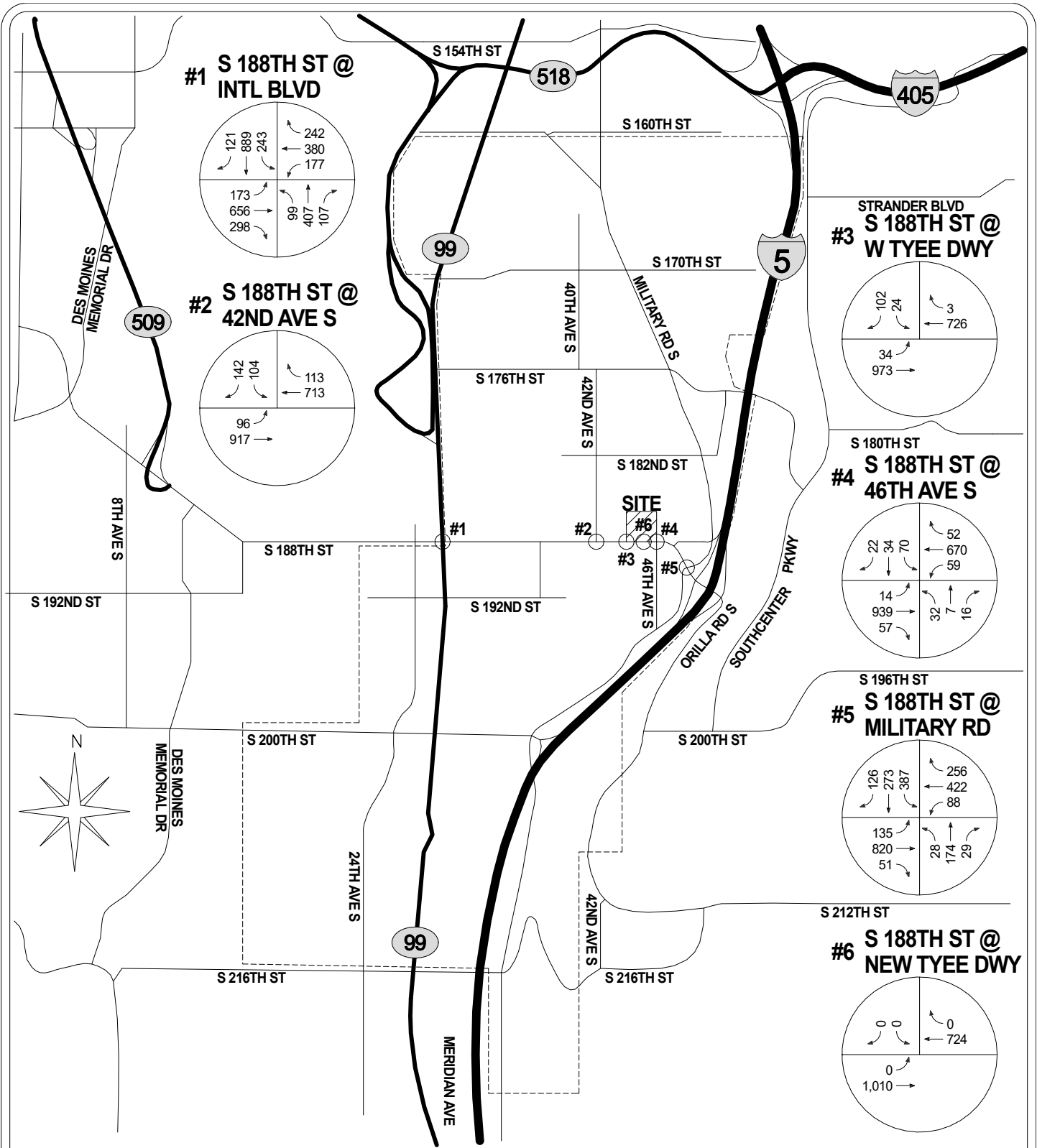
TYEE HIGH SCHOOL

**LEGEND**

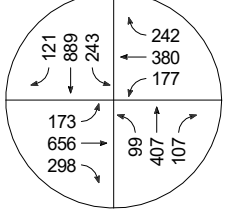
XX → AM PEAK HOUR  
TRAFFIC VOLUMES

CITY OF SEATAC

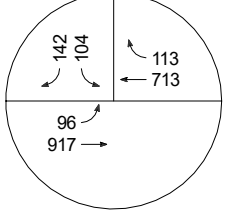
**FIGURE 2**  
**2021 EXISTING**  
**AM PEAK-HOUR**  
**TURNING MOVEMENTS**



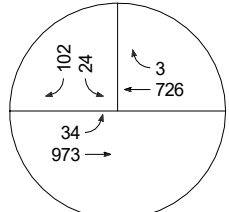
#1 S 188TH ST @ INTL BLVD



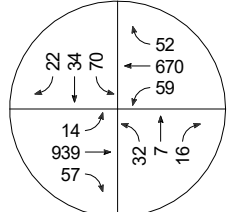
#2 S 188TH ST @ 42ND AVE S



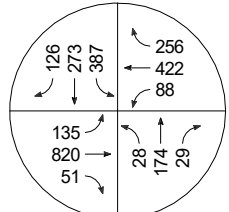
#3 STRANDER BLVD S 188TH ST @ W TYEE DWY



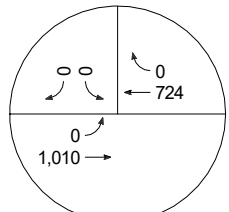
#4 S 188TH ST @ 46TH AVE S



#5 S 188TH ST @ MILITARY RD



#6 S 188TH ST @ NEW TYEE DWY



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**LEGEND**  
XX → PM PEAK HOUR TRAFFIC VOLUMES

CITY OF SEATAC

**FIGURE 3**  
2021 EXISTING SCHOOL PM PEAK-HOUR TURNING MOVEMENTS

**Table 3: Existing Level of Service Summary – AM Peak-Hour**

	Intersections	Approach	2021 Existing Conditions	
			LOS	Delay
1.	S. 188 <sup>th</sup> St. @ Pacific Hwy S.	Intersection Average	D	48.9 sec
2.	S. 188 <sup>th</sup> St. @ 42 <sup>nd</sup> Ave S.	Intersection Average	B	13.6 sec
3.	S. 188 <sup>th</sup> St. @ Tyee HS West Dwy.	Southbound	B	14.9 sec
4.	S. 188 <sup>th</sup> St. @ 46 <sup>th</sup> Ave S	Intersection Average	B	18.4 sec
5.	S. 188 <sup>th</sup> St. @ Military Rd S.	Intersection Average	C	27.0 sec

**Table 4: Existing Level of Service Summary – School PM Peak-Hour**

	Intersections	Approach	2021 Existing Conditions	
			LOS	Delay
1.	S. 188 <sup>th</sup> St. @ Pacific Hwy S.	Intersection Average	D	46.5 sec
2.	S. 188 <sup>th</sup> St. @ 42 <sup>nd</sup> Ave S.	Intersection Average	A	10.0 sec
3.	S. 188 <sup>th</sup> St. @ Tyee HS West Dwy.	Southbound	B	14.3 sec
4.	S. 188 <sup>th</sup> St. @ 46 <sup>th</sup> Ave S	Intersection Average	B	14.6 sec
5.	S. 188 <sup>th</sup> St. @ Military Rd S.	Intersection Average	D	35.7 sec

## 5. FUTURE CONDITIONS

### 5.1 Trip Generation

The new Tyee High School will have the same capacity as today with 1,200 students. This is an increase of approximately 505 students for in-person learning based on the current reduced enrollment at the time of the counts. The Institute of Transportation Engineers (ITE) has published trip generation rates for Land Use Code 525, High School, of 0.52 trips per student for the AM peak hour and 0.32 trips per student for the School PM peak-hour, respectively. Driveway counts and video observation of the school showed an existing AM peak hour trip generation of 0.61 trips per student in the AM peak hour and 0.46 trips per student in the School PM peak hour. These observed rates at Tyee High School are within the range of rates for ITE's LUC 525 entire data set as well as within the range for schools with similar student enrollment. Therefore, the check counts provide justification for use of ITE's trip generation data. Local trip generation calculations are included in the attachments. Trip generation rate calculations using ITE data for Tyee High School are summarized in Table 5. The Tyee High School at full enrollment is expected to generate an additional 1,025 daily trips, 263 AM peak-hour trips, and 167 School PM peak hour trips compared to the existing enrollment of 695 students at the time of the count collection.

**Table 5: Tyee High School Trip Generation Summary**

Land Use	Students	Daily Trips	AM Peak Hour			School PM Peak Hour		
			In	Out	Total	In	Out	Total
LUC 525, High School (Full Capacity)	1,200	2,436	418	206	624	127	269	396
LUC 525, High School (Existing In-Person Enrollment)	-695	-1,411	-242	-119	-361	-73	-156	-229
<b>Total</b>	<b>505</b>	<b>1,025</b>	<b>176</b>	<b>87</b>	<b>263</b>	<b>54</b>	<b>113</b>	<b>167</b>

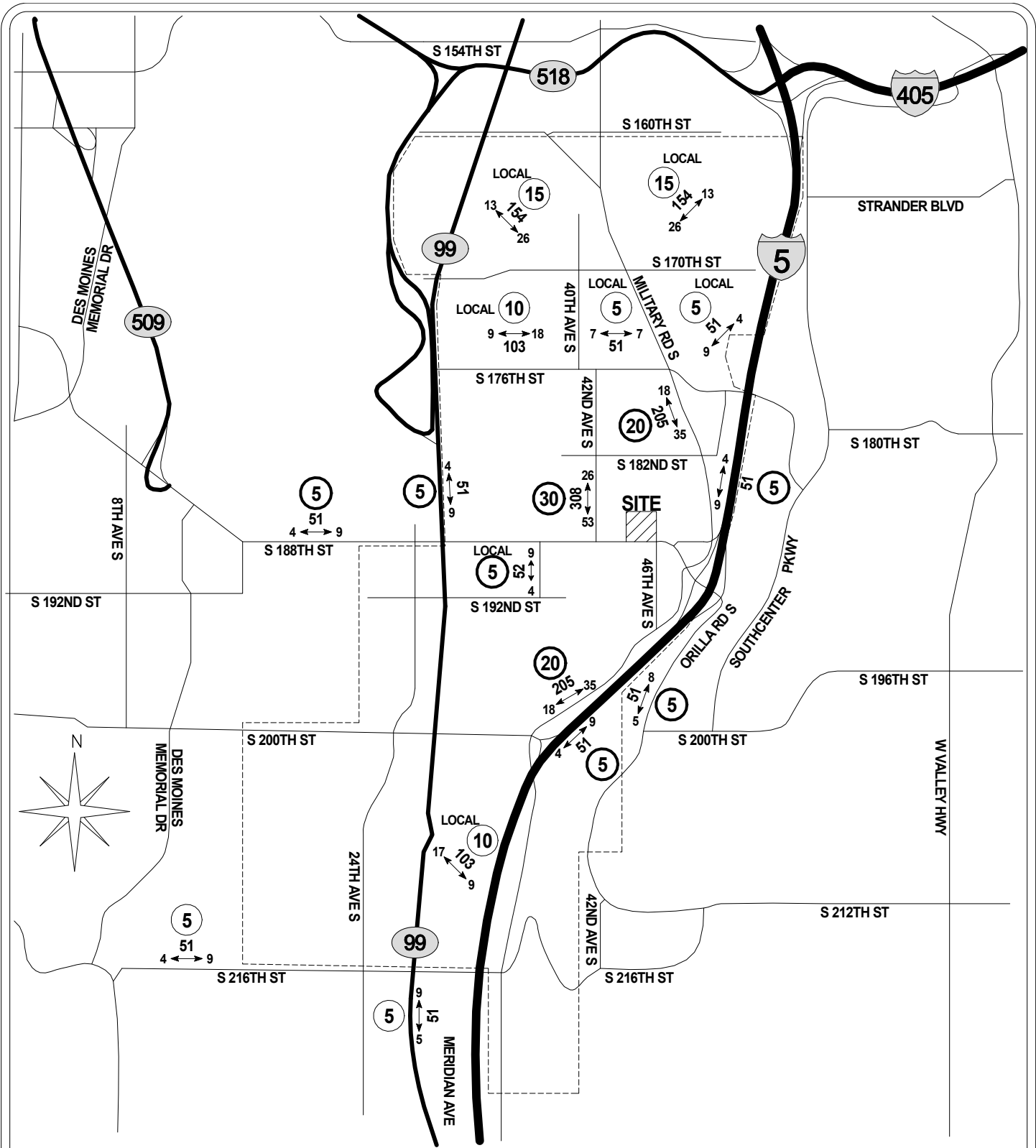
Additionally, the City of SeaTac requested commuter peak hour (4-6 PM) trip generation calculations be completed for concurrency and impact fee mitigation purposes. School traffic typically subsides after the afternoon dismissal and is typically much lower than the AM and afternoon peaks. Table 6 summarizes the 4-6 PM commuter peak hour trip generation calculations for Tyee High School. Tyee High School is expected to generate 71 additional commuter PM peak hour trips compared to today with full enrollment.

**Table 6: Tyee High School Trip Generation Summary – Commuter PM Peak Hour**

Land Use	Students	4-6 PM Peak Hour		
		In	Out	Total
LUC 525, High School (Full Capacity)	1,200	81	87	168
LUC 525, High School (Existing In-Person Enrollment)	-695	-47	-50	-97
<b>Total</b>	<b>505</b>	<b>34</b>	<b>37</b>	<b>71</b>

## 5.2 Trip Distribution

The distribution of the additional trips generated by the Tyee High School with full enrollment is based on the existing attendance area of the school and existing traffic counts. It is expected 50% of the trips will travel to and from the north—thirty percent on 42<sup>nd</sup> Ave S and twenty percent on Military Road S. Approximately 20% of the trips are expected to travel to and from the south on 46<sup>th</sup> Avenue S. An additional 15% of trips are expected to travel to and from the west on S 188<sup>th</sup> Street, west of 42<sup>nd</sup> Avenue S. The remaining 15% are expected to travel to and from the east on S 188<sup>th</sup> Street, east of Military Road S—ten percent to/from I-5 and five percent on Orilla Road S. Trip distribution figures for the AM peak hour and School PM peak hour are shown in Figure 4 and Figure 5, respectively.



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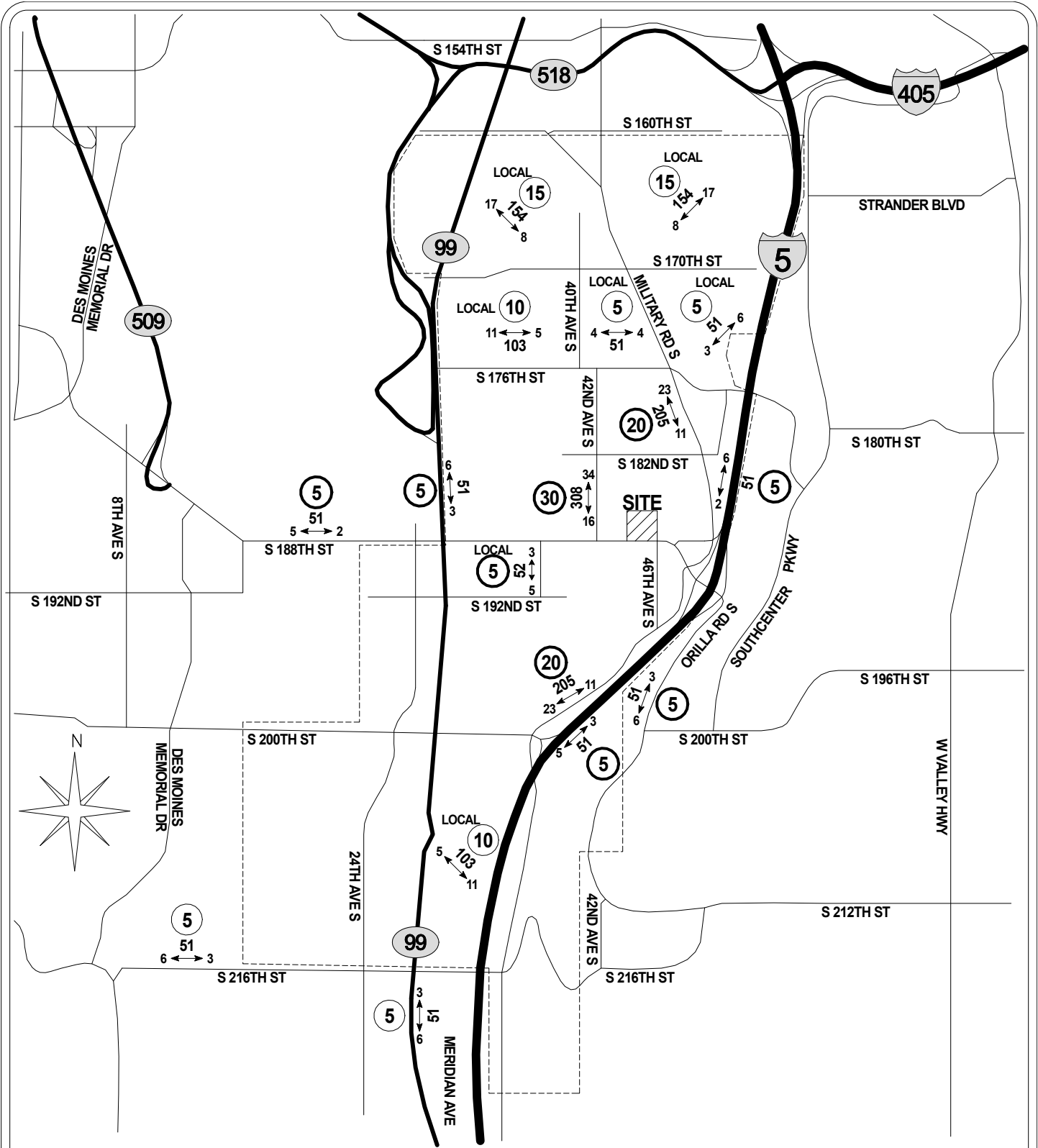
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TYEE HIGH SCHOOL

CITY OF SEATAC

LEGEND	
AWDT	NEW DAILY TRAFFIC
AM ← PEAK	NEW AM PEAK HOUR TRIPS
(XX)	TRIP DISTRIBUTION %
○#X	PROPOSED STUDY INTERSECTION

**FIGURE 4**  
**SCHOOL**  
**AM PEAK HOUR**  
**TRIP DISTRIBUTION**



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**LEGEND**

AWDT  
PM ← → PEAK

NEW DAILY TRAFFIC  
NEW PM PEAK-HOUR TRIPS

(XX)

TRIP DISTRIBUTION %

**FIGURE 5**

**SCHOOL  
PM DISMISSAL PEAK-HOUR  
TRIP DISTRIBUTION**



### **5.3 2027 Baseline Volumes and Level of Service**

The 2027 baseline (future without project) turning movement volumes were estimated by applying a 2.5% annual compounding growth rate to the existing turning movement volumes. Turning movement volumes to and from legs primarily serving the existing Tyee High School site were not increased because future increase in volumes is accounted for in the full enrollment trip generation calculations. The 2027 baseline turning movement volumes for the AM peak-hour and School PM peak-hour are shown in Figure 6 and Figure 7.

With the addition of baseline growth, all study intersections are expected to operate at LOS D or better except for S 188<sup>th</sup> Street at Pacific Highway South during the School PM peak hour which is expected to operate at LOS E. This LOS E condition is still acceptable based on the City of SeaTac's LOS standards. The 2027 baseline level of service results for the AM peak-hour and School PM peak-hour are summarized in Table 7 and Table 8. The baseline level of service calculations are included in the attachments.

### **5.4 2027 Future with Project Volumes and Level of Service**

The 2027 future with project turning movement volumes are calculated by adding additional school trips that would result from full enrollment of the school. Additionally, shifted school driveway volumes based on the proposed on-site circulation were also included. These adjustments are shown in the intersection turning movement calculations. It should be noted that the west driveway turning movements did not account for any reduction in trips associated with Chinook Middle School as a conservative assumption. The 2027 future with project turning movement volumes for the AM peak-hour and School PM peak-hour in Figure 8 and Figure 9, respectively. The 2027 future with project level of service results for the AM peak-hour and School PM peak-hour are summarized in Table 7 and Table 8. The 2027 future with project level of service calculations are included in the attachments.

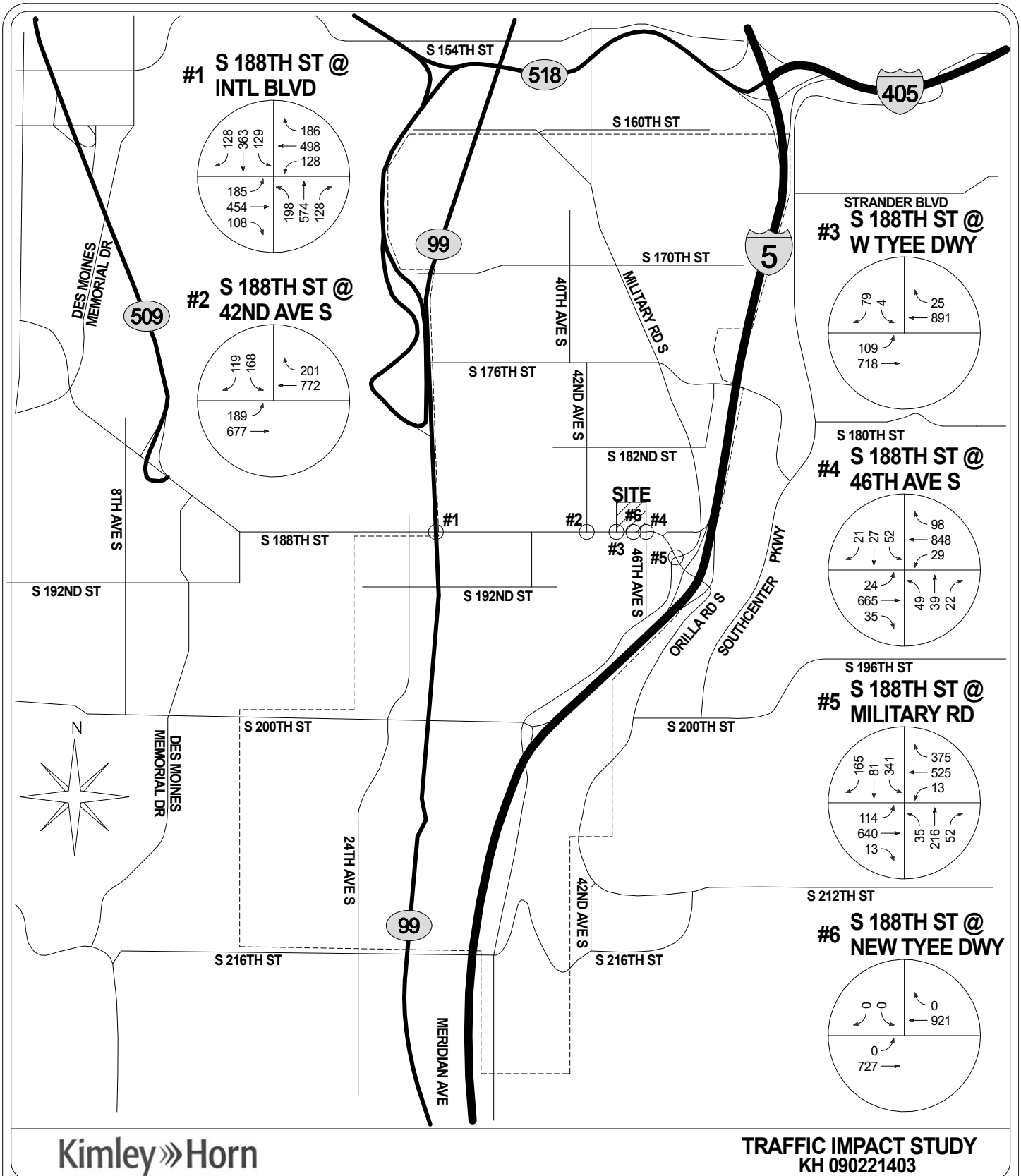
The school's new proposed right-in/right-out access to S 188<sup>th</sup> Street will provide benefit to the existing S 188<sup>th</sup> Street at 46<sup>th</sup> Avenue S signal operations. The allowed right-turn out movements will reduce the volume heading to 46<sup>th</sup> Avenue S during the AM and School PM peak hours. This will improve on-site circulation by not requiring as many vehicles to travel through the southeast parking lot to get back to 46<sup>th</sup> Avenue S after drop-off/pick-up, and it will improve operations for vehicles traveling westbound on S 187<sup>th</sup> Place. Signing of the intersection for right-out operations only is recommended.

**Table 7: 2027 Future Level of Service Summary – AM Peak-Hour**

Intersections	Approach	2021 Existing Conditions		2027 Baseline Conditions		2027 Future w/ Expansion Conditions	
		LOS	Delay	LOS	Delay	LOS	Delay
1. S. 188 <sup>th</sup> St. @ Pacific Hwy S.	Intersection Average	D	48.9 sec	D	51.8 sec	D	52.1 sec
2. S. 188 <sup>th</sup> St. @ 42 <sup>nd</sup> Ave S.	Intersection Average	B	13.6 sec	B	17.5 sec	C	20.0 sec
3. S. 188 <sup>th</sup> St. @ Tyee HS West Dwy.	Southbound	B	14.9 sec	C	16.6 sec	C	19.2 sec
4. S. 188 <sup>th</sup> St. @ 46 <sup>th</sup> Ave S	Intersection Average	B	18.4 sec	B	20.0 sec	C	27.1 sec
5. S. 188 <sup>th</sup> St. @ Military Rd S.	Intersection Average	C	27.0 sec	C	33.2 sec	C	34.8 sec
6. S. 188 <sup>th</sup> St @ New Access	Southbound	-	-	-	-	C	15.1 sec

**Table 8: 2027 Future Level of Service Summary – School PM Peak-Hour**

Intersections	Approach	2021 Existing Conditions		2027 Baseline Conditions		2027 Future w/ Expansion Conditions	
		LOS	Delay	LOS	Delay	LOS	Delay
1. S. 188 <sup>th</sup> St. @ Pacific Hwy S.	Intersection Average	D	46.5 sec	E	58.1 sec	E	58.1 sec
2. S. 188 <sup>th</sup> St. @ 42 <sup>nd</sup> Ave S.	Intersection Average	A	10.0 sec	B	11.1 sec	B	11.6 sec
3. S. 188 <sup>th</sup> St. @ Tyee HS West Dwy.	Southbound	B	14.3 sec	C	15.8 sec	C	20.8 sec
4. S. 188 <sup>th</sup> St. @ 46 <sup>th</sup> Ave S	Intersection Average	B	14.6 sec	B	15.6 sec	C	20.9 sec
5. S. 188 <sup>th</sup> St. @ Military Rd S.	Intersection Average	D	35.7 sec	D	39.6 sec	D	40.4 sec
6. S. 188 <sup>th</sup> St @ New Access	Southbound	-	-	-	-	B	13.4 sec



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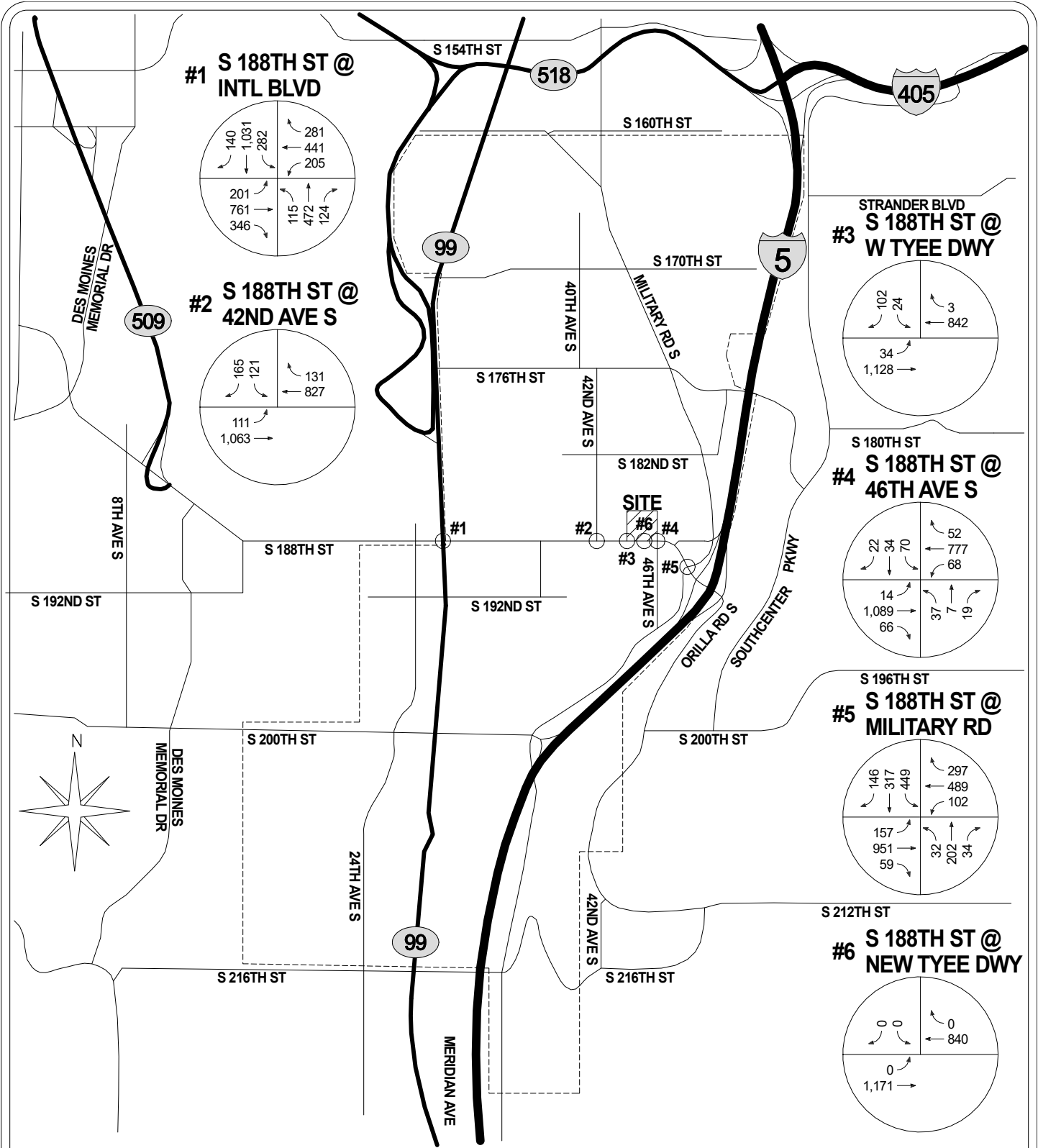
TYEE HIGH SCHOOL

LEGEND

XX → AM PEAK HOUR  
TRAFFIC VOLUMES

CITY OF SEATAC

**FIGURE 6**  
**2027 BASELINE**  
**AM PEAK-HOUR**  
**TURNING MOVEMENTS**



Kimley»Horn

TRAFFIC IMPACT STUDY  
KH 090221403

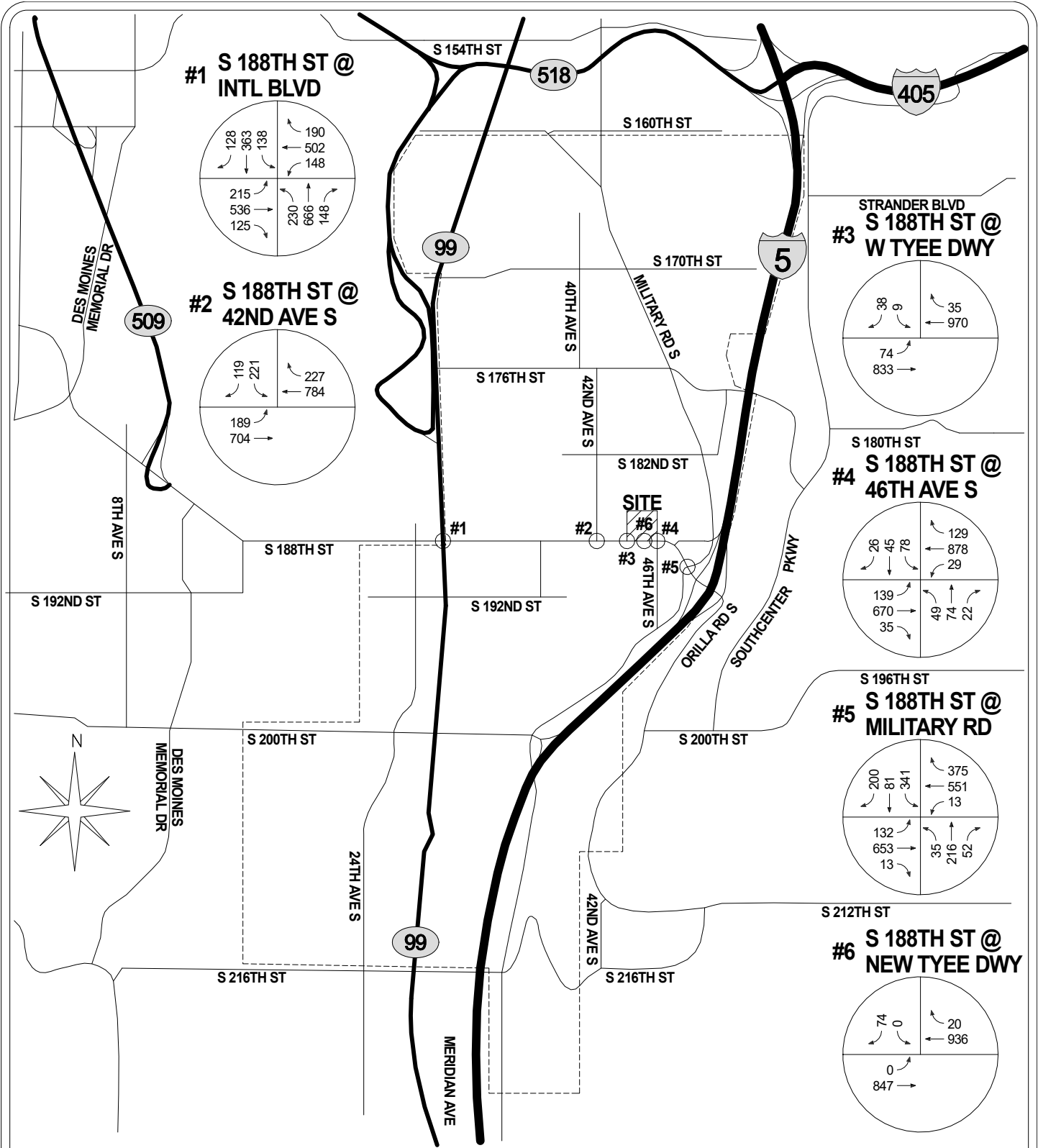
TYEE HIGH SCHOOL

**LEGEND**

XX → PM PEAK HOUR TRAFFIC VOLUMES

CITY OF SEATAC

**FIGURE 7**  
**2027 BASELINE**  
**SCHOOL PM PEAK-HOUR**  
**TURNING MOVEMENTS**



Kimley»Horn

TRAFFIC IMPACT STUDY  
KH 090221403

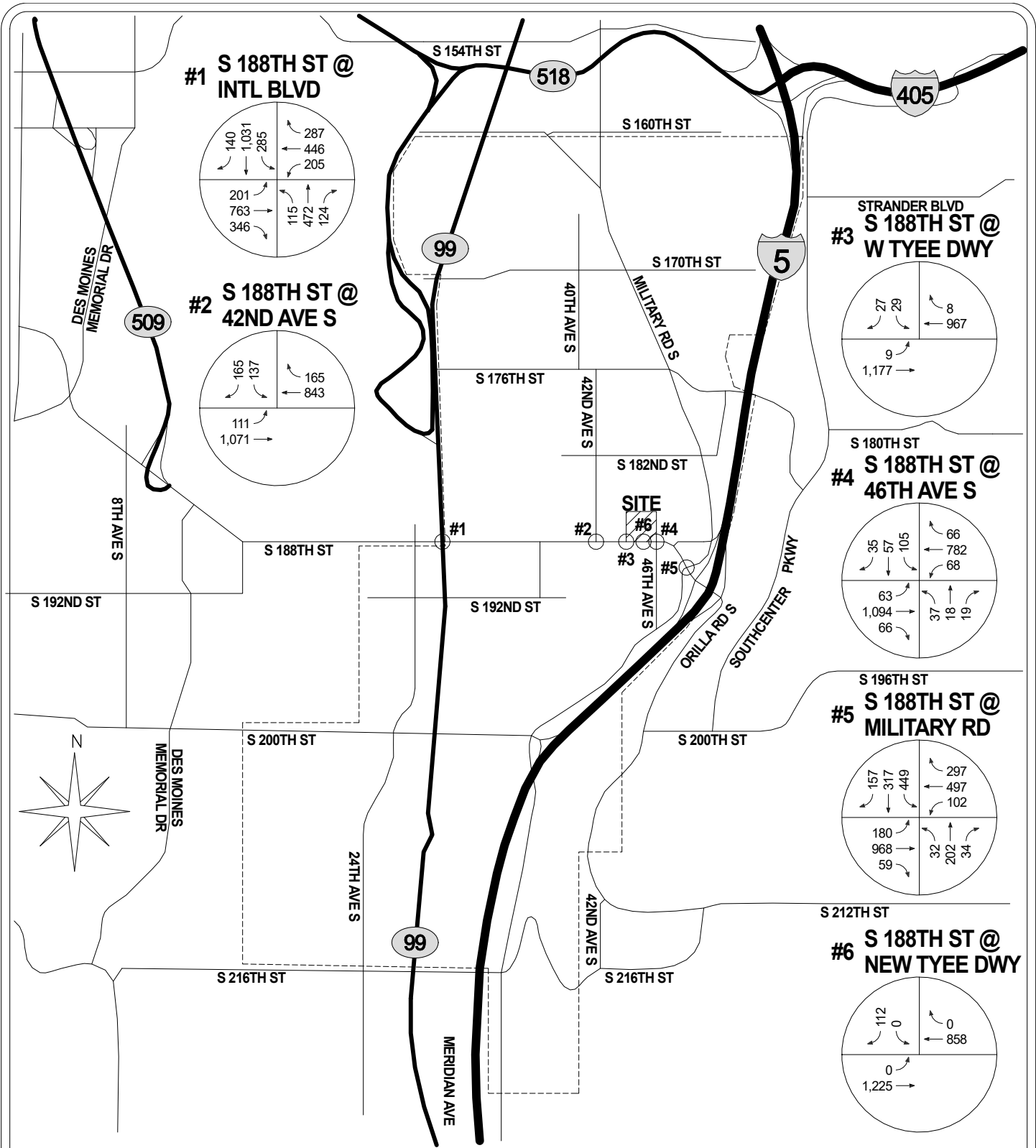
TYEE HIGH SCHOOL

**LEGEND**

XX → AM PEAK HOUR TRAFFIC VOLUMES

CITY OF SEATAC

**FIGURE 8**  
**2027 FUTURE WITH EXPANSION**  
**AM PEAK-HOUR**  
**TURNING MOVEMENTS**



Kimley»Horn

TRAFFIC IMPACT STUDY  
KH 090221403

TYEE HIGH SCHOOL

CITY OF SEATAC

**LEGEND**

XX → PM PEAK HOUR TRAFFIC VOLUMES

**FIGURE 9**

**2027 FUTURE W/ EXPANSION SCHOOL PM PEAK-HOUR TURNING MOVEMENTS**

## 6. PARKING DEMAND

Per city code requirements of 1 space per 35 students for the 1,200 students plus 1 space per faculty the required parking is for 140 spaces. The school will be providing at least 200 parking spaces per district direction.

## 7. TRAFFIC MITIGATION

### 7.1 On-Site/Access Improvements

The following on-site/access improvements will be constructed by the district or is recommended to enhance the traffic flow and safety conditions at the site access:

- Primary student/parent inbound access should occur at the 46<sup>th</sup> Avenue S signal.
- The parent drop-off/pick-up loop will operate in a counterclockwise motion entering from 46<sup>th</sup> Avenue S. Parents wishing to travel west from the school will use the new right-in/right-out access to S 188<sup>th</sup> Street. Parents wishing to travel south or east from the school will loop through the southeast parking lot back to 46<sup>th</sup> Avenue S and use the signal.
- Pavement markings and signage will be placed at the first landscape island north of the right-in/right-out driveway to S 188<sup>th</sup> Street to prevent vehicles from entering the drop-off/pick-up loop in a clockwise motion.
- The parent drop-off/pick-up loop is expected to accommodate between 6-8 vehicles simultaneously. Assuming the loop only operates with 6 vehicles being able to simultaneously drop-off/pick-up would result in a 95<sup>th</sup>-percentile queue of 11 vehicles (275 feet) which would not extend to the 46<sup>th</sup> Avenue S signal. See Figure 10 on the next page. (The longer length per vehicle assumed for the drop-off/pick-up area accounts for additional spacing).

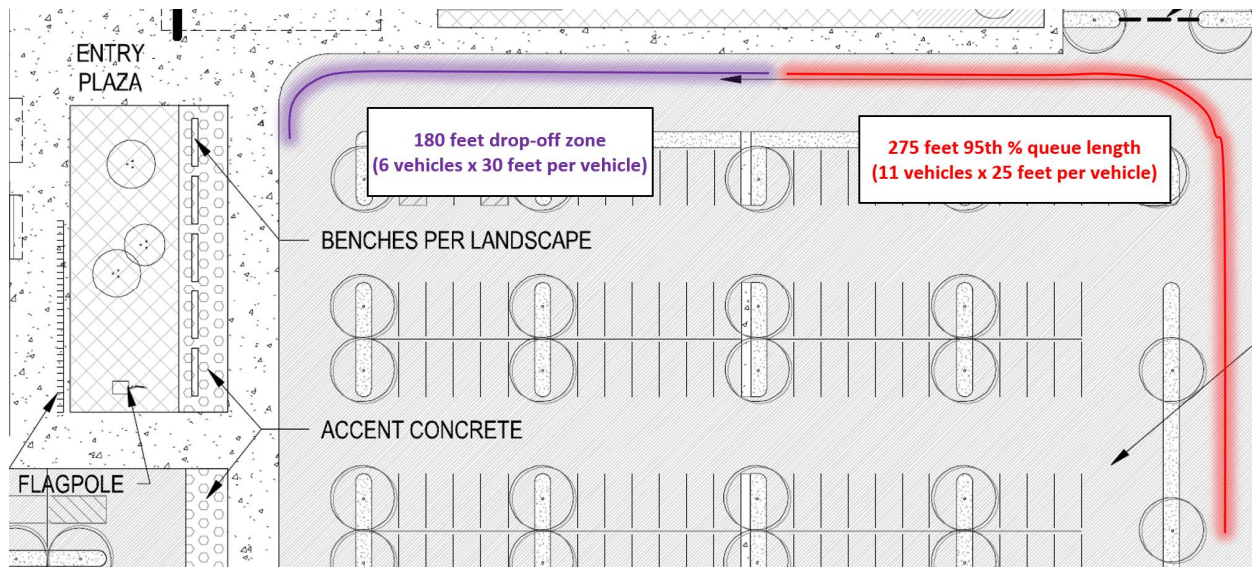


Figure 10: Expected drop-off/pick-up and queue lengths.

## 7.2 Off-Site Mitigation/Improvements

The Tye High School Expansion will not trigger the need for any off-site mitigation based on the level of service analysis.

## 7.3 Traffic Impact Fees

The school currently has a capacity of 1,200 students and the maximum capacity will remain at 1,200 students after the expansion is complete. The City of SeaTac has a traffic impact fee of \$523 per student for High Schools. As the capacity of the school is not increasing and there will be no additional students, no additional mitigation fees would be required.

## 8. CONCLUSIONS

Tye High School will continue to serve 1,200 students with the expansion. With full enrollment the school is expected to generate an additional 1,025 daily trips, 263 AM peak-hour trips, and 167 School PM peak hour trips based on the current reduced enrollment at the time of the counts. With full enrollment in 2027 future with the project, all the off-site study intersections will continue to operate at acceptable levels of service based on City of SeaTac standards. The school district should not be required to construct any off-site intersection improvements or pay any traffic impact fees.



# Trip Generation

Tyee High School  
KH: 090221403

Trip Generation for: Development Peak Weekday  
(a.k.a.): Average Weekday Daily Trips (AWDT)

LAND USES	VARIABLE	ITE LU code	Trip Rate	Gross Trips			Internal Crossover		NET EXTERNAL TRIPS BY TYPE					
				% IN	% OUT	In+Out (Total)	% of Gross Trips	In+Out (Total)	IN BOTH DIRECTIONS		DIRECTIONAL ASSIGNMENTS			
									TOTAL In+Out (Total)	PASS-BY % of Ext. Trips	NEW In+Out (Total)	PASS-BY In	NEW In	NEW Out
High School	1200 students	522	2.03	50%	50%	2,436	0%	0	0	2,436	0	0	1,218	1,218
High School	-695 students	522	2.03	50%	50%	-1,411	0%	0	0	-1,411	0	0	-706	-705
<b>Total</b>						1,025		0	0	1,025	0	0	512	513

Tyee High School  
KH: 090221403

**Trip Generation for: Development Peak Weekday, Peak Hour of Adjacent Street Traffic, One Hour between 7 and 9 AM  
(a.k.a.): Weekday AM Peak Hour**

LAND USES	VARIABLE	ITE LU code	Gross Trips				Internal Crossover		NET EXTERNAL TRIPS BY TYPE					
			Trip Rate	% IN	% OUT	In+Out (Total)	% of Gross Trips	In+Out (Total)	IN BOTH DIRECTIONS		DIRECTIONAL ASSIGNMENTS			
									TOTAL In+Out (Total)	PASS-BY % of Ext. Trips	NEW In+Out (Total)	PASS-BY In	NEW In	NEW Out
High School	1200 students	522	0.52	67%	33%	624	0%	0	0	624	0	0	418	206
High School	-695 students	522	0.52	67%	33%	-361	0%	0	0	-361	0	0	-242	-119
<b>Total</b>						263		0	0	263	0	0	176	87

Tyee High School  
KH: 090221403

**Trip Generation for: Development Peak Weekday, Peak Hour of Generator  
(a.k.a.): Weekday PM Peak Hour**

LAND USES	VARIABLE	ITE LU code	Gross Trips				Internal Crossover		NET EXTERNAL TRIPS BY TYPE							
			Trip Rate	% IN	% OUT	In+Out (Total)	% of Gross Trips	In+Out (Total)	IN BOTH DIRECTIONS		DIRECTIONAL ASSIGNMENTS					
									TOTAL In+Out (Total)	PASS-BY % of Ext. Trips	NEW In+Out (Total)	PASS-BY In	NEW In	NEW Out		
High School	1200 students	522	0.33	32%	68%	396	0%	0	0	0	0	396	0	0	127	269
High School	-695 students	522	0.33	32%	68%	-229	0%	0	0	0	0	-229	0	0	-73	-156
<b>Total</b>						167		0	0	0	0	167	0	0	54	113

Tyee High School  
KH: 090221403

**Trip Generation for: Development Peak Weekday, Peak Hour of Adjacent Street Traffic, One Hour between 4 and 6 PM  
(a.k.a.): Weekday PM Peak Hour**

LAND USES	VARIABLE	ITE LU code	Gross Trips				Internal Crossover		NET EXTERNAL TRIPS BY TYPE							
			Trip Rate		In+Out (Total)		% of Gross Trips		IN BOTH DIRECTIONS		PASS-BY		DIRECTIONAL ASSIGNMENTS			
			% IN	% OUT	In+Out (Total)	In+Out (Total)	% IN	% OUT	TOTAL In+Out (Total)	% of Ext. Trips	In+Out (Total)	In	Out	In	Out	
High School	1200 students	522	0.14	48%	52%	168	0%	0	0%	0	0%	168	0	0	81	87
High School	-695 students	522	0.14	48%	52%	-97	0%	0	0%	0	0%	-97	0	0	-47	-50
<b>Total</b>						71		0		0		71	0	0	34	37

Tyee High School  
KH: 090221403

AM Peak-Hour

%	New ADT	New AM Peak Hour Trips		
		In	Out	Total
100%	1025	176	87	263
1%	10.25	1.76	0.87	2.63
2%	20.50	3.52	1.74	5.26
3%	30.75	5.28	2.61	7.89
4%	41.00	7.04	3.48	10.52
5%	<b>51.25</b>	<b>8.80</b>	<b>4.35</b>	<b>13.15</b>
6%	61.50	10.56	5.22	15.78
7%	71.75	12.32	6.09	18.41
8%	82.00	14.08	6.96	21.04
9%	92.25	15.84	7.83	23.67
10%	<b>102.50</b>	<b>17.60</b>	<b>8.70</b>	<b>26.30</b>
11%	112.75	19.36	9.57	28.93
12%	123.00	21.12	10.44	31.56
13%	133.25	22.88	11.31	34.19
14%	143.50	24.64	12.18	36.82
15%	<b>153.75</b>	<b>26.40</b>	<b>13.05</b>	<b>39.45</b>
16%	164.00	28.16	13.92	42.08
17%	174.25	29.92	14.79	44.71
18%	184.50	31.68	15.66	47.34
19%	194.75	33.44	16.53	49.97
20%	<b>205.00</b>	<b>35.20</b>	<b>17.40</b>	<b>52.60</b>
21%	215.25	36.96	18.27	55.23
22%	225.50	38.72	19.14	57.86
23%	235.75	40.48	20.01	60.49
24%	246.00	42.24	20.88	63.12
25%	<b>256.25</b>	<b>44.00</b>	<b>21.75</b>	<b>65.75</b>
26%	266.50	45.76	22.62	68.38
27%	276.75	47.52	23.49	71.01
28%	287.00	49.28	24.36	73.64
29%	297.25	51.04	25.23	76.27
30%	<b>307.50</b>	<b>52.80</b>	<b>26.10</b>	<b>78.90</b>
31%	317.75	54.56	26.97	81.53
32%	328.00	56.32	27.84	84.16
33%	338.25	58.08	28.71	86.79
34%	348.50	59.84	29.58	89.42
35%	<b>358.75</b>	<b>61.60</b>	<b>30.45</b>	<b>92.05</b>
36%	369.00	63.36	31.32	94.68
37%	379.25	65.12	32.19	97.31
38%	389.50	66.88	33.06	99.94
39%	399.75	68.64	33.93	102.57
40%	<b>410.00</b>	<b>70.40</b>	<b>34.80</b>	<b>105.20</b>
41%	420.25	72.16	35.67	107.83
42%	430.50	73.92	36.54	110.46
43%	440.75	75.68	37.41	113.09
44%	451.00	77.44	38.28	115.72
45%	<b>461.25</b>	<b>79.20</b>	<b>39.15</b>	<b>118.35</b>
46%	471.50	80.96	40.02	120.98
47%	481.75	82.72	40.89	123.61
48%	492.00	84.48	41.76	126.24
49%	502.25	86.24	42.63	128.87
50%	<b>512.50</b>	<b>88.00</b>	<b>43.50</b>	<b>131.50</b>

%	New ADT	New AM Peak Hour Trips		
		In	Out	Total
100%	1025	176	87	263
51%	522.75	89.76	44.37	134.13
52%	533.00	91.52	45.24	136.76
53%	543.25	93.28	46.11	139.39
54%	553.50	95.04	46.98	142.02
55%	<b>563.75</b>	<b>96.80</b>	<b>47.85</b>	<b>144.65</b>
56%	574.00	98.56	48.72	147.28
57%	584.25	100.32	49.59	149.91
58%	594.50	102.08	50.46	152.54
59%	604.75	103.84	51.33	155.17
60%	<b>615.00</b>	<b>105.60</b>	<b>52.20</b>	<b>157.80</b>
61%	625.25	107.36	53.07	160.43
62%	635.50	109.12	53.94	163.06
63%	645.75	110.88	54.81	165.69
64%	656.00	112.64	55.68	168.32
65%	<b>666.25</b>	<b>114.40</b>	<b>56.55</b>	<b>170.95</b>
66%	676.50	116.16	57.42	173.58
67%	686.75	117.92	58.29	176.21
68%	697.00	119.68	59.16	178.84
69%	707.25	121.44	60.03	181.47
70%	<b>717.50</b>	<b>123.20</b>	<b>60.90</b>	<b>184.10</b>
71%	727.75	124.96	61.77	186.73
72%	738.00	126.72	62.64	189.36
73%	748.25	128.48	63.51	191.99
74%	758.50	130.24	64.38	194.62
75%	<b>768.75</b>	<b>132.00</b>	<b>65.25</b>	<b>197.25</b>
76%	779.00	133.76	66.12	199.88
77%	789.25	135.52	66.99	202.51
78%	799.50	137.28	67.86	205.14
79%	809.75	139.04	68.73	207.77
80%	<b>820.00</b>	<b>140.80</b>	<b>69.60</b>	<b>210.40</b>
81%	830.25	142.56	70.47	213.03
82%	840.50	144.32	71.34	215.66
83%	850.75	146.08	72.21	218.29
84%	861.00	147.84	73.08	220.92
85%	<b>871.25</b>	<b>149.60</b>	<b>73.95</b>	<b>223.55</b>
86%	881.50	151.36	74.82	226.18
87%	891.75	153.12	75.69	228.81
88%	902.00	154.88	76.56	231.44
89%	912.25	156.64	77.43	234.07
90%	<b>922.50</b>	<b>158.40</b>	<b>78.30</b>	<b>236.70</b>
91%	932.75	160.16	79.17	239.33
92%	943.00	161.92	80.04	241.96
93%	953.25	163.68	80.91	244.59
94%	963.50	165.44	81.78	247.22
95%	<b>973.75</b>	<b>167.20</b>	<b>82.65</b>	<b>249.85</b>
96%	984.00	168.96	83.52	252.48
97%	994.25	170.72	84.39	255.11
98%	1004.50	172.48	85.26	257.74
99%	1014.75	174.24	86.13	260.37
100%	<b>1025.00</b>	<b>176.00</b>	<b>87.00</b>	<b>263.00</b>

Tyee High School  
KH: 090221403

PM Peak-Hour

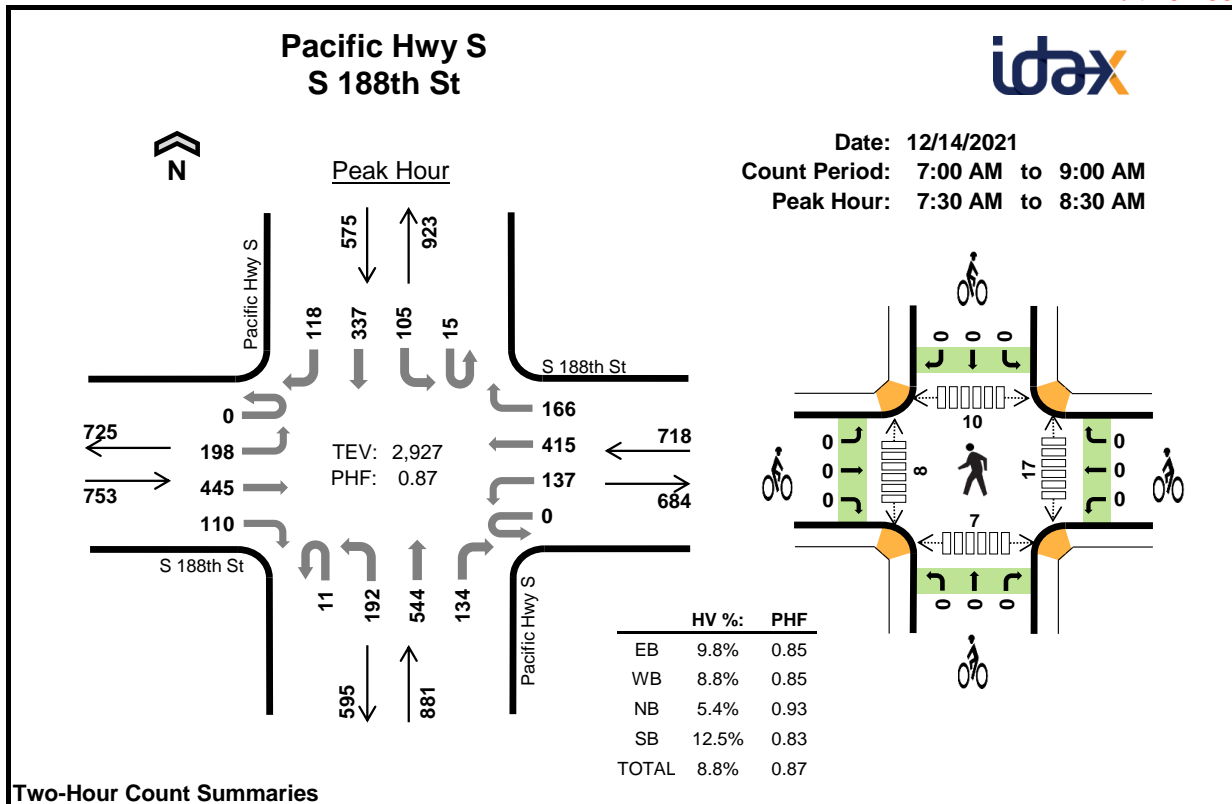
%	New ADT	New PM Peak Hour Trips		
		In	Out	Total
100%	1025	54	113	167
1%	10.25	0.54	1.13	1.67
2%	20.50	1.08	2.26	3.34
3%	30.75	1.62	3.39	5.01
4%	41.00	2.16	4.52	6.68
5%	<b>51.25</b>	<b>2.70</b>	<b>5.65</b>	<b>8.35</b>
6%	61.50	3.24	6.78	10.02
7%	71.75	3.78	7.91	11.69
8%	82.00	4.32	9.04	13.36
9%	92.25	4.86	10.17	15.03
10%	<b>102.50</b>	<b>5.40</b>	<b>11.30</b>	<b>16.70</b>
11%	112.75	5.94	12.43	18.37
12%	123.00	6.48	13.56	20.04
13%	133.25	7.02	14.69	21.71
14%	143.50	7.56	15.82	23.38
15%	<b>153.75</b>	<b>8.10</b>	<b>16.95</b>	<b>25.05</b>
16%	164.00	8.64	18.08	26.72
17%	174.25	9.18	19.21	28.39
18%	184.50	9.72	20.34	30.06
19%	194.75	10.26	21.47	31.73
20%	<b>205.00</b>	<b>10.80</b>	<b>22.60</b>	<b>33.40</b>
21%	215.25	11.34	23.73	35.07
22%	225.50	11.88	24.86	36.74
23%	235.75	12.42	25.99	38.41
24%	246.00	12.96	27.12	40.08
25%	<b>256.25</b>	<b>13.50</b>	<b>28.25</b>	<b>41.75</b>
26%	266.50	14.04	29.38	43.42
27%	276.75	14.58	30.51	45.09
28%	287.00	15.12	31.64	46.76
29%	297.25	15.66	32.77	48.43
30%	<b>307.50</b>	<b>16.20</b>	<b>33.90</b>	<b>50.10</b>
31%	317.75	16.74	35.03	51.77
32%	328.00	17.28	36.16	53.44
33%	338.25	17.82	37.29	55.11
34%	348.50	18.36	38.42	56.78
35%	<b>358.75</b>	<b>18.90</b>	<b>39.55</b>	<b>58.45</b>
36%	369.00	19.44	40.68	60.12
37%	379.25	19.98	41.81	61.79
38%	389.50	20.52	42.94	63.46
39%	399.75	21.06	44.07	65.13
40%	<b>410.00</b>	<b>21.60</b>	<b>45.20</b>	<b>66.80</b>
41%	420.25	22.14	46.33	68.47
42%	430.50	22.68	47.46	70.14
43%	440.75	23.22	48.59	71.81
44%	451.00	23.76	49.72	73.48
45%	<b>461.25</b>	<b>24.30</b>	<b>50.85</b>	<b>75.15</b>
46%	471.50	24.84	51.98	76.82
47%	481.75	25.38	53.11	78.49
48%	492.00	25.92	54.24	80.16
49%	502.25	26.46	55.37	81.83
50%	<b>512.50</b>	<b>27.00</b>	<b>56.50</b>	<b>83.50</b>

%	New ADT	New PM Peak Hour Trips		
		In	Out	Total
100%	1025	54	113	167
51%	522.75	27.54	57.63	85.17
52%	533.00	28.08	58.76	86.84
53%	543.25	28.62	59.89	88.51
54%	553.50	29.16	61.02	90.18
55%	<b>563.75</b>	<b>29.70</b>	<b>62.15</b>	<b>91.85</b>
56%	574.00	30.24	63.28	93.52
57%	584.25	30.78	64.41	95.19
58%	594.50	31.32	65.54	96.86
59%	604.75	31.86	66.67	98.53
60%	<b>615.00</b>	<b>32.40</b>	<b>67.80</b>	<b>100.20</b>
61%	625.25	32.94	68.93	101.87
62%	635.50	33.48	70.06	103.54
63%	645.75	34.02	71.19	105.21
64%	656.00	34.56	72.32	106.88
65%	<b>666.25</b>	<b>35.10</b>	<b>73.45</b>	<b>108.55</b>
66%	676.50	35.64	74.58	110.22
67%	686.75	36.18	75.71	111.89
68%	697.00	36.72	76.84	113.56
69%	707.25	37.26	77.97	115.23
70%	<b>717.50</b>	<b>37.80</b>	<b>79.10</b>	<b>116.90</b>
71%	727.75	38.34	80.23	118.57
72%	738.00	38.88	81.36	120.24
73%	748.25	39.42	82.49	121.91
74%	758.50	39.96	83.62	123.58
75%	<b>768.75</b>	<b>40.50</b>	<b>84.75</b>	<b>125.25</b>
76%	779.00	41.04	85.88	126.92
77%	789.25	41.58	87.01	128.59
78%	799.50	42.12	88.14	130.26
79%	809.75	42.66	89.27	131.93
80%	<b>820.00</b>	<b>43.20</b>	<b>90.40</b>	<b>133.60</b>
81%	830.25	43.74	91.53	135.27
82%	840.50	44.28	92.66	136.94
83%	850.75	44.82	93.79	138.61
84%	861.00	45.36	94.92	140.28
85%	<b>871.25</b>	<b>45.90</b>	<b>96.05</b>	<b>141.95</b>
86%	881.50	46.44	97.18	143.62
87%	891.75	46.98	98.31	145.29
88%	902.00	47.52	99.44	146.96
89%	912.25	48.06	100.57	148.63
90%	<b>922.50</b>	<b>48.60</b>	<b>101.70</b>	<b>150.30</b>
91%	932.75	49.14	102.83	151.97
92%	943.00	49.68	103.96	153.64
93%	953.25	50.22	105.09	155.31
94%	963.50	50.76	106.22	156.98
95%	<b>973.75</b>	<b>51.30</b>	<b>107.35</b>	<b>158.65</b>
96%	984.00	51.84	108.48	160.32
97%	994.25	52.38	109.61	161.99
98%	1004.50	52.92	110.74	163.66
99%	1014.75	53.46	111.87	165.33
100%	<b>1025.00</b>	<b>54.00</b>	<b>113.00</b>	<b>167.00</b>

# Count Data





**Two-Hour Count Summaries**

Interval Start	S 188th St				S 188th St				Pacific Hwy S				Pacific Hwy S				15-min Total	Rolling One Hour	
	Eastbound		Westbound		Northbound		Southbound		Northbound		Southbound		Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	38	70	13	0	21	81	40	4	40	106	12	4	29	52	20	530	0	
7:15 AM	0	30	94	19	0	24	80	22	2	49	151	20	7	24	65	15	602	0	
7:30 AM	0	47	138	23	0	28	102	40	2	50	141	35	5	27	63	32	733	0	
7:45 AM	0	61	126	34	0	37	134	40	3	43	144	48	3	36	98	36	843	2,708	
8:00 AM	0	47	96	32	0	39	113	58	2	56	138	25	3	24	87	27	747	2,925	
8:15 AM	0	43	85	21	0	33	66	28	4	43	121	26	4	18	89	23	604	2,927	
8:30 AM	0	42	97	25	0	28	89	68	2	41	110	19	4	33	81	29	668	2,862	
8:45 AM	0	29	92	27	0	28	85	56	1	34	110	28	5	24	88	34	641	2,660	
Count Total	0	337	798	194	0	238	750	352	20	356	1,021	213	35	215	623	216	5,368	0	
Peak Hour	All	0	198	445	110	0	137	415	166	11	192	544	134	15	105	337	118	2,927	0
	HV	0	28	41	5	0	11	40	12	0	5	35	8	6	11	41	14	257	0
	HV%	-	14%	9%	5%	-	8%	10%	7%	0%	3%	6%	6%	40%	10%	12%	12%	9%	0

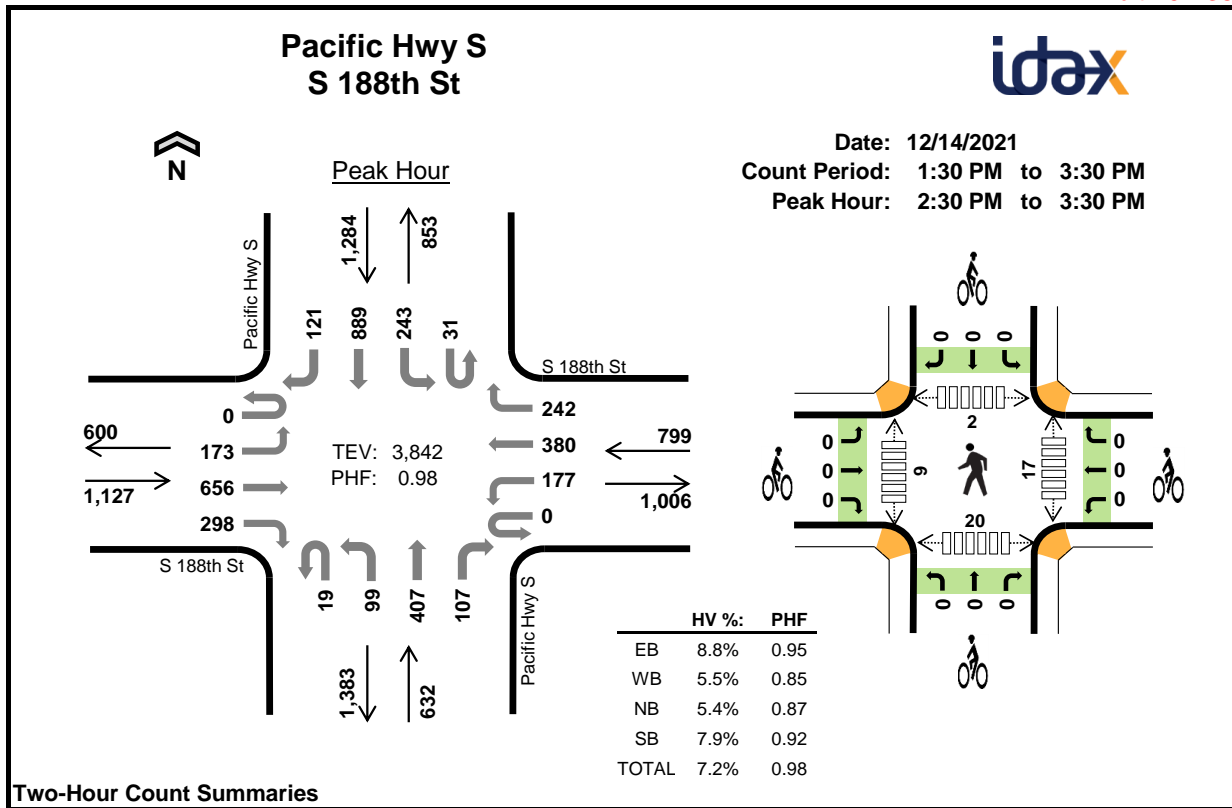
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	15	10	5	18	48	0	0	0	0	0	7	2	1	4	14
7:15 AM	21	8	8	16	53	0	0	0	0	0	1	1	0	2	4
7:30 AM	20	19	14	15	68	0	0	0	0	0	8	2	3	4	17
7:45 AM	19	19	7	20	65	0	0	0	0	0	1	2	1	1	5
8:00 AM	21	12	18	18	69	0	0	0	0	0	4	1	4	1	10
8:15 AM	14	13	9	19	55	0	0	0	0	0	4	3	2	1	10
8:30 AM	16	10	12	24	62	0	0	0	0	0	7	4	0	3	14
8:45 AM	15	9	12	19	55	0	0	0	0	0	4	6	3	2	15
Count Total	141	100	85	149	475	0	0	0	0	0	36	21	14	18	89
Peak Hour	74	63	48	72	257	0	0	0	0	0	17	8	10	7	42

<b>Two-Hour Count Summaries - Heavy Vehicles</b>																		
Interval Start	S 188th St				S 188th St				Pacific Hwy S				Pacific Hwy S				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	12	2	1	0	2	4	4	0	1	3	1	2	5	6	5	48	0
7:15 AM	0	8	13	0	0	1	7	0	0	1	5	2	1	2	11	2	53	0
7:30 AM	0	9	11	0	0	0	15	4	0	3	9	2	1	3	9	2	68	0
7:45 AM	0	7	11	1	0	3	12	4	0	0	4	3	1	2	11	6	65	234
8:00 AM	0	9	8	4	0	3	7	2	0	1	16	1	2	3	9	4	69	255
8:15 AM	0	3	11	0	0	5	6	2	0	1	6	2	2	3	12	2	55	257
8:30 AM	0	6	10	0	0	1	7	2	0	3	8	1	2	6	11	5	62	251
8:45 AM	0	6	9	0	0	1	6	2	0	1	7	4	2	2	8	7	55	241
Count Total	0	60	75	6	0	16	64	20	0	11	58	16	13	26	77	33	475	0
Peak Hour	0	28	41	5	0	11	40	12	0	5	35	8	6	11	41	14	257	0

<b>Two-Hour Count Summaries - Bikes</b>																		
Interval Start	S 188th St			S 188th St			Pacific Hwy S			Pacific Hwy S			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



**Two-Hour Count Summaries**

Interval Start	S 188th St Eastbound				S 188th St Westbound				Pacific Hwy S Northbound				Pacific Hwy S Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
1:30 PM	0	48	126	35	0	19	80	56	5	30	103	17	14	48	132	26	739	0	
1:45 PM	0	42	103	39	0	24	72	58	7	30	137	27	5	60	147	28	779	0	
2:00 PM	0	34	118	37	0	30	91	30	6	29	102	27	6	42	160	31	743	0	
2:15 PM	0	42	156	48	0	41	81	36	4	30	89	37	7	59	165	30	825	3,086	
<b>2:30 PM</b>	<b>0</b>	<b>52</b>	<b>152</b>	<b>77</b>	<b>0</b>	<b>40</b>	<b>83</b>	<b>74</b>	<b>5</b>	<b>23</b>	<b>121</b>	<b>32</b>	<b>10</b>	<b>65</b>	<b>213</b>	<b>25</b>	<b>972</b>	<b>3,319</b>	
2:45 PM	0	49	155	76	0	56	116	64	4	26	90	20	4	61	216	34	971	3,511	
3:00 PM	0	43	165	60	0	36	88	34	5	23	82	30	6	67	245	31	915	3,683	
<b>3:15 PM</b>	<b>0</b>	<b>29</b>	<b>184</b>	<b>85</b>	<b>0</b>	<b>45</b>	<b>93</b>	<b>70</b>	<b>5</b>	<b>27</b>	<b>114</b>	<b>25</b>	<b>11</b>	<b>50</b>	<b>215</b>	<b>31</b>	<b>984</b>	<b>3,842</b>	
Count Total	0	339	1,159	457	0	291	704	422	41	218	838	215	63	452	1,493	236	6,928	0	
Peak Hour	All	0	173	656	298	0	177	380	242	19	99	407	107	31	243	889	121	3,842	0
	HV	0	22	61	16	0	5	27	12	0	1	31	2	7	27	52	15	278	0
	HV%	-	13%	9%	5%	-	3%	7%	5%	0%	1%	8%	2%	23%	11%	6%	12%	7%	0

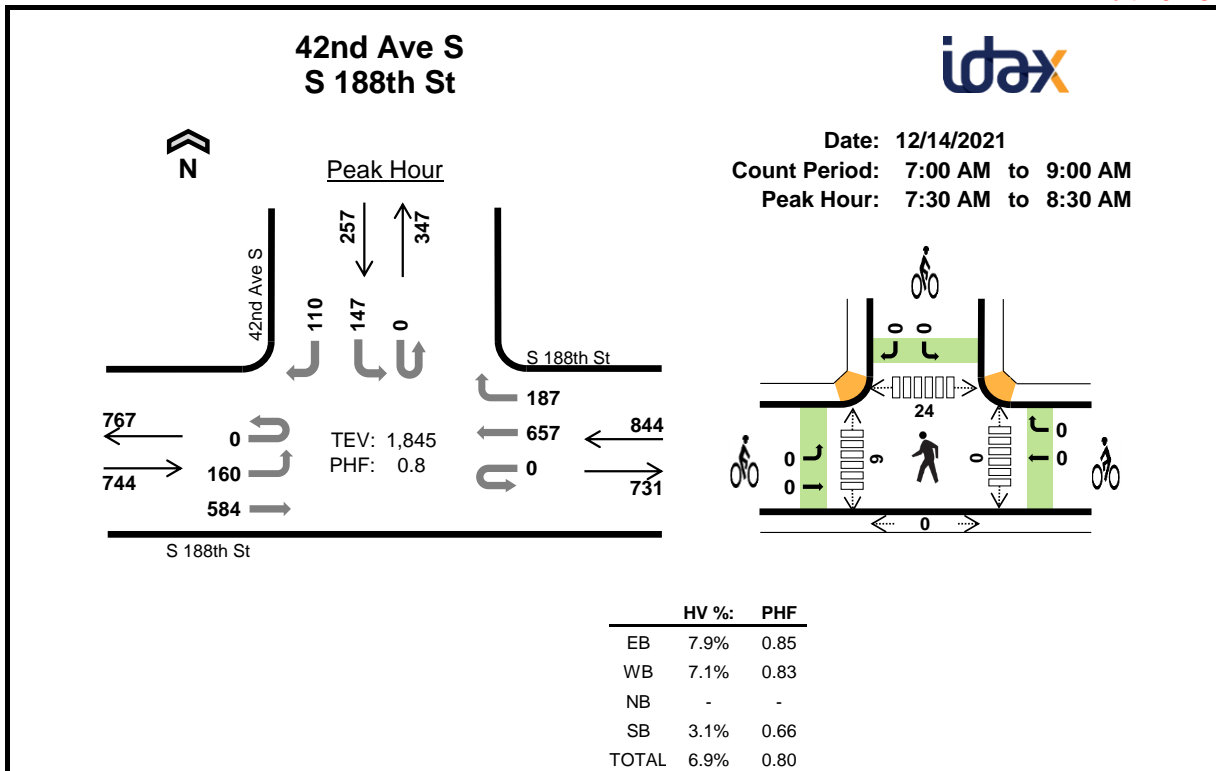
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
1:30 PM	25	10	8	14	57	0	0	0	0	0	4	4	1	3	12
1:45 PM	17	16	9	18	60	0	0	0	0	0	6	3	0	5	14
2:00 PM	21	13	12	20	66	0	0	0	0	0	0	3	2	0	5
2:15 PM	26	4	8	19	57	0	0	0	0	0	3	1	1	1	6
<b>2:30 PM</b>	<b>34</b>	<b>7</b>	<b>9</b>	<b>23</b>	<b>73</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>6</b>
2:45 PM	21	13	7	18	59	0	0	0	0	0	8	1	2	11	22
3:00 PM	26	12	7	31	76	0	0	0	0	0	2	5	0	6	13
<b>3:15 PM</b>	<b>18</b>	<b>12</b>	<b>11</b>	<b>29</b>	<b>70</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>7</b>
Count Total	188	87	71	172	518	0	0	0	0	0	30	20	6	29	85
Peak Hour	99	44	34	101	278	0	0	0	0	0	17	9	2	20	48

<b>Two-Hour Count Summaries - Heavy Vehicles</b>																		
Interval Start	S 188th St				S 188th St				Pacific Hwy S				Pacific Hwy S				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
1:30 PM	0	7	17	1	0	1	5	4	0	0	7	1	2	2	8	2	57	0
1:45 PM	0	5	10	2	0	0	8	8	0	0	7	2	1	3	8	6	60	0
2:00 PM	0	7	13	1	0	0	11	2	0	1	11	0	2	2	11	5	66	0
2:15 PM	0	6	17	3	0	0	2	2	0	1	6	1	2	8	9	0	57	240
2:30 PM	0	8	20	6	0	2	3	2	0	0	9	0	2	7	12	2	73	256
2:45 PM	0	7	10	4	0	1	6	6	0	0	7	0	1	3	9	5	59	255
3:00 PM	0	6	17	3	0	0	10	2	0	1	6	0	2	8	17	4	76	265
3:15 PM	0	1	14	3	0	2	8	2	0	0	9	2	2	9	14	4	70	278
Count Total	0	47	118	23	0	6	53	28	0	3	62	6	14	42	88	28	518	0
Peak Hour	0	22	61	16	0	5	27	12	0	1	31	2	7	27	52	15	278	0

<b>Two-Hour Count Summaries - Bikes</b>																		
Interval Start	S 188th St			S 188th St			Pacific Hwy S			Pacific Hwy S			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



**Two-Hour Count Summaries**

Interval Start	S 188th St Eastbound				S 188th St Westbound				0 Northbound				42nd Ave S Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
	7:00 AM	0	15	104	0	0	0	142	11	0	0	0	0	0	6	0			11
7:15 AM	0	24	121	0	0	0	142	19	0	0	0	0	0	17	0	8	331	0	
7:30 AM	0	28	174	0	0	0	162	43	0	0	0	0	0	31	0	15	453	0	
7:45 AM	0	63	157	0	0	0	191	64	0	0	0	0	0	54	0	44	573	1,646	
8:00 AM	0	48	132	0	0	0	171	47	0	0	0	0	0	43	0	36	477	1,834	
8:15 AM	0	21	121	0	0	0	133	33	0	0	0	0	0	19	0	15	342	1,845	
8:30 AM	0	31	153	0	0	0	163	23	0	0	0	0	0	29	0	39	438	1,830	
8:45 AM	0	15	122	0	0	0	161	22	0	0	0	0	0	23	0	14	357	1,614	
Count Total	0	245	1,084	0	0	0	1,265	262	0	0	0	0	0	222	0	182	3,260	0	
Peak Hour	All	0	160	584	0	0	0	657	187	0	0	0	0	0	147	0	110	1,845	0
	HV	0	2	57	0	0	0	52	8	0	0	0	0	0	5	0	3	127	0
	HV%	-	1%	10%	-	-	-	8%	4%	-	-	-	-	-	3%	-	3%	7%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

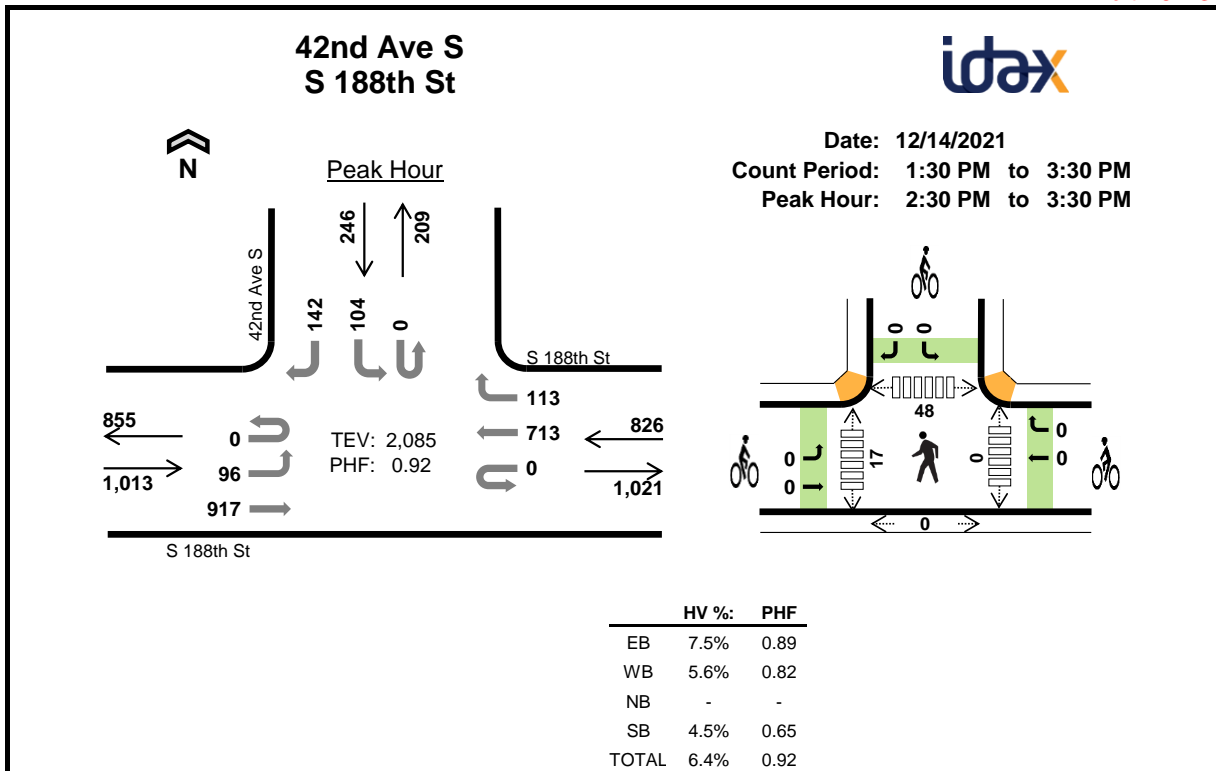
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	6	12	0	0	18	0	0	0	0	0	0	2	0	0	2
7:15 AM	15	10	0	3	28	0	0	0	0	0	0	1	1	0	2
7:30 AM	13	17	0	3	33	0	0	0	0	0	0	6	11	0	17
7:45 AM	18	18	0	1	37	0	0	0	0	0	0	1	6	0	7
8:00 AM	12	11	0	3	26	0	0	0	0	0	0	1	7	0	8
8:15 AM	16	14	0	1	31	0	0	0	0	0	0	1	0	0	1
8:30 AM	16	10	0	3	29	0	0	0	0	0	0	1	0	0	1
8:45 AM	9	11	0	3	23	0	0	0	0	0	0	0	4	0	4
Count Total	105	103	0	17	225	0	0	0	0	0	0	13	29	0	42
Peak Hr	59	60	0	8	127	0	0	0	0	0	0	9	24	0	33

Two-Hour Count Summaries - Heavy Vehicles														15-min Total	Rolling One Hour			
Interval Start	S 188th St				S 188th St				0				42nd Ave S					
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	5	0	0	0	12	0	0	0	0	0	0	0	0	0	18	0
7:15 AM	0	1	14	0	0	0	10	0	0	0	0	0	0	1	0	2	28	0
7:30 AM	0	1	12	0	0	0	15	2	0	0	0	0	0	2	0	1	33	0
7:45 AM	0	0	18	0	0	0	16	2	0	0	0	0	0	1	0	0	37	116
8:00 AM	0	0	12	0	0	0	8	3	0	0	0	0	0	2	0	1	26	124
8:15 AM	0	1	15	0	0	0	13	1	0	0	0	0	0	0	0	1	31	127
8:30 AM	0	0	16	0	0	0	9	1	0	0	0	0	0	0	0	3	29	123
8:45 AM	0	0	9	0	0	0	10	1	0	0	0	0	0	3	0	0	23	109
Count Total	0	4	101	0	0	0	93	10	0	0	0	0	0	9	0	8	225	0
Peak Hour	0	2	57	0	0	0	52	8	0	0	0	0	0	5	0	3	127	0

Two-Hour Count Summaries - Bikes														15-min Total	Rolling One Hour			
Interval Start	S 188th St			S 188th St			0			42nd Ave S								
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



**Two-Hour Count Summaries**

Interval Start	S 188th St Eastbound				S 188th St Westbound				0 Northbound				42nd Ave S Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
1:30 PM	0	21	155	0	0	0	157	14	0	0	0	0	0	11	0	17	375	0	
1:45 PM	0	7	183	0	0	0	139	16	0	0	0	0	0	22	0	10	377	0	
2:00 PM	0	22	181	0	0	0	157	14	0	0	0	0	0	16	0	17	407	0	
2:15 PM	0	25	220	0	0	0	138	21	0	0	0	0	0	19	0	25	448	1,607	
<b>2:30 PM</b>	<b>0</b>	<b>25</b>	<b>220</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>206</b>	<b>45</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>0</b>	<b>39</b>	<b>561</b>	<b>1,793</b>	
2:45 PM	0	21	210	0	0	0	163	30	0	0	0	0	0	15	0	36	475	1,891	
3:00 PM	0	27	225	0	0	0	174	21	0	0	0	0	0	22	0	13	482	1,966	
<b>3:15 PM</b>	<b>0</b>	<b>23</b>	<b>262</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>170</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>41</b>	<b>0</b>	<b>54</b>	<b>567</b>	<b>2,085</b>	
Count Total	0	171	1,656	0	0	0	1,304	178	0	0	0	0	0	172	0	211	3,692	0	
Peak Hour	All	0	96	917	0	0	0	713	113	0	0	0	0	0	104	0	142	2,085	0
	HV	0	0	76	0	0	0	39	7	0	0	0	0	0	2	0	9	133	0
	HV%	-	0%	8%	-	-	-	5%	6%	-	-	-	-	-	2%	-	6%	6%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
1:30 PM	13	13	0	0	26	0	0	0	0	0	0	0	1	0	1
1:45 PM	15	11	0	0	26	0	0	0	0	0	0	1	0	0	1
2:00 PM	11	17	0	1	29	0	0	0	0	0	0	0	0	0	0
2:15 PM	22	9	0	1	32	0	0	0	0	0	0	0	0	0	0
<b>2:30 PM</b>	<b>22</b>	<b>15</b>	<b>0</b>	<b>1</b>	<b>38</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>25</b>	<b>0</b>	<b>29</b>
2:45 PM	12	8	0	4	24	0	0	0	0	0	0	13	18	0	31
3:00 PM	19	10	0	1	30	0	0	0	0	0	0	0	4	0	4
<b>3:15 PM</b>	<b>23</b>	<b>13</b>	<b>0</b>	<b>5</b>	<b>41</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>
Count Total	137	96	0	13	246	0	0	0	0	0	0	18	49	0	67
Peak Hr	76	46	0	11	133	0	0	0	0	0	0	17	48	0	65

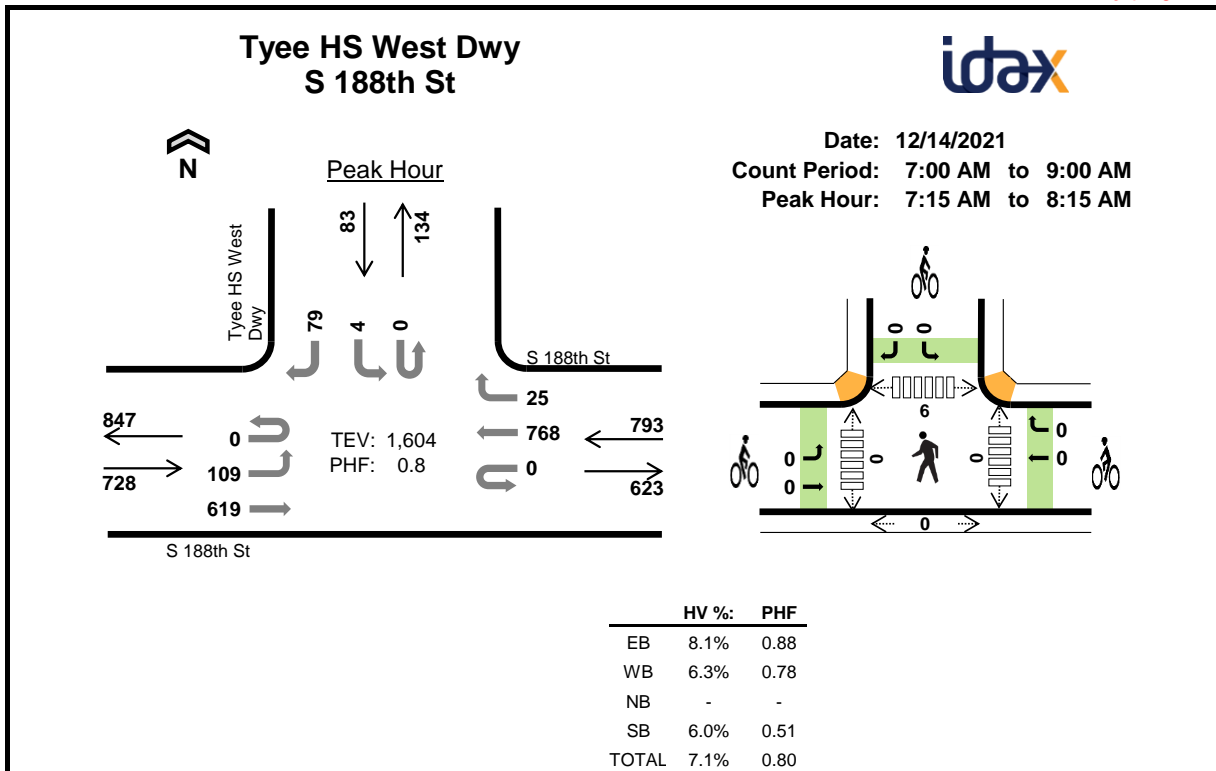
<b>Two-Hour Count Summaries - Heavy Vehicles</b>														15-min Total	Rolling One Hour			
Interval Start	S 188th St				S 188th St				0				42nd Ave S					
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
1:30 PM	0	0	13	0	0	0	12	1	0	0	0	0	0	0	0	0	26	0
1:45 PM	0	0	15	0	0	0	11	0	0	0	0	0	0	0	0	0	26	0
2:00 PM	0	1	10	0	0	0	15	2	0	0	0	0	0	1	0	0	29	0
2:15 PM	0	0	22	0	0	0	8	1	0	0	0	0	0	0	0	1	32	113
2:30 PM	0	0	22	0	0	0	11	4	0	0	0	0	0	1	0	0	38	125
2:45 PM	0	0	12	0	0	0	7	1	0	0	0	0	0	0	0	4	24	123
3:00 PM	0	0	19	0	0	0	9	1	0	0	0	0	0	0	0	1	30	124
3:15 PM	0	0	23	0	0	0	12	1	0	0	0	0	0	1	0	4	41	133
Count Total	0	1	136	0	0	0	85	11	0	0	0	0	0	3	0	10	246	0
Peak Hour	0	0	76	0	0	0	39	7	0	0	0	0	0	2	0	9	133	0

<b>Two-Hour Count Summaries - Bikes</b>														15-min Total	Rolling One Hour
Interval Start	S 188th St			S 188th St			0			42nd Ave S					
	Eastbound			Westbound			Northbound			Southbound					
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT			
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Note: U-Turn volumes for bikes are included in Left-Turn, if any.





**Two-Hour Count Summaries**

Interval Start	S 188th St Eastbound				S 188th St Westbound				0 Northbound				Tye HS West Dwy Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	6	100	0	0	0	141	3	0	0	0	0	0	0	0	2	252	0	
7:15 AM	0	14	124	0	0	0	168	8	0	0	0	0	0	0	0	1	315	0	
7:30 AM	0	26	180	0	0	0	191	6	0	0	0	0	0	0	0	8	411	0	
7:45 AM	0	39	168	0	0	0	246	9	0	0	0	0	0	1	0	40	503	1,481	
8:00 AM	0	30	147	0	0	0	163	2	0	0	0	0	0	3	0	30	375	1,604	
8:15 AM	0	6	134	0	0	0	159	1	0	0	0	0	0	1	0	7	308	1,597	
8:30 AM	0	6	179	0	0	0	196	2	0	0	0	0	0	0	0	2	385	1,571	
8:45 AM	0	5	145	0	0	0	168	2	0	0	0	0	0	2	0	6	328	1,396	
Count Total	0	132	1,177	0	0	0	1,432	33	0	0	0	0	0	7	0	96	2,877	0	
Peak Hour	All	0	109	619	0	0	0	768	25	0	0	0	0	0	4	0	79	1,604	0
	HV	0	3	56	0	0	0	50	0	0	0	0	0	0	1	0	4	114	0
	HV%	-	3%	9%	-	-	-	7%	0%	-	-	-	-	-	25%	-	5%	7%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	5	10	0	0	15	0	0	0	0	0	0	0	0	0	0
7:15 AM	15	11	0	0	26	0	0	0	0	0	0	0	0	0	0
7:30 AM	11	16	0	0	27	0	0	0	0	0	0	0	4	0	4
7:45 AM	20	15	0	3	38	0	0	0	0	0	0	0	2	0	2
8:00 AM	13	8	0	2	23	0	0	0	0	0	0	0	0	0	0
8:15 AM	15	12	0	0	27	0	0	0	0	0	0	0	0	0	0
8:30 AM	16	9	0	0	25	0	0	0	0	0	0	0	0	1	1
8:45 AM	14	9	0	0	23	0	0	0	0	0	0	0	0	0	0
Count Total	109	90	0	5	204	0	0	0	0	0	0	0	6	1	7
Peak Hr	59	50	0	5	114	0	0	0	0	0	0	0	6	0	6

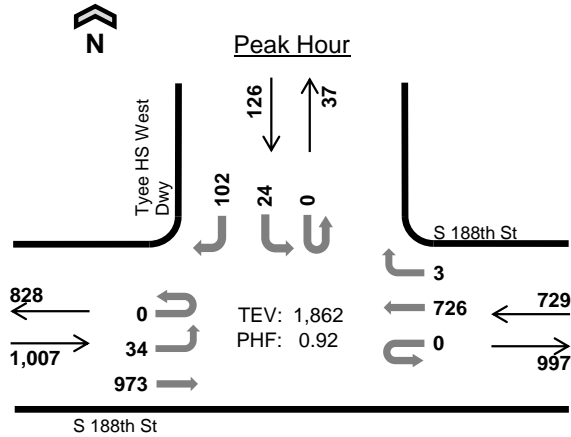
<b>Two-Hour Count Summaries - Heavy Vehicles</b>														15-min Total	Rolling One Hour			
Interval Start	S 188th St				S 188th St				0				Tyee HS West Dwy					
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	5	0	0	0	10	0	0	0	0	0	0	0	0	0	15	0
7:15 AM	0	0	15	0	0	0	11	0	0	0	0	0	0	0	0	0	26	0
7:30 AM	0	1	10	0	0	0	16	0	0	0	0	0	0	0	0	0	27	0
7:45 AM	0	2	18	0	0	0	15	0	0	0	0	0	0	0	0	3	38	106
8:00 AM	0	0	13	0	0	0	8	0	0	0	0	0	0	1	0	1	23	114
8:15 AM	0	0	15	0	0	0	12	0	0	0	0	0	0	0	0	0	27	115
8:30 AM	0	0	16	0	0	0	8	1	0	0	0	0	0	0	0	0	25	113
8:45 AM	0	0	14	0	0	0	9	0	0	0	0	0	0	0	0	0	23	98
Count Total	0	3	106	0	0	0	89	1	0	0	0	0	0	1	0	4	204	0
Peak Hour	0	3	56	0	0	0	50	0	0	0	0	0	0	1	0	4	114	0

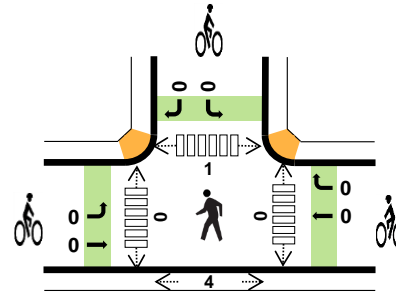
<b>Two-Hour Count Summaries - Bikes</b>														15-min Total	Rolling One Hour			
Interval Start	S 188th St			S 188th St			0			Tyee HS West Dwy								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

### Tyee HS West Dwy S 188th St



Date: 12/14/2021  
Count Period: 1:30 PM to 3:30 PM  
Peak Hour: 2:30 PM to 3:30 PM



	HV %:	PHF
EB	7.9%	0.87
WB	5.3%	0.94
NB	-	-
SB	4.0%	0.43
TOTAL	6.7%	0.92

#### Two-Hour Count Summaries

Interval Start	S 188th St Eastbound				S 188th St Westbound				0 Northbound				Tyee HS West Dwy Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
1:30 PM	0	3	164	0	0	0	167	0	0	0	0	0	0	1	0	4	339	0	
1:45 PM	0	5	205	0	0	0	156	2	0	0	0	0	0	1	0	2	371	0	
2:00 PM	0	9	181	0	0	1	166	1	0	0	0	0	0	2	0	3	363	0	
2:15 PM	0	16	235	0	0	0	151	4	0	0	0	0	0	2	0	4	412	1,485	
<b>2:30 PM</b>	<b>0</b>	<b>18</b>	<b>223</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>190</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>62</b>	<b>506</b>	1,652	
2:45 PM	0	8	221	0	0	0	173	0	0	0	0	0	0	5	0	21	428	1,709	
3:00 PM	0	3	244	0	0	0	193	1	0	0	0	0	0	6	0	12	459	1,805	
3:15 PM	0	5	285	0	0	0	170	1	0	0	0	0	0	1	0	7	469	1,862	
Count Total	0	67	1,758	0	0	1	1,366	10	0	0	0	0	0	30	0	115	3,347	0	
Peak Hour	All	0	34	973	0	0	0	726	3	0	0	0	0	0	24	0	102	1,862	0
	HV	0	2	78	0	0	0	39	0	0	0	0	0	0	4	0	1	124	0
	HV%	-	6%	8%	-	-	-	5%	0%	-	-	-	-	-	17%	-	1%	7%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

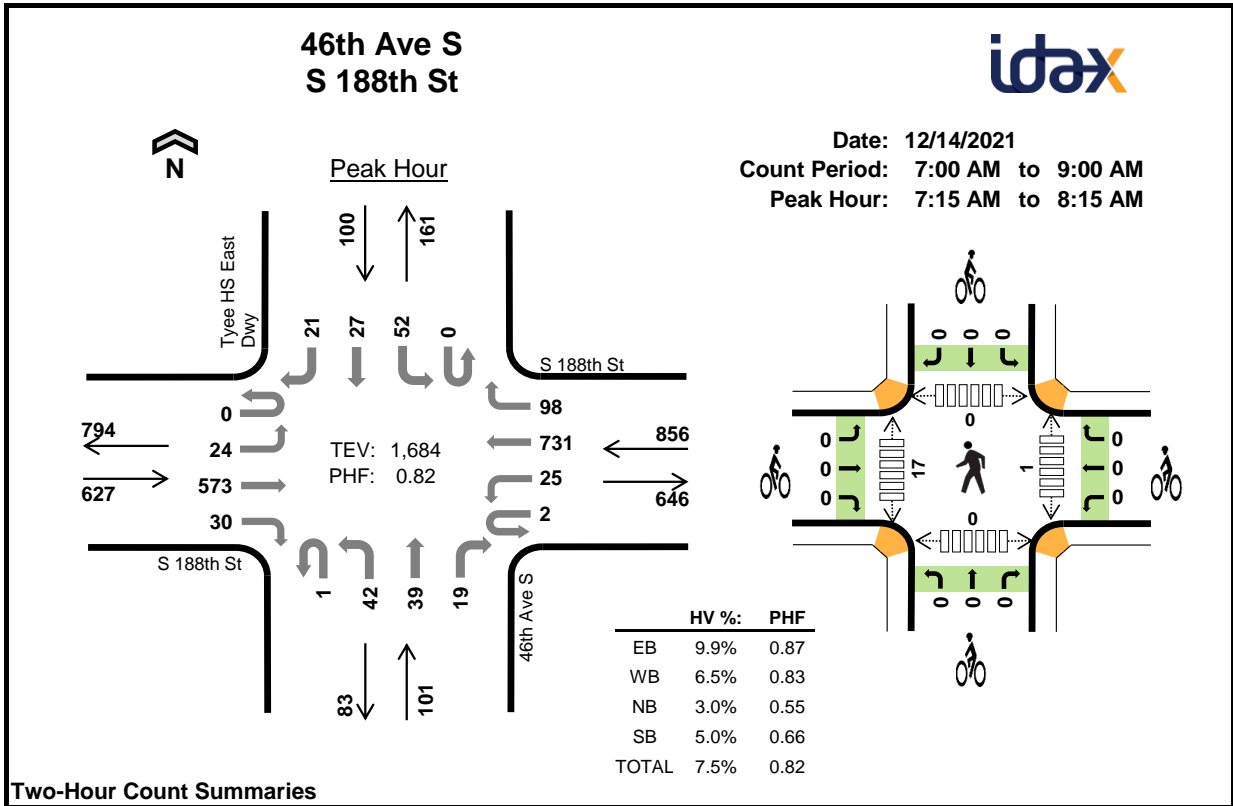
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
1:30 PM	13	12	0	0	25	0	0	0	0	0	0	0	0	0	0
1:45 PM	16	12	0	0	28	0	0	0	0	0	0	0	0	1	1
2:00 PM	11	17	0	0	28	0	0	0	0	0	0	0	0	0	0
2:15 PM	24	8	0	0	32	0	0	0	0	0	0	0	0	0	0
<b>2:30 PM</b>	<b>25</b>	<b>8</b>	<b>0</b>	<b>4</b>	<b>37</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>
2:45 PM	13	8	0	0	21	0	0	0	0	0	0	0	0	4	4
3:00 PM	19	11	0	0	30	0	0	0	0	0	0	0	0	0	0
3:15 PM	23	12	0	1	36	0	0	0	0	0	0	0	0	0	0
Count Total	144	88	0	5	237	0	0	0	0	0	0	0	1	5	6
Peak Hr	80	39	0	5	124	0	0	0	0	0	0	0	1	4	5

Two-Hour Count Summaries - Heavy Vehicles														15-min Total	Rolling One Hour			
Interval Start	S 188th St				S 188th St				0				Tyee HS West Dwy					
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
1:30 PM	0	0	13	0	0	0	12	0	0	0	0	0	0	0	0	0	25	0
1:45 PM	0	0	16	0	0	0	12	0	0	0	0	0	0	0	0	0	28	0
2:00 PM	0	2	9	0	0	0	17	0	0	0	0	0	0	0	0	0	28	0
2:15 PM	0	2	22	0	0	0	8	0	0	0	0	0	0	0	0	0	32	113
<b>2:30 PM</b>	<b>0</b>	<b>2</b>	<b>23</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>37</b>	125
2:45 PM	0	0	13	0	0	0	8	0	0	0	0	0	0	0	0	0	21	118
3:00 PM	0	0	19	0	0	0	11	0	0	0	0	0	0	0	0	0	30	120
3:15 PM	0	0	23	0	0	0	12	0	0	0	0	0	0	0	0	1	36	124
Count Total	0	6	138	0	0	0	88	0	0	0	0	0	0	4	0	1	237	0
Peak Hour	0	2	78	0	0	0	39	0	0	0	0	0	0	4	0	1	124	0

Two-Hour Count Summaries - Bikes														15-min Total	Rolling One Hour			
Interval Start	S 188th St			S 188th St			0			Tyee HS West Dwy								
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>2:30 PM</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



**Two-Hour Count Summaries**

Interval Start	S 188th St Eastbound				S 188th St Westbound				46th Ave S Northbound				Tyee HS East Dwy Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	1	93	4	1	8	139	1	0	3	0	7	0	7	0	2	266	0	
7:15 AM	0	2	117	4	1	6	169	15	1	5	1	8	0	4	1	3	337	0	
7:30 AM	0	3	169	8	0	5	194	18	0	6	4	4	0	8	2	6	427	0	
7:45 AM	0	16	142	11	1	6	215	36	0	24	21	1	0	19	13	6	511	1,541	
8:00 AM	0	3	145	7	0	8	153	29	0	7	13	6	0	21	11	6	409	1,684	
8:15 AM	0	2	120	6	0	8	148	10	0	9	4	8	0	3	2	4	324	1,671	
8:30 AM	0	2	175	7	1	7	181	6	0	19	4	3	0	1	0	0	406	1,650	
8:45 AM	0	0	139	9	1	9	154	9	0	7	1	1	0	5	3	4	342	1,481	
Count Total	0	29	1,100	56	5	57	1,353	124	1	80	48	38	0	68	32	31	3,022	0	
Peak Hour	All	0	24	573	30	2	25	731	98	1	42	39	19	0	52	27	21	1,684	0
	HV	0	1	56	5	0	0	51	5	0	0	2	1	0	1	3	1	126	0
	HV%	-	4%	10%	17%	0%	0%	7%	5%	0%	0%	5%	5%	-	2%	11%	5%	7%	0

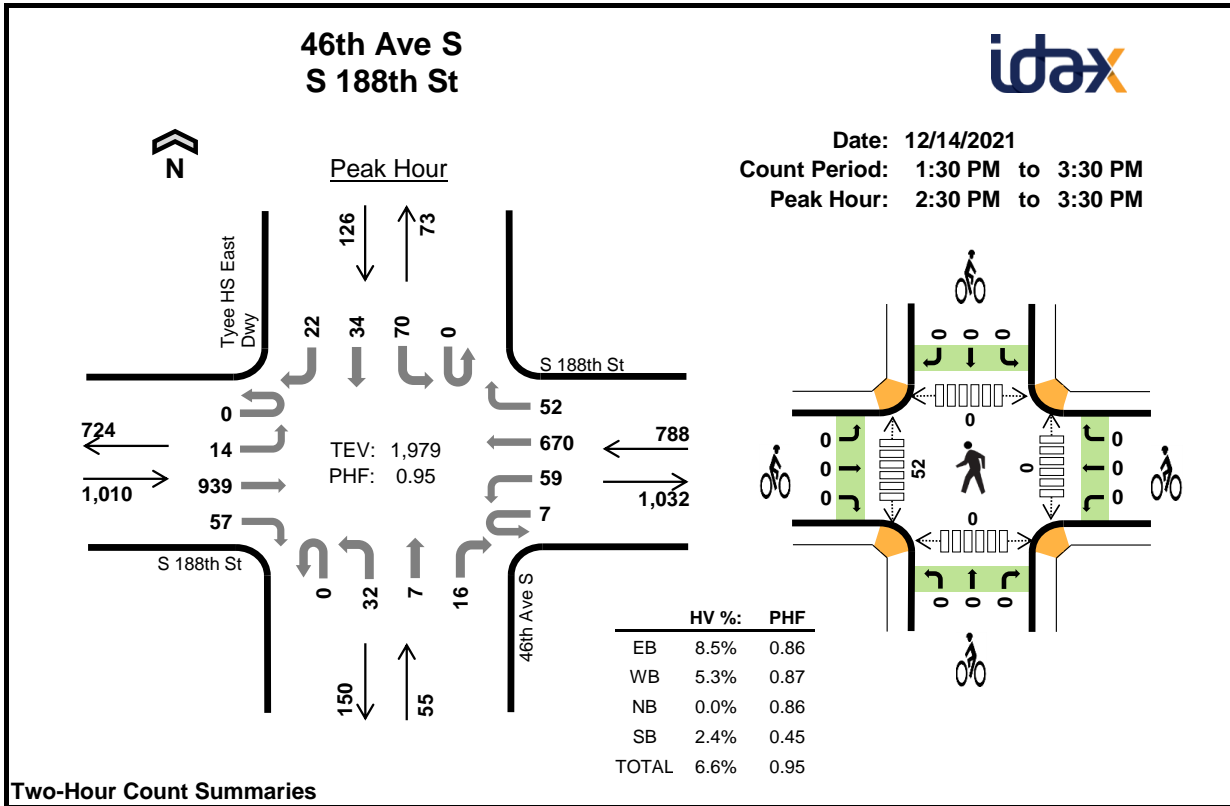
Note: Two-hour count summary include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	5	12	0	0	17	0	0	0	0	0	0	4	0	0	4
7:15 AM	15	11	0	0	26	0	0	0	0	0	0	2	0	0	2
7:30 AM	13	19	1	0	33	0	0	0	0	0	0	7	0	0	7
7:45 AM	18	19	1	3	41	0	0	0	0	0	1	4	0	0	5
8:00 AM	16	7	1	2	26	0	0	0	0	0	0	4	0	0	4
8:15 AM	12	16	1	0	29	0	0	0	0	0	0	1	0	0	1
8:30 AM	19	10	0	0	29	0	0	0	0	0	2	3	1	1	7
8:45 AM	15	13	0	0	28	0	0	0	0	0	0	1	0	0	1
Count Total	113	107	4	5	229	0	0	0	0	0	3	26	1	1	31
Peak Hour	62	56	3	5	126	0	0	0	0	0	1	17	0	0	18

<b>Two-Hour Count Summaries - Heavy Vehicles</b>																		
Interval Start	S 188th St				S 188th St				46th Ave S				Tyee HS East Dwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	4	1	0	0	12	0	0	0	0	0	0	0	0	0	17	0
7:15 AM	0	0	14	1	0	0	11	0	0	0	0	0	0	0	0	0	26	0
7:30 AM	0	0	11	2	0	0	18	1	0	0	0	1	0	0	0	0	33	0
7:45 AM	0	1	16	1	0	0	15	4	0	0	1	0	0	0	3	0	41	117
8:00 AM	0	0	15	1	0	0	7	0	0	0	1	0	0	1	0	1	26	126
8:15 AM	0	0	12	0	0	0	15	1	0	1	0	0	0	0	0	0	29	129
8:30 AM	0	0	19	0	0	1	9	0	0	0	0	0	0	0	0	0	29	125
8:45 AM	0	0	15	0	0	2	11	0	0	0	0	0	0	0	0	0	28	112
Count Total	0	1	106	6	0	3	98	6	0	1	2	1	0	1	3	1	229	0
Peak Hour	0	1	56	5	0	0	51	5	0	0	2	1	0	1	3	1	126	0

<b>Two-Hour Count Summaries - Bikes</b>																		
Interval Start	S 188th St			S 188th St			46th Ave S			Tyee HS East Dwy			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



**Two-Hour Count Summaries**

Interval Start	S 188th St Eastbound				S 188th St Westbound				46th Ave S Northbound				Tyee HS East Dwy Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
1:30 PM	0	0	167	1	2	6	166	4	0	3	0	5	0	4	2	1	361	0	
1:45 PM	0	5	191	3	2	17	146	3	0	6	0	5	0	2	1	5	386	0	
2:00 PM	0	1	169	9	2	10	153	9	0	8	2	3	0	1	1	7	375	0	
2:15 PM	0	5	224	4	2	13	148	15	0	8	13	6	0	5	0	3	446	1,568	
<b>2:30 PM</b>	<b>0</b>	<b>5</b>	<b>198</b>	<b>11</b>	<b>2</b>	<b>18</b>	<b>177</b>	<b>29</b>	<b>0</b>	<b>5</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>37</b>	<b>24</b>	<b>9</b>	<b>523</b>	<b>1,730</b>	
2:45 PM	0	1	249	10	2	14	155	11	0	10	2	4	0	12	6	5	481	1,825	
3:00 PM	0	4	226	12	3	12	185	6	0	9	0	4	0	9	3	3	476	1,926	
3:15 PM	0	4	266	24	0	15	153	6	0	8	0	5	0	12	1	5	499	1,979	
Count Total	0	25	1,690	74	15	105	1,283	83	0	57	22	35	0	82	38	38	3,547	0	
Peak Hour	All	0	14	939	57	7	59	670	52	0	32	7	16	0	70	34	22	1,979	0
	HV	0	4	80	2	0	0	39	3	0	0	0	0	0	1	2	0	131	0
	HV%	-	29%	9%	4%	0%	0%	6%	6%	-	0%	0%	0%	-	1%	6%	0%	7%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

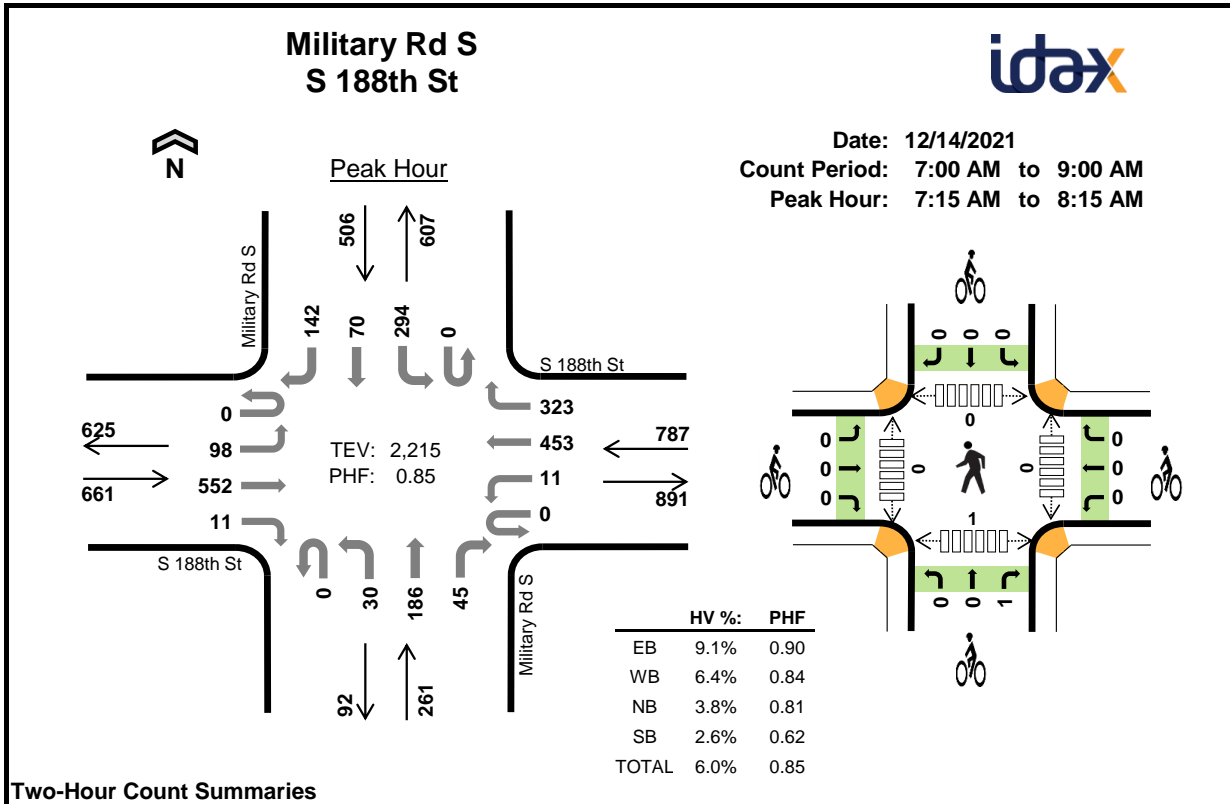
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
1:30 PM	19	15	0	0	34	0	0	0	0	0	0	1	0	0	1
1:45 PM	17	10	1	1	29	0	0	0	0	0	0	0	0	0	0
2:00 PM	10	16	0	2	28	0	0	0	0	0	0	0	0	0	0
2:15 PM	22	6	1	1	30	0	0	0	0	0	1	2	1	0	4
<b>2:30 PM</b>	<b>23</b>	<b>8</b>	<b>0</b>	<b>3</b>	<b>34</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>0</b>	<b>0</b>	<b>29</b>
2:45 PM	18	9	0	0	27	0	0	0	0	0	0	14	0	0	14
3:00 PM	20	12	0	0	32	0	0	0	0	0	0	6	0	0	6
3:15 PM	25	13	0	0	38	0	0	0	0	0	0	3	0	0	3
Count Total	154	89	2	7	252	0	0	0	0	0	1	55	1	0	57
Peak Hour	86	42	0	3	131	0	0	0	0	0	0	52	0	0	52

<b>Two-Hour Count Summaries - Heavy Vehicles</b>																		
Interval Start	S 188th St				S 188th St				46th Ave S				Tyee HS East Dwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
1:30 PM	0	0	19	0	0	2	13	0	0	0	0	0	0	0	0	0	34	0
1:45 PM	0	0	16	1	0	0	10	0	0	0	0	1	0	0	0	1	29	0
2:00 PM	0	0	9	1	0	0	16	0	0	0	0	0	0	1	0	1	28	0
2:15 PM	0	2	19	1	0	0	6	0	0	0	1	0	0	0	0	1	30	121
<b>2:30 PM</b>	<b>0</b>	<b>4</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>34</b>	121
2:45 PM	0	0	18	0	0	0	8	1	0	0	0	0	0	0	0	0	27	119
3:00 PM	0	0	19	1	0	0	12	0	0	0	0	0	0	0	0	0	32	123
3:15 PM	0	0	24	1	0	0	12	1	0	0	0	0	0	0	0	0	38	131
Count Total	0	6	143	5	0	2	84	3	0	0	1	1	0	2	2	3	252	0
Peak Hour	0	4	80	2	0	0	39	3	0	0	0	0	0	1	2	0	131	0

<b>Two-Hour Count Summaries - Bikes</b>																		
Interval Start	S 188th St			S 188th St			46th Ave S			Tyee HS East Dwy			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>2:30 PM</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.





**Two-Hour Count Summaries**

Interval Start	S 188th St Eastbound				S 188th St Westbound				Military Rd S Northbound				Military Rd S Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	4	122	3	0	0	94	53	0	3	24	13	0	58	10	3	387	0	
7:15 AM	0	10	122	2	0	1	122	63	0	7	35	4	0	57	7	11	441	0	
7:30 AM	0	36	139	1	0	4	117	112	0	3	59	19	0	77	18	37	622	0	
7:45 AM	0	20	143	4	0	3	124	84	0	11	51	11	0	107	31	66	655	2,105	
8:00 AM	0	32	148	4	0	3	90	64	0	9	41	11	0	53	14	28	497	2,215	
8:15 AM	0	9	118	5	0	4	119	57	0	2	31	10	0	41	13	12	421	2,195	
8:30 AM	0	12	162	2	0	3	121	52	0	3	33	6	0	30	26	11	461	2,034	
8:45 AM	0	13	127	4	0	4	107	48	0	6	43	7	0	59	22	12	452	1,831	
Count Total	0	136	1,081	25	0	22	894	533	0	44	317	81	0	482	141	180	3,936	0	
Peak Hour	All	0	98	552	11	0	11	453	323	0	30	186	45	0	294	70	142	2,215	0
	HV	0	2	57	1	0	1	38	11	0	1	3	6	0	8	1	4	133	0
	HV%	-	2%	10%	9%	-	9%	8%	3%	-	3%	2%	13%	-	3%	1%	3%	6%	0

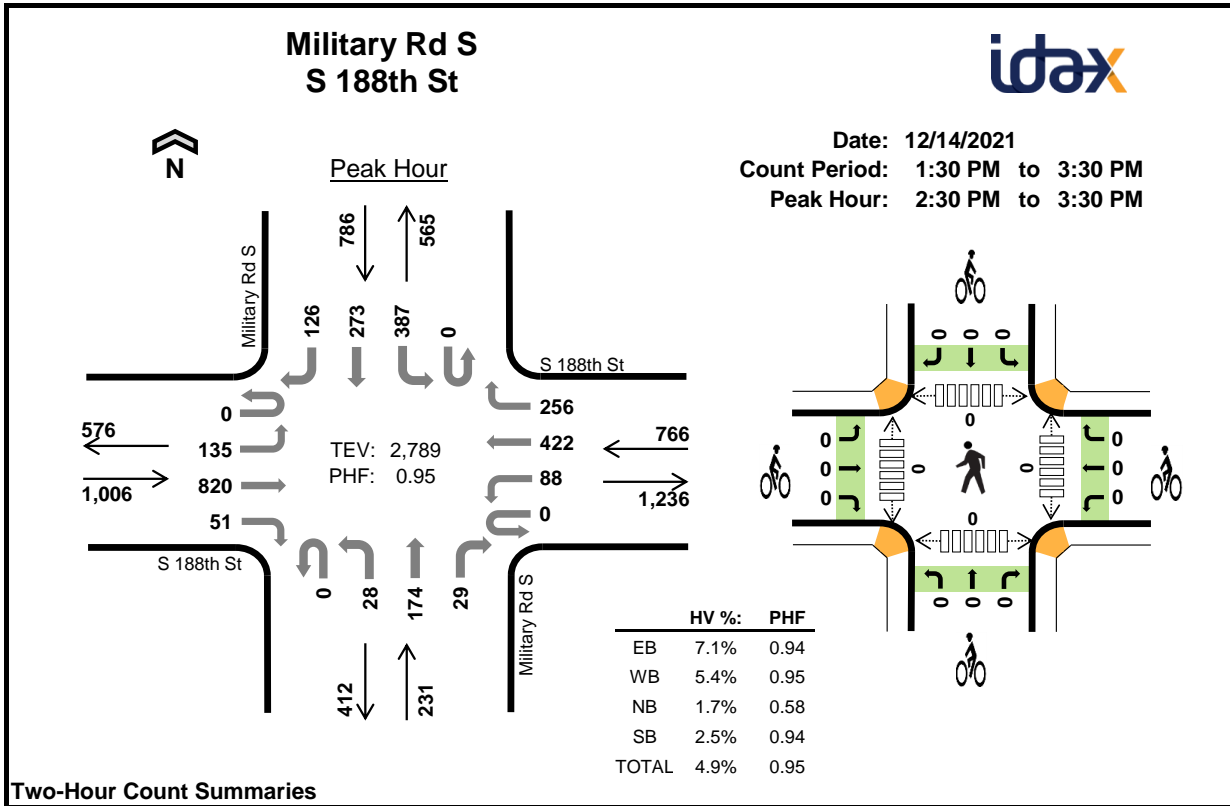
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	6	9	1	2	18	0	0	0	0	0	0	0	0	0	0
7:15 AM	15	11	1	2	29	0	0	0	0	0	0	0	0	0	0
7:30 AM	9	14	2	3	28	0	0	1	0	1	0	0	0	1	1
7:45 AM	18	14	3	7	42	0	0	0	0	0	0	0	0	0	0
8:00 AM	18	11	4	1	34	0	0	0	0	0	0	0	0	0	0
8:15 AM	11	14	4	1	30	0	0	0	0	0	0	0	0	1	1
8:30 AM	18	11	1	3	33	0	0	0	0	0	0	0	0	0	0
8:45 AM	16	8	2	7	33	0	0	0	0	0	0	0	0	0	0
Count Total	111	92	18	26	247	0	0	1	0	1	0	0	0	2	2
Peak Hour	60	50	10	13	133	0	0	1	0	1	0	0	0	1	1

<b>Two-Hour Count Summaries - Heavy Vehicles</b>																		
Interval Start	S 188th St				S 188th St				Military Rd S				Military Rd S				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	6	0	0	0	7	2	0	1	0	0	0	2	0	0	18	0
7:15 AM	0	0	14	1	0	0	9	2	0	0	1	0	0	2	0	0	29	0
7:30 AM	0	1	8	0	0	0	13	1	0	0	0	2	0	1	1	1	28	0
7:45 AM	0	0	18	0	0	0	11	3	0	1	0	2	0	4	0	3	42	117
8:00 AM	0	1	17	0	0	1	5	5	0	0	2	2	0	1	0	0	34	133
8:15 AM	0	0	11	0	0	0	13	1	0	0	3	1	0	1	0	0	30	134
8:30 AM	0	0	18	0	0	2	7	2	0	0	1	0	0	1	2	0	33	139
8:45 AM	0	0	14	2	0	0	6	2	0	1	0	1	0	3	3	1	33	130
Count Total	0	2	106	3	0	3	71	18	0	3	7	8	0	15	6	5	247	0
Peak Hour	0	2	57	1	0	1	38	11	0	1	3	6	0	8	1	4	133	0

<b>Two-Hour Count Summaries - Bikes</b>																		
Interval Start	S 188th St			S 188th St			Military Rd S			Military Rd S			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



**Two-Hour Count Summaries**

Interval Start	S 188th St Eastbound				S 188th St Westbound				Military Rd S Northbound				Military Rd S Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
1:30 PM	0	14	164	1	0	6	95	46	0	6	6	7	0	59	19	17	440	0	
1:45 PM	0	15	178	9	0	5	92	48	0	6	20	8	0	58	38	15	492	0	
2:00 PM	0	13	171	5	0	6	92	49	0	3	18	15	0	69	21	23	485	0	
2:15 PM	0	23	205	8	0	16	83	60	0	8	29	15	0	75	46	26	594	2,011	
<b>2:30 PM</b>	<b>0</b>	<b>38</b>	<b>178</b>	<b>8</b>	<b>0</b>	<b>21</b>	<b>113</b>	<b>59</b>	<b>0</b>	<b>7</b>	<b>29</b>	<b>11</b>	<b>0</b>	<b>98</b>	<b>69</b>	<b>32</b>	<b>663</b>	<b>2,234</b>	
<b>2:45 PM</b>	<b>0</b>	<b>35</b>	<b>200</b>	<b>20</b>	<b>0</b>	<b>21</b>	<b>106</b>	<b>74</b>	<b>0</b>	<b>8</b>	<b>87</b>	<b>4</b>	<b>0</b>	<b>87</b>	<b>66</b>	<b>27</b>	<b>735</b>	<b>2,477</b>	
3:00 PM	0	27	216	16	0	18	106	74	0	7	28	7	0	115	60	34	708	2,700	
3:15 PM	0	35	226	7	0	28	97	49	0	6	30	7	0	87	78	33	683	2,789	
Count Total	0	200	1,538	74	0	121	784	459	0	51	247	74	0	648	397	207	4,800	0	
Peak Hour	All	0	135	820	51	0	88	422	256	0	28	174	29	0	387	273	126	2,789	0
	HV	0	4	66	1	0	4	30	7	0	0	1	3	0	12	8	0	136	0
	HV%	-	3%	8%	2%	-	5%	7%	3%	-	0%	1%	10%	-	3%	3%	0%	5%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
1:30 PM	16	10	2	4	32	0	0	0	0	0	0	0	0	0	0
1:45 PM	15	8	2	5	30	0	0	0	0	0	0	0	0	0	0
2:00 PM	10	19	0	5	34	0	0	0	0	0	0	1	0	0	1
2:15 PM	21	6	1	3	31	0	0	0	0	0	0	0	0	0	0
<b>2:30 PM</b>	<b>14</b>	<b>8</b>	<b>1</b>	<b>4</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>2:45 PM</b>	<b>20</b>	<b>12</b>	<b>0</b>	<b>5</b>	<b>37</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
3:00 PM	18	11	1	3	33	0	0	0	0	0	0	0	0	0	0
3:15 PM	19	10	2	8	39	0	0	0	0	0	0	0	0	0	0
Count Total	133	84	9	37	263	0	0	0	0	0	0	1	0	0	1
Peak Hour	71	41	4	20	136	0	0	0	0	0	0	0	0	0	0

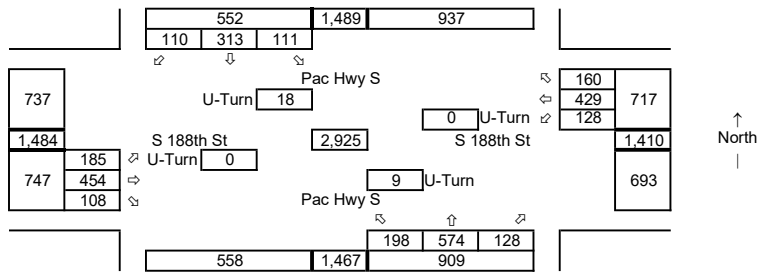
<b>Two-Hour Count Summaries - Heavy Vehicles</b>																		
Interval Start	S 188th St				S 188th St				Military Rd S				Military Rd S				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
1:30 PM	0	0	16	0	0	0	9	1	0	1	1	0	0	4	0	0	32	0
1:45 PM	0	0	15	0	0	1	5	2	0	0	1	1	0	4	0	1	30	0
2:00 PM	0	0	10	0	0	2	15	2	0	0	0	0	0	5	0	0	34	0
2:15 PM	0	1	18	2	0	2	4	0	0	0	0	1	0	1	2	0	31	127
<b>2:30 PM</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>27</b>	<b>122</b>
<b>2:45 PM</b>	<b>0</b>	<b>3</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>8</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>37</b>	<b>129</b>
3:00 PM	0	1	16	1	0	1	8	2	0	0	0	1	0	3	0	0	33	128
3:15 PM	0	0	19	0	0	0	10	0	0	0	1	1	0	3	5	0	39	136
Count Total	0	5	125	3	0	9	63	12	0	1	3	5	0	26	10	1	263	0
Peak Hour	0	4	66	1	0	4	30	7	0	0	1	3	0	12	8	0	136	0

<b>Two-Hour Count Summaries - Bikes</b>																		
Interval Start	S 188th St			S 188th St			Military Rd S			Military Rd S			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>2:30 PM</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>2:45 PM</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

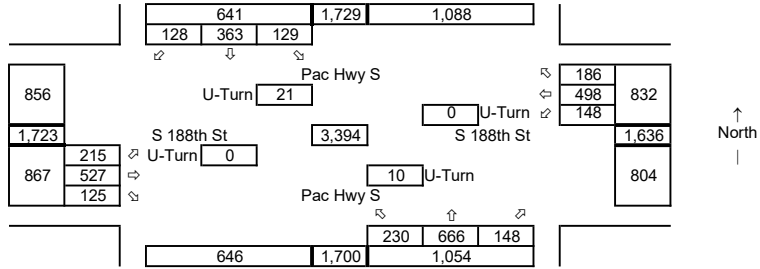
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

# AM Turning Movement Calculations

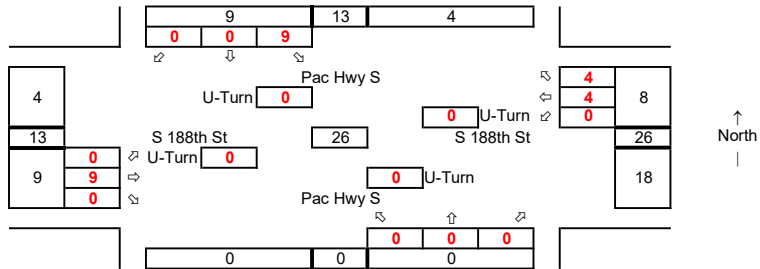
Synchro ID: 1  
**Existing**  
 Average Weekday  
 AM Peak Hour  
 Year: 12/14/21  
 Data Source: Idax



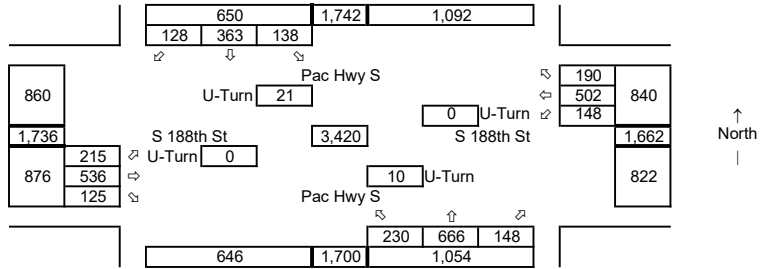
**Future without Development**  
 Average Weekday  
 AM Peak Hour  
 Year: 2027  
 Growth Rate = 2.5%  
 Years of Growth = 6  
 Total Growth = 1.1597



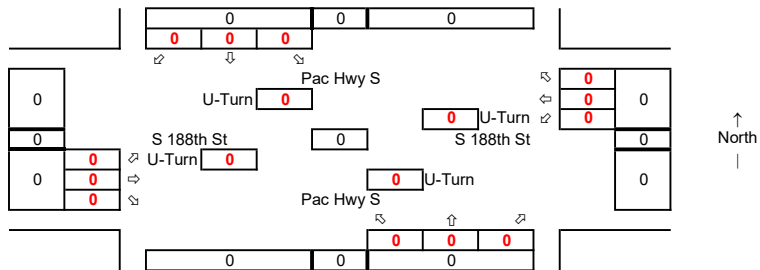
**Total Development Trips**  
 Average Weekday  
 AM Peak Hour



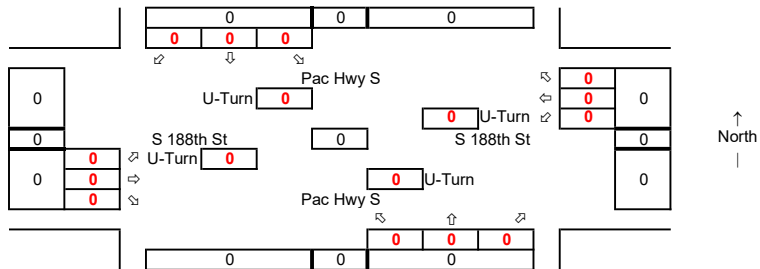
**Future with Development**  
 Average Weekday  
 AM Peak Hour



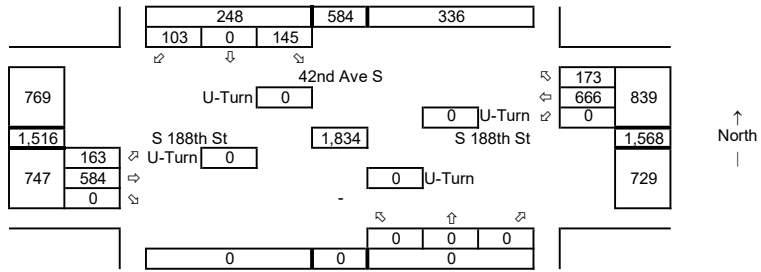
**Total Pipeline Project Trips**  
 Average Weekday  
 AM Peak Hour



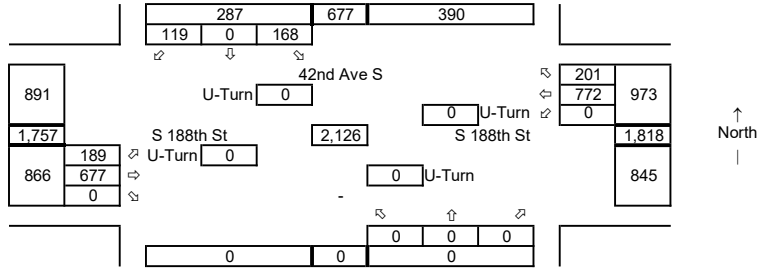
**Driveway Diversion**  
 Average Weekday  
 AM Peak Hour



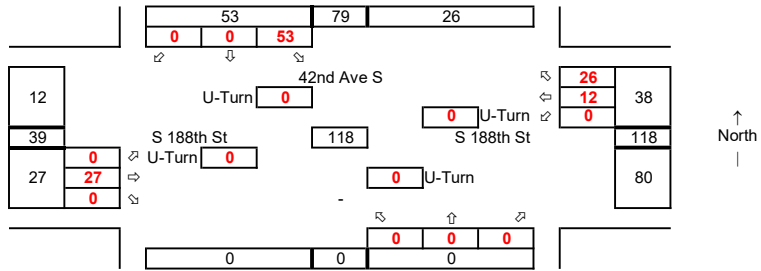
Synchro ID: 2  
**Existing**  
 Average Weekday  
 AM Peak Hour  
 Year: 12/14/21  
 Data Source: Idax



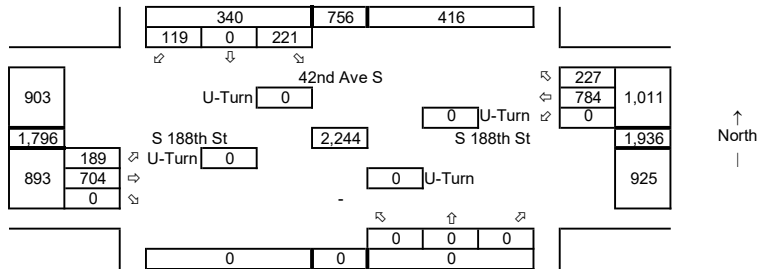
**Future without Development**  
 Average Weekday  
 AM Peak Hour  
 Year: 2027  
 Growth Rate = 2.5%  
 Years of Growth = 6  
 Total Growth = 1.1597



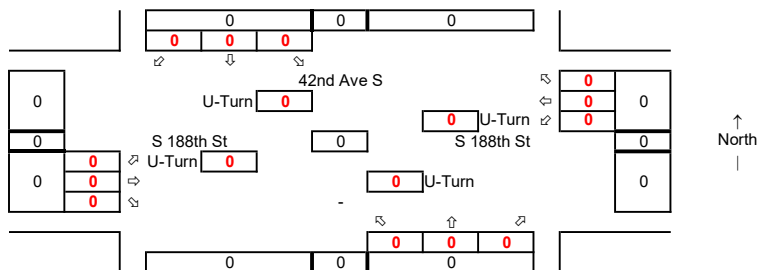
**Total Development Trips**  
 Average Weekday  
 AM Peak Hour



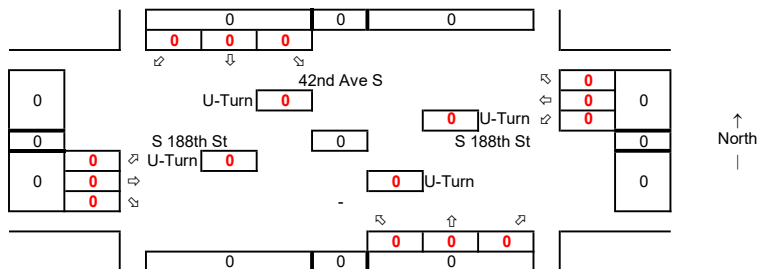
**Future with Development**  
 Average Weekday  
 AM Peak Hour



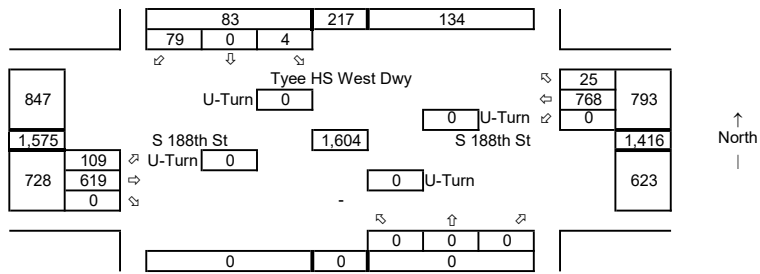
**Total Pipeline Project Trips**  
 Average Weekday  
 AM Peak Hour



**Driveway Diversion**  
 Average Weekday  
 AM Peak Hour

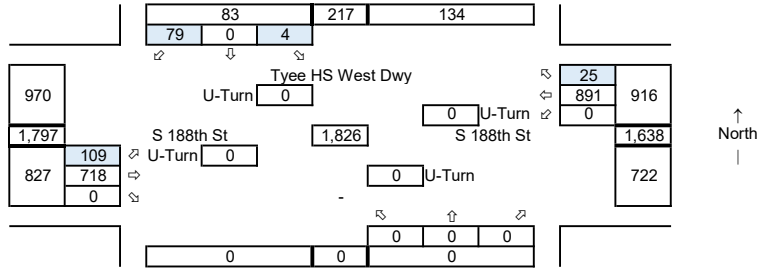


Synchro ID: 3  
**Existing**  
 Average Weekday  
 AM Peak Hour  
 Year: 12/14/21  
 Data Source: Idax

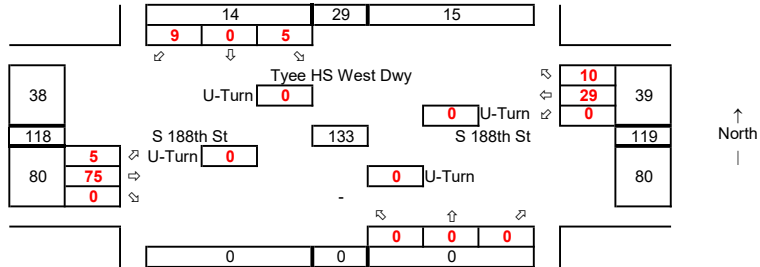


**Future without Development**  
 Average Weekday  
 AM Peak Hour  
 Year: 2027  
 Growth Rate = 2.5%  
 Years of Growth = 6  
 Total Growth = 1.1597

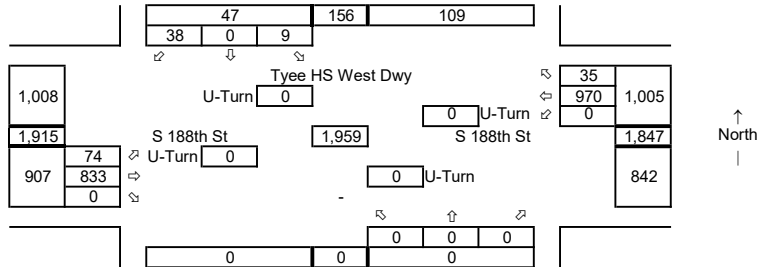
Growth Rate Not Applied to  
 School Turning Movements



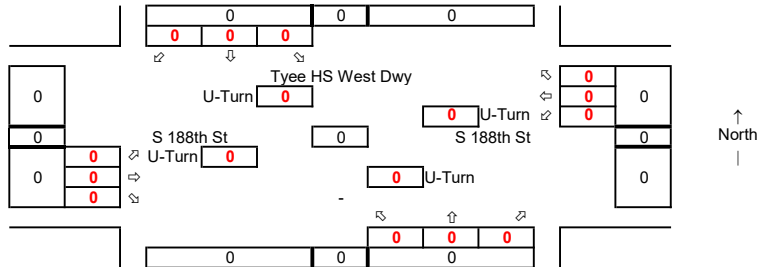
**Total Development Trips**  
 Average Weekday  
 AM Peak Hour



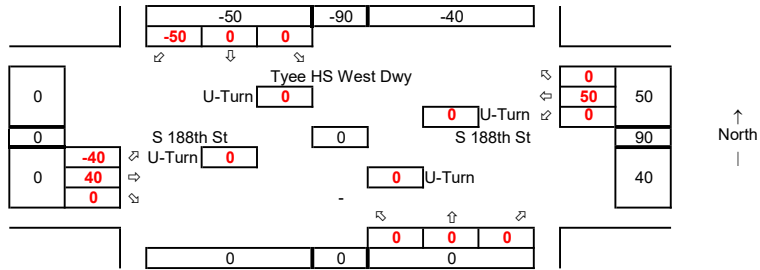
**Future with Development**  
 Average Weekday  
 AM Peak Hour



**Total Pipeline Project Trips**  
 Average Weekday  
 AM Peak Hour



**Driveway Diversion**  
 Average Weekday  
 AM Peak Hour

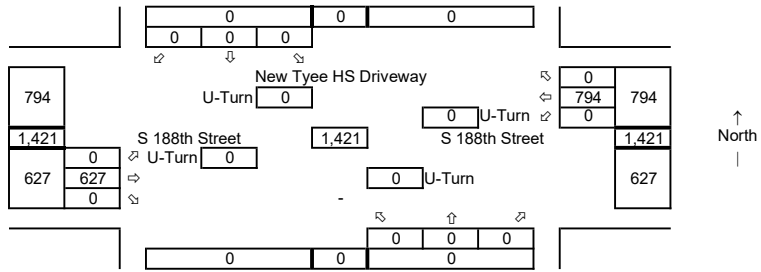




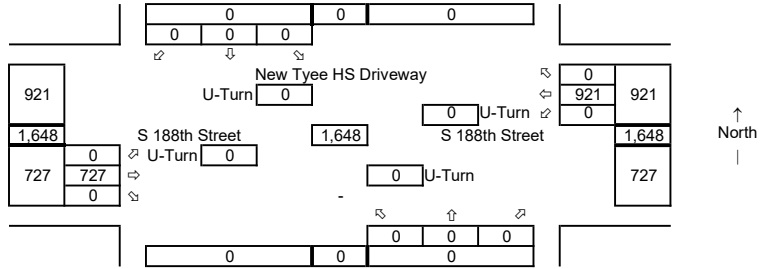




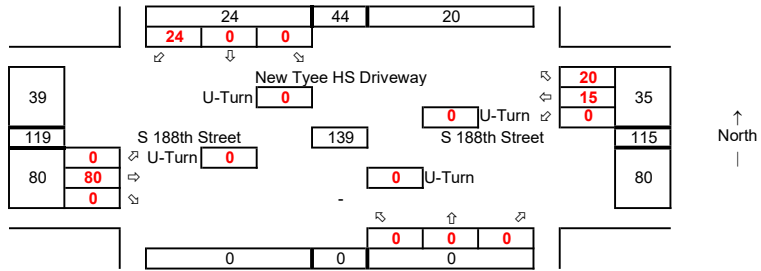
Synchro ID: 6  
**Existing**  
 Average Weekday  
 AM Peak Hour  
 Year: 12/14/21  
 Data Source: Idax



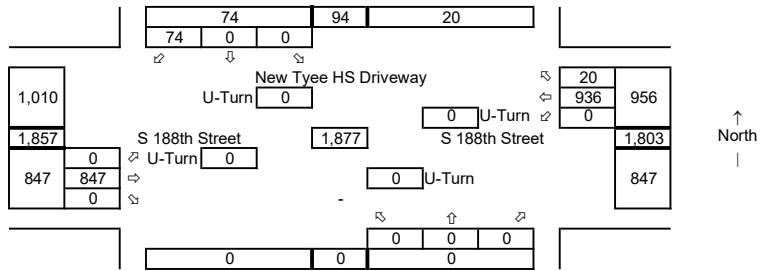
**Future without Development**  
 Average Weekday  
 AM Peak Hour  
 Year: 2027  
 Growth Rate = 2.5%  
 Years of Growth = 6  
 Total Growth = 1.1597



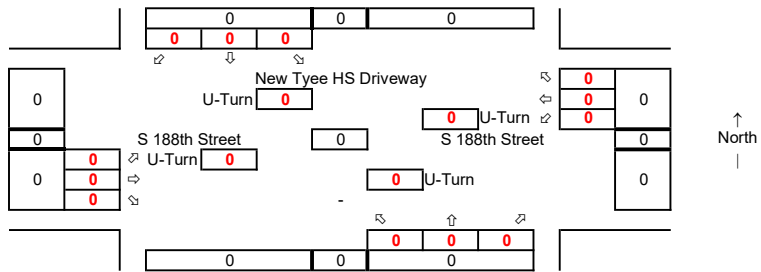
**Total Development Trips**  
 Average Weekday  
 AM Peak Hour



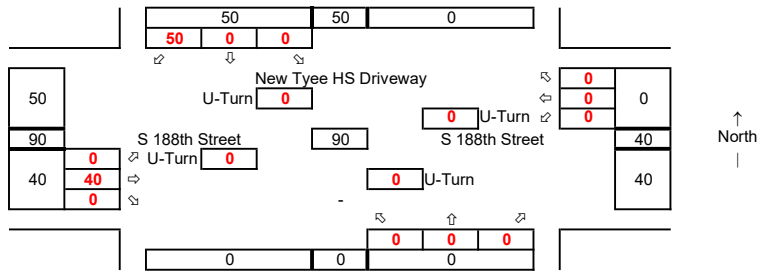
**Future with Development**  
 Average Weekday  
 AM Peak Hour



**Total Pipeline Project Trips**  
 Average Weekday  
 AM Peak Hour

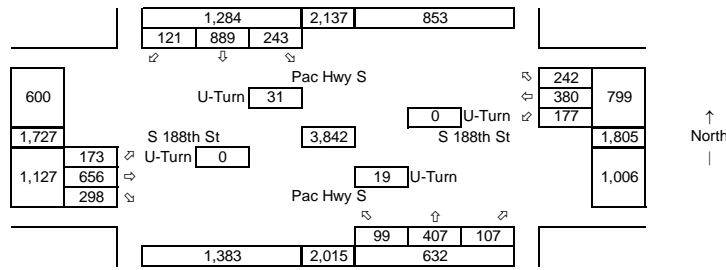


**Driveway Diversion**  
 Average Weekday  
 AM Peak Hour

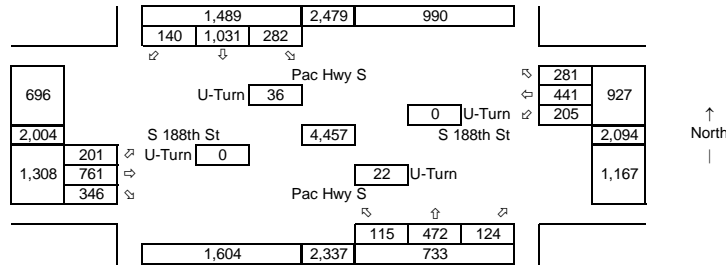


# School PM Turning Movement Calculations

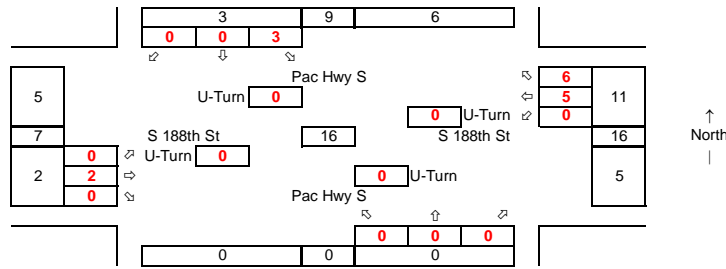
Synchro ID: 1  
**Existing**  
 Average Weekday  
 School PM Peak Hour  
  
 Year: 12/14/21  
  
 Data Source: Idax



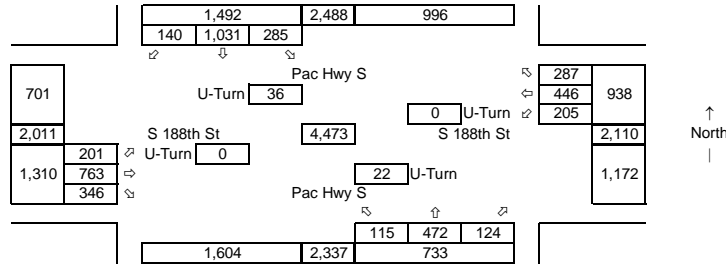
**Future without Development**  
 Average Weekday  
 School PM Peak Hour  
  
 Year: 2027  
 Growth Rate = 2.5%  
 Years of Growth = 6  
 Total Growth = 1.1597



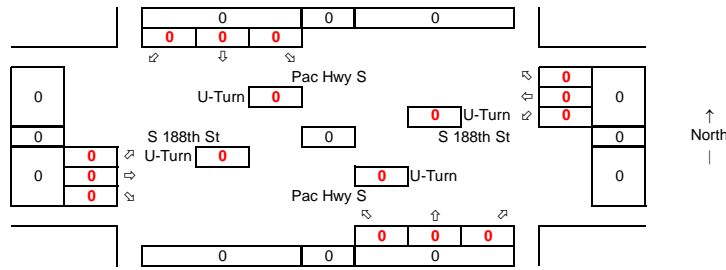
**Total Development Trips**  
 Average Weekday  
 School PM Peak Hour



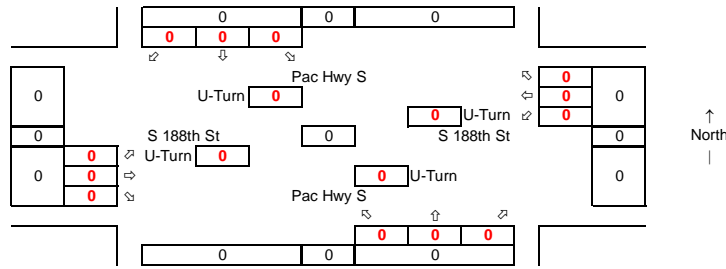
**Future with Development**  
 Average Weekday  
 School PM Peak Hour



**Total Pipeline Project Trips**  
 Average Weekday  
 School PM Peak Hour



**Driveway Diversion**  
 Average Weekday  
 School PM Peak Hour

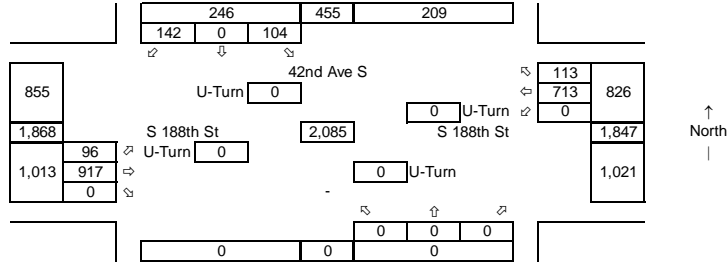


Synchro ID: 2

**Existing**  
Average Weekday  
School PM Peak Hour

Year: 12/14/21

Data Source: Idax



**Future without Development**

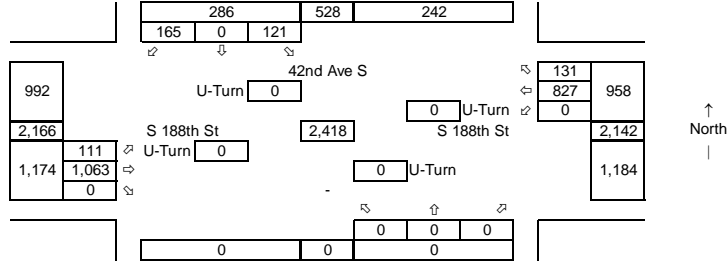
Average Weekday  
School PM Peak Hour

Year: 2027

Growth Rate = 2.5%

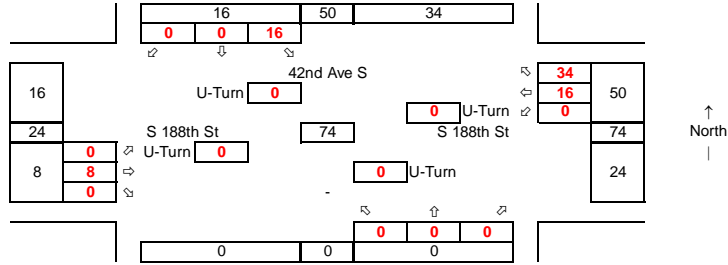
Years of Growth = 6

Total Growth = 1.1597



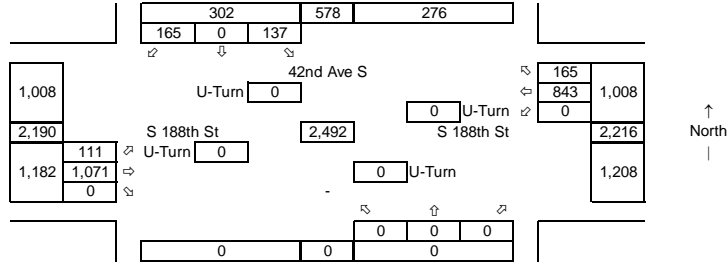
**Total Development Trips**

Average Weekday  
School PM Peak Hour



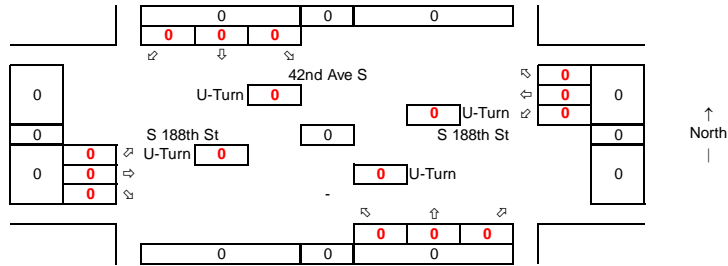
**Future with Development**

Average Weekday  
School PM Peak Hour



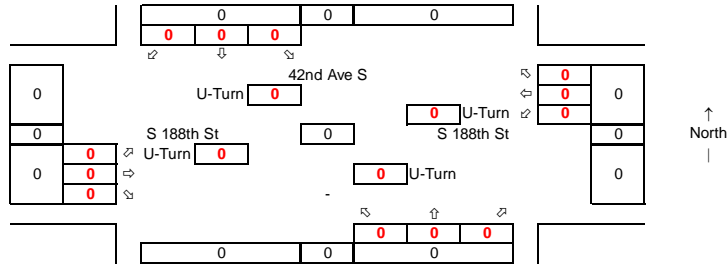
**Total Pipeline Project Trips**

Average Weekday  
School PM Peak Hour

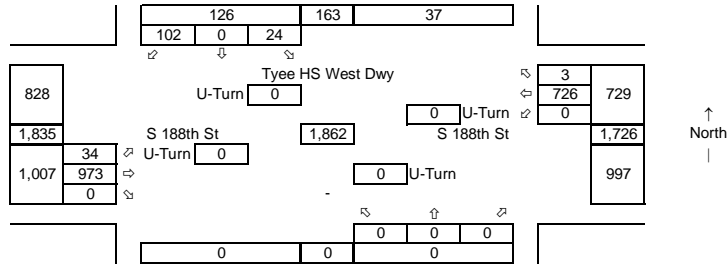


**Driveway Diversion**

Average Weekday  
School PM Peak Hour

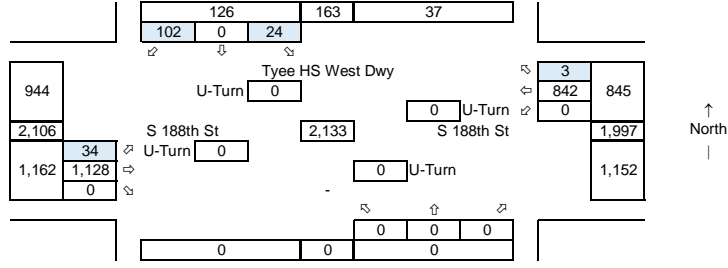


Synchro ID: 3  
**Existing**  
 Average Weekday  
 School PM Peak Hour  
  
 Year: 12/14/21  
 Data Source: Idax

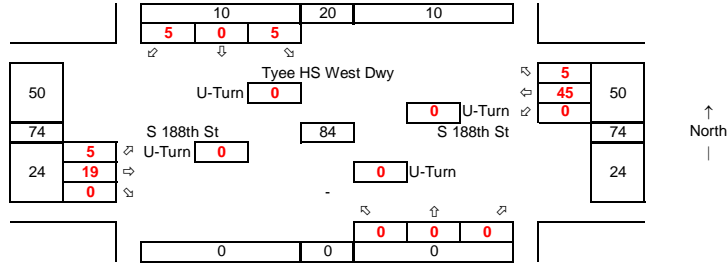


**Future without Development**  
 Average Weekday  
 School PM Peak Hour  
  
 Year: 2027  
 Growth Rate = 2.5%  
 Years of Growth = 6  
 Total Growth = 1.1597

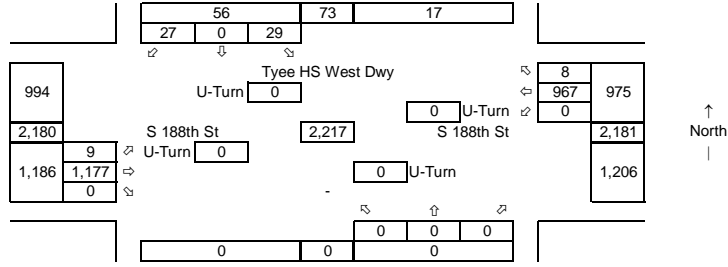
Growth Rate Not Applied to School Turning Movements



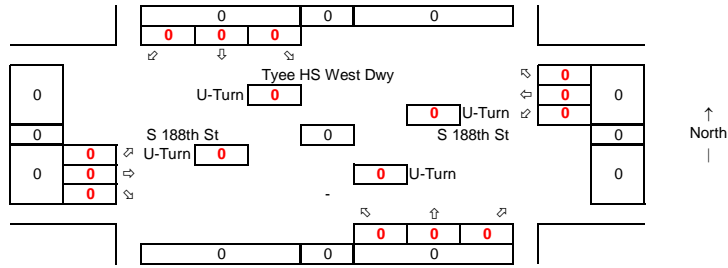
**Total Development Trips**  
 Average Weekday  
 School PM Peak Hour



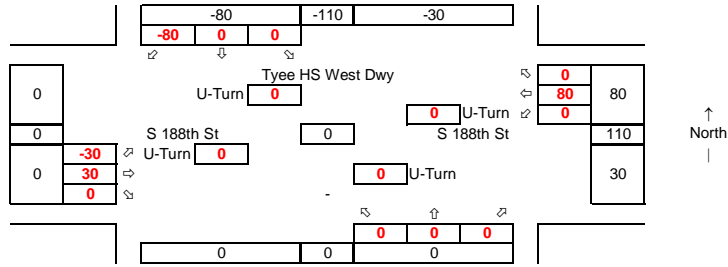
**Future with Development**  
 Average Weekday  
 School PM Peak Hour



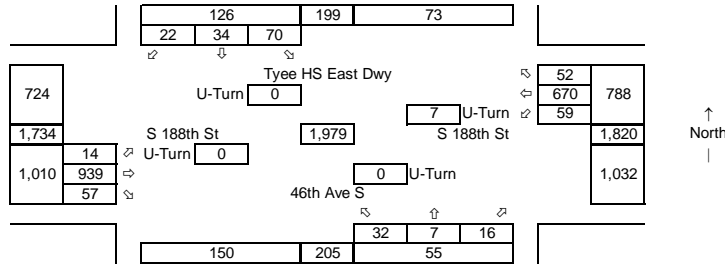
**Total Pipeline Project Trips**  
 Average Weekday  
 School PM Peak Hour



**Driveway Diversion**  
 Average Weekday  
 School PM Peak Hour

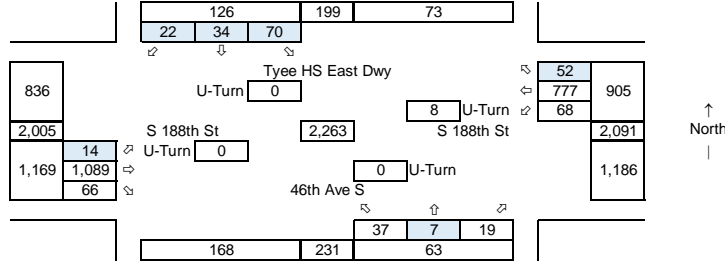


Synchro ID: 4  
**Existing**  
 Average Weekday  
 School PM Peak Hour  
 Year: 12/14/21  
 Data Source: Idax

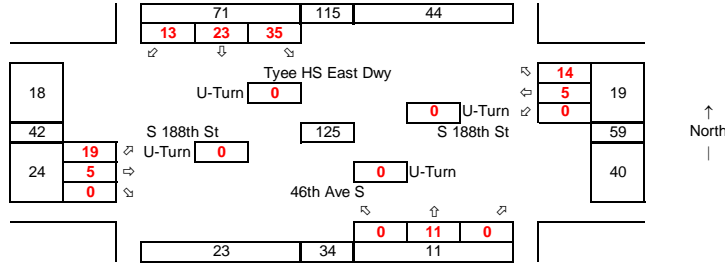


**Future without Development**  
 Average Weekday  
 School PM Peak Hour  
 Year: 2027  
 Growth Rate = 2.5%  
 Years of Growth = 6  
 Total Growth = 1.1597

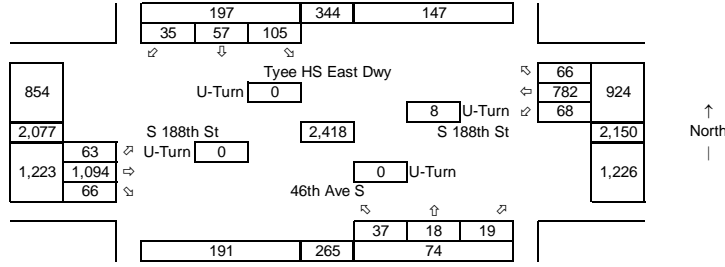
Growth Rate Not Applied to  
 School Turning Movements



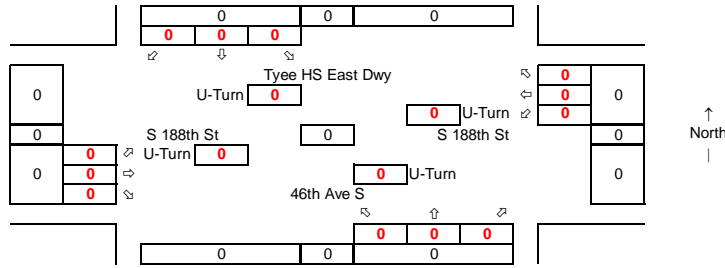
**Total Development Trips**  
 Average Weekday  
 School PM Peak Hour



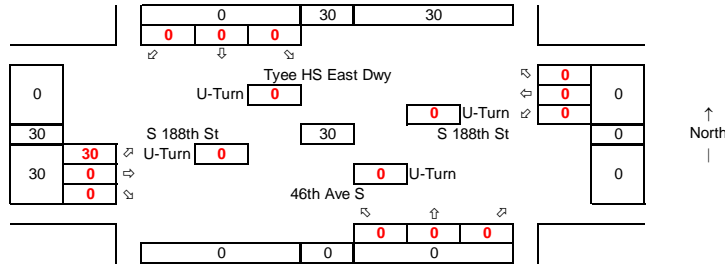
**Future with Development**  
 Average Weekday  
 School PM Peak Hour



**Total Pipeline Project Trips**  
 Average Weekday  
 School PM Peak Hour

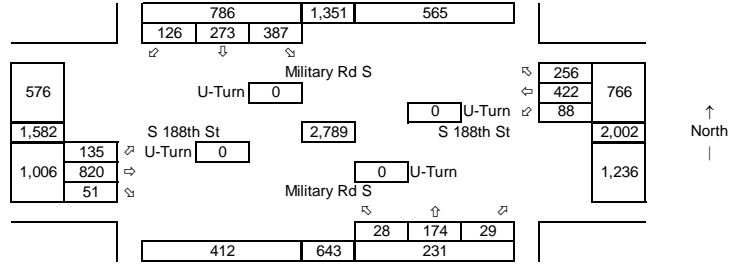


**Driveway Diversion**  
 Average Weekday  
 School PM Peak Hour

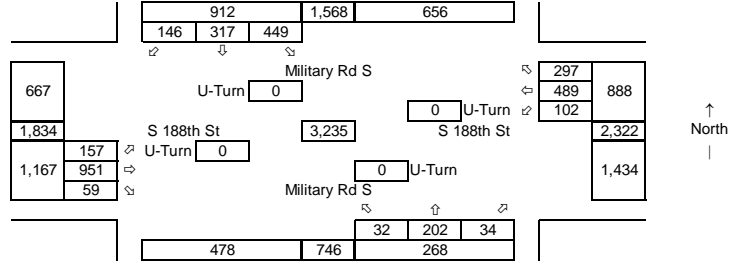




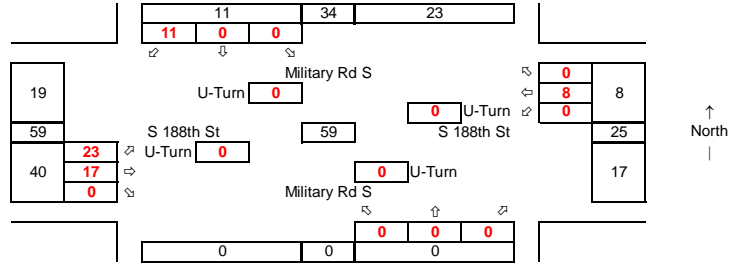
Synchro ID: 5  
**Existing**  
 Average Weekday  
 School PM Peak Hour  
  
 Year: 12/14/21  
 Data Source: Idax



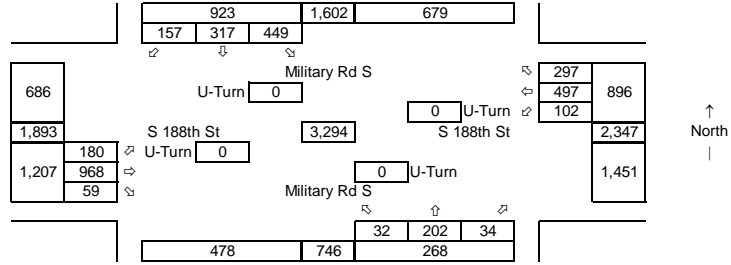
**Future without Development**  
 Average Weekday  
 School PM Peak Hour  
  
 Year: 2027  
 Growth Rate = 2.5%  
 Years of Growth = 6  
 Total Growth = 1.1597



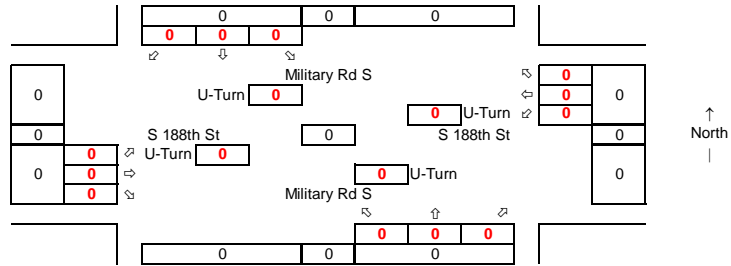
**Total Development Trips**  
 Average Weekday  
 School PM Peak Hour



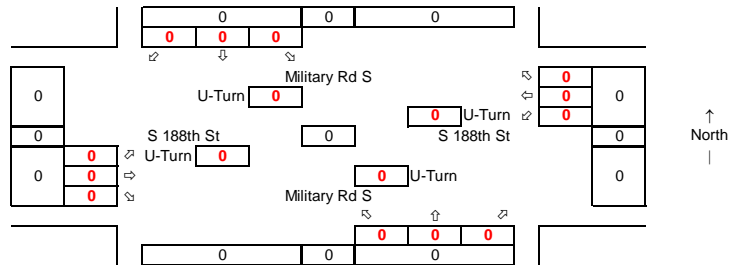
**Future with Development**  
 Average Weekday  
 School PM Peak Hour



**Total Pipeline Project Trips**  
 Average Weekday  
 School PM Peak Hour



**Driveway Diversion**  
 Average Weekday  
 School PM Peak Hour

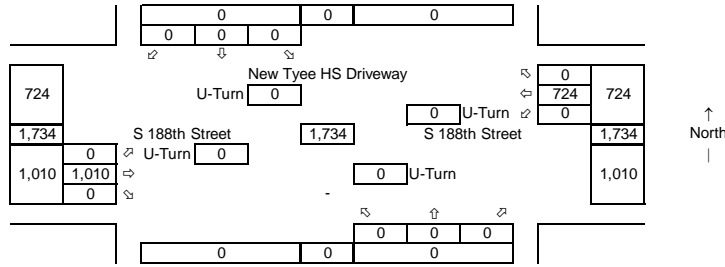


Synchro ID: 6

**Existing**  
Average Weekday  
School PM Peak Hour

Year: 12/14/21

Data Source: Idax



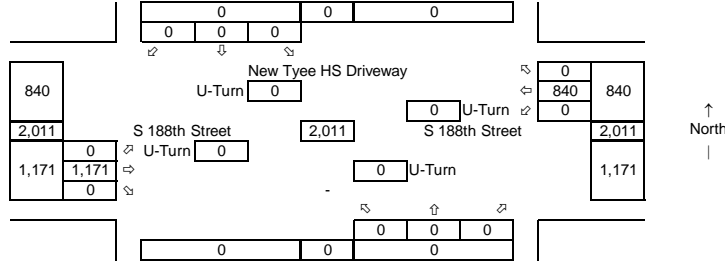
**Future without Development**  
Average Weekday  
School PM Peak Hour

Year: 2027

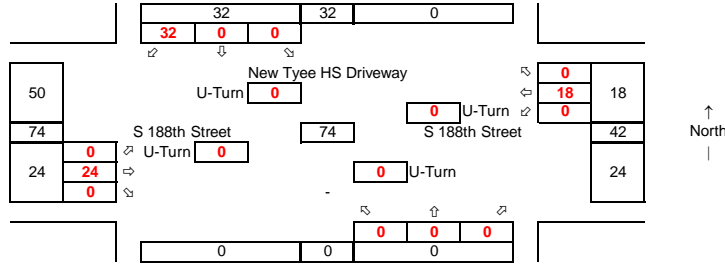
Growth Rate = 2.5%

Years of Growth = 6

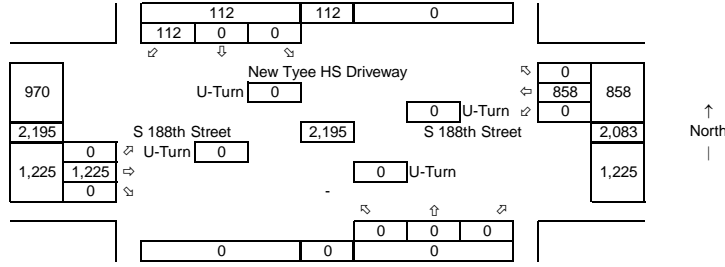
Total Growth = 1.1597



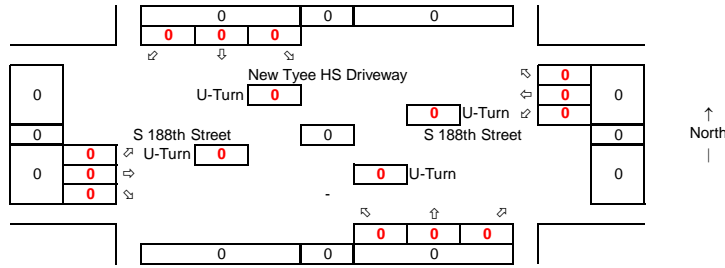
**Total Development Trips**  
Average Weekday  
School PM Peak Hour



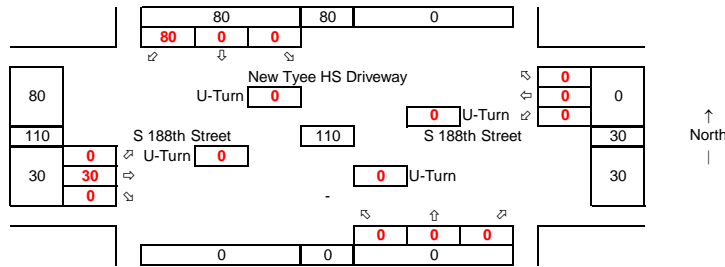
**Future with Development**  
Average Weekday  
School PM Peak Hour



**Total Pipeline Project Trips**  
Average Weekday  
School PM Peak Hour



**Driveway Diversion**  
Average Weekday  
School PM Peak Hour



# 2021 Existing AM LOS

Lanes, Volumes, Timings  
1: Pac Hwy S & S 188th St

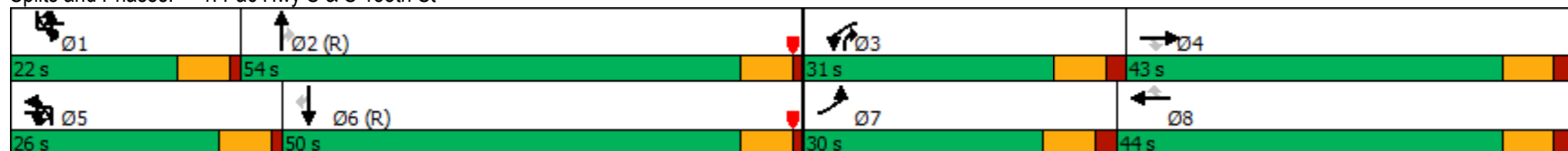
Tyee HS Expansion

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	185	454	108	128	429	160	9	198	574	128	18	111	313	110
Future Volume (vph)	185	454	108	128	429	160	9	198	574	128	18	111	313	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	510		510		180		200		410		0
Storage Lanes	1		1	1		1		2		1		2		1
Taper Length (ft)	25			25		25		25		25		25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.97	0.95	1.00	0.95	0.97	0.95	1.00
Ped Bike Factor	0.99		0.98	1.00		0.98		0.98		0.96		0.97		0.98
Frts			0.850			0.850				0.850				0.850
Flt Protected	0.950			0.950				0.950				0.950		
Satd. Flow (prot)	1656	3312	1482	1671	3343	1495	0	3367	3471	1553	0	2943	3034	1357
Flt Permitted	0.950			0.950				0.950				0.950		
Satd. Flow (perm)	1646	3312	1451	1664	3343	1460	0	3293	3471	1493	0	2858	3034	1325
Right Turn on Red			Yes			Yes				Yes				Yes
Satd. Flow (RTOR)			124			99				108				126
Link Speed (mph)		35			35				40				40	
Link Distance (ft)		544			3413				1242				1027	
Travel Time (s)		10.6			66.5				21.2				17.5	
Confl. Peds. (#/hr)	10		7	7		10	7	8		17	10	17		8
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	9%	9%	9%	8%	8%	8%	4%	4%	4%	4%	19%	19%	19%	19%
Shared Lane Traffic (%)														
Lane Group Flow (vph)	213	522	124	147	493	184	0	238	660	147	0	149	360	126
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	Prot	Prot	NA	Perm
Protected Phases	7	4	5!	3	8	1!	5!	5	2	3	1!	1	6	
Permitted Phases			4			8				2				6
Detector Phase	7	4	5	3	8	1	5	5	2	3	1	1	6	6
Switch Phase														
Minimum Initial (s)	5.0	7.0	7.0	5.0	7.0	15.0	7.0	7.0	10.0	5.0	15.0	15.0	10.0	10.0
Minimum Split (s)	30.0	43.0	26.0	31.0	44.0	22.0	26.0	26.0	54.0	31.0	22.0	22.0	50.0	50.0
Total Split (s)	30.0	43.0	26.0	31.0	44.0	22.0	26.0	26.0	54.0	31.0	22.0	22.0	50.0	50.0
Total Split (%)	20.0%	28.7%	17.3%	20.7%	29.3%	14.7%	17.3%	17.3%	36.0%	20.7%	14.7%	14.7%	33.3%	33.3%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	6.0	7.0	7.0	6.0		6.0	6.0	7.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag
Lead-Lag Optimize?														
Recall Mode	None	None	None	None	None	None	None	None	C-Min	None	None	None	C-Min	C-Min
Act Effct Green (s)	24.7	35.7	52.6	18.4	29.5	45.7		15.8	54.6	72.1		15.2	54.0	54.0
Actuated g/C Ratio	0.16	0.24	0.35	0.12	0.20	0.30		0.11	0.36	0.48		0.10	0.36	0.36
v/c Ratio	0.78	0.66	0.21	0.72	0.75	0.36		0.67	0.52	0.19		0.50	0.33	0.23
Control Delay	79.7	55.5	4.6	81.9	63.8	16.9		73.8	41.4	7.1		70.0	39.0	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	79.7	55.5	4.6	81.9	63.8	16.9		73.8	41.4	7.1		70.0	39.0	7.7
LOS	E	E	A	F	E	B		E	D	A		E	D	A
Approach Delay		54.1			56.6				44.0				40.1	
Approach LOS		D			E				D				D	
Queue Length 50th (ft)	201	247	0	141	246	59		117	262	18		72	133	0
Queue Length 95th (ft)	280	285	34	202	277	105		154	357	55		106	202	48
Internal Link Dist (ft)		464			3333				1162				947	
Turn Bay Length (ft)	300			510		510		180		200		410		
Base Capacity (vph)	284	852	630	269	824	524		448	1312	836		313	1128	571
Starvation Cap Reductn	0	0	0	0	0	0		0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0	0		0	0	0
Reduced v/c Ratio	0.75	0.61	0.20	0.55	0.60	0.35		0.53	0.50	0.18		0.48	0.32	0.22

Intersection Summary

Area Type: Other  
 Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 67 (45%), Referenced to phase 2:NBT and 6:SBT, Start of Red  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.78  
 Intersection Signal Delay: 48.9  
 Intersection Capacity Utilization 85.0%  
 Analysis Period (min) 15  
 ! Phase conflict between lane groups.

Splits and Phases: 1: Pac Hwy S & S 188th St



Lanes, Volumes, Timings  
2: S 188th St & 42nd Ave S

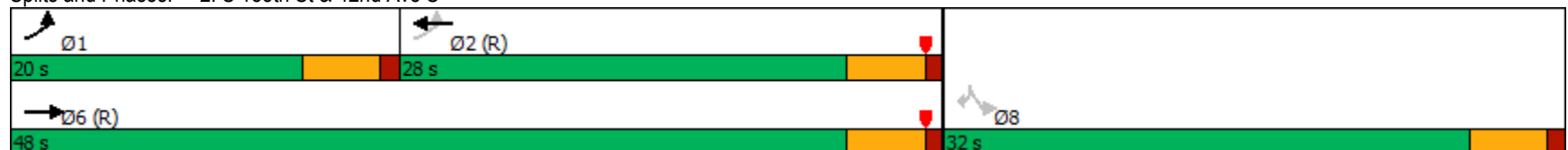
Tyee HS Expansion

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	163	584	666	173	145	103
Future Volume (vph)	163	584	666	173	145	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200			0	170	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor			0.99			0.97
Frnt			0.969			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1703	3406	3255	0	1752	1568
Flt Permitted	0.198				0.950	
Satd. Flow (perm)	355	3406	3255	0	1752	1521
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			41			129
Link Speed (mph)		35	35		25	
Link Distance (ft)		3413	723		714	
Travel Time (s)		66.5	14.1		19.5	
Confl. Peds. (#/hr)	24			24		13
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	6%	6%	6%	6%	3%	3%
Shared Lane Traffic (%)						
Lane Group Flow (vph)		730	1049	0	181	129
Turn Type	D.P+P	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases	2				8	8
Detector Phase	1	6	2		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	10.0	22.5	25.0		22.5	22.5
Total Split (s)	20.0	48.0	28.0		32.0	32.0
Total Split (%)	25.0%	60.0%	35.0%		40.0%	40.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						
Recall Mode	None	C-Min	C-Min		None	None
Act Effct Green (s)	52.3	57.3	42.4		12.7	12.7
Actuated g/C Ratio	0.65	0.72	0.53		0.16	0.16
v/c Ratio	0.51	0.30	0.60		0.65	0.37
Control Delay	10.1	4.9	16.0		42.3	8.6
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	10.1	4.9	16.0		42.3	8.6
LOS	B	A	B		D	A
Approach Delay		6.0	16.0		28.3	
Approach LOS		A	B		C	
Queue Length 50th (ft)	27	56	67		86	0
Queue Length 95th (ft)	53	86	182		121	30
Internal Link Dist (ft)		3333	643		634	
Turn Bay Length (ft)	200				170	
Base Capacity (vph)	501	2441	1745		591	598
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.41	0.30	0.60		0.31	0.22

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 10 (13%), Referenced to phase 2:EBWB and 6:EBT, Start of Red  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.65  
 Intersection Signal Delay: 13.6  
 Intersection Capacity Utilization 56.1%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service B

Splits and Phases: 2: S 188th St & 42nd Ave S



HCM 6th TWSC  
3: S 188th St & Tyee West Dwy

Tyee HS Expansion

Intersection

Int Delay, s/veh	1.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	109	619	768	25	4	79
Future Vol, veh/h	109	619	768	25	4	79
Conflicting Peds, #/hr	6	0	0	6	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	6	6	3	3	12	12
Mvmt Flow	136	774	960	31	5	99

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	997	0	-	0	1641
Stage 1	-	-	-	-	982
Stage 2	-	-	-	-	659
Critical Hdwy	4.22	-	-	-	7.04
Critical Hdwy Stg 1	-	-	-	-	6.04
Critical Hdwy Stg 2	-	-	-	-	6.04
Follow-up Hdwy	2.26	-	-	-	3.62
Pot Cap-1 Maneuver	666	-	-	-	82
Stage 1	-	-	-	-	301
Stage 2	-	-	-	-	450
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	662	-	-	-	64
Mov Cap-2 Maneuver	-	-	-	-	168
Stage 1	-	-	-	-	238
Stage 2	-	-	-	-	447

Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	14.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	662	-	-	-	168	486
HCM Lane V/C Ratio	0.206	-	-	-	0.03	0.203
HCM Control Delay (s)	11.8	-	-	-	27.1	14.3
HCM Lane LOS	B	-	-	-	D	B
HCM 95th %tile Q(veh)	0.8	-	-	-	0.1	0.8

Lanes, Volumes, Timings  
4: 46th Ave S & S 188th St

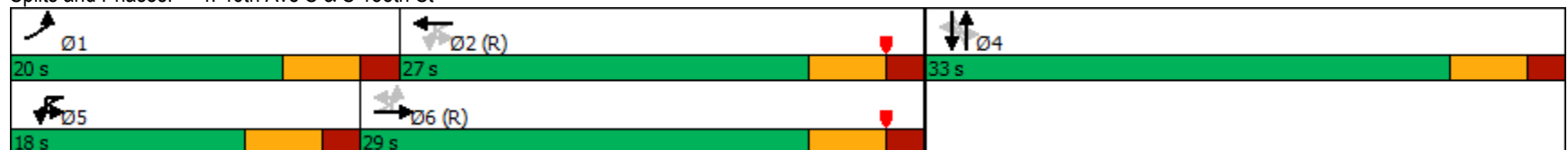
Tyee HS Expansion

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	24	573	30	2	25	731	98	1	42	39	19	52	27	21
Future Volume (vph)	24	573	30	2	25	731	98	1	42	39	19	52	27	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0		200		0		0		0	0		0
Storage Lanes	1		0		1		0		0		0	0		0
Taper Length (ft)	25				25				25			25		
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00					0.99			0.99	
Frnt		0.992				0.982				0.975			0.971	
Flt Protected	0.950				0.950					0.979			0.975	
Satd. Flow (prot)	1656	3285	0	0	1736	3409	0	0	0	1740	0	0	1687	0
Flt Permitted	0.225				0.339					0.831			0.797	
Satd. Flow (perm)	392	3285	0	0	619	3409	0	0	0	1469	0	0	1379	0
Right Turn on Red			Yes				Yes				Yes			Yes
Satd. Flow (RTOR)		7				18				16			18	
Link Speed (mph)		35				35				25			25	
Link Distance (ft)		608				1005				746			431	
Travel Time (s)		11.8				19.6				20.3			11.8	
Confl. Peds. (#/hr)				1					17		1	1		17
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	9%	9%	9%	4%	4%	4%	4%	4%	4%	4%	4%	6%	6%	6%
Shared Lane Traffic (%)														
Lane Group Flow (vph)	29	736	0	0	32	1011	0	0	0	123	0	0	122	0
Turn Type	pm+pt	NA		pm+pt	pm+pt	NA		Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	5	2				4			4	
Permitted Phases	6			2	2			4	4			4		
Detector Phase	1	6		5	5	2		4	4	4		4	4	
Switch Phase														
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	29.0		11.0	11.0	27.0		33.0	33.0	33.0		33.0	33.0	
Total Split (s)	20.0	29.0		18.0	18.0	27.0		33.0	33.0	33.0		33.0	33.0	
Total Split (%)	25.0%	36.3%		22.5%	22.5%	33.8%		41.3%	41.3%	41.3%		41.3%	41.3%	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0		2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0	0.0				0.0			0.0	
Total Lost Time (s)	6.0	6.0			6.0	6.0				6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lead	Lag								
Lead-Lag Optimize?														
Recall Mode	None	C-Min		None	None	C-Min		None	None	None		None	None	
Act Effct Green (s)	50.0	47.6			50.1	47.7				15.6			15.6	
Actuated g/C Ratio	0.62	0.60			0.63	0.60				0.20			0.20	
v/c Ratio	0.09	0.38			0.07	0.50				0.41			0.43	
Control Delay	7.5	9.7			16.9	23.3				25.6			25.8	
Queue Delay	0.0	0.0			0.0	0.0				0.0			0.0	
Total Delay	7.5	9.7			16.9	23.3				25.6			25.8	
LOS	A	A			B	C				C			C	
Approach Delay		9.6				23.1				25.6			25.8	
Approach LOS		A				C				C			C	
Queue Length 50th (ft)	3	43			9	181				51			50	
Queue Length 95th (ft)	14	138			m25	294				69			69	
Internal Link Dist (ft)		528				925				666			351	
Turn Bay Length (ft)	150				200									
Base Capacity (vph)	478	1958			572	2038				506			477	
Starvation Cap Reductn	0	0			0	0				0			0	
Spillback Cap Reductn	0	0			0	0				0			0	
Storage Cap Reductn	0	0			0	0				0			0	
Reduced v/c Ratio	0.06	0.38			0.06	0.50				0.24			0.26	

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBTL, Start of Red  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.50  
 Intersection Signal Delay: 18.4  
 Intersection Capacity Utilization 47.7%  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: 46th Ave S & S 188th St



Lanes, Volumes, Timings  
5: Military Rd S & S 188th St

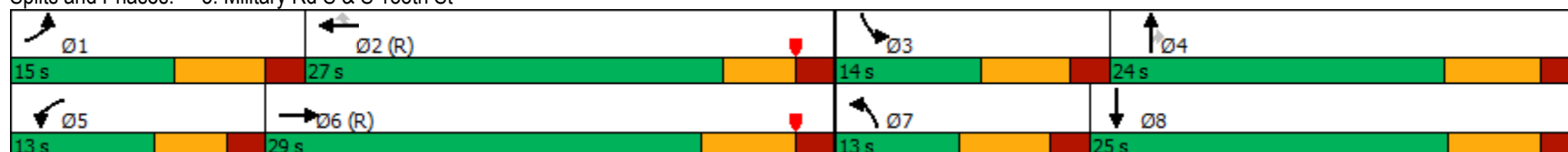
Tyee HS Expansion

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	552	11	11	453	323	30	186	45	294	70	142
Future Volume (vph)	98	552	11	11	453	323	30	186	45	294	70	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	490		480	135		110	190		30	390		0
Storage Lanes	1		1	1		1	1		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor		1.00		1.00								
Frnt		0.997				0.850			0.850		0.899	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	4970	0	1687	3374	1509	1687	1776	1509	3433	1675	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	4970	0	1686	3374	1509	1687	1776	1509	3433	1675	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				380			221		119	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1005			272			787			554	
Travel Time (s)		19.6			5.3			15.3			10.8	
Confl. Peds. (#/hr)			1	1								
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	4%	4%	4%	7%	7%	7%	7%	7%	7%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	115	662	0	13	533	380	35	219	53	346	249	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			
Detector Phase	1	6		5	2	2	7	4	4	3	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	11.7	28.8		10.7	25.7	25.7	11.7	22.5	22.5	11.6	34.8	
Total Split (s)	15.0	29.0		13.0	27.0	27.0	13.0	24.0	24.0	14.0	25.0	
Total Split (%)	18.8%	36.3%		16.3%	33.8%	33.8%	16.3%	30.0%	30.0%	17.5%	31.3%	
Yellow Time (s)	4.7	4.8		3.7	3.7	3.7	4.7	4.9	4.9	4.6	4.8	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.7	6.8		5.7	5.7	5.7	6.7	6.9	6.9	6.6	6.8	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None	None	None	None	
Act Effct Green (s)	8.1	32.0		5.5	23.3	23.3	5.9	14.3	14.3	11.0	24.0	
Actuated g/C Ratio	0.10	0.40		0.07	0.29	0.29	0.07	0.18	0.18	0.14	0.30	
v/c Ratio	0.66	0.33		0.11	0.54	0.54	0.28	0.69	0.12	0.74	0.42	
Control Delay	56.2	23.2		36.8	27.6	6.0	40.8	42.2	0.5	46.9	15.9	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	56.2	23.2		36.8	27.6	6.0	40.8	42.2	0.5	46.9	15.9	
LOS	E	C		D	C	A	D	D	A	D	B	
Approach Delay		28.1			18.9			34.9			33.9	
Approach LOS		C			B			C			C	
Queue Length 50th (ft)	45	65		6	127	0	17	102	0	87	54	
Queue Length 95th (ft)	#118	111		22	161	50	42	157	0	#168	113	
Internal Link Dist (ft)		925			192			707			474	
Turn Bay Length (ft)	490			135		110	190		30	390		
Base Capacity (vph)	187	1991		153	1024	722	135	379	496	470	586	
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	0.61	0.33		0.08	0.52	0.53	0.26	0.58	0.11	0.74	0.42	

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Red  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 27.0  
 Intersection Capacity Utilization 62.3%  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 5: Military Rd S & S 188th St





# 2021 Existing School PM LOS

Lanes, Volumes, Timings  
1: Pac Hwy S & S 188th St

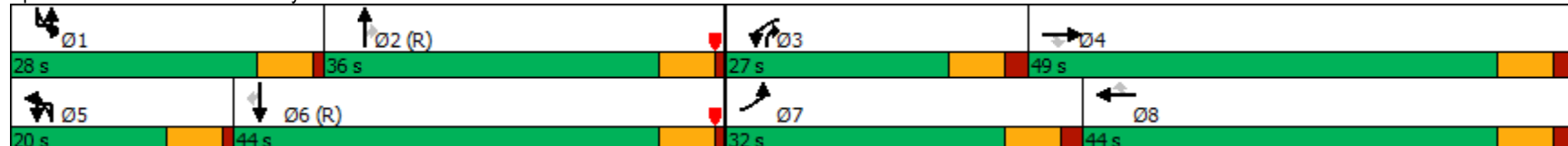
Tyee HS Expansion

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	173	656	298	177	380	242	19	99	407	107	31	243	889	121
Future Volume (vph)	173	656	298	177	380	242	19	99	407	107	31	243	889	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	510		510		180		200		410		0
Storage Lanes	1		1	1		1		2		1		2		1
Taper Length (ft)	25			25		25		25		25		25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.97	0.95	1.00	0.95	0.97	0.95	1.00
Ped Bike Factor	1.00		0.96	0.99		0.99		0.98		0.96		0.97		0.98
Frnt			0.850			0.850				0.850				0.850
Flt Protected	0.950			0.950				0.950				0.950		
Satd. Flow (prot)	1656	3312	1482	1719	3438	1538	0	3400	3505	1568	0	3099	3195	1429
Flt Permitted	0.950			0.950				0.950				0.950		
Satd. Flow (perm)	1654	3312	1429	1703	3438	1516	0	3337	3505	1510	0	3016	3195	1395
Right Turn on Red			Yes			Yes				Yes				Yes
Satd. Flow (RTOR)			212			247				125				132
Link Speed (mph)		35			35				40				40	
Link Distance (ft)		544			3413				1259				1027	
Travel Time (s)		10.6			66.5				21.5				17.5	
Confl. Peds. (#/hr)	2		20	20		2	20	9		17	2	17		9
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	9%	9%	9%	5%	5%	5%	3%	3%	3%	3%	13%	13%	13%	13%
Shared Lane Traffic (%)														
Lane Group Flow (vph)	177	669	304	181	388	247	0	120	415	109	0	280	907	123
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	Prot	NA	pm+ov	Prot	Prot	NA	Perm
Protected Phases	7	4		3	8		5	5	2	3	1	1	6	
Permitted Phases			4			8				2				6
Detector Phase	7	4	4	3	8	8	5	5	2	3	1	1	6	6
Switch Phase														
Minimum Initial (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	10.0	5.0	15.0	15.0	10.0	10.0
Minimum Split (s)	12.0	42.0	42.0	12.0	44.0	44.0	13.0	13.0	34.0	12.0	21.0	21.0	37.0	37.0
Total Split (s)	32.0	49.0	49.0	27.0	44.0	44.0	20.0	20.0	36.0	27.0	28.0	28.0	44.0	44.0
Total Split (%)	22.9%	35.0%	35.0%	19.3%	31.4%	31.4%	14.3%	14.3%	25.7%	19.3%	20.0%	20.0%	31.4%	31.4%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		6.0	6.0	7.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag
Lead-Lag Optimize?														
Recall Mode	None	None	None	None	None	None	None	None	C-Max	None	None	None	C-Max	C-Max
Act Effct Green (s)	19.7	36.0	36.0	18.2	34.5	34.5		11.2	41.1	58.3		18.7	48.5	48.5
Actuated g/C Ratio	0.14	0.26	0.26	0.13	0.25	0.25		0.08	0.29	0.42		0.13	0.35	0.35
v/c Ratio	0.76	0.79	0.58	0.81	0.46	0.44		0.44	0.40	0.15		0.68	0.82	0.22
Control Delay	78.0	55.1	17.6	85.7	46.3	7.3		66.1	43.3	3.5		66.3	50.0	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	78.0	55.1	17.6	85.7	46.3	7.3		66.1	43.3	3.5		66.3	50.0	6.1
LOS	E	E	B	F	D	A		E	D	A		E	D	A
Approach Delay		48.7			43.2				40.8				49.4	
Approach LOS		D			D				D				D	
Queue Length 50th (ft)	157	298	68	160	155	0		54	164	0		126	407	0
Queue Length 95th (ft)	233	353	159	#267	206	68		86	235	29		172	#605	43
Internal Link Dist (ft)		464			3333				1179				947	
Turn Bay Length (ft)	300			510		510		180		200		410		
Base Capacity (vph)	295	993	577	245	908	582		340	1029	728		486	1107	569
Starvation Cap Reductn	0	0	0	0	0	0		0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0	0		0	0	0
Reduced v/c Ratio	0.60	0.67	0.53	0.74	0.43	0.42		0.35	0.40	0.15		0.58	0.82	0.22

Intersection Summary

Area Type: Other  
 Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 115 (82%), Referenced to phase 2:NBT and 6:SBT, Start of Red  
 Natural Cycle: 115  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay: 46.5  
 Intersection Capacity Utilization 90.8%  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Pac Hwy S & S 188th St



Lanes, Volumes, Timings  
2: S 188th St & 42nd Ave S

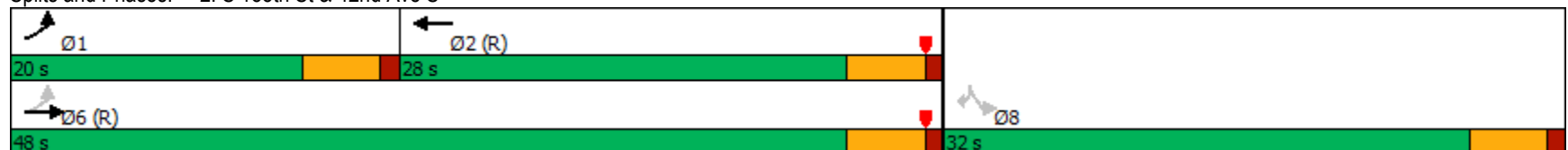
Tyee HS Expansion

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	96	917	713	113	104	142
Future Volume (vph)	96	917	713	113	104	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200			0	170	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor			0.98			0.97
Frt			0.979			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1736	3471	3282	0	1736	1553
Flt Permitted	0.233				0.950	
Satd. Flow (perm)	426	3471	3282	0	1736	1510
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			22			154
Link Speed (mph)		35	35		25	
Link Distance (ft)		3413	723		714	
Travel Time (s)		66.5	14.1		19.5	
Confl. Peds. (#/hr)	48			48		17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	6%	6%	4%	4%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	104	997	898	0	113	154
Turn Type	pm+pt	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases	6				8	8
Detector Phase	1	6	2		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		7.0	7.0
Minimum Split (s)	10.0	22.5	25.0		31.0	31.0
Total Split (s)	20.0	48.0	28.0		32.0	32.0
Total Split (%)	25.0%	60.0%	35.0%		40.0%	40.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						
Recall Mode	None	C-Min	C-Min		None	None
Act Effct Green (s)	54.3	54.3	44.8		15.7	15.7
Actuated g/C Ratio	0.68	0.68	0.56		0.20	0.20
v/c Ratio	0.26	0.42	0.49		0.33	0.37
Control Delay	8.3	8.0	10.7		27.6	6.3
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	8.3	8.0	10.7		27.6	6.3
LOS	A	A	B		C	A
Approach Delay		8.1	10.7		15.3	
Approach LOS		A	B		B	
Queue Length 50th (ft)	11	74	71		53	0
Queue Length 95th (ft)	46	203	96		78	39
Internal Link Dist (ft)		3333	643		634	
Turn Bay Length (ft)	200				170	
Base Capacity (vph)	534	2356	1848		585	611
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.19	0.42	0.49		0.19	0.25

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 10 (13%), Referenced to phase 2:WBT and 6:EBTL, Start of Red  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.49  
 Intersection Signal Delay: 10.0  
 Intersection Capacity Utilization 54.3%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service A

Splits and Phases: 2: S 188th St & 42nd Ave S



HCM 6th TWSC  
3: S 188th St & Tyee West Dwy

Tyee HS Expansion

Intersection

Int Delay, s/veh 1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑		↘	↘
Traffic Vol, veh/h	34	973	726	3	24	102
Future Vol, veh/h	34	973	726	3	24	102
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	7	7	3	3	9	9
Mvmt Flow	37	1058	789	3	26	111

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	793	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.24	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.27	-	-
Pot Cap-1 Maneuver	792	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	791	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	14.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	791	-	-	-	245	582
HCM Lane V/C Ratio	0.047	-	-	-	0.106	0.19
HCM Control Delay (s)	9.8	-	-	-	21.4	12.6
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4	0.7

Lanes, Volumes, Timings  
4: 46th Ave S & S 188th St

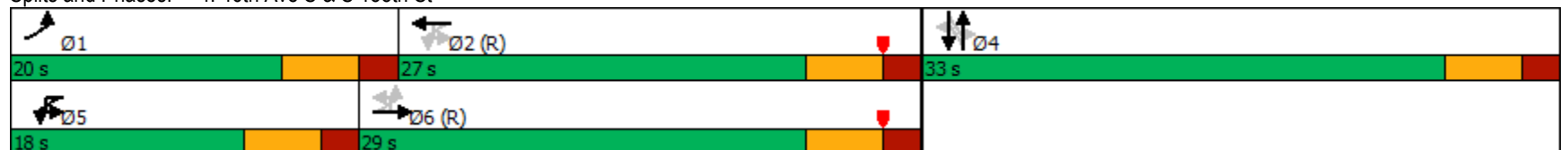
Tyee HS Expansion

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	14	939	57	7	59	670	52	32	7	16	70	34	22
Future Volume (vph)	14	939	57	7	59	670	52	32	7	16	70	34	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0		200		0	0		0	0		0
Storage Lanes	1		0		1		0	0		0	0		0
Taper Length (ft)	25				25			25			25		
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor									0.98			0.99	
Frt		0.991				0.989			0.960			0.977	
Flt Protected	0.950				0.950				0.972			0.973	
Satd. Flow (prot)	1583	3138	0	0	1752	3466	0	0	1773	0	0	1754	0
Flt Permitted	0.363				0.206				0.768			0.795	
Satd. Flow (perm)	605	3138	0	0	380	3466	0	0	1371	0	0	1433	0
Right Turn on Red			Yes				Yes			Yes			Yes
Satd. Flow (RTOR)		8				10			17			14	
Link Speed (mph)		35				35			25			25	
Link Distance (ft)		608				1005			746			431	
Travel Time (s)		11.8				19.6			20.3			11.8	
Confl. Peds. (#/hr)								52					52
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	0.95
Heavy Vehicles (%)	14%	14%	14%	3%	3%	3%	3%	0%	0%	0%	2%	2%	2%
Shared Lane Traffic (%)													
Lane Group Flow (vph)	15	1048	0	0	69	760	0	0	58	0	0	133	0
Turn Type	pm+pt	NA		pm+pt	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	5	2			4			4	
Permitted Phases	6			2	2			4			4		
Detector Phase	1	6		5	5	2		4	4		4	4	
Switch Phase													
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	26.0		11.0	11.0	27.0		34.0	34.0		34.0	34.0	
Total Split (s)	20.0	29.0		18.0	18.0	27.0		33.0	33.0		33.0	33.0	
Total Split (%)	25.0%	36.3%		22.5%	22.5%	33.8%		41.3%	41.3%		41.3%	41.3%	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0	6.0			6.0	6.0			6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lead	Lag							
Lead-Lag Optimize?													
Recall Mode	None	C-Min		None	None	C-Min		None	None		None	None	
Act Effct Green (s)	51.6	47.6			56.1	54.7			11.0			11.0	
Actuated g/C Ratio	0.64	0.60			0.70	0.68			0.14			0.14	
v/c Ratio	0.03	0.56			0.19	0.32			0.29			0.64	
Control Delay	9.1	16.8			5.7	6.8			25.7			42.1	
Queue Delay	0.0	0.0			0.0	0.0			0.0			0.0	
Total Delay	9.1	16.8			5.7	6.8			25.7			42.1	
LOS	A	B			A	A			C			D	
Approach Delay		16.7				6.7			25.7			42.1	
Approach LOS		B				A			C			D	
Queue Length 50th (ft)	2	120			9	59			19			57	
Queue Length 95th (ft)	m11	284			25	161			48			104	
Internal Link Dist (ft)		528				925			666			351	
Turn Bay Length (ft)	150				200								
Base Capacity (vph)	602	1868			476	2374			473			492	
Starvation Cap Reductn	0	0			0	0			0			0	
Spillback Cap Reductn	0	0			0	0			0			0	
Storage Cap Reductn	0	0			0	0			0			0	
Reduced v/c Ratio	0.02	0.56			0.14	0.32			0.12			0.27	

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBTL, Start of Red  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.64  
 Intersection Signal Delay: 14.6  
 Intersection Capacity Utilization 67.7%  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: 46th Ave S & S 188th St



Lanes, Volumes, Timings  
5: Military Rd S & S 188th St

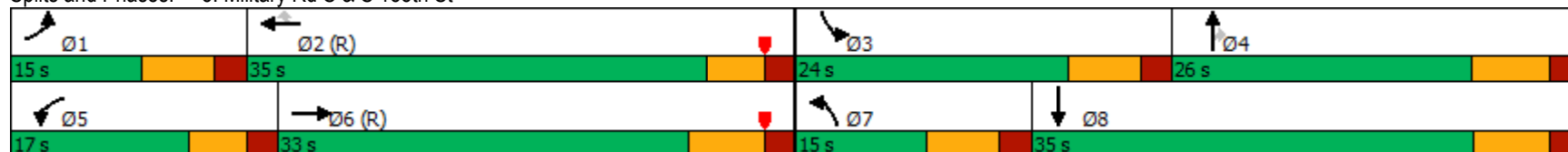
Tyee HS Expansion

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	820	51	88	422	256	28	174	29	387	273	126
Future Volume (vph)	135	820	51	88	422	256	28	174	29	387	273	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	490		480	135		110	190		30	390		0
Storage Lanes	1		1	1		1	1		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	4943	0	1719	3438	1538	1736	1827	1553	3433	1773	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	4943	0	1719	3438	1538	1736	1827	1553	3433	1773	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9				269			260		23	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1005			281			787			554	
Travel Time (s)		19.6			5.5			15.3			10.8	
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
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	4%	4%	4%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	142	917	0	93	444	269	29	183	31	407	420	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			
Detector Phase	1	6		5	2	2	7	4	4	3	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	11.7	28.8		10.7	25.7	25.7	11.7	22.5	22.5	11.6	34.8	
Total Split (s)	15.0	33.0		17.0	35.0	35.0	15.0	26.0	26.0	24.0	35.0	
Total Split (%)	15.0%	33.0%		17.0%	35.0%	35.0%	15.0%	26.0%	26.0%	24.0%	35.0%	
Yellow Time (s)	4.7	4.8		3.7	3.7	3.7	4.7	4.9	4.9	4.6	4.8	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.7	6.8		5.7	5.7	5.7	6.7	6.9	6.9	6.6	6.8	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None	None	None	None	
Act Effct Green (s)	11.5	36.3		9.2	31.9	31.9	6.3	15.3	15.3	15.4	29.1	
Actuated g/C Ratio	0.12	0.36		0.09	0.32	0.32	0.06	0.15	0.15	0.15	0.29	
v/c Ratio	0.71	0.51		0.59	0.40	0.40	0.27	0.66	0.07	0.77	0.79	
Control Delay	65.4	28.5		58.5	29.0	5.4	50.2	50.6	0.3	50.8	43.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	65.4	28.5		58.5	29.0	5.4	50.2	50.6	0.3	50.8	43.2	
LOS	E	C		E	C	A	D	D	A	D	D	
Approach Delay		33.4			24.5			44.1			46.9	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	85	179		58	127	0	18	108	0	128	239	
Queue Length 95th (ft)	#216	240		108	167	58	46	176	0	177	#392	
Internal Link Dist (ft)		925			201			707			474	
Turn Bay Length (ft)	490			135		110	190		30	390		
Base Capacity (vph)	199	1803		194	1123	683	144	348	506	598	538	
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	0.71	0.51		0.48	0.40	0.39	0.20	0.53	0.06	0.68	0.78	

Intersection Summary

Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 5 (5%), Referenced to phase 2:WBT and 6:EBT, Start of Red  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 35.7  
 Intersection Capacity Utilization 69.7%  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 5: Military Rd S & S 188th St



# 2027 Baseline AM LOS

Lanes, Volumes, Timings  
1: Pac Hwy S & S 188th St

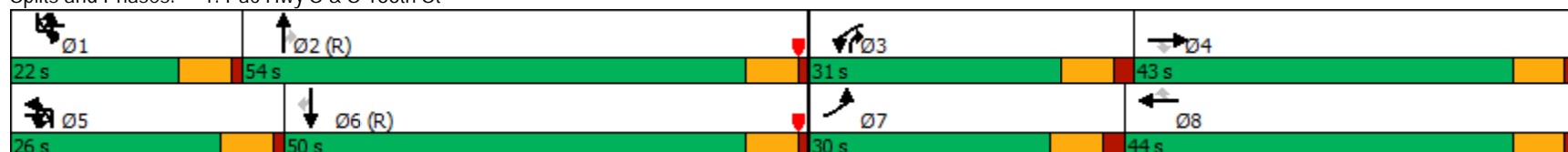
Tyee HS Expansion

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
Lane Configurations															
Traffic Volume (vph)	215	527	125	148	498	186	10	230	666	148	21	129	363	128	
Future Volume (vph)	215	527	125	148	498	186	10	230	666	148	21	129	363	128	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	300		0	510		510		180		200		410		0	
Storage Lanes	1		1	1		1		2		1		2		1	
Taper Length (ft)	25			25		25		25		25		25		25	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.97	0.95	1.00	0.95	0.97	0.95	1.00	
Ped Bike Factor	0.99		0.98	1.00		0.98		0.98		0.96		0.98		0.98	
Frnt			0.850			0.850				0.850				0.850	
Flt Protected	0.950			0.950				0.950				0.950			
Satd. Flow (prot)	1656	3312	1482	1671	3343	1495	0	3367	3471	1553	0	2943	3034	1357	
Flt Permitted	0.950			0.950				0.950				0.950			
Satd. Flow (perm)	1646	3312	1451	1665	3343	1460	0	3293	3471	1493	0	2869	3034	1325	
Right Turn on Red			Yes			Yes				Yes				Yes	
Satd. Flow (RTOR)			144			73				77				147	
Link Speed (mph)		35			35				40				40		
Link Distance (ft)		544			3413				1242				1027		
Travel Time (s)		10.6			66.5				21.2				17.5		
Confl. Peds. (#/hr)	10		7	7		10	7	8		17	10	17		8	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	
Heavy Vehicles (%)	9%	9%	9%	8%	8%	8%	4%	4%	4%	4%	19%	19%	19%	19%	
Shared Lane Traffic (%)															
Lane Group Flow (vph)	247	606	144	170	572	214	0	275	766	170	0	172	417	147	
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	Prot	Prot	NA	Perm	
Protected Phases	7	4	5!	3	8	1!	5!	5	2	3	1!	1	6		
Permitted Phases			4		8			8		2				6	
Detector Phase	7	4	5	3	8	1	5	5	2	3	1	1	6	6	
Switch Phase															
Minimum Initial (s)	5.0	7.0	7.0	5.0	7.0	15.0	7.0	7.0	10.0	5.0	15.0	15.0	10.0	10.0	
Minimum Split (s)	30.0	43.0	26.0	31.0	44.0	22.0	26.0	26.0	54.0	31.0	22.0	22.0	50.0	50.0	
Total Split (s)	30.0	43.0	26.0	31.0	44.0	22.0	26.0	26.0	54.0	31.0	22.0	22.0	50.0	50.0	
Total Split (%)	20.0%	28.7%	17.3%	20.7%	29.3%	14.7%	17.3%	17.3%	36.0%	20.7%	14.7%	14.7%	33.3%	33.3%	
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0	7.0	6.0	7.0	7.0	6.0		6.0	6.0	7.0		6.0	6.0	6.0	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?															
Recall Mode	None	None	None	None	None	None	None	None	C-Min	None	None	None	C-Min	C-Min	
Act Effct Green (s)	27.7	39.1	57.2	19.8	31.3	47.6		17.1	49.7	68.6		15.3	48.0	48.0	
Actuated g/C Ratio	0.18	0.26	0.38	0.13	0.21	0.32		0.11	0.33	0.46		0.10	0.32	0.32	
v/c Ratio	0.81	0.70	0.22	0.77	0.82	0.41		0.72	0.67	0.23		0.57	0.43	0.28	
Control Delay	78.7	55.4	4.6	85.0	66.8	24.8		75.0	47.2	12.0		72.2	43.3	7.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	
Total Delay	78.7	55.4	4.6	85.0	66.8	24.8		75.0	47.2	12.0		72.2	43.3	7.2	
LOS	E	E	A	F	E	C		E	D	B		E	D	A	
Approach Delay		53.9			60.7				48.6				42.8		
Approach LOS		D			E				D				D		
Queue Length 50th (ft)	228	276	0	162	283	100		135	351	49		84	177	0	
Queue Length 95th (ft)	#396	349	39	231	325	153		176	403	84		121	223	49	
Internal Link Dist (ft)		464			3333				1162				947		
Turn Bay Length (ft)	300			510		510		180		200		410			
Base Capacity (vph)	305	863	671	268	824	523		448	1175	774		313	985	529	
Starvation Cap Reductn	0	0	0	0	0	0		0	0	0		0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0		0	0	0		0	0	0	
Storage Cap Reductn	0	0	0	0	0	0		0	0	0		0	0	0	
Reduced v/c Ratio	0.81	0.70	0.21	0.63	0.69	0.41		0.61	0.65	0.22		0.55	0.42	0.28	

Intersection Summary

Area Type: Other  
 Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 67 (45%), Referenced to phase 2:NBT and 6:SBT, Start of Red  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay: 51.8  
 Intersection Capacity Utilization 88.0%  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 ! Phase conflict between lane groups.

Splits and Phases: 1: Pac Hwy S & S 188th St





Lanes, Volumes, Timings  
2: S 188th St & 42nd Ave S

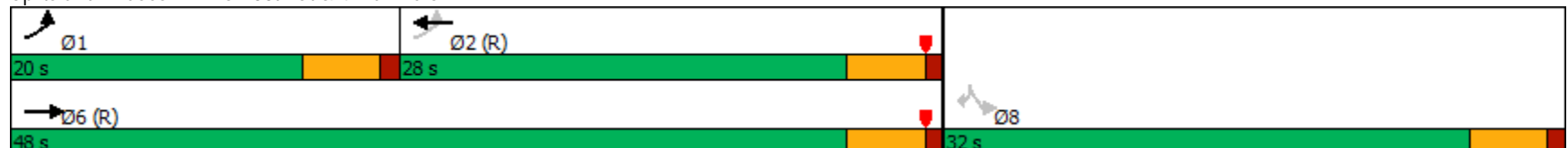
Tyee HS Expansion

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	189	677	772	201	168	119
Future Volume (vph)	189	677	772	201	168	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200			0	170	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor			0.99			0.97
Frt			0.969			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1703	3406	3254	0	1752	1568
Flt Permitted	0.131				0.950	
Satd. Flow (perm)	235	3406	3254	0	1752	1521
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			41			149
Link Speed (mph)		35	35		25	
Link Distance (ft)		3413	723		714	
Travel Time (s)		66.5	14.1		19.5	
Confl. Peds. (#/hr)	24			24		13
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	6%	6%	6%	6%	3%	3%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	236	846	1216	0	210	149
Turn Type	D.P+P	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases	2				8	8
Detector Phase	1	6	2		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	10.0	22.5	25.0		22.5	22.5
Total Split (s)	20.0	48.0	28.0		32.0	32.0
Total Split (%)	25.0%	60.0%	35.0%		40.0%	40.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						
Recall Mode	None	C-Min	C-Min		None	None
Act Effct Green (s)	50.9	55.9	39.7		14.1	14.1
Actuated g/C Ratio	0.64	0.70	0.50		0.18	0.18
v/c Ratio	0.66	0.36	0.74		0.68	0.38
Control Delay	21.2	5.9	22.0		41.7	7.8
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	21.2	5.9	22.0		41.7	7.8
LOS	C	A	C		D	A
Approach Delay		9.2	22.0		27.6	
Approach LOS		A	C		C	
Queue Length 50th (ft)	44	74	311		99	0
Queue Length 95th (ft)	102	112	#352		134	31
Internal Link Dist (ft)		3333	643		634	
Turn Bay Length (ft)	200				170	
Base Capacity (vph)	440	2381	1637		591	612
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.54	0.36	0.74		0.36	0.24

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 10 (13%), Referenced to phase 2:EBWB and 6:EBT, Start of Red  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 17.5  
 Intersection Capacity Utilization 62.2%  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 2: S 188th St & 42nd Ave S



HCM 6th TWSC  
3: S 188th St & Tyee West Dwy

Tyee HS Expansion

Intersection

Int Delay, s/veh	1.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	109	718	891	25	4	79
Future Vol, veh/h	109	718	891	25	4	79
Conflicting Peds, #/hr	6	0	0	6	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	6	6	3	3	12	12
Mvmt Flow	136	898	1114	31	5	99

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1151	0	-	0	1857
Stage 1	-	-	-	-	1136
Stage 2	-	-	-	-	721
Critical Hdwy	4.22	-	-	-	7.04
Critical Hdwy Stg 1	-	-	-	-	6.04
Critical Hdwy Stg 2	-	-	-	-	6.04
Follow-up Hdwy	2.26	-	-	-	3.62
Pot Cap-1 Maneuver	580	-	-	-	58
Stage 1	-	-	-	-	248
Stage 2	-	-	-	-	417
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	577	-	-	-	44
Mov Cap-2 Maneuver	-	-	-	-	135
Stage 1	-	-	-	-	188
Stage 2	-	-	-	-	414

Approach	EB	WB	SB
HCM Control Delay, s	1.7	0	16.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	577	-	-	-	135	432
HCM Lane V/C Ratio	0.236	-	-	-	0.037	0.229
HCM Control Delay (s)	13.2	-	-	-	32.7	15.8
HCM Lane LOS	B	-	-	-	D	C
HCM 95th %tile Q(veh)	0.9	-	-	-	0.1	0.9

Lanes, Volumes, Timings  
4: 46th Ave S & S 188th St

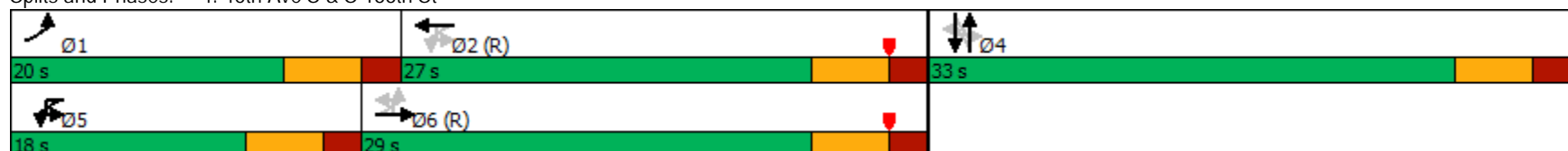
Tyee HS Expansion

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	24	665	35	2	29	848	98	1	49	39	22	52	27	21
Future Volume (vph)	24	665	35	2	29	848	98	1	49	39	22	52	27	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0		200		0		0		0	0		0
Storage Lanes	1		0		1		0		0		0	0		0
Taper Length (ft)	25				25				25			25		
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00					0.99			0.99	
Frnt		0.992				0.984				0.973			0.971	
Flt Protected	0.950				0.950					0.978			0.975	
Satd. Flow (prot)	1656	3285	0	0	1736	3416	0	0	0	1734	0	0	1687	0
Flt Permitted	0.180				0.274					0.820			0.783	
Satd. Flow (perm)	314	3285	0	0	500	3416	0	0	0	1446	0	0	1355	0
Right Turn on Red			Yes				Yes				Yes			Yes
Satd. Flow (RTOR)		7				15				17			18	
Link Speed (mph)		35				35				25			25	
Link Distance (ft)		608				1005				746			431	
Travel Time (s)		11.8				19.6				20.3			11.8	
Confl. Peds. (#/hr)				1					17		1	1		17
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	9%	9%	9%	4%	4%	4%	4%	4%	4%	4%	4%	6%	6%	6%
Shared Lane Traffic (%)														
Lane Group Flow (vph)	29	854	0	0	37	1154	0	0	0	136	0	0	122	0
Turn Type	pm+pt	NA		pm+pt	pm+pt	NA		Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	5	2				4			4	
Permitted Phases	6			2	2			4	4			4		
Detector Phase	1	6		5	5	2		4	4	4		4	4	
Switch Phase														
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	29.0		11.0	11.0	27.0		33.0	33.0	33.0		33.0	33.0	
Total Split (s)	20.0	29.0		18.0	18.0	27.0		33.0	33.0	33.0		33.0	33.0	
Total Split (%)	25.0%	36.3%		22.5%	22.5%	33.8%		41.3%	41.3%	41.3%		41.3%	41.3%	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0		2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0	0.0				0.0			0.0	
Total Lost Time (s)	6.0	6.0			6.0	6.0				6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lead	Lag								
Lead-Lag Optimize?														
Recall Mode	None	C-Min		None	None	C-Min		None	None	None		None	None	
Act Effct Green (s)	48.4	45.1			49.8	47.4				15.9			15.9	
Actuated g/C Ratio	0.60	0.56			0.62	0.59				0.20			0.20	
v/c Ratio	0.10	0.46			0.09	0.57				0.45			0.43	
Control Delay	8.0	11.2			16.9	25.5				26.7			25.6	
Queue Delay	0.0	0.0			0.0	0.0				0.0			0.0	
Total Delay	8.0	11.2			16.9	25.5				26.7			25.6	
LOS	A	B			B	C				C			C	
Approach Delay		11.1				25.2				26.7			25.6	
Approach LOS		B				C				C			C	
Queue Length 50th (ft)	3	87			11	222				57			49	
Queue Length 95th (ft)	14	162			m25	#345				76			69	
Internal Link Dist (ft)		528				925				666			351	
Turn Bay Length (ft)	150				200									
Base Capacity (vph)	439	1853			510	2028				499			469	
Starvation Cap Reductn	0	0			0	0				0			0	
Spillback Cap Reductn	0	0			0	0				0			0	
Storage Cap Reductn	0	0			0	0				0			0	
Reduced v/c Ratio	0.07	0.46			0.07	0.57				0.27			0.26	

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Red  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.57  
 Intersection Signal Delay: 20.0  
 Intersection Capacity Utilization 50.8%  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: 46th Ave S & S 188th St



Lanes, Volumes, Timings  
5: Military Rd S & S 188th St

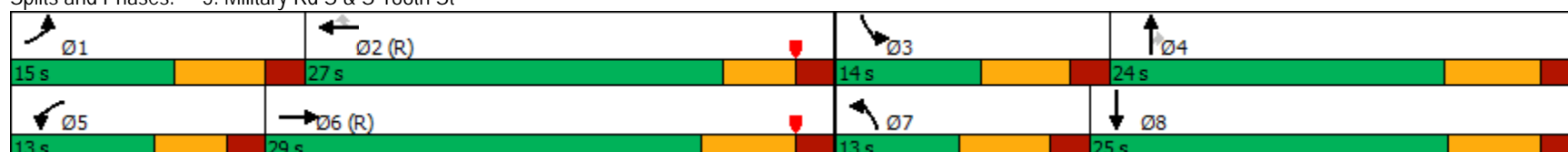
Tyee HS Expansion

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	640	13	13	525	375	35	216	52	341	81	165
Future Volume (vph)	114	640	13	13	525	375	35	216	52	341	81	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	490		480	135		110	190		30	390		0
Storage Lanes	1		1	1		1	1		1	2		0
Taper Length (ft)	25			25		25				25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor		1.00		1.00								
Frt		0.997				0.850			0.850		0.899	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	4970	0	1687	3374	1509	1687	1776	1509	3433	1675	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	4970	0	1686	3374	1509	1687	1776	1509	3433	1675	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				400			221		119	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1005			272			787			554	
Travel Time (s)		19.6			5.3			15.3			10.8	
Confl. Peds. (#/hr)			1	1								
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	4%	4%	4%	7%	7%	7%	7%	7%	7%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	134	768	0	15	618	441	41	254	61	401	289	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			
Detector Phase	1	6		5	2	2	7	4	4	3	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	11.7	28.8		10.7	25.7	25.7	11.7	22.5	22.5	11.6	34.8	
Total Split (s)	15.0	29.0		13.0	27.0	27.0	13.0	24.0	24.0	14.0	25.0	
Total Split (%)	18.8%	36.3%		16.3%	33.8%	33.8%	16.3%	30.0%	30.0%	17.5%	31.3%	
Yellow Time (s)	4.7	4.8		3.7	3.7	3.7	4.7	4.9	4.9	4.6	4.8	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.7	6.8		5.7	5.7	5.7	6.7	6.9	6.9	6.6	6.8	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None	None	None	None	
Act Effct Green (s)	8.3	32.3		5.5	20.9	20.9	5.8	15.1	15.1	9.8	23.8	
Actuated g/C Ratio	0.10	0.40		0.07	0.26	0.26	0.07	0.19	0.19	0.12	0.30	
v/c Ratio	0.74	0.38		0.13	0.70	0.64	0.34	0.76	0.13	0.96	0.50	
Control Delay	65.9	24.3		37.1	31.7	8.9	42.7	45.5	0.6	75.0	18.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	65.9	24.3		37.1	31.7	8.9	42.7	45.5	0.6	75.0	18.6	
LOS	E	C		D	C	A	D	D	A	E	B	
Approach Delay		30.5			22.4			37.5			51.4	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	74	75		7	148	16	20	118	0	-121	73	
Queue Length 95th (ft)	#146	135		24	188	75	47	182	0	#201	140	
Internal Link Dist (ft)		925			192			707			474	
Turn Bay Length (ft)	490			135		110	190		30	390		
Base Capacity (vph)	187	2010		153	900	696	132	379	496	418	581	
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	0.72	0.38		0.10	0.69	0.63	0.31	0.67	0.12	0.96	0.50	

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Red  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.96  
 Intersection Signal Delay: 33.2  
 Intersection Capacity Utilization 65.3%  
 Analysis Period (min) 15  
 - Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 5: Military Rd S & S 188th St



# 2027 Baseline School PM LOS

Lanes, Volumes, Timings  
1: Pac Hwy S & S 188th St

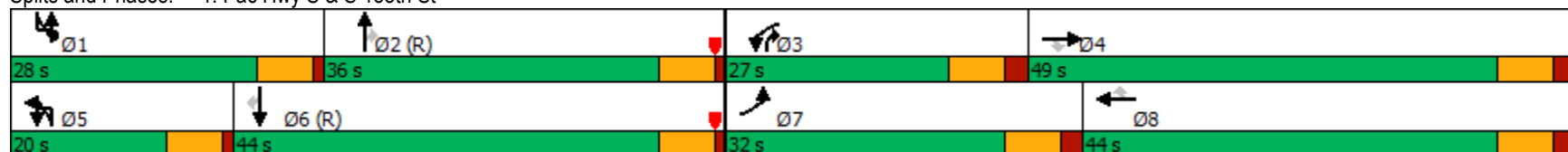
Tyee HS Expansion

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	201	761	346	205	441	281	22	115	472	124	36	282	1031	140
Future Volume (vph)	201	761	346	205	441	281	22	115	472	124	36	282	1031	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	510		510		180		200		410		0
Storage Lanes	1		1	1		1		2		1		2		1
Taper Length (ft)	25			25		25		25		25		25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.97	0.95	1.00	0.95	0.97	0.95	1.00
Ped Bike Factor	1.00		0.96	0.99		0.99		0.98		0.96		0.98		0.98
Frt			0.850			0.850				0.850				0.850
Flt Protected	0.950			0.950				0.950				0.950		
Satd. Flow (prot)	1656	3312	1482	1719	3438	1538	0	3400	3505	1568	0	3099	3195	1429
Flt Permitted	0.950			0.950				0.950				0.950		
Satd. Flow (perm)	1654	3312	1429	1705	3438	1516	0	3337	3505	1510	0	3023	3195	1395
Right Turn on Red			Yes			Yes				Yes				Yes
Satd. Flow (RTOR)			189			247				125				132
Link Speed (mph)		35			35				40				40	
Link Distance (ft)		544			3413				1259				1027	
Travel Time (s)		10.6			66.5				21.5				17.5	
Confl. Peds. (#/hr)	2		20	20		2	20	9		17	2	17		9
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	9%	9%	9%	5%	5%	5%	3%	3%	3%	3%	13%	13%	13%	13%
Shared Lane Traffic (%)														
Lane Group Flow (vph)	205	777	353	209	450	287	0	139	482	127	0	325	1052	143
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	Prot	NA	pm+ov	Prot	Prot	NA	Perm
Protected Phases	7	4		3	8		5	5	2	3	1	1	6	
Permitted Phases			4			8				2				6
Detector Phase	7	4	4	3	8	8	5	5	2	3	1	1	6	6
Switch Phase														
Minimum Initial (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	10.0	5.0	15.0	15.0	10.0	10.0
Minimum Split (s)	12.0	42.0	42.0	12.0	44.0	44.0	13.0	13.0	34.0	12.0	21.0	21.0	37.0	37.0
Total Split (s)	32.0	49.0	49.0	27.0	44.0	44.0	20.0	20.0	36.0	27.0	28.0	28.0	44.0	44.0
Total Split (%)	22.9%	35.0%	35.0%	19.3%	31.4%	31.4%	14.3%	14.3%	25.7%	19.3%	20.0%	20.0%	31.4%	31.4%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		6.0	6.0	7.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag
Lead-Lag Optimize?														
Recall Mode	None	None	None	None	None	None	None	None	C-Max	None	None	None	C-Max	C-Max
Act Effct Green (s)	21.3	39.1	39.1	19.3	37.1	37.1		11.8	35.8	54.1		19.8	43.8	43.8
Actuated g/C Ratio	0.15	0.28	0.28	0.14	0.26	0.26		0.08	0.26	0.39		0.14	0.31	0.31
v/c Ratio	0.81	0.84	0.66	0.89	0.50	0.49		0.49	0.54	0.19		0.74	1.05	0.27
Control Delay	81.2	56.4	25.9	94.2	45.6	10.9		66.7	49.1	5.2		68.4	89.4	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	81.2	56.4	25.9	94.2	45.6	10.9		66.7	49.1	5.2		68.4	89.4	9.1
LOS	F	E	C	F	D	B		E	D	A		E	F	A
Approach Delay		52.1			45.8				44.9				77.3	
Approach LOS		D			D				D				E	
Queue Length 50th (ft)	181	343	130	188	180	27		63	208	1		147	~586	7
Queue Length 95th (ft)	268	421	243	#329	239	111		97	274	42		198	#753	62
Internal Link Dist (ft)		464			3333				1179				947	
Turn Bay Length (ft)	300			510		510		180		200		410		
Base Capacity (vph)	295	993	561	245	926	588		340	897	675		486	999	527
Starvation Cap Reductn	0	0	0	0	0	0		0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0	0		0	0	0
Reduced v/c Ratio	0.69	0.78	0.63	0.85	0.49	0.49		0.41	0.54	0.19		0.67	1.05	0.27

Intersection Summary

Area Type: Other  
 Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 115 (82%), Referenced to phase 2:NBT and 6:SBT, Start of Red  
 Natural Cycle: 125  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.05  
 Intersection Signal Delay: 58.1  
 Intersection Capacity Utilization 93.8%  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Pac Hwy S & S 188th St



Lanes, Volumes, Timings  
2: S 188th St & 42nd Ave S

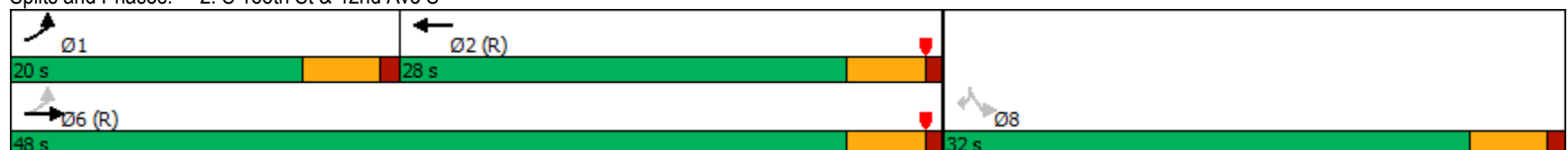
Tyee HS Expansion

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	111	1063	827	131	121	165
Future Volume (vph)	111	1063	827	131	121	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200			0	170	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor			0.98			0.97
Frnt			0.980			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1736	3471	3286	0	1736	1553
Flt Permitted	0.183				0.950	
Satd. Flow (perm)	334	3471	3286	0	1736	1510
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			22			179
Link Speed (mph)		35	35		25	
Link Distance (ft)		3413	723		714	
Travel Time (s)		66.5	14.1		19.5	
Confl. Peds. (#/hr)	48			48		17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	6%	6%	4%	4%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	121	1155	1041	0	132	179
Turn Type	pm+pt	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases	6				8	8
Detector Phase	1	6	2		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		7.0	7.0
Minimum Split (s)	10.0	22.5	25.0		31.0	31.0
Total Split (s)	20.0	48.0	28.0		32.0	32.0
Total Split (%)	25.0%	60.0%	35.0%		40.0%	40.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						
Recall Mode	None	C-Min	C-Min		None	None
Act Effct Green (s)	54.0	54.0	44.2		16.0	16.0
Actuated g/C Ratio	0.68	0.68	0.55		0.20	0.20
v/c Ratio	0.35	0.49	0.57		0.38	0.40
Control Delay	9.5	8.9	12.5		28.4	6.3
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	9.5	8.9	12.5		28.4	6.3
LOS	A	A	B		C	A
Approach Delay		8.9	12.5		15.6	
Approach LOS		A	B		B	
Queue Length 50th (ft)	14	97	77		62	0
Queue Length 95th (ft)	52	250	#357		90	42
Internal Link Dist (ft)		3333	643		634	
Turn Bay Length (ft)	200				170	
Base Capacity (vph)	488	2343	1823		585	628
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.25	0.49	0.57		0.23	0.29

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 10 (13%), Referenced to phase 2:WBT and 6:EBTL, Start of Red  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.57  
 Intersection Signal Delay: 11.1  
 Intersection Capacity Utilization 59.4%  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 2: S 188th St & 42nd Ave S



HCM 6th TWSC  
3: S 188th St & Tyee West Dwy

Tyee HS Expansion

Intersection

Int Delay, s/veh	1.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	34	1128	842	3	24	102
Future Vol, veh/h	34	1128	842	3	24	102
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	7	7	3	3	9	9
Mvmt Flow	37	1226	915	3	26	111

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	919	0	0	1605	460
Stage 1	-	-	-	918	-
Stage 2	-	-	-	687	-
Critical Hdwy	4.24	-	-	6.98	7.08
Critical Hdwy Stg 1	-	-	-	5.98	-
Critical Hdwy Stg 2	-	-	-	5.98	-
Follow-up Hdwy	2.27	-	-	3.59	3.39
Pot Cap-1 Maneuver	708	-	-	90	530
Stage 1	-	-	-	333	-
Stage 2	-	-	-	442	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	707	-	-	85	529
Mov Cap-2 Maneuver	-	-	-	205	-
Stage 1	-	-	-	315	-
Stage 2	-	-	-	442	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	15.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	707	-	-	-	205	529
HCM Lane V/C Ratio	0.052	-	-	-	0.127	0.21
HCM Control Delay (s)	10.4	-	-	-	25.1	13.6
HCM Lane LOS	B	-	-	-	D	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.4	0.8



Lanes, Volumes, Timings  
4: 46th Ave S & S 188th St

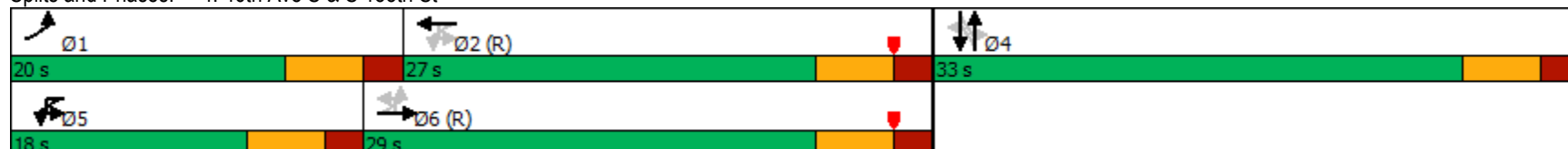
Tyee HS Expansion

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	14	1089	66	8	68	777	52	37	7	19	70	34	22
Future Volume (vph)	14	1089	66	8	68	777	52	37	7	19	70	34	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0		200		0	0		0	0		0
Storage Lanes	1		0		1		0	0		0	0		0
Taper Length (ft)	25				25			25			25		
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor									0.98			0.99	
Frt		0.991				0.991			0.959			0.977	
Flt Protected	0.950				0.950				0.971			0.973	
Satd. Flow (prot)	1583	3138	0	0	1752	3473	0	0	1769	0	0	1754	0
Flt Permitted	0.321				0.156				0.767			0.791	
Satd. Flow (perm)	535	3138	0	0	288	3473	0	0	1368	0	0	1426	0
Right Turn on Red			Yes				Yes			Yes			Yes
Satd. Flow (RTOR)		8				8			20			14	
Link Speed (mph)		35				35			25			25	
Link Distance (ft)		608				1005			746			431	
Travel Time (s)		11.8				19.6			20.3			11.8	
Confl. Peds. (#/hr)								52					52
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	0.95
Heavy Vehicles (%)	14%	14%	14%	3%	3%	3%	3%	0%	0%	0%	2%	2%	2%
Shared Lane Traffic (%)													
Lane Group Flow (vph)	15	1215	0	0	80	873	0	0	66	0	0	133	0
Turn Type	pm+pt	NA		pm+pt	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	5	2			4			4	
Permitted Phases	6			2	2			4			4		
Detector Phase	1	6		5	5	2		4	4		4	4	
Switch Phase													
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	26.0		11.0	11.0	27.0		34.0	34.0		34.0	34.0	
Total Split (s)	20.0	29.0		18.0	18.0	27.0		33.0	33.0		33.0	33.0	
Total Split (%)	25.0%	36.3%		22.5%	22.5%	33.8%		41.3%	41.3%		41.3%	41.3%	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0	6.0			6.0	6.0			6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lead	Lag							
Lead-Lag Optimize?													
Recall Mode	None	C-Min		None	None	C-Min		None	None		None	None	
Act Effct Green (s)	51.4	47.4			56.2	54.7			11.0			11.0	
Actuated g/C Ratio	0.64	0.59			0.70	0.68			0.14			0.14	
v/c Ratio	0.04	0.65			0.26	0.37			0.32			0.64	
Control Delay	9.2	18.8			6.6	7.2			26.1			42.2	
Queue Delay	0.0	0.0			0.0	0.0			0.0			0.0	
Total Delay	9.2	18.8			6.6	7.2			26.1			42.2	
LOS	A	B			A	A			C			D	
Approach Delay		18.7				7.2			26.1			42.2	
Approach LOS		B				A			C			D	
Queue Length 50th (ft)	2	147			10	71			21			57	
Queue Length 95th (ft)	m10	337			28	192			52			104	
Internal Link Dist (ft)		528				925			666			351	
Turn Bay Length (ft)	150				200								
Base Capacity (vph)	564	1860			424	2378			474			490	
Starvation Cap Reductn	0	0			0	0			0			0	
Spillback Cap Reductn	0	0			0	0			0			0	
Storage Cap Reductn	0	0			0	0			0			0	
Reduced v/c Ratio	0.03	0.65			0.19	0.37			0.14			0.27	

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBTL, Start of Red  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.65  
 Intersection Signal Delay: 15.6  
 Intersection Capacity Utilization 72.2%  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: 46th Ave S & S 188th St



Lanes, Volumes, Timings  
5: Military Rd S & S 188th St

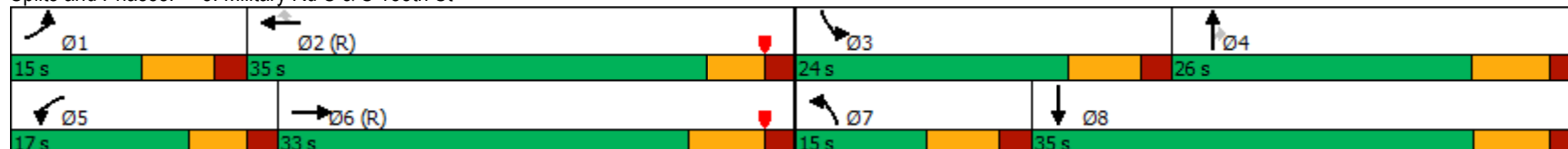
Tyee HS Expansion

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	157	951	59	102	489	297	32	202	34	449	317	146
Future Volume (vph)	157	951	59	102	489	297	32	202	34	449	317	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	490		480	135		110	190		30	390		0
Storage Lanes	1		1	1		1	1		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Fr't		0.991				0.850			0.850		0.953	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	4943	0	1719	3438	1538	1736	1827	1553	3433	1775	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	4943	0	1719	3438	1538	1736	1827	1553	3433	1775	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9				313			260		23	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1005			281			787			554	
Travel Time (s)		19.6			5.5			15.3			10.8	
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
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	4%	4%	4%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	165	1063	0	107	515	313	34	213	36	473	488	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			
Detector Phase	1	6		5	2	2	7	4	4	3	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	11.7	28.8		10.7	25.7	25.7	11.7	22.5	22.5	11.6	34.8	
Total Split (s)	15.0	33.0		17.0	35.0	35.0	15.0	26.0	26.0	24.0	35.0	
Total Split (%)	15.0%	33.0%		17.0%	35.0%	35.0%	15.0%	26.0%	26.0%	24.0%	35.0%	
Yellow Time (s)	4.7	4.8		3.7	3.7	3.7	4.7	4.9	4.9	4.6	4.8	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.7	6.8		5.7	5.7	5.7	6.7	6.9	6.9	6.6	6.8	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None	None	None	None	
Act Effct Green (s)	12.2	31.9		9.6	29.4	29.4	6.5	16.1	16.1	16.4	30.8	
Actuated g/C Ratio	0.12	0.32		0.10	0.29	0.29	0.06	0.16	0.16	0.16	0.31	
v/c Ratio	0.78	0.67		0.65	0.51	0.47	0.30	0.72	0.08	0.84	0.87	
Control Delay	71.4	33.3		61.7	31.6	5.7	51.1	53.8	0.3	54.9	49.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	71.4	33.3		61.7	31.6	5.7	51.1	53.8	0.3	54.9	49.3	
LOS	E	C		E	C	A	D	D	A	D	D	
Approach Delay		38.4			26.4			46.6			52.1	
Approach LOS		D			C			D			D	
Queue Length 50th (ft)	~124	229		66	143	0	21	125	0	150	284	
Queue Length 95th (ft)	#255	285		121	195	62	52	203	0	#220	#494	
Internal Link Dist (ft)		925			201			707			474	
Turn Bay Length (ft)	490			135		110	190		30	390		
Base Capacity (vph)	211	1581		194	1026	678	144	348	506	597	562	
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	0.78	0.67		0.55	0.50	0.46	0.24	0.61	0.07	0.79	0.87	

Intersection Summary

Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 5 (5%), Referenced to phase 2:WBT and 6:EBT, Start of Red  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.87  
 Intersection Signal Delay: 39.6  
 Intersection Capacity Utilization 76.7%  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 5: Military Rd S & S 188th St



# **2027 Future with Expansion AM LOS**

Lanes, Volumes, Timings  
1: Pac Hwy S & S 188th St

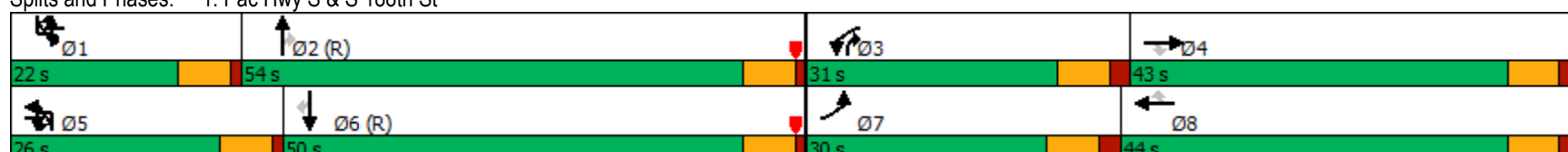
Tyee HS Expansion

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	215	536	125	148	502	190	10	230	666	148	21	138	363	128
Future Volume (vph)	215	536	125	148	502	190	10	230	666	148	21	138	363	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	510		510		180		200		410		0
Storage Lanes	1		1	1		1		2		1		2		1
Taper Length (ft)	25			25		25		25				25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.97	0.95	1.00	0.95	0.97	0.95	1.00
Ped Bike Factor	0.99		0.98	1.00		0.98		0.98		0.96		0.98		0.98
Frt			0.850			0.850				0.850				0.850
Flt Protected	0.950			0.950				0.950				0.950		
Satd. Flow (prot)	1656	3312	1482	1671	3343	1495	0	3367	3471	1553	0	2943	3034	1357
Flt Permitted	0.950			0.950				0.950				0.950		
Satd. Flow (perm)	1647	3312	1451	1665	3343	1460	0	3299	3471	1493	0	2869	3034	1325
Right Turn on Red			Yes			Yes				Yes				Yes
Satd. Flow (RTOR)			144			73				73				147
Link Speed (mph)		35			35				40				40	
Link Distance (ft)		544			3413				1242				1027	
Travel Time (s)		10.6			66.5				21.2				17.5	
Confl. Peds. (#/hr)	10		7	7		10	7	8		17	10	17		8
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	9%	9%	9%	8%	8%	8%	4%	4%	4%	4%	19%	19%	19%	19%
Shared Lane Traffic (%)														
Lane Group Flow (vph)	247	616	144	170	577	218	0	275	766	170	0	183	417	147
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	Prot	Prot	NA	Perm
Protected Phases	7	4	5!	3	8	1!	5!	5	2	3	1!	1	6	
Permitted Phases			4			8				2				6
Detector Phase	7	4	5	3	8	1	5	5	2	3	1	1	6	6
Switch Phase														
Minimum Initial (s)	5.0	7.0	7.0	5.0	7.0	15.0	7.0	7.0	10.0	5.0	15.0	15.0	10.0	10.0
Minimum Split (s)	30.0	43.0	26.0	31.0	44.0	22.0	26.0	26.0	54.0	31.0	22.0	22.0	50.0	50.0
Total Split (s)	30.0	43.0	26.0	31.0	44.0	22.0	26.0	26.0	54.0	31.0	22.0	22.0	50.0	50.0
Total Split (%)	20.0%	28.7%	17.3%	20.7%	29.3%	14.7%	17.3%	17.3%	36.0%	20.7%	14.7%	14.7%	33.3%	33.3%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	6.0	7.0	7.0	6.0	6.0	6.0	6.0	7.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag
Lead-Lag Optimize?														
Recall Mode	None	None	None	None	None	None	None	None	C-Min	None	None	None	C-Min	C-Min
Act Effct Green (s)	27.6	39.2	57.3	19.8	31.4	47.9		17.1	49.5	68.3		15.5	47.9	47.9
Actuated g/C Ratio	0.18	0.26	0.38	0.13	0.21	0.32		0.11	0.33	0.46		0.10	0.32	0.32
v/c Ratio	0.81	0.71	0.22	0.77	0.82	0.42		0.72	0.67	0.23		0.60	0.43	0.28
Control Delay	78.9	55.7	4.6	85.0	66.9	25.0		75.0	47.4	12.5		73.3	43.3	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	78.9	55.7	4.6	85.0	66.9	25.0		75.0	47.4	12.5		73.3	43.3	7.2
LOS	E	E	A	F	E	C		E	D	B		E	D	A
Approach Delay		54.1			60.6				48.8				43.6	
Approach LOS		D			E				D				D	
Queue Length 50th (ft)	228	281	0	162	285	103		135	351	51		90	177	0
Queue Length 95th (ft)	#396	356	39	231	328	156		176	403	86		127	223	49
Internal Link Dist (ft)		464			3333				1162				947	
Turn Bay Length (ft)	300			510		510		180		200		410		
Base Capacity (vph)	304	865	672	268	824	524		448	1173	769		314	983	528
Starvation Cap Reductn	0	0	0	0	0	0		0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0	0		0	0	0
Reduced v/c Ratio	0.81	0.71	0.21	0.63	0.70	0.42		0.61	0.65	0.22		0.58	0.42	0.28

Intersection Summary

Area Type: Other  
 Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 67 (45%), Referenced to phase 2:NBT and 6:SBT, Start of Red  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay: 52.1  
 Intersection Capacity Utilization 88.1%  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 ! Phase conflict between lane groups.

Splits and Phases: 1: Pac Hwy S & S 188th St



Lanes, Volumes, Timings  
2: S 188th St & 42nd Ave S

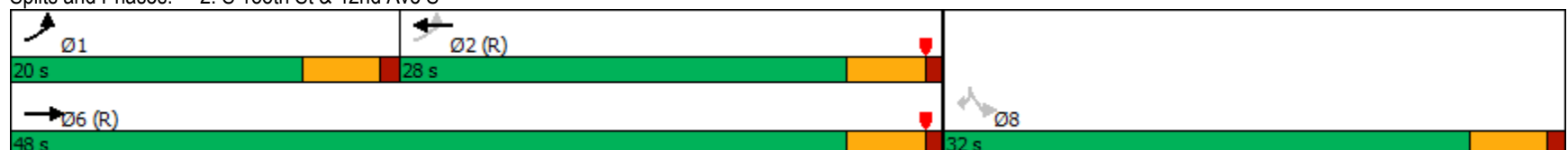
Tyee HS Expansion

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	189	704	784	227	221	119
Future Volume (vph)	189	704	784	227	221	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200			0	170	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor			0.98			0.97
Frnt			0.966			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1703	3406	3240	0	1752	1568
Flt Permitted	0.109				0.950	
Satd. Flow (perm)	195	3406	3240	0	1752	1521
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			47			149
Link Speed (mph)		35	35		25	
Link Distance (ft)		3413	723		714	
Travel Time (s)		66.5	14.1		19.5	
Confl. Peds. (#/hr)	24			24		13
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	6%	6%	6%	6%	3%	3%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	236	880	1264	0	276	149
Turn Type	D.P+P	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases	2				8	8
Detector Phase	1	6	2		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	10.0	22.5	25.0		22.5	22.5
Total Split (s)	20.0	48.0	28.0		32.0	32.0
Total Split (%)	25.0%	60.0%	35.0%		40.0%	40.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						
Recall Mode	None	C-Min	C-Min		None	None
Act Effct Green (s)	47.9	52.9	36.7		17.1	17.1
Actuated g/C Ratio	0.60	0.66	0.46		0.21	0.21
v/c Ratio	0.72	0.39	0.84		0.74	0.34
Control Delay	28.1	7.5	24.3		41.0	6.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	28.1	7.5	24.3		41.0	6.5
LOS	C	A	C		D	A
Approach Delay		11.9	24.3		28.9	
Approach LOS		B	C		C	
Queue Length 50th (ft)	62	92	92		130	0
Queue Length 95th (ft)	118	135	#406		163	29
Internal Link Dist (ft)		3333	643		634	
Turn Bay Length (ft)	200				170	
Base Capacity (vph)	414	2254	1511		591	612
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.57	0.39	0.84		0.47	0.24

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 10 (13%), Referenced to phase 2:EBWB and 6:EBT, Start of Red  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.84  
 Intersection Signal Delay: 20.0  
 Intersection Capacity Utilization 65.3%  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 2: S 188th St & 42nd Ave S



HCM 6th TWSC  
3: S 188th St & Tyee West Dwy

Tyee HS Expansion

Intersection

Int Delay, s/veh	1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑		↘	↘
Traffic Vol, veh/h	74	833	970	35	9	38
Future Vol, veh/h	74	833	970	35	9	38
Conflicting Peds, #/hr	6	0	0	6	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	6	6	3	3	12	12
Mvmt Flow	93	1041	1213	44	11	48

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1263	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.22	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.26	-	-
Pot Cap-1 Maneuver	525	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	522	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	19.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	522	-	-	-	129	396
HCM Lane V/C Ratio	0.177	-	-	-	0.087	0.12
HCM Control Delay (s)	13.4	-	-	-	35.6	15.3
HCM Lane LOS	B	-	-	-	E	C
HCM 95th %tile Q(veh)	0.6	-	-	-	0.3	0.4

Lanes, Volumes, Timings  
4: 46th Ave S & S 188th St

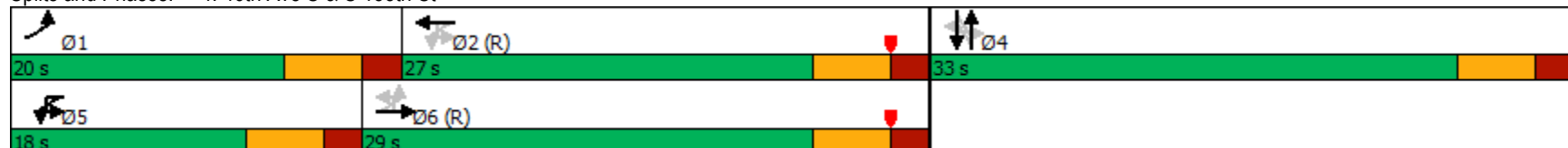
Tyee HS Expansion

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕			↔	↕				↕			↕	
Traffic Volume (vph)	139	670	35	2	29	878	129	1	49	74	22	78	45	26
Future Volume (vph)	139	670	35	2	29	878	129	1	49	74	22	78	45	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0		200		0		0		0	0		0
Storage Lanes	1		0		1		0		0		0	0		0
Taper Length (ft)	25				25				25			25		
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00					0.99			0.99	
Frnt		0.992				0.981				0.980			0.976	
Flt Protected	0.950				0.950					0.983			0.975	
Satd. Flow (prot)	1656	3285	0	0	1736	3405	0	0	0	1757	0	0	1698	0
Flt Permitted	0.105				0.320					0.815			0.720	
Satd. Flow (perm)	183	3285	0	0	584	3405	0	0	0	1451	0	0	1253	0
Right Turn on Red			Yes				Yes				Yes			Yes
Satd. Flow (RTOR)		7				20				12			14	
Link Speed (mph)		35				35				25			25	
Link Distance (ft)		252				1005				746			431	
Travel Time (s)		4.9				19.6				20.3			11.8	
Confl. Peds. (#/hr)				1					17		1	1		17
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	9%	9%	9%	4%	4%	4%	4%	4%	4%	4%	4%	6%	6%	6%
Shared Lane Traffic (%)														
Lane Group Flow (vph)	170	860	0	0	37	1228	0	0	0	178	0	0	182	0
Turn Type	pm+pt	NA		pm+pt	pm+pt	NA		Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	5	2				4			4	
Permitted Phases	6			2	2			4	4			4		
Detector Phase	1	6		5	5	2		4	4	4		4	4	
Switch Phase														
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	29.0		11.0	11.0	27.0		33.0	33.0	33.0		33.0	33.0	
Total Split (s)	20.0	29.0		18.0	18.0	27.0		33.0	33.0	33.0		33.0	33.0	
Total Split (%)	25.0%	36.3%		22.5%	22.5%	33.8%		41.3%	41.3%	41.3%		41.3%	41.3%	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0		2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0	0.0				0.0			0.0	
Total Lost Time (s)	6.0	6.0			6.0	6.0				6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lead	Lag								
Lead-Lag Optimize?														
Recall Mode	None	C-Min		None	None	C-Min		None	None	None		None	None	
Act Effct Green (s)	51.6	45.3			43.0	37.5				15.7			15.7	
Actuated g/C Ratio	0.64	0.57			0.54	0.47				0.20			0.20	
v/c Ratio	0.61	0.46			0.09	0.76				0.61			0.71	
Control Delay	24.7	12.0			15.8	35.1				34.6			41.4	
Queue Delay	0.0	0.0			0.0	0.0				0.0			0.0	
Total Delay	24.7	12.0			15.8	35.1				34.6			41.4	
LOS	C	B			B	D				C			D	
Approach Delay		14.1				34.5				34.6			41.4	
Approach LOS		B				C				C			D	
Queue Length 50th (ft)	36	88			12	308				78			80	
Queue Length 95th (ft)	96	203			m23	#480				102			106	
Internal Link Dist (ft)		172				925				666			351	
Turn Bay Length (ft)	150				200									
Base Capacity (vph)	377	1863			533	1608				497			432	
Starvation Cap Reductn	0	0			0	0				0			0	
Spillback Cap Reductn	0	0			0	0				0			0	
Storage Cap Reductn	0	0			0	0				0			0	
Reduced v/c Ratio	0.45	0.46			0.07	0.76				0.36			0.42	

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Red  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.76  
 Intersection Signal Delay: 27.1  
 Intersection Capacity Utilization 68.4%  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: 46th Ave S & S 188th St



Lanes, Volumes, Timings  
5: Military Rd S & S 188th St

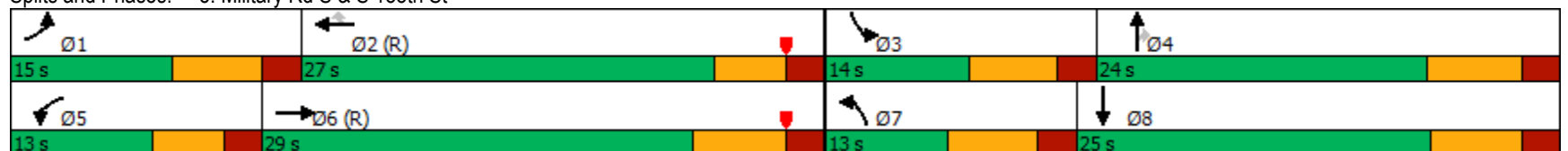
Tyee HS Expansion

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	132	653	13	13	551	375	35	216	52	341	81	200
Future Volume (vph)	132	653	13	13	551	375	35	216	52	341	81	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	490		480	135		110	190		30	390		0
Storage Lanes	1		1	1		1	1		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor		1.00		1.00								
Frnt		0.997				0.850			0.850		0.893	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	4970	0	1687	3374	1509	1687	1776	1509	3433	1663	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	4970	0	1686	3374	1509	1687	1776	1509	3433	1663	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				389			221		144	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1005			272			787			554	
Travel Time (s)		19.6			5.3			15.3			10.8	
Confl. Peds. (#/hr)			1	1								
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	4%	4%	4%	7%	7%	7%	7%	7%	7%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	155	783	0	15	648	441	41	254	61	401	330	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			
Detector Phase	1	6		5	2	2	7	4	4	3	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	11.7	28.8		10.7	25.7	25.7	11.7	22.5	22.5	11.6	34.8	
Total Split (s)	15.0	29.0		13.0	27.0	27.0	13.0	24.0	24.0	14.0	25.0	
Total Split (%)	18.8%	36.3%		16.3%	33.8%	33.8%	16.3%	30.0%	30.0%	17.5%	31.3%	
Yellow Time (s)	4.7	4.8		3.7	3.7	3.7	4.7	4.9	4.9	4.6	4.8	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.7	6.8		5.7	5.7	5.7	6.7	6.9	6.9	6.6	6.8	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None	None	None	None	
Act Effct Green (s)	9.0	32.9		5.5	20.7	20.7	5.8	15.1	15.1	9.2	23.3	
Actuated g/C Ratio	0.11	0.41		0.07	0.26	0.26	0.07	0.19	0.19	0.12	0.29	
v/c Ratio	0.79	0.38		0.13	0.74	0.65	0.34	0.76	0.13	1.02	0.56	
Control Delay	68.8	21.0		37.1	33.1	9.6	42.7	45.5	0.6	89.5	19.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	68.8	21.0		37.1	33.1	9.6	42.7	45.5	0.6	89.5	19.2	
LOS	E	C		D	C	A	D	D	A	F	B	
Approach Delay		28.9			23.7			37.5			57.8	
Approach LOS		C			C			D			E	
Queue Length 50th (ft)	86	76		7	154	20	20	118	0	~131	83	
Queue Length 95th (ft)	#175	139		24	198	82	47	182	0	#201	155	
Internal Link Dist (ft)		925			192			707			474	
Turn Bay Length (ft)	490			135		110	190		30	390		
Base Capacity (vph)	195	2043		153	898	687	132	379	496	395	587	
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	0.79	0.38		0.10	0.72	0.64	0.31	0.67	0.12	1.02	0.56	

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Red  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.02  
 Intersection Signal Delay: 34.8  
 Intersection Capacity Utilization 65.3%  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 5: Military Rd S & S 188th St





HCM 6th TWSC  
6: S 188th St & New Accesss

Tyee HS Expansion

Intersection

Int Delay, s/veh 0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	847	936	20	0	74
Future Vol, veh/h	0	847	936	20	0	74
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1059	1170	25	0	93

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	0	-	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	15.1
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	450
HCM Lane V/C Ratio	-	-	-	0.206
HCM Control Delay (s)	-	-	-	15.1
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.8

# **2027 Future with Expansion School PM LOS**

Lanes, Volumes, Timings  
1: Pac Hwy S & S 188th St

Tyee HS Expansion

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	201	763	346	205	446	287	22	115	472	124	36	285	1031	140
Future Volume (vph)	201	763	346	205	446	287	22	115	472	124	36	285	1031	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	510		510		180		200		410		0
Storage Lanes	1		1	1		1		2		1		2		1
Taper Length (ft)	25			25		25		25		25		25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.97	0.95	1.00	0.95	0.97	0.95	1.00
Ped Bike Factor	1.00		0.96	0.99		0.99		0.98		0.96		0.98		0.98
Frt			0.850			0.850				0.850				0.850
Flt Protected	0.950			0.950		0.950		0.950				0.950		
Satd. Flow (prot)	1656	3312	1482	1719	3438	1538	0	3400	3505	1568	0	3099	3195	1429
Flt Permitted	0.950			0.950		0.950		0.950				0.950		
Satd. Flow (perm)	1654	3312	1429	1705	3438	1516	0	3348	3505	1510	0	3023	3195	1395
Right Turn on Red			Yes			Yes				Yes				Yes
Satd. Flow (RTOR)			189			247				125				132
Link Speed (mph)		35			35				40				40	
Link Distance (ft)		544			3413				1259				1027	
Travel Time (s)		10.6			66.5				21.5				17.5	
Confl. Peds. (#/hr)	2		20	20		2	20	9		17	2	17		9
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	9%	9%	9%	5%	5%	5%	3%	3%	3%	3%	13%	13%	13%	13%
Shared Lane Traffic (%)														
Lane Group Flow (vph)	205	779	353	209	455	293	0	139	482	127	0	328	1052	143
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	Prot	NA	pm+ov	Prot	Prot	NA	Perm
Protected Phases	7	4		3	8		5	5	2	3	1	1	6	
Permitted Phases			4			8				2				6
Detector Phase	7	4	4	3	8	8	5	5	2	3	1	1	6	6
Switch Phase														
Minimum Initial (s)	5.0	7.0	7.0	5.0	7.0	7.0	7.0	7.0	10.0	5.0	15.0	15.0	10.0	10.0
Minimum Split (s)	12.0	42.0	42.0	12.0	44.0	44.0	13.0	13.0	34.0	12.0	21.0	21.0	37.0	37.0
Total Split (s)	32.0	49.0	49.0	27.0	44.0	44.0	20.0	20.0	36.0	27.0	28.0	28.0	44.0	44.0
Total Split (%)	22.9%	35.0%	35.0%	19.3%	31.4%	31.4%	14.3%	14.3%	25.7%	19.3%	20.0%	20.0%	31.4%	31.4%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		6.0	6.0	7.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag
Lead-Lag Optimize?														
Recall Mode	None	None	None	None	None	None	None	None	C-Max	None	None	None	C-Max	C-Max
Act Effct Green (s)	21.3	39.2	39.2	19.3	37.1	37.1		11.8	35.7	53.9		19.9	43.8	43.8
Actuated g/C Ratio	0.15	0.28	0.28	0.14	0.26	0.26		0.08	0.26	0.38		0.14	0.31	0.31
v/c Ratio	0.81	0.84	0.66	0.89	0.50	0.50		0.49	0.54	0.19		0.75	1.05	0.27
Control Delay	81.2	56.5	25.8	94.2	45.7	11.5		66.7	49.2	5.2		68.5	89.6	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	81.2	56.5	25.8	94.2	45.7	11.5		66.7	49.2	5.2		68.5	89.6	9.1
LOS	F	E	C	F	D	B		E	D	A		E	F	A
Approach Delay		52.2			45.8				45.0				77.5	
Approach LOS		D			D				D				E	
Queue Length 50th (ft)	181	344	130	188	182	31		63	208	1		148	~586	7
Queue Length 95th (ft)	268	422	243	#329	242	118		97	274	42		200	#753	62
Internal Link Dist (ft)		464			3333				1179				947	
Turn Bay Length (ft)	300			510		510		180		200		410		
Base Capacity (vph)	295	993	561	245	926	589		340	893	674		486	998	526
Starvation Cap Reductn	0	0	0	0	0	0		0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0		0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0		0	0	0		0	0	0
Reduced v/c Ratio	0.69	0.78	0.63	0.85	0.49	0.50		0.41	0.54	0.19		0.67	1.05	0.27

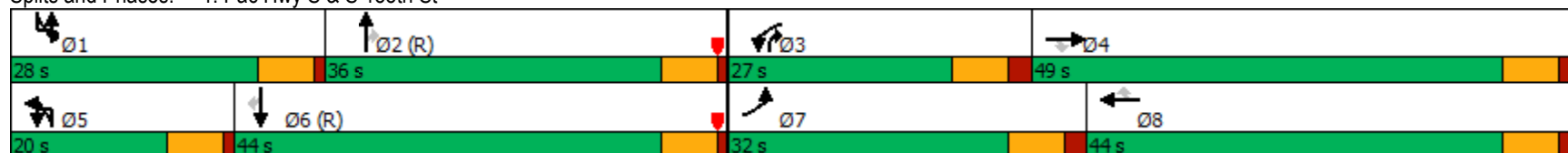
Intersection Summary

Area Type: Other  
 Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 115 (82%), Referenced to phase 2:NBT and 6:SBT, Start of Red  
 Natural Cycle: 125  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.05  
 Intersection Signal Delay: 58.1  
 Intersection Capacity Utilization 93.9%  
 Analysis Period (min) 15

Intersection LOS: E  
 ICU Level of Service F

~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Pac Hwy S & S 188th St



Lanes, Volumes, Timings  
2: S 188th St & 42nd Ave S

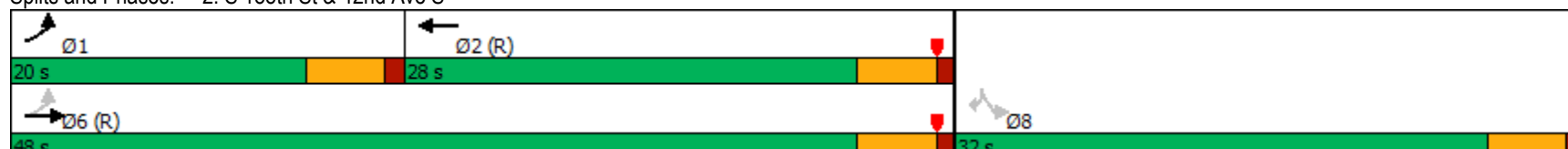
Tyee HS Expansion

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	111	1071	843	165	137	165
Future Volume (vph)	111	1071	843	165	137	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200			0	170	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor			0.98			0.97
Frnt			0.975			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1736	3471	3259	0	1736	1553
Flt Permitted	0.165				0.950	
Satd. Flow (perm)	301	3471	3259	0	1736	1510
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			28			179
Link Speed (mph)		35	35		25	
Link Distance (ft)		3413	723		714	
Travel Time (s)		66.5	14.1		19.5	
Confl. Peds. (#/hr)	48			48		17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	6%	6%	4%	4%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	121	1164	1095	0	149	179
Turn Type	pm+pt	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases	6				8	8
Detector Phase	1	6	2		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		7.0	7.0
Minimum Split (s)	10.0	22.5	25.0		31.0	31.0
Total Split (s)	20.0	48.0	28.0		32.0	32.0
Total Split (%)	25.0%	60.0%	35.0%		40.0%	40.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						
Recall Mode	None	C-Min	C-Min		None	None
Act Effct Green (s)	53.6	53.6	43.8		16.4	16.4
Actuated g/C Ratio	0.67	0.67	0.55		0.20	0.20
v/c Ratio	0.37	0.50	0.61		0.42	0.40
Control Delay	10.0	9.1	13.0		29.1	6.2
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	10.0	9.1	13.0		29.1	6.2
LOS	B	A	B		C	A
Approach Delay		9.1	13.0		16.6	
Approach LOS		A	B		B	
Queue Length 50th (ft)	15	104	87		70	0
Queue Length 95th (ft)	52	253	#361		100	42
Internal Link Dist (ft)		3333	643		634	
Turn Bay Length (ft)	200				170	
Base Capacity (vph)	470	2327	1796		585	628
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.26	0.50	0.61		0.25	0.29

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 10 (13%), Referenced to phase 2:WBT and 6:EBTL, Start of Red  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.61  
 Intersection Signal Delay: 11.6  
 Intersection Capacity Utilization 61.5%  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 2: S 188th St & 42nd Ave S



HCM 6th TWSC  
3: S 188th St & Tyee West Dwy

Tyee HS Expansion

Intersection

Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	1177	967	8	29	27
Future Vol, veh/h	9	1177	967	8	29	27
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	7	7	3	3	9	9
Mvmt Flow	10	1279	1051	9	32	29

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1061	0	0	1717	531
Stage 1	-	-	-	1057	-
Stage 2	-	-	-	660	-
Critical Hdwy	4.24	-	-	6.98	7.08
Critical Hdwy Stg 1	-	-	-	5.98	-
Critical Hdwy Stg 2	-	-	-	5.98	-
Follow-up Hdwy	2.27	-	-	3.59	3.39
Pot Cap-1 Maneuver	623	-	-	75	475
Stage 1	-	-	-	280	-
Stage 2	-	-	-	457	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	622	-	-	74	475
Mov Cap-2 Maneuver	-	-	-	188	-
Stage 1	-	-	-	275	-
Stage 2	-	-	-	457	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	20.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	622	-	-	-	188	475
HCM Lane V/C Ratio	0.016	-	-	-	0.168	0.062
HCM Control Delay (s)	10.9	-	-	-	28	13.1
HCM Lane LOS	B	-	-	-	D	B
HCM 95th %tile Q(veh)	0	-	-	-	0.6	0.2

Lanes, Volumes, Timings  
4: 46th Ave S & S 188th St

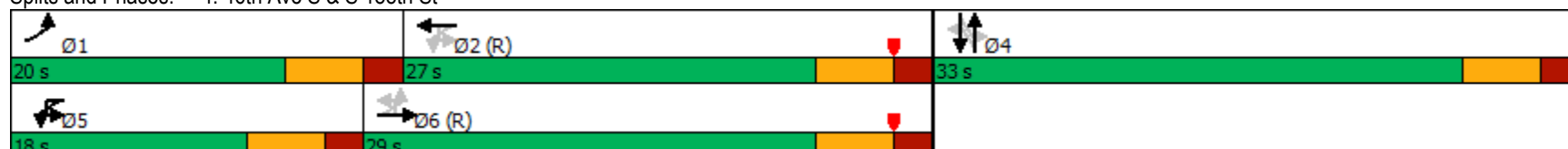
Tyee HS Expansion

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	63	1094	66	8	68	782	66	37	18	19	105	57	35
Future Volume (vph)	63	1094	66	8	68	782	66	37	18	19	105	57	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0		200		0	0		0	0		0
Storage Lanes	1		0		1		0	0		0	0		0
Taper Length (ft)	25				25			25			25		
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor									0.98			0.99	
Frnt		0.992				0.988			0.965			0.976	
Flt Protected	0.950				0.950				0.976			0.974	
Satd. Flow (prot)	1583	3141	0	0	1752	3463	0	0	1789	0	0	1753	0
Flt Permitted	0.263				0.144				0.761			0.791	
Satd. Flow (perm)	438	3141	0	0	266	3463	0	0	1370	0	0	1424	0
Right Turn on Red			Yes				Yes			Yes			Yes
Satd. Flow (RTOR)		8				11			20			15	
Link Speed (mph)		35				35			25			25	
Link Distance (ft)		282				1005			746			431	
Travel Time (s)		5.5				19.6			20.3			11.8	
Confl. Peds. (#/hr)								52					52
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	0.95
Heavy Vehicles (%)	14%	14%	14%	3%	3%	3%	3%	0%	0%	0%	2%	2%	2%
Shared Lane Traffic (%)													
Lane Group Flow (vph)	66	1221	0	0	80	892	0	0	78	0	0	208	0
Turn Type	pm+pt	NA		pm+pt	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	5	2			4			4	
Permitted Phases	6			2	2			4			4		
Detector Phase	1	6		5	5	2		4	4		4	4	
Switch Phase													
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	26.0		11.0	11.0	27.0		34.0	34.0		34.0	34.0	
Total Split (s)	20.0	29.0		18.0	18.0	27.0		33.0	33.0		33.0	33.0	
Total Split (%)	25.0%	36.3%		22.5%	22.5%	33.8%		41.3%	41.3%		41.3%	41.3%	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0	6.0			6.0	6.0			6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lead	Lag							
Lead-Lag Optimize?													
Recall Mode	None	C-Min		None	None	C-Min		None	None		None	None	
Act Effct Green (s)	47.7	42.7			47.9	42.9			15.4			15.4	
Actuated g/C Ratio	0.60	0.53			0.60	0.54			0.19			0.19	
v/c Ratio	0.19	0.73			0.30	0.48			0.28			0.73	
Control Delay	12.2	23.1			9.5	14.7			22.2			42.0	
Queue Delay	0.0	0.0			0.0	0.0			0.0			0.0	
Total Delay	12.2	23.1			9.5	14.7			22.2			42.0	
LOS	B	C			A	B			C			D	
Approach Delay		22.5				14.2			22.2			42.0	
Approach LOS		C				B			C			D	
Queue Length 50th (ft)	9	185			12	143			25			91	
Queue Length 95th (ft)	m48	#435			35	245			55			146	
Internal Link Dist (ft)		202				925			666			351	
Turn Bay Length (ft)	150				200								
Base Capacity (vph)	488	1681			396	1860			475			490	
Starvation Cap Reductn	0	0			0	0			0			0	
Spillback Cap Reductn	0	0			0	0			0			0	
Storage Cap Reductn	0	0			0	0			0			0	
Reduced v/c Ratio	0.14	0.73			0.20	0.48			0.16			0.42	

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Red  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 20.9  
 Intersection Capacity Utilization 73.4%  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: 46th Ave S & S 188th St



Lanes, Volumes, Timings  
5: Military Rd S & S 188th St

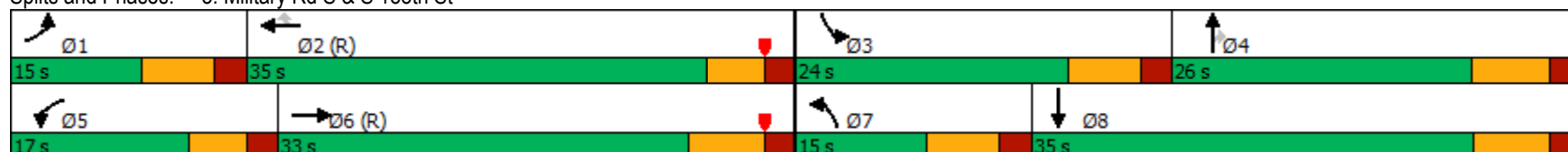
Tyee HS Expansion

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↗↗		↖	↗↗	↗	↖	↗	↗	↖↖	↖	
Traffic Volume (vph)	180	968	59	102	497	297	32	202	34	449	317	157
Future Volume (vph)	180	968	59	102	497	297	32	202	34	449	317	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	490		480	135		110	190		30	390		0
Storage Lanes	1		1	1		1	1		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.991				0.850			0.850		0.950	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	4943	0	1719	3438	1538	1736	1827	1553	3433	1770	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	4943	0	1719	3438	1538	1736	1827	1553	3433	1770	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9				313			260		25	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1005			281			787			554	
Travel Time (s)		19.6			5.5			15.3			10.8	
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
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	4%	4%	4%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	189	1081	0	107	523	313	34	213	36	473	499	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			
Detector Phase	1	6		5	2	2	7	4	4	3	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	11.7	28.8		10.7	25.7	25.7	11.7	22.5	22.5	11.6	34.8	
Total Split (s)	15.0	33.0		17.0	35.0	35.0	15.0	26.0	26.0	24.0	35.0	
Total Split (%)	15.0%	33.0%		17.0%	35.0%	35.0%	15.0%	26.0%	26.0%	24.0%	35.0%	
Yellow Time (s)	4.7	4.8		3.7	3.7	3.7	4.7	4.9	4.9	4.6	4.8	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.7	6.8		5.7	5.7	5.7	6.7	6.9	6.9	6.6	6.8	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None	None	None	None	
Act Effct Green (s)	13.8	31.9		9.6	27.8	27.8	6.5	16.1	16.1	16.4	30.8	
Actuated g/C Ratio	0.14	0.32		0.10	0.28	0.28	0.06	0.16	0.16	0.16	0.31	
v/c Ratio	0.79	0.68		0.65	0.55	0.48	0.30	0.72	0.08	0.84	0.89	
Control Delay	70.0	33.6		61.7	33.0	5.9	51.1	53.8	0.3	54.9	51.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	70.0	33.6		61.7	33.0	5.9	51.1	53.8	0.3	54.9	51.6	
LOS	E	C		E	C	A	D	D	A	D	D	
Approach Delay		39.0			27.3			46.6			53.2	
Approach LOS		D			C			D			D	
Queue Length 50th (ft)	~156	233		66	145	0	21	125	0	150	292	
Queue Length 95th (ft)	#295	291		121	198	62	52	203	0	#220	#509	
Internal Link Dist (ft)		925			201			707			474	
Turn Bay Length (ft)	490			135		110	190		30	390		
Base Capacity (vph)	239	1581		194	1007	671	144	348	506	597	562	
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	0.79	0.68		0.55	0.52	0.47	0.24	0.61	0.07	0.79	0.89	

Intersection Summary

Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 5 (5%), Referenced to phase 2:WBT and 6:EBT, Start of Red  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.89  
 Intersection Signal Delay: 40.4  
 Intersection Capacity Utilization 77.8%  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 5: Military Rd S & S 188th St



HCM 6th TWSC  
6: S 188th St

Tyee HS Expansion

Intersection

Int Delay, s/veh 0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	1225	858	0	0	112
Future Vol, veh/h	0	1225	858	0	0	112
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	0	0
Mvmt Flow	0	1332	933	0	0	122

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	0	-	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.4
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	548
HCM Lane V/C Ratio	-	-	-	0.222
HCM Control Delay (s)	-	-	-	13.4
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.8



# Collision Data

**Collision Data Date Range**

Start 1/1/2016  
End 6/30/2021  
Total Years 5.50

Intersection	No. Collisions	No. Injury/Fatal Collisions	Estimated ADT	Collisions per Year	Collisions per MEV
#1: Pac Hwy S @ S 188th St	116	35	38,420	21.09	1.50
#2: 42nd Ave S @ S 188th St	14	7	20,850	2.55	0.33
#3: Tyee HS West Dwy @ S 188th St	5	3	18,620	0.91	0.13
#4: 46th Ave S @ S 188th St	19	8	19,790	3.45	0.48
#5: Military Rd @ S 188th St	75	26	27,890	13.64	1.34

PRIMARY TRAFFICWAY	INTERSECTING TRAFFICWAY/ REFERENCE POINT NAME	DIST FROM REF POINT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	MILEPOST	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# J	# A	# F	# V	# B	# P	# S	FIRST COLLISION TYPE / OBJECT STRUCK	
46TH AVE S	S 188TH ST	0			E567095	2016-07-26 07:35	11:13	Suspected Minor Injury	1	0	1	0	1	0	0	0	Vehicle - Pedal/cyclist	
MILITARY RD S	S 188TH ST	0			E620548	2016-12-12 13:35	17:20	No Apparent Injury	0	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end	
MILITARY RD S	S 188TH ST	0			E613571	2016-11-28 17:20	19:58	No Apparent Injury	0	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end	
MILITARY RD S	S 188TH ST	0			E623672	2016-12-15 15:55	19:58	No Apparent Injury	0	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - sideswipe	
MILITARY RD S	S 188TH ST	0			E601981	2016-10-20 19:30	19:58	No Apparent Injury	0	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end	
MILITARY RD S	S 188TH ST	0			E567901	2016-07-27 19:58	19:58	Possible Injury	1	0	0	0	0	0	0	0	Entering at angle	
S 188TH ST	42ND AVE S	0			E566114	2016-07-23 11:13	11:13	No Apparent Injury	0	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end	
S 188TH ST	42ND AVE S	0			E561835	2016-07-08 16:41	16:41	No Apparent Injury	0	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end	
S 188TH ST	42ND AVE S	0			E614985	2016-12-02 12:35	12:35	Suspected Serious Injury	1	0	0	0	0	0	0	0	Entering at angle	
S 188TH ST	46TH AVE S	0			E598709	2016-10-20 14:57	14:57	Suspected Minor Injury	1	0	1	0	0	0	0	0	Vehicle going straight hits pedestrian	
S 188TH ST	46TH AVE S	0			E570062	2016-07-26 16:09	16:09	No Apparent Injury	0	0	0	0	0	0	0	0	Entering at angle	
S 188TH ST	46TH AVE S	0			E599663	2016-06-30 18:18	18:18	No Apparent Injury	0	0	0	0	0	0	0	0	Entering at angle	
S 188TH ST	46TH AVE S	0			E512243	2016-02-02 18:14	18:14	No Apparent Injury	0	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end	
S 188TH ST	46TH AVE S	0			E530048	2016-03-31 07:17	07:17	No Apparent Injury	0	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end	
S 188TH ST	MILITARY RD S	0			E600607	2016-10-21 16:58	16:58	No Apparent Injury	0	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end	
S 188TH ST	MILITARY RD S	0			E613011	2016-11-27 17:30	17:30	No Apparent Injury	0	0	0	0	0	0	0	0	From same direction - all others	
S 188TH ST	MILITARY RD S	0			E570942	2016-08-05 17:08	17:08	No Apparent Injury	0	0	0	0	0	0	0	0	From same direction - both going straight - both moving - sideswipe	
S 188TH ST	MILITARY RD S	0			E551477	2016-08-08 17:01	17:01	Possible Injury	1	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end	
S 188TH ST	MILITARY RD S	0			E586214	2016-09-19 06:25	06:25	No Apparent Injury	0	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end	
S 188TH ST	MILITARY RD S	0			E541471	2016-05-06 19:29	19:29	Possible Injury	2	0	0	0	0	0	0	0	Entering at angle	
S 188TH ST	MILITARY RD S	0			E520822	2016-03-01 05:38	05:38	No Apparent Injury	0	0	0	0	0	0	0	0	From same direction - one right turn - one straight	
S 188TH ST	MILITARY RD S	0			E526404	2016-03-18 16:56	16:56	No Apparent Injury	0	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end	
S 188TH ST	MILITARY RD S	0			E583729	2016-09-10 22:50	22:50	No Apparent Injury	0	0	0	0	0	0	0	0	From same direction - both going straight - both moving - rear-end	
S 188TH ST	MILITARY RD S	0			E598993	2016-10-21 16:40	16:40	Possible Injury	1	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end	
S 188TH ST	MILITARY RD S	0			E613572	2016-11-28 14:50	14:50	No Apparent Injury	0	0	0	0	0	0	0	0	From same direction - both going straight - both moving - rear-end	
S 188TH ST	MILITARY RD S	0			E514365	2016-02-09 17:20	17:20	No Apparent Injury	0	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end	
005LX15226		0.00			E545982	2016-05-22 10:17	10:17	Possible Injury	3	0	0	0	0	0	0	0	Entering at angle	
005LX15226		0.00			E569697	2016-07-30 00:01	00:01	Possible Injury	1	0	0	0	0	0	0	0	From opposite direction - one left turn - one straight	
099		18.34			3779659	2016-06-13 15:20	15:20	No Apparent Injury	0	0	0	0	0	0	0	0	Entering at angle	
099		18.34			E520824	2016-02-28 21:00	21:00	Suspected Minor Injury	1	0	1	0	0	0	0	0	Vehicle turning right hits pedestrian	
099		18.35			E571632	2016-08-06 16:39	16:39	Possible Injury	2	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end	
099		18.35			E575667	2016-08-18 16:00	16:00	Suspected Serious Injury	1	0	1	0	0	0	0	0	Vehicle going straight hits pedestrian	
099		18.35			E576850	2016-08-01 15:12	15:12	No Apparent Injury	0	0	0	0	0	0	0	0	Entering at angle	
099		18.35			E541126	2016-04-28 14:03	14:03	No Apparent Injury	0	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end	
099		18.35			E593472	2016-09-09 16:10	16:10	No Apparent Injury	0	0	0	0	0	0	0	0	From same direction - both going straight - both moving - rear-end	
099		18.35			2843287	2016-03-07 14:29	14:29	No Apparent Injury	0	0	0	0	0	0	0	0	From same direction - one right turn - one straight	
099		18.35			E527052	2016-03-21 15:04	15:04	No Apparent Injury	0	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end	
099		18.35			E597078	2016-10-17 12:00	12:00	Suspected Minor Injury	1	0	0	0	0	0	0	0	From same direction - both going straight - both moving - rear-end	
099		18.35			E510405	2016-01-27 06:50	06:50	No Apparent Injury	0	0	0	0	0	0	0	0	From opposite direction - one left turn - one straight	
099		18.35			E589042	2016-09-22 05:48	05:48	No Apparent Injury	0	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end	
099		18.35			E540783	2016-05-06 10:49	10:49	Possible Injury	1	0	0	0	0	0	0	0	From same direction - both going straight - both moving - rear-end	
099		18.35			E581373	2016-08-29 10:39	10:39	No Apparent Injury	0	0	0	0	0	0	0	0	From same direction - all others	
099		18.35			E584586	2016-09-13 22:28	22:28	Suspected Serious Injury	1	0	1	0	0	0	0	0	0	Vehicle going straight hits pedestrian
099		18.35			E620549	2016-12-14 00:06	00:06	No Apparent Injury	0	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end	
099		18.35			E613573	2016-11-28 22:03	22:03	No Apparent Injury	0	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end	
099		18.35			E614587	2016-11-22 09:09	09:09	No Apparent Injury	0	0	0	0	0	0	0	0	Same direction - both turning right - both moving - sideswipe	
099		18.35			E601847	2016-10-29 05:42	05:42	Possible Injury	1	0	0	0	0	0	0	0	From same direction - both going straight - both moving - rear-end	
MILITARY RD S	S 188TH ST	0			E674978	2017-05-24 15:24	15:24	No Apparent Injury	0	0	0	0	0	0	0	0	0	From same direction - one right turn - one straight
MILITARY RD S	S 188TH ST	0			E664186	2017-04-23 13:54	13:54	Possible Injury	1	0	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end
MILITARY RD S	S 188TH ST	0			E641716	2017-02-05 03:20	03:20	No Apparent Injury	0	0	0	0	0	0	0	0	0	Signal Pole
MILITARY RD S	S 188TH ST	129 F	NE		E646630	2017-02-19 10:30	10:30	No Apparent Injury	0	0	0	0	0	0	0	0	0	One parked - one moving
MILITARY RD S	S 188TH ST	200 F	NE		E736162	2017-11-16 14:31	14:31	No Apparent Injury	0	0	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end
MILITARY RD S	S 188TH ST	40 F	NE		E683197	2017-06-20 14:58	14:58	No Apparent Injury	0	0	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end
MILITARY RD S	S 188TH ST	416 F	NE		E634583	2017-01-19 14:57	14:57	No Apparent Injury	0	0	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end
MILITARY RD S	S 188TH ST	40 F	NE		E736159	2017-11-16 13:23	13:23	Possible Injury	2	0	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end
MILITARY RD S	S 188TH ST	100 F	NE		E766371	2017-10-09 16:00	16:00	Possible Injury	1	0	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end
S 188TH ST	46TH AVE S	0			E741427	2017-11-30 09:41	09:41	Possible Injury	1	0	0	0	0	0	0	0	0	From opposite direction - one left turn - one straight
S 188TH ST	46TH AVE S	0			E642623	2017-02-11 15:42	15:42	Possible Injury	1	0	0	0	0	0	0	0	0	From same direction - both going straight - both moving - sideswipe
S 188TH ST	46TH AVE S	0			E768291	2017-04-04 18:28	18:28	No Apparent Injury	0	0	0	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end

PRIMARY TRAFFICWAY	INTERSECTING TRAFFICWAY/ REFERENCE POINT NAME	DIST FROM REF POINT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	MILEPOST	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# N A I F I J T	# P B I V E K D E S	# P B I V E K D E S	FIRST COLLISION TYPE / OBJECT STRUCK			
S 188TH ST	46TH AVE S	0				E725300	2017-10-18	18:37	No Apparent Injury	0	0	0	0	0	0	Entering at angle
S 188TH ST	MILITARY RD S	0				E647685	2017-02-18	11:53	Possible Injury	2	0	0	0	0	0	Entering at angle
S 188TH ST	MILITARY RD S	0				E645744	2017-02-22	18:30	No Apparent Injury	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end
S 188TH ST	MILITARY RD S	0				E704606	2017-08-16	17:42	No Apparent Injury	0	0	0	0	0	0	From same direction - both going straight - both moving - sideswipe
S 188TH ST	MILITARY RD S	0				E655739	2017-03-27	08:24	Possible Injury	1	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end
S 188TH ST	MILITARY RD S	0				E686977	2017-06-30	15:00	No Apparent Injury	0	0	0	0	0	0	Entering at angle
S 188TH ST	MILITARY RD S	0				E639626	2017-01-31	23:21	No Apparent Injury	0	0	0	0	0	0	From opposite direction - one left turn - one straight
S 188TH ST	MILITARY RD S	0				E744359	2017-12-07	04:40	No Apparent Injury	0	0	0	0	0	0	Entering at angle
S 188TH ST	MILITARY RD S	86	F	SE	005LX15226	E729054	2017-10-29	08:05	No Apparent Injury	0	0	0	0	0	0	From opposite direction - both moving - head-on
S 188TH ST	MILITARY RD S	62	F	W	099	E659132	2017-04-05	05:48	No Apparent Injury	0	0	0	0	0	0	Other Objects
S 188TH ST	MILITARY RD S	0	E		42ND AVE S	E676202	2017-05-24	15:24	Possible Injury	2	0	0	0	0	0	From same direction - one left turn - one straight
S 188TH ST	MILITARY RD S	101	F	W	42ND AVE S	E713807	2017-09-19	14:00	Possible Injury	1	0	0	0	0	0	From same direction - all others
S 188TH ST	MILITARY RD S	21	F	W	42ND AVE S	E683784	2017-06-21	17:10	No Apparent Injury	0	0	0	0	0	0	From same direction - both going straight - both moving - rear-end
S 188TH ST	MILITARY RD S	150	F	W	INTERNATIONAL BLVD	E657330	2017-04-01	10:18	No Apparent Injury	0	0	0	0	0	0	From same direction - both going straight - both moving - sideswipe
S 188TH ST	MILITARY RD S	124	F	NW	MILITARY RD S	E684529	2017-03-15	15:47	Possible Injury	2	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end
S 188TH ST	MILITARY RD S	0.1	M	W	S 188TH ST	E732063	2017-11-05	00:01	No Apparent Injury	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end
S 188TH ST	MILITARY RD S	117	F	E	WA-99	E743695	2017-08-29	09:10	No Apparent Injury	0	0	0	0	0	0	From same direction - both going straight - one stopped - sideswipe
099		0				E637353	2017-01-20	07:35	No Apparent Injury	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end
099		0				E710861	2017-09-10	20:00	No Apparent Injury	0	0	0	0	0	0	From same direction - all others
099		0				E685531	2017-05-25	23:10	Possible Injury	3	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end
099		0				E700383	2017-08-09	04:45	Possible Injury	1	0	0	0	0	0	From same direction - both going straight - both moving - rear-end
099		0				E689926	2017-07-08	01:20	Possible Injury	3	0	0	0	0	0	Entering at angle
099		0				E702253	2017-08-15	04:00	No Apparent Injury	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end
099		0				E634580	2017-01-16	04:25	No Apparent Injury	0	0	0	0	0	0	From same direction - both going straight - both moving - rear-end
099		0				E752649	2017-12-25	01:35	No Apparent Injury	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end
099		0				E643780	2017-02-16	16:05	No Apparent Injury	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end
099		0				E676204	2017-05-29	15:04	Possible Injury	2	0	0	0	0	0	From same direction - both going straight - both moving - sideswipe
099		0				E665363	2017-04-25	21:12	No Apparent Injury	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end
099		0				E699919	2017-08-03	16:24	No Apparent Injury	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end
099		0				E657616	2017-04-01	22:45	No Apparent Injury	0	0	0	0	0	0	Entering at angle
099		0				E685615	2017-06-23	19:53	Suspected Serious Injury	1	0	1	0	0	0	Vehicle going straight hits pedestrian
099		0				E697937	2017-08-01	16:59	Possible Injury	1	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end
099		0				E741426	2017-11-29	19:18	No Apparent Injury	0	0	0	0	0	0	Same direction -- both turning left -- both moving -- sideswipe
099		0				E753566	2017-12-29	17:10	No Apparent Injury	0	0	0	0	0	0	Same direction -- both turning right -- both moving -- sideswipe
099		0				E699128	2017-08-04	00:23	No Apparent Injury	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end
099		0				E738376	2017-11-20	15:47	Suspected Serious Injury	1	0	1	0	0	0	Vehicle turning left hits pedestrian
099		0				E653350	2017-03-18	17:58	No Apparent Injury	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end
099		0				E702823	2017-08-18	21:05	Possible Injury	1	0	0	0	0	0	From same direction - both going straight - both moving - rear-end
099		0				E659130	2017-03-27	16:13	No Apparent Injury	0	0	0	0	0	0	From same direction - both going straight - both moving - rear-end
099		0				E758290	2018-01-11	7:29	Possible Injury	1	0	0	0	0	0	From opposite direction - one left turn - one straight
46TH AVE S	S 188TH ST	0				E831649	2018-08-23	21:55	Possible Injury	1	0	0	0	0	0	From opposite direction - one left turn - one straight
MILITARY RD S	S 188TH ST	0				E868152	2018-11-24	22:55	No Apparent Injury	0	0	0	0	0	0	Same direction -- both turning right -- one stopped -- rear end
MILITARY RD S	S 188TH ST	0				E807359	2018-06-10	13:31	No Apparent Injury	0	0	0	0	0	0	From same direction - both going straight - both moving - sideswipe
S 188TH ST	42ND AVE S	0				E790566	2018-04-16	13:04	Possible Injury	1	0	0	0	0	0	Entering at angle
S 188TH ST	46TH AVE S	0				E851036	2018-10-14	16:40	Possible Injury	1	0	1	0	0	0	Vehicle turning left hits pedestrian
S 188TH ST	MILITARY RD S	0				E822863	2018-07-27	20:11	No Apparent Injury	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end
S 188TH ST	MILITARY RD S	0				E828699	2018-08-14	16:10	Possible Injury	1	0	0	0	0	0	From opposite direction - one left turn - one straight
S 188TH ST	MILITARY RD S	0				E843578	2018-09-27	12:05	Possible Injury	1	0	0	0	0	0	From same direction - both going straight - both moving - rear-end
S 188TH ST	MILITARY RD S	0				E817470	2018-07-11	13:45	Possible Injury	1	0	0	0	0	0	From same direction - both going straight - one stopped - sideswipe
S 188TH ST	MILITARY RD S	0				E805357	2018-06-03	21:36	No Apparent Injury	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end
S 188TH ST	MILITARY RD S	0				E833678	2018-08-31	12:30	No Apparent Injury	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end
S 188TH ST	MILITARY RD S	0				E780635	2018-03-17	7:50	Suspected Minor Injury	2	0	0	0	0	0	Vehicle Strikes Pedalcyclist
S 188TH ST	MILITARY RD S	0				E864862	2018-11-25	21:57	Possible Injury	2	0	0	0	0	0	Entering at angle
S 188TH ST	MILITARY RD S	0				E848462	2018-10-11	16:52	No Apparent Injury	0	0	0	0	0	0	Entering at angle
S 188TH ST	MILITARY RD S	139	F	W	INTERNATIONAL BLVD	E848453	2018-10-08	15:24	Possible Injury	1	0	0	0	0	0	Tree or Stump (stationary)
S 188TH ST	MILITARY RD S	101	F	E	INTERNATIONAL BLVD	E824981	2018-07-30	18:12	No Apparent Injury	0	0	0	0	0	0	From same direction - both going straight - both moving - rear-end
99		0				E853589	2018-10-26	7:35	No Apparent Injury	0	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end
99		0				E869574	2018-11-30	23:37	Possible Injury	1	0	0	0	0	0	From same direction - both going straight - one stopped - rear-end
99		0				E817472	2018-07-11	18:10	No Apparent Injury	0	0	0	0	0	0	From same direction - both going straight - both moving - sideswipe



PRIMARY TRAFFICWAY	INTERSECTING TRAFFICWAY/ REFERENCE POINT NAME	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	MILEPOST	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# F I N J U R Y	# P I B I E K D E S	# P I B I E K D E S	FIRST COLLISION TYPE / OBJECT STRUCK
99		0				18.35	E881387	2019-01-10 23:15	Possible Injury	3	0	0	0	Entering at angle
99		18.35	0			18.35	E928444	2019-06-04 17:47	No Apparent Injury	0	0	0	0	From same direction - both going straight - both moving - sideswipe
99		18.35	0			18.35	E957691	2019-09-04 6:50	No Apparent Injury	0	0	0	0	From same direction - one left turn - one straight
99		18.35	0			18.35	E960053	2019-09-13 8:20	No Apparent Injury	0	0	0	0	From same direction - both going straight - one stopped - rear-end
99		18.35	0			18.35	E981895	2019-11-12 17:03	No Apparent Injury	0	0	0	0	From same direction - all others
99		18.35	0			18.35	E950454	2019-08-14 23:10	No Apparent Injury	0	0	0	0	From same direction - both going straight - one stopped - rear-end
99		18.35	0			18.35	E885138	2019-01-22 20:24	Suspected Minor Injury	1	0	1	0	Vehicle going straight hits pedestrian
99		18.35	0			18.35	E990320	2019-12-02 15:53	No Apparent Injury	0	0	0	0	Entering at angle
99		18.35	0			18.35	E923010	2019-05-22 10:30	No Apparent Injury	0	0	0	0	From same direction - both going straight - one stopped - rear-end
99		18.35	0			18.35	E990324	2019-11-29 18:20	Possible Injury	1	0	1	0	Vehicle turning right hits pedestrian
99		18.35	0			18.35	E880383	2019-01-04 21:17	No Apparent Injury	0	0	0	0	From same direction - all others
99		18.35	0			18.35	E931462	2019-06-18 8:06	Possible Injury	1	0	0	0	Entering at angle
99		18.35	0			18.35	E947877	2019-08-02 5:41	No Apparent Injury	0	0	0	0	From same direction - both going straight - one stopped - rear-end
99	MILITARY RD S	0				18.35	EAO7846	2020-01-25 23:19	Possible Injury	4	0	0	0	Entering at angle
99	MILITARY RD S	0				18.35	EAI16678	2020-02-20 5:53	No Apparent Injury	0	0	0	0	Same direction -- both turning left -- both moving -- sideswipe
99	MILITARY RD S	0				18.35	EAD25195	2020-03-19 14:50	No Apparent Injury	0	0	0	0	Same direction -- both turning left -- both moving -- sideswipe
99	S 188TH ST	75	F	E	42ND AVE S	18.35	EAA4448	2020-12-31 10:53	No Apparent Injury	0	0	0	0	From same direction - both going straight - both moving - rear-end
99	S 188TH ST	161	F	W	INTERNATIONAL BLVD	18.35	EAS7498	2020-08-21 17:01	No Apparent Injury	0	0	0	0	From same direction - both going straight - both moving - rear-end
99	S 188TH ST	297	F	E	INTERNATIONAL BLVD	18.35	EAS9942	2020-08-31 8:42	No Apparent Injury	0	0	0	0	From same direction - both going straight - both moving - sideswipe
99	S 188TH ST	105	F	W	INTERNATIONAL BLVD	18.35	EAS1899	2020-09-04 17:08	No Apparent Injury	0	0	0	0	From same direction - both going straight - both moving - sideswipe
99	S 188TH ST	0				18.35	EAS25197	2020-03-20 13:29	No Apparent Injury	0	0	0	0	From opposite direction - one left turn - one straight
99	S 188TH ST	0				18.35	EAS2000	2020-04-30 16:58	Possible Injury	1	0	0	0	From same direction - both going straight - one stopped - rear-end
99	S 188TH ST	0				18.35	EAT7636	2020-11-03 16:40	Suspected Minor Injury	3	0	0	0	From opposite direction - one left turn - one straight
99	S 188TH ST	0				18.35	EA03156	2020-01-14 14:14	No Apparent Injury	1	0	0	0	From same direction - both going straight - one stopped - rear-end
99	S 188TH ST	0				18.35	EA06286	2020-01-19 14:10	Possible Injury	1	0	0	0	From same direction - both going straight - one stopped - rear-end
99	S 188TH ST	0				18.35	EA18825	2020-02-12 9:24	Possible Injury	2	0	0	0	Entering at angle
99	S 188TH ST	0				18.35	EAA2453	2020-03-06 13:49	No Apparent Injury	0	0	0	0	From same direction - both going straight - both moving - rear-end
99	S 188TH ST	0				18.35	EAA26032	2020-03-20 13:33	No Apparent Injury	0	0	0	0	From same direction - both going straight - both moving - rear-end
99	S 188TH ST	0				18.35	EAA93815	2020-10-24 16:06	No Apparent Injury	0	0	0	0	Entering at angle
99	S 188TH ST	0				18.35	EAI1822	2020-01-08 19:00	Possible Injury	1	0	1	0	Vehicle going straight hits pedestrian
99	S 188TH ST	0				18.35	EAI7644	2020-02-21 22:28	No Apparent Injury	0	0	0	0	Entering at angle
99	S 188TH ST	0				18.35	EAA23479	2020-03-03 16:51	No Apparent Injury	0	0	0	0	Entering at angle
99	S 188TH ST	0				18.35	EAA39602	2020-06-12 12:41	Possible Injury	3	0	0	0	From same direction - both going straight - one stopped - rear-end
99	S 188TH ST	0				18.35	EAA71691	2020-10-10 1:10	No Apparent Injury	0	0	0	0	Entering at angle
99	MILITARY RD S	0				18.35	EAB34142	2021-05-26 16:38	Suspected Minor Injury	2	0	0	0	From same direction - both going straight - one stopped - rear-end
99	MILITARY RD S	0				18.35	EAB34142	2021-05-26 16:38	Suspected Minor Injury	2	0	0	0	From same direction - both going straight - one stopped - rear-end
99	MILITARY RD S	0				18.35	EAB28940	2021-03-23 16:50	No Apparent Injury	0	0	0	0	From same direction - both going straight - one stopped - rear-end
99	MILITARY RD S	0				18.35	EBO1576	2021-01-27 12:10	No Apparent Injury	0	0	0	0	Entering at angle
99	MILITARY RD S	0				18.35	EBO6877	2021-02-15 20:17	No Apparent Injury	0	0	0	0	Entering at angle
99	MILITARY RD S	0				18.35	EAA99619	2021-01-01 17:55	No Apparent Injury	0	0	0	0	From same direction - both going straight - both moving - sideswipe
99	MILITARY RD S	0				18.35	EBO19193	2021-03-28 18:45	Suspected Minor Injury	1	0	0	0	Entering at angle
99	MILITARY RD S	0				18.35	EBO4842	2021-02-09 13:21	No Apparent Injury	0	0	0	0	Entering at angle
99	MILITARY RD S	0				18.35	EBO51393	2021-07-21 14:31	No Apparent Injury	0	0	0	0	From same direction - both going straight - one stopped - rear-end
99	MILITARY RD S	0				18.35	EB16069	2021-02-09 20:00	No Apparent Injury	0	0	0	0	From same direction - all others
99	MILITARY RD S	0				18.35	EB48628	2021-07-14 19:56	Suspected Minor Injury	1	0	0	0	From same direction - both going straight - one stopped - rear-end
99	MILITARY RD S	0				18.35	EB34495	2021-05-30 18:52	Possible Injury	3	0	0	0	Entering at angle
99	MILITARY RD S	0				18.35	EB30226	2021-05-14 11:32	No Apparent Injury	0	0	0	0	From same direction - both going straight - one stopped - rear-end
99	MILITARY RD S	0				18.35	EAA6679	2021-01-08 22:20	No Apparent Injury	0	0	0	0	From opposite direction - one left turn - one straight
99	MILITARY RD S	0				18.35	EB08705	2021-02-18 17:57	No Apparent Injury	0	0	0	0	From same direction - both going straight - one stopped - rear-end
99	MILITARY RD S	0				18.35	EB08026	2021-02-20 8:15	No Apparent Injury	0	0	0	0	From same direction - both going straight - one stopped - sideswipe
99	MILITARY RD S	0				18.35	EB40481	2021-06-15 1:58	No Apparent Injury	0	0	0	0	From same direction - both going straight - both moving - rear-end
99	MILITARY RD S	0				18.35	EB01999	2021-01-27 22:30	No Apparent Injury	0	0	0	0	From same direction - both going straight - both moving - sideswipe

# Transit



Moving forward together

October 2, 2021 thru  
March 18, 2022

Del 2 de octubre de 2021  
al 18 de marzo de 2022

# 161

## Kent, Sea-Tac International Airport, Burien

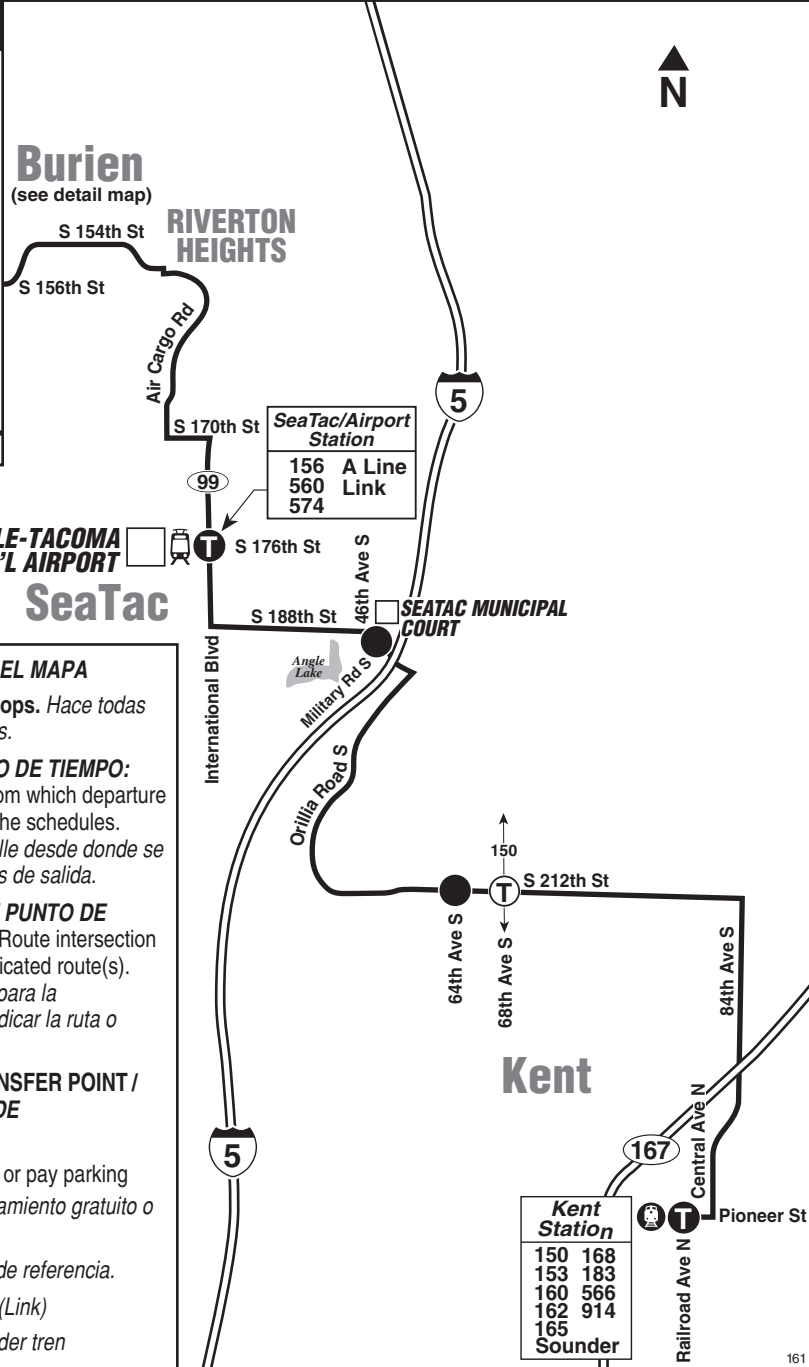


**BURIEN**

Burien Transit Center	
120 132 560	F Line
131 165 631	

SW 148th St  
SW 150th St  
4th Ave SW  
S 156th St

TOWN PLAZA  
P&R



**MAP LEGEND / LEYENDA DEL MAPA**

- Makes all regular stops. Hace todas las paradas regulares.
- TIME POINT / PUNTO DE TIEMPO:** Street intersection from which departure times are shown on the schedules. Intersección de la calle desde donde se muestran los horarios de salida.
- TRANSFER POINT / PUNTO DE TRANSFERENCIA:** Route intersection for transferring to indicated route(s). Intersección de ruta para la transferencia para indicar la ruta o rutas.
- TIME POINT & TRANSFER POINT / TIEMPO Y PUNTO DE TRANSFERENCIA**
- PARK & RIDE:** Free or pay parking area. Zona de aparcamiento gratuito o de pago.
- Landmark** El punto de referencia.
- 1 Line (Link)** 1 Line (Link)
- Sounder train** Sounder tren

### Snow / Emergency Service Servicio en caso de nieve o emergencia

During most snow conditions this route will operate via the routing shown in this timetable. If Metro declares an emergency, it will operate on an **Emergency Snow Network** plan. Visit [kingcounty.gov/metro/snow](http://kingcounty.gov/metro/snow) to register for **Transit Alerts** and to learn more.

*Durante la mayoría de las nevadas, esta ruta operará en el sendero que se muestra en este programa. Si Metro declara una emergencia, operará de acuerdo con un plan de Red de emergencia en caso de nieve. Visite [kingcounty.gov/metro/snow](http://kingcounty.gov/metro/snow) para registrarse y recibir las alertas de transporte público y obtener más información.*

<b>Kent Station</b>	
150 168	
153 183	
160 566	
162 914	
165	
Sounder	



### Route 161 Monday thru Friday to Burien

Servicio de lunes a viernes a Burien

Kent Sounder Station Bay 2	S 212nd St & 64th Ave S	S 188th St & Military Rd S	SeaTac Airport Station Bay 2	Burien TC Bay 1
Stop #57452	Stop #58084	Stop #52636	Stop #60900	Stop #52301
4:43	4:52	4:59	5:04†	5:18†
5:15	5:26	5:34	5:40†	5:54†
5:43	5:55	6:03	6:09†	6:23†
6:08	6:20	6:28	6:34†	6:48†
6:29	6:41	6:49	6:55†	7:09†
6:43	6:55	7:03	7:09†	7:24†
6:57	7:09	7:17	7:23†	7:38†
7:16	7:29	7:37	7:43†	7:58†
7:29	7:42	7:50	7:56†	8:11†
7:43	7:56	8:04	8:10†	8:25†
7:58	8:11	8:19	8:25†	8:40†
8:28	8:41	8:48	8:54†	9:09†
8:58	9:11	9:18	9:24†	9:39†
9:27	9:40	9:47	9:53†	10:08†
9:57	10:10	10:17	10:23†	10:38†
10:27	10:40	10:47	10:53†	11:08†
10:57	11:10	11:17	11:24†	11:39†
11:28	11:41	11:48	11:55†	12:10†
11:58	12:11	12:18	12:25†	12:41†
12:27	12:40	12:47	12:54†	1:10†
12:58	1:11	1:18	1:25†	1:41†
1:27	1:40	1:47	1:54†	2:10†
1:57	2:10	2:17	2:24†	2:40†
2:27	2:41	2:48	2:56†	3:13†
2:57	3:11	3:18	3:26†	3:43†
3:27	3:41	3:48	3:56†	4:12†
3:42	3:56	4:03	4:11†	4:27†
3:58	4:11	4:18	4:26†	4:42†
4:12	4:25	4:32	4:40†	4:56†
4:27	4:40	4:47	4:55†	5:11†
4:42	4:55	5:02	5:10†	5:26†
4:57	5:10	5:17	5:24†	5:40†
5:12	5:25	5:32	5:38†	5:54†
5:27	5:40	5:47	5:53†	6:09†
5:42	5:55	6:02	6:08†	6:24†
6:12	6:24	6:31	6:37†	6:53†
6:42	6:54	7:01	7:07†	7:22†
7:13	7:24	7:31	7:37†	7:52†
7:42	7:53	8:00	8:06†	8:21†
8:13	8:24	8:31	8:36†	8:50†
8:42	8:52	8:59	9:04†	9:18†
9:12	9:22	9:29	9:34†	9:48†
9:42	9:51	9:57	10:02†	10:16†
10:11	10:20	10:26	10:31†	10:45†
10:47	10:56	11:02	11:07†	11:20†
11:12	11:21	11:27	11:32†	11:44†
12:03	12:12	12:18	12:23†	12:35†
12:55	1:03	1:09	1:14†	1:26†
1:29	1:37	1:43	1:48†	2:00†
2:30	2:38	2:44	2:49†	3:00†
3:30	3:38	3:44	3:49†	4:00†

**B** PM time  
† Estimated time.

### Route 161 Monday thru Friday to Kent

Servicio de lunes a viernes a Kent

Burien TC Bay 6	SeaTac Airport Station Bay 1	S 188th St & Military Rd S	S 212nd St & 64th Ave S	Kent Sounder Station Bay 3	To Route
Stop #52306	Stop #61080	Stop #53503	Stop #58079	Stop #57453	
4:53	5:05	5:11	5:19	5:30	168
5:22	5:34	5:40	5:48	6:00	168
5:37	5:49	5:55	6:03	6:15	
5:52	6:04	6:10	6:18	6:30	168
6:07	6:19	6:25	6:33	6:45	
6:22	6:34	6:40	6:48	7:00	168
6:37	6:49	6:55	7:03	7:15	
6:51	7:04	7:10	7:18	7:30	168
7:21	7:34	7:40	7:48	8:00	168
7:51	8:04	8:10	8:18	8:30	168
8:21	8:34	8:40	8:48	9:00	168
8:51	9:04	9:10	9:18	9:30	168
9:21	9:34	9:40	9:48	10:00	168
9:51	10:04	10:10	10:18	10:30	168
10:21	10:34	10:40	10:48	11:00	168
10:51	11:04	11:10	11:18	11:30	168
11:20	11:33	11:40	11:48	12:00	168
11:49	<b>12:03</b>	<b>12:10</b>	<b>12:18</b>	<b>12:30</b>	168
<b>12:18</b>	<b>12:32</b>	<b>12:39</b>	<b>12:47</b>	<b>1:00</b>	168
<b>12:48</b>	<b>1:02</b>	<b>1:09</b>	<b>1:17</b>	<b>1:30</b>	168
<b>1:17</b>	<b>1:31</b>	<b>1:38</b>	<b>1:46</b>	<b>2:00</b>	168
<b>1:47</b>	<b>2:01</b>	<b>2:08</b>	<b>2:16</b>	<b>2:30</b>	168
<b>2:16</b>	<b>2:30</b>	<b>2:37</b>	<b>2:45</b>	<b>3:00</b>	168
<b>2:40</b>	<b>2:54</b>	<b>3:01</b>	<b>3:09</b>	<b>3:24</b>	168
<b>2:59</b>	<b>3:13</b>	<b>3:20</b>	<b>3:28</b>	<b>3:43</b>	168
<b>3:15</b>	<b>3:29</b>	<b>3:36</b>	<b>3:44</b>	<b>3:59</b>	
<b>3:30</b>	<b>3:44</b>	<b>3:51</b>	<b>4:00</b>	<b>4:15</b>	
<b>3:44</b>	<b>3:58</b>	<b>4:05</b>	<b>4:14</b>	<b>4:30</b>	
<b>3:59</b>	<b>4:13</b>	<b>4:20</b>	<b>4:29</b>	<b>4:45</b>	168
<b>4:13</b>	<b>4:27</b>	<b>4:34</b>	<b>4:43</b>	<b>5:01</b>	
<b>4:27</b>	<b>4:41</b>	<b>4:48</b>	<b>4:57</b>	<b>5:15</b>	
<b>4:43</b>	<b>4:57</b>	<b>5:04</b>	<b>5:13</b>	<b>5:30</b>	SB
<b>5:00</b>	<b>5:14</b>	<b>5:21</b>	<b>5:30</b>	<b>5:45</b>	168
<b>5:16</b>	<b>5:30</b>	<b>5:37</b>	<b>5:46</b>	<b>6:00</b>	SB
<b>5:29</b>	<b>5:43</b>	<b>5:50</b>	<b>5:59</b>	<b>6:11</b>	168
<b>5:42</b>	<b>5:56</b>	<b>6:03</b>	<b>6:12</b>	<b>6:24</b>	SB
<b>6:18</b>	<b>6:32</b>	<b>6:39</b>	<b>6:47</b>	<b>6:58</b>	168
<b>6:52</b>	<b>7:05</b>	<b>7:12</b>	<b>7:20</b>	<b>7:31</b>	168
<b>7:17</b>	<b>7:30</b>	<b>7:37</b>	<b>7:44</b>	<b>7:55</b>	168
<b>7:53</b>	<b>8:06</b>	<b>8:13</b>	<b>8:20</b>	<b>8:31</b>	168
<b>8:23</b>	<b>8:36</b>	<b>8:43</b>	<b>8:50</b>	<b>9:01</b>	168
<b>8:54</b>	<b>9:07</b>	<b>9:14</b>	<b>9:21</b>	<b>9:31</b>	168
<b>9:27</b>	<b>9:39</b>	<b>9:45</b>	<b>9:51</b>	<b>10:01</b>	
<b>9:57</b>	<b>10:09</b>	<b>10:15</b>	<b>10:21</b>	<b>10:31</b>	168
<b>10:28</b>	<b>10:40</b>	<b>10:45</b>	<b>10:51</b>	<b>11:01</b>	
<b>10:59</b>	<b>11:11</b>	<b>11:16</b>	<b>11:22</b>	<b>11:31</b>	168
<b>11:29</b>	<b>11:41</b>	<b>11:46</b>	<b>11:52</b>	<b>12:01</b>	SB
<b>12:01</b>	<b>12:13</b>	<b>12:18</b>	<b>12:24</b>	<b>12:33</b>	168
<b>12:55</b>	<b>1:08</b>	<b>1:13</b>	<b>1:20</b>	<b>1:29b</b>	161

**B** PM time  
**b** Serves Kent Sounder Station Bay 2 at this time.  
**SB** Returns to South Base Garage.

### Holiday Information Información sobre días festivos

This route will operate its Sunday schedule on the following holidays. *Esta ruta operará según su horario de domingo en los siguientes días festivos.*

Thanksgiving	Nov. 25
Día de acción de gracias	el 25 de noviembre
Christmas (observed)	Dec. 24
Navidad (observado)	el 24 de diciembre
New Year (observed)	Dec. 31
Año nuevo (observado)	el 31 de diciembre

## Route 161 Saturday to Burien

Servicio de al sábado a Burien

Kent Sounder Station Bay 2	S 212nd St & 64th Ave S	S 188th St & Military Rd S	SeaTac Airport Station Bay 2	Burien TC Bay 1
Stop #57452	Stop #58084	Stop #52636	Stop #60900	Stop #52301
4:45	4:55	5:02	5:08	5:20
5:48	5:58	6:05	6:11	6:23
6:18	6:28	6:35	6:41	6:53
6:48	6:58	7:05	7:11	7:23
7:18	7:28	7:35	7:41	7:53
7:48	7:58	8:05	8:11	8:23
8:18	8:28	8:35	8:41	8:53
8:48	8:58	9:05	9:11	9:25
9:18	9:28	9:35	9:41	9:55
9:48	9:58	10:05	10:11	10:25
10:18	10:28	10:35	10:41	10:56
10:48	10:59	11:06	11:12	11:27
11:18	11:29	11:36	11:42	11:57
11:48	11:59	<b>12:06</b>	<b>12:12</b>	<b>12:27</b>
<b>12:18</b>	<b>12:29</b>	<b>12:36</b>	<b>12:42</b>	<b>12:57</b>
<b>12:48</b>	<b>12:59</b>	<b>1:06</b>	<b>1:12</b>	<b>1:27</b>
<b>1:18</b>	<b>1:29</b>	<b>1:36</b>	<b>1:42</b>	<b>1:57</b>
<b>1:48</b>	<b>2:00</b>	<b>2:07</b>	<b>2:13</b>	<b>2:28</b>
<b>2:18</b>	<b>2:30</b>	<b>2:37</b>	<b>2:43</b>	<b>2:58</b>
<b>2:48</b>	<b>3:00</b>	<b>3:07</b>	<b>3:13</b>	<b>3:28</b>
<b>3:18</b>	<b>3:30</b>	<b>3:37</b>	<b>3:43</b>	<b>3:58</b>
<b>3:48</b>	<b>4:00</b>	<b>4:07</b>	<b>4:13</b>	<b>4:28</b>
<b>4:18</b>	<b>4:30</b>	<b>4:37</b>	<b>4:43</b>	<b>4:58</b>
<b>4:48</b>	<b>5:00</b>	<b>5:07</b>	<b>5:13</b>	<b>5:28</b>
<b>5:18</b>	<b>5:30</b>	<b>5:37</b>	<b>5:43</b>	<b>5:58</b>
<b>5:48</b>	<b>6:00</b>	<b>6:07</b>	<b>6:13</b>	<b>6:28</b>
<b>6:18</b>	<b>6:30</b>	<b>6:37</b>	<b>6:43</b>	<b>6:58</b>
<b>6:46</b>	<b>6:58</b>	<b>7:05</b>	<b>7:10</b>	<b>7:23</b>
<b>7:18</b>	<b>7:29</b>	<b>7:36</b>	<b>7:41</b>	<b>7:54</b>
<b>7:46</b>	<b>7:57</b>	<b>8:04</b>	<b>8:09</b>	<b>8:22</b>
<b>8:18</b>	<b>8:28</b>	<b>8:35</b>	<b>8:40</b>	<b>8:53</b>
<b>8:48</b>	<b>8:58</b>	<b>9:05</b>	<b>9:10</b>	<b>9:23</b>
<b>9:18</b>	<b>9:27</b>	<b>9:33</b>	<b>9:38</b>	<b>9:50</b>
<b>9:48</b>	<b>9:57</b>	<b>10:03</b>	<b>10:08</b>	<b>10:20</b>
<b>10:18</b>	<b>10:27</b>	<b>10:33</b>	<b>10:38</b>	<b>10:50</b>
<b>10:48</b>	<b>10:57</b>	<b>11:03</b>	<b>11:08</b>	<b>11:20</b>
<b>11:19</b>	<b>11:28</b>	<b>11:34</b>	<b>11:39</b>	<b>11:50</b>
<b>11:48</b>	<b>11:57</b>	12:03	12:08	12:19
12:18	12:27	12:33	12:38	12:49
1:24	1:33	1:39	1:44	1:55
2:24	2:33	2:39	2:44	2:56
3:34	3:43	3:49	3:54	4:06

**Bold** PM time

## Route 161 Saturday to Kent

Servicio de al sábado a Kent

Burien TC Bay 6	SeaTac Airport Station Bay 1	S 188th St & Military Rd S	S 212nd St & 64th Ave S	Kent Sounder Station Bay 3	To Route
Stop #52306	Stop #61080	Stop #53503	Stop #58079	Stop #57453	
5:27	5:39	5:44	5:51	6:01	168
5:57	6:09	6:14	6:21	6:31	168
6:31	6:43	6:48	6:55	7:05	168
7:02	7:14	7:19	7:26	7:36	168
7:34	7:46	7:51	7:58	8:08	168
8:04	8:16	8:21	8:28	8:38	168
8:34	8:46	8:51	8:58	9:08	168
8:50	9:02	9:07	9:14	9:24	168
9:20	9:32	9:38	9:45	9:55	168
9:50	10:02	10:08	10:15	10:25	168
10:21	10:33	10:39	10:46	10:56	168
10:50	11:02	11:08	11:15	11:26	168
11:21	11:33	11:39	11:46	11:57	168
11:51	<b>12:03</b>	<b>12:09</b>	<b>12:16</b>	<b>12:27</b>	168
<b>12:22</b>	<b>12:35</b>	<b>12:41</b>	<b>12:48</b>	<b>1:00</b>	168
<b>12:54</b>	<b>1:07</b>	<b>1:13</b>	<b>1:20</b>	<b>1:32</b>	168
<b>1:22</b>	<b>1:35</b>	<b>1:43</b>	<b>1:50</b>	<b>2:02</b>	168
<b>1:52</b>	<b>2:05</b>	<b>2:13</b>	<b>2:20</b>	<b>2:32</b>	168
<b>2:22</b>	<b>2:35</b>	<b>2:43</b>	<b>2:50</b>	<b>3:02</b>	168
<b>2:52</b>	<b>3:05</b>	<b>3:13</b>	<b>3:20</b>	<b>3:32</b>	168
<b>3:22</b>	<b>3:35</b>	<b>3:43</b>	<b>3:50</b>	<b>4:02</b>	168
<b>3:53</b>	<b>4:06</b>	<b>4:13</b>	<b>4:20</b>	<b>4:32</b>	168
<b>4:23</b>	<b>4:36</b>	<b>4:43</b>	<b>4:50</b>	<b>5:02</b>	168
<b>4:53</b>	<b>5:06</b>	<b>5:13</b>	<b>5:20</b>	<b>5:32</b>	168
<b>5:21</b>	<b>5:34</b>	<b>5:41</b>	<b>5:48</b>	<b>6:00</b>	168
<b>5:52</b>	<b>6:05</b>	<b>6:12</b>	<b>6:19</b>	<b>6:31</b>	168
<b>6:21</b>	<b>6:34</b>	<b>6:41</b>	<b>6:48</b>	<b>6:58</b>	168
<b>6:50</b>	<b>7:02</b>	<b>7:08</b>	<b>7:15</b>	<b>7:25</b>	168
<b>7:20</b>	<b>7:32</b>	<b>7:38</b>	<b>7:45</b>	<b>7:55</b>	168
<b>7:37</b>	<b>7:49</b>	<b>7:55</b>	<b>8:02</b>	<b>8:12</b>	168
<b>8:08</b>	<b>8:20</b>	<b>8:26</b>	<b>8:33</b>	<b>8:42</b>	168
<b>8:36</b>	<b>8:48</b>	<b>8:54</b>	<b>9:01</b>	<b>9:10</b>	SB
<b>9:11</b>	<b>9:23</b>	<b>9:29</b>	<b>9:36</b>	<b>9:45</b>	168
<b>9:42</b>	<b>9:54</b>	<b>9:59</b>	<b>10:06</b>	<b>10:14</b>	SB
<b>10:13</b>	<b>10:24</b>	<b>10:29</b>	<b>10:36</b>	<b>10:44</b>	168
<b>10:40</b>	<b>10:51</b>	<b>10:56</b>	<b>11:03</b>	<b>11:11</b>	
<b>11:11</b>	<b>11:22</b>	<b>11:27</b>	<b>11:34</b>	<b>11:42</b>	168
<b>11:40</b>	<b>11:51</b>	<b>11:56</b>	12:03	12:11	
12:44	12:55	1:00	1:06	1:14	

**Bold** PM time

**SB** Returns to South Base Garage.

### Route 161 Sunday to Burien

Servicio de domingo a Burien

Kent Sounder Station Bay 2	S 212nd St & 64th Ave S	S 188th St & Military Rd S	SeaTac Airport Station Bay 2	Burien TC Bay 1
Stop #57452	Stop #58084	Stop #52636	Stop #60900	Stop #52301
4:45	4:55	5:00	5:05	5:18
5:48	5:58	6:03	6:08	6:21
6:18	6:28	6:33	6:38	6:51
6:48	6:58	7:03	7:08	7:21
7:18	7:28	7:33	7:38	7:51
7:48	7:58	8:03	8:08	8:21
8:18	8:28	8:33	8:38	8:51
8:48	8:58	9:03	9:08	9:21
9:18	9:28	9:33	9:39	9:53
9:48	9:58	10:04	10:10	10:24
10:18	10:28	10:34	10:40	10:54
10:48	10:58	11:04	11:10	11:24
11:18	11:29	11:35	11:41	11:55
11:48	11:59	<b>12:05</b>	<b>12:11</b>	<b>12:25</b>
<b>12:18</b>	<b>12:29</b>	<b>12:35</b>	<b>12:41</b>	<b>12:55</b>
12:48	12:59	1:05	1:11	1:26
1:18	1:29	1:35	1:41	1:56
1:48	1:59	2:06	2:12	2:27
2:18	2:29	2:36	2:42	2:57
2:48	2:59	3:06	3:12	3:27
3:18	3:29	3:36	3:42	3:57
3:48	3:59	4:06	4:12	4:27
4:18	4:29	4:36	4:42	4:57
4:48	4:59	5:06	5:12	5:27
5:18	5:29	5:36	5:42	5:57
5:48	5:59	6:06	6:12	6:27
6:18	6:29	6:36	6:42	6:57
6:46	6:56	7:03	7:09	7:23
7:18	7:27	7:34	7:40	7:54
7:46	7:55	8:02	8:08	8:22
8:18	8:27	8:33	8:39	8:52
8:48	8:57	9:03	9:08	9:21
9:18	9:27	9:33	9:38	9:51
9:48	9:57	10:03	10:08	10:21
10:18	10:27	10:33	10:38	10:51
10:48	10:57	11:03	11:08	11:19
11:19	11:28	11:34	11:39	11:50
11:48	11:57	12:03	12:07	12:18
12:18	12:27	12:33	12:37	12:48
1:24	1:33	1:39	1:43	1:54
2:24	2:33	2:39	2:43	2:54
3:34	3:43	3:49	3:53	4:04
<b>Bold</b> PM time				

### Route 161 Sunday to Kent

Servicio de domingo a Kent

Burien TC Bay 6	SeaTac Airport Station Bay 1	S 188th St & Military Rd S	S 212nd St & 64th Ave S	Kent Sounder Station Bay 3	To Route
Stop #52306	Stop #61080	Stop #53503	Stop #58079	Stop #57453	
5:28	5:40	5:45	5:52	6:01	168
5:58	6:10	6:15	6:22	6:31	168
6:32	6:44	6:49	6:56	7:05	168
7:03	7:15	7:20	7:27	7:36	168
7:34	7:46	7:51	7:58	8:08	168
8:04	8:16	8:21	8:28	8:38	168
8:34	8:46	8:51	8:58	9:08	168
8:50	9:02	9:07	9:14	9:24	168
9:21	9:33	9:38	9:45	9:55	168
9:50	10:02	10:08	10:15	10:25	168
10:21	10:33	10:39	10:46	10:56	168
10:50	11:02	11:08	11:15	11:26	168
11:20	11:32	11:39	11:46	11:57	168
11:50	<b>12:02</b>	<b>12:09</b>	<b>12:16</b>	<b>12:27</b>	168
<b>12:23</b>	<b>12:35</b>	<b>12:42</b>	<b>12:49</b>	<b>1:00</b>	168
12:55	1:07	1:14	1:21	1:32	168
1:25	1:37	1:44	1:51	2:02	168
1:54	2:07	2:14	2:21	2:32	168
2:24	2:37	2:44	2:51	3:02	168
2:54	3:07	3:14	3:21	3:32	168
3:24	3:37	3:44	3:51	4:02	168
3:54	4:07	4:14	4:21	4:32	168
4:23	4:36	4:43	4:51	5:02	168
4:53	5:06	5:13	5:21	5:32	168
5:21	5:34	5:41	5:49	6:00	168
5:53	6:06	6:13	6:21	6:31	168
6:22	6:35	6:41	6:48	6:58	168
6:49	7:02	7:08	7:15	7:25	168
7:19	7:32	7:38	7:45	7:55	168
7:37	7:49	7:55	8:02	8:12	168
8:08	8:20	8:26	8:33	8:42	168
8:38	8:50	8:56	9:03	9:12	SB
9:11	9:23	9:29	9:36	9:45	168
9:41	9:52	9:58	10:05	10:14	SB
10:11	10:22	10:28	10:35	10:44	168
10:38	10:49	10:55	11:02	11:11	
11:10	11:21	11:26	11:33	11:42	168
11:40	11:51	11:56	12:02	12:11	
12:47	12:58	1:03	1:09	1:18	
<b>Bold</b> PM time					
<b>SB</b> Returns to South Base Garage.					

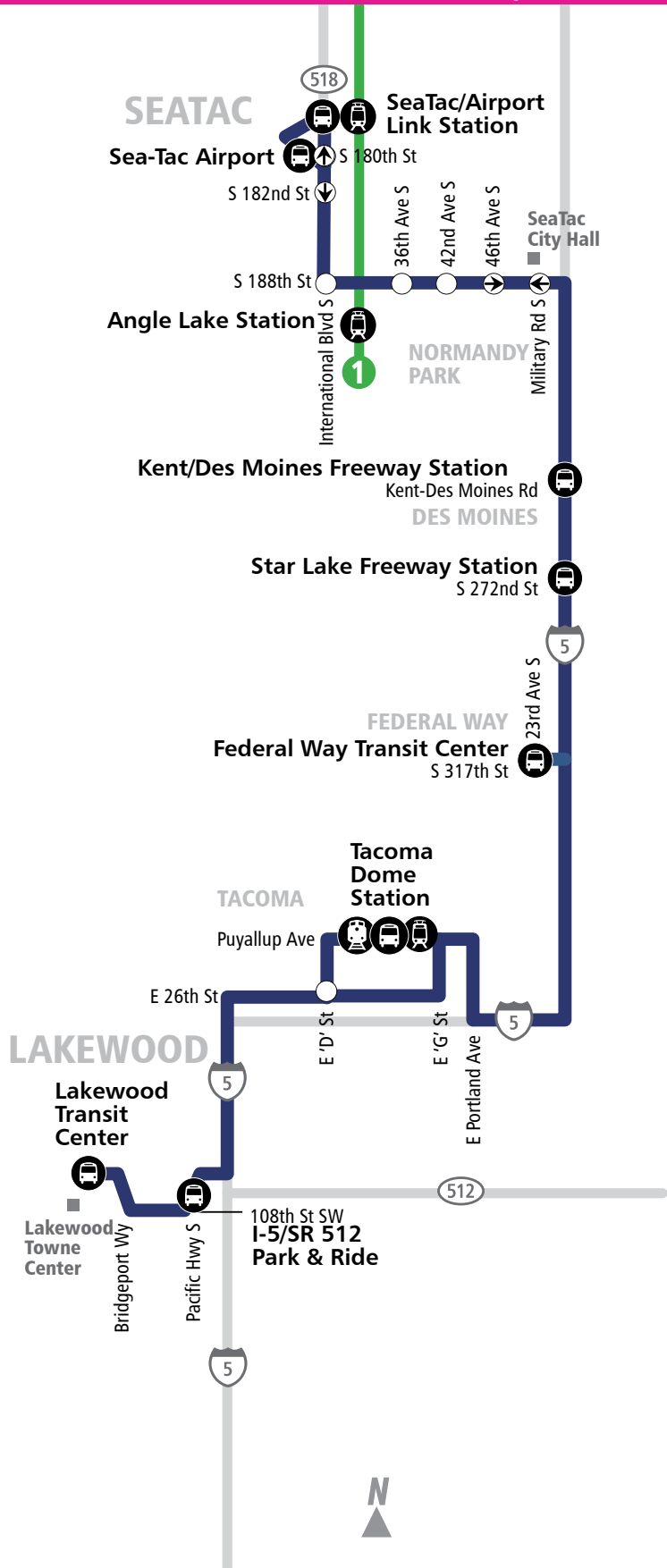


ST Express

# 574 Lakewood – SeaTac

Adult fares \$3.25

Effective September 19, 2021 – March 19, 2022



### Connecting routes

#### Lakewood Transit Center

PT	2	4	202	212
	3	48	206	214

#### I-5/SR 512 Park & Ride

IT	620			
PT	3	4		
ST	580	592	594	

#### Tacoma Dome Station

PT	13	42	500	501
	41	400		
ST	586	590	594	595
	S Line			
	T Line			

#### Federal Way Transit Center

METRO	177	183	901	
	181	187	903	
	182	193	A	
PT	402	500	501	
ST	577	578		

#### Star Lake Freeway Station

METRO	183	190	193	
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#### Kent/Des Moines Freeway Station

METRO	158	166	193	
	159	192	197	

#### SeaTac/Airport Station

METRO	124	156	161	A
ST	560			
	1 Line			

#### Sea-Tac Airport

ST	560	1 Line		
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### Legend

- Bus stops only in this direction
  - Bus stops in both directions
  - 1 Line
- Map not to scale

### ST Express bus fares

Adult	\$3.25
ORCA LIFT/Youth	\$1.50
Senior/Disabled	\$1.00



[soundtransit.org/ride-with-us](https://soundtransit.org/ride-with-us)  
Get updates [soundtransit.org/subscribe](https://soundtransit.org/subscribe)

# 574 Lakewood – SeaTac

Lakewood TC Zone L	SR512 P&R Zone F	Tacoma Dome Station Zone A	Federal Way TC Bay 8	Star Lake Fwy Station*	Kent/Des Moines Fwy Station*	SeaTac/Airport Link Station*	SeaTac Airport*
2:03AM	2:12	2:24	2:42	2:49	2:53	3:01	3:05
2:13AM	2:22	2:34	2:52	2:59	3:03	3:11	3:15
2:28AM	2:37	2:49	3:07	3:14	3:18	3:26	3:30
2:48AM	2:57	3:09	3:27	3:34	3:38	3:46	3:50
3:08AM	3:17	3:29	3:47	3:54	3:58	4:06	4:10
3:38AM	3:47	3:59	4:17	4:24	4:28	4:36	4:40
4:08AM	4:17	4:27	4:44	4:51	4:55	5:06	5:10
4:34AM	4:43	4:53	5:10	5:17	5:21	5:36	5:40
4:50AM	4:59	5:15	5:35	5:42	5:46	6:06	6:10
5:25AM	5:34	5:50	6:10	6:17	6:21	6:41	6:45
5:55AM	6:04	6:20	6:40	6:47	6:51	7:11	7:15
6:25AM	6:34	6:50	7:10	7:17	7:21	7:41	7:45
6:55AM	7:06	7:20	7:38	7:45	7:49	8:11	8:15
7:30AM	7:41	7:55	8:13	8:20	8:24	8:41	8:45
8:00AM	8:11	8:25	8:45	8:52	8:56	9:11	9:15
8:32AM	8:43	8:55	9:15	9:22	9:26	9:40	9:45
9:03AM	9:14	9:28	9:45	9:52	9:56	10:10	10:15
9:33AM	9:44	9:58	10:15	10:22	10:26	10:40	10:45
9:54AM	10:05	10:19	10:36	10:43	10:47	11:01	11:06
10:33AM	10:44	10:58	11:15	11:22	11:26	11:40	11:45
11:18AM	11:29	11:43	<b>12:00</b>	<b>12:07</b>	<b>12:11</b>	<b>12:25</b>	<b>12:30</b>
11:48AM	11:59	<b>12:13</b>	<b>12:30</b>	<b>12:37</b>	<b>12:41</b>	<b>12:55</b>	<b>1:00</b>
<b>12:18PM</b>	<b>12:29</b>	<b>12:43</b>	<b>1:00</b>	<b>1:07</b>	<b>1:11</b>	<b>1:25</b>	<b>1:30</b>
<b>12:48PM</b>	<b>12:59</b>	<b>1:13</b>	<b>1:30</b>	<b>1:37</b>	<b>1:41</b>	<b>1:55</b>	<b>2:00</b>
<b>1:18PM</b>	<b>1:29</b>	<b>1:43</b>	<b>2:00</b>	<b>2:07</b>	<b>2:11</b>	<b>2:25</b>	<b>2:30</b>
<b>1:48PM</b>	<b>1:59</b>	<b>2:12</b>	<b>2:30</b>	<b>2:37</b>	<b>2:41</b>	<b>2:55</b>	<b>3:00</b>
<b>2:18PM</b>	<b>2:29</b>	<b>2:42</b>	<b>3:00</b>	<b>3:07</b>	<b>3:11</b>	<b>3:25</b>	<b>3:30</b>
<b>2:48PM</b>	<b>2:59</b>	<b>3:12</b>	<b>3:30</b>	<b>3:37</b>	<b>3:41</b>	<b>3:55</b>	<b>4:00</b>
<b>3:18PM</b>	<b>3:29</b>	<b>3:42</b>	<b>4:00</b>	<b>4:07</b>	<b>4:11</b>	<b>4:25</b>	<b>4:30</b>
<b>3:48PM</b>	<b>3:59</b>	<b>4:12</b>	<b>4:30</b>	<b>4:37</b>	<b>4:41</b>	<b>4:55</b>	<b>5:00</b>
<b>4:18PM</b>	<b>4:29</b>	<b>4:45</b>	<b>5:00</b>	<b>5:07</b>	<b>5:11</b>	<b>5:25</b>	<b>5:30</b>
<b>4:48PM</b>	<b>4:59</b>	<b>5:15</b>	<b>5:32</b>	<b>5:39</b>	<b>5:43</b>	<b>5:55</b>	<b>6:00</b>
<b>5:18PM</b>	<b>5:29</b>	<b>5:45</b>	<b>6:02</b>	<b>6:09</b>	<b>6:13</b>	<b>6:25</b>	<b>6:30</b>
<b>5:48PM</b>	<b>5:59</b>	<b>6:15</b>	<b>6:32</b>	<b>6:39</b>	<b>6:43</b>	<b>6:55</b>	<b>7:00</b>
<b>6:18PM</b>	<b>6:27</b>	<b>6:47</b>	<b>7:02</b>	<b>7:09</b>	<b>7:13</b>	<b>7:25</b>	<b>7:30</b>
<b>6:52PM</b>	<b>7:01</b>	<b>7:17</b>	<b>7:33</b>	<b>7:40</b>	<b>7:44</b>	<b>7:55</b>	<b>8:00</b>
<b>7:52PM</b>	<b>8:01</b>	<b>8:17</b>	<b>8:33</b>	<b>8:40</b>	<b>8:44</b>	<b>8:55</b>	<b>9:00</b>
<b>8:52PM</b>	<b>9:01</b>	<b>9:17</b>	<b>9:33</b>	<b>9:40</b>	<b>9:44</b>	<b>9:55</b>	<b>10:00</b>
<b>9:47PM</b>	<b>9:56</b>	<b>10:12</b>	<b>10:28</b>	<b>10:35</b>	<b>10:39</b>	<b>10:51</b>	<b>10:55</b>

\* This is an estimated timepoint for public guidance only. Buses will proceed on arrival to the next timepoint. This may be before the time shown on our schedule.

# 574 SeaTac – Lakewood

SeaTac/Airport Link Station	SeaTac/Airport	Kent/Des Moines Fwy Station*	Kent/Des Moines Fwy Station*	Federal Way TC Bay 5	Tacoma Dome Station Zone H*	SR 512 P&R Zone H*	Lakewood TC Zone L*
4:33AM	4:40	4:49	4:52	4:59	5:15	5:27	5:37
5:03AM	5:10	5:19	5:22	5:29	5:45	5:58	6:08
5:33AM	5:40	5:49	5:52	6:00	6:16	6:29	6:39
6:03AM	6:10	6:19	6:22	6:30	6:46	6:59	7:09
6:33AM	6:40	6:49	6:52	7:00	7:16	7:30	7:40
7:03AM	7:10	7:19	7:22	7:30	7:46	8:00	8:10
7:33AM	7:40	7:49	7:52	8:00	8:16	8:30	8:40
8:03AM	8:10	8:19	8:22	8:30	8:46	9:00	9:10
8:33AM	8:40	8:49	8:52	9:00	9:16	9:30	9:40
9:03AM	9:10	9:19	9:22	9:30	9:46	10:00	10:10
9:33AM	9:40	9:49	9:52	10:00	10:17	10:31	10:41
10:03AM	10:10	10:19	10:22	10:30	10:47	11:02	11:12
10:33AM	10:40	10:49	10:52	11:00	11:17	11:32	11:42
11:03AM	11:10	11:19	11:22	11:30	11:50	<b>12:05</b>	<b>12:15</b>
11:33AM	11:40	11:49	11:52	<b>12:00</b>	<b>12:20</b>	<b>12:35</b>	<b>12:45</b>
<b>12:03PM</b>	<b>12:10</b>	<b>12:20</b>	<b>12:23</b>	<b>12:32</b>	<b>12:54</b>	<b>1:12</b>	<b>1:22</b>
<b>12:23PM</b>	<b>12:30</b>	<b>12:40</b>	<b>12:43</b>	<b>12:52</b>	<b>1:14</b>	<b>1:32</b>	<b>1:42</b>
<b>12:43PM</b>	<b>12:50</b>	<b>1:01</b>	<b>1:04</b>	<b>1:13</b>	<b>1:35</b>	<b>1:56</b>	<b>2:06</b>
<b>1:03PM</b>	<b>1:10</b>	<b>1:21</b>	<b>1:24</b>	<b>1:33</b>	<b>1:59</b>	<b>2:22</b>	<b>2:32</b>
<b>1:33PM</b>	<b>1:40</b>	<b>1:51</b>	<b>1:54</b>	<b>2:03</b>	<b>2:29</b>	<b>2:52</b>	<b>3:02</b>
<b>2:03PM</b>	<b>2:10</b>	<b>2:22</b>	<b>2:25</b>	<b>2:35</b>	<b>3:03</b>	<b>3:26</b>	<b>3:36</b>
<b>2:23PM</b>	<b>2:30</b>	<b>2:42</b>	<b>2:45</b>	<b>2:56</b>	<b>3:32</b>	<b>3:55</b>	<b>4:05</b>
<b>2:43PM</b>	<b>2:50</b>	<b>3:03</b>	<b>3:06</b>	<b>3:17</b>	<b>3:56</b>	<b>4:19</b>	<b>4:29</b>
<b>3:03PM</b>	<b>3:10</b>	<b>3:24</b>	<b>3:27</b>	<b>3:40</b>	<b>4:22</b>	<b>4:45</b>	<b>4:55</b>
<b>3:33PM</b>	<b>3:40</b>	<b>3:54</b>	<b>3:57</b>	<b>4:10</b>	<b>4:54</b>	<b>5:14</b>	<b>5:24</b>
<b>4:03PM</b>	<b>4:10</b>	<b>4:24</b>	<b>4:27</b>	<b>4:40</b>	<b>5:23</b>	<b>5:43</b>	<b>5:53</b>
<b>4:33PM</b>	<b>4:40</b>	<b>4:53</b>	<b>4:56</b>	<b>5:09</b>	<b>5:50</b>	<b>6:10</b>	<b>6:20</b>
<b>5:03PM</b>	<b>5:10</b>	<b>5:23</b>	<b>5:26</b>	<b>5:39</b>	<b>6:16</b>	<b>6:36</b>	<b>6:46</b>
<b>5:33PM</b>	<b>5:40</b>	<b>5:52</b>	<b>5:55</b>	<b>6:07</b>	<b>6:40</b>	<b>7:00</b>	<b>7:10</b>
<b>6:03PM</b>	<b>6:10</b>	<b>6:21</b>	<b>6:24</b>	<b>6:35</b>	<b>7:05</b>	<b>7:21</b>	<b>7:31</b>
<b>6:33PM</b>	<b>6:40</b>	<b>6:50</b>	<b>6:53</b>	<b>7:04</b>	<b>7:29</b>	<b>7:45</b>	<b>7:55</b>
<b>7:03PM</b>	<b>7:10</b>	<b>7:20</b>	<b>7:23</b>	<b>7:33</b>	<b>7:51</b>	<b>8:07</b>	<b>8:17</b>
<b>7:33PM</b>	<b>7:40</b>	<b>7:49</b>	<b>7:52</b>	<b>8:01</b>	<b>8:18</b>	<b>8:32</b>	<b>8:42</b>
<b>8:03PM</b>	<b>8:10</b>	<b>8:19</b>	<b>8:22</b>	<b>8:31</b>	<b>8:48</b>	<b>9:01</b>	<b>9:11</b>
<b>8:33PM</b>	<b>8:40</b>	<b>8:49</b>	<b>8:52</b>	<b>9:00</b>	<b>9:17</b>	<b>9:30</b>	<b>9:40</b>
<b>9:33PM</b>	<b>9:40</b>	<b>9:49</b>	<b>9:52</b>	<b>10:00</b>	<b>10:17</b>	<b>10:30</b>	<b>10:40</b>
<b>10:33PM</b>	<b>10:40</b>	<b>10:49</b>	<b>10:52</b>	<b>10:59</b>	<b>11:16</b>	<b>11:29</b>	<b>11:39</b>
<b>11:33PM</b>	<b>11:40</b>	<b>11:49</b>	<b>11:52</b>	<b>11:59</b>	12:15AM	12:28	12:38

\* This is an estimated timepoint for public guidance only. Buses will proceed on arrival to the next timepoint. This may be before the time shown on our schedule.

# 574 Lakewood – SeaTac

Lakewood TC Zone L	SR512 P&R Zone F	Tacoma Dome Station Zone A	Federal Way TC Bay 8	Star Lake Fwy Station*	Kent/Des Moines Fwy Station*	SeaTac/Airport Link Station*	SeaTac/ Airport*
2:13AM	2:23	2:35	2:50	2:56	2:59	3:08	3:13
2:38AM	2:48	3:00	3:15	3:21	3:24	3:33	3:38
3:08AM	3:18	3:30	3:45	3:51	3:54	4:03	4:08
3:38AM	3:48	4:00	4:15	4:21	4:24	4:33	4:38
4:08AM	4:18	4:30	4:45	4:51	4:54	5:03	5:08
4:38AM	4:48	5:00	5:15	5:21	5:24	5:33	5:38
5:38AM	5:48	6:00	6:15	6:21	6:24	6:33	6:38
6:38AM	6:48	7:00	7:15	7:20	7:23	7:34	7:39
7:38AM	7:48	8:00	8:15	8:20	8:23	8:34	8:39
8:38AM	8:48	9:00	9:16	9:21	9:25	9:36	9:41
9:38AM	9:47	10:00	10:17	10:22	10:26	10:37	10:42
10:08AM	10:19	10:32	10:47	10:54	10:58	11:09	11:14
10:38AM	10:49	11:02	11:17	11:24	11:28	11:39	11:44
11:21AM	11:32	11:45	<b>12:00</b>	<b>12:07</b>	<b>12:11</b>	<b>12:22</b>	<b>12:27</b>
11:51AM	<b>12:02</b>	<b>12:15</b>	<b>12:30</b>	<b>12:37</b>	<b>12:41</b>	<b>12:52</b>	<b>12:57</b>
<b>12:21PM</b>	<b>12:32</b>	<b>12:45</b>	<b>1:00</b>	<b>1:07</b>	<b>1:11</b>	<b>1:22</b>	<b>1:27</b>
<b>12:51PM</b>	<b>1:02</b>	<b>1:15</b>	<b>1:30</b>	<b>1:37</b>	<b>1:41</b>	<b>1:52</b>	<b>1:57</b>
<b>1:21PM</b>	<b>1:32</b>	<b>1:45</b>	<b>2:00</b>	<b>2:07</b>	<b>2:11</b>	<b>2:22</b>	<b>2:27</b>
<b>1:51PM</b>	<b>2:02</b>	<b>2:15</b>	<b>2:30</b>	<b>2:37</b>	<b>2:41</b>	<b>2:52</b>	<b>2:57</b>
<b>2:21PM</b>	<b>2:32</b>	<b>2:45</b>	<b>3:00</b>	<b>3:07</b>	<b>3:11</b>	<b>3:22</b>	<b>3:27</b>
<b>2:51PM</b>	<b>3:02</b>	<b>3:15</b>	<b>3:30</b>	<b>3:37</b>	<b>3:41</b>	<b>3:52</b>	<b>3:57</b>
<b>3:21PM</b>	<b>3:32</b>	<b>3:45</b>	<b>4:00</b>	<b>4:07</b>	<b>4:11</b>	<b>4:22</b>	<b>4:27</b>
<b>3:51PM</b>	<b>4:02</b>	<b>4:15</b>	<b>4:30</b>	<b>4:37</b>	<b>4:41</b>	<b>4:52</b>	<b>4:57</b>
<b>4:21PM</b>	<b>4:32</b>	<b>4:45</b>	<b>5:00</b>	<b>5:07</b>	<b>5:11</b>	<b>5:22</b>	<b>5:27</b>
<b>4:51PM</b>	<b>5:02</b>	<b>5:15</b>	<b>5:30</b>	<b>5:37</b>	<b>5:41</b>	<b>5:52</b>	<b>5:57</b>
<b>5:21PM</b>	<b>5:32</b>	<b>5:45</b>	<b>6:00</b>	<b>6:07</b>	<b>6:11</b>	<b>6:22</b>	<b>6:27</b>
<b>5:51PM</b>	<b>6:02</b>	<b>6:15</b>	<b>6:30</b>	<b>6:36</b>	<b>6:39</b>	<b>6:50</b>	<b>6:55</b>
<b>6:52PM</b>	<b>7:03</b>	<b>7:16</b>	<b>7:31</b>	<b>7:37</b>	<b>7:40</b>	<b>7:51</b>	<b>7:56</b>
<b>7:53PM</b>	<b>8:03</b>	<b>8:15</b>	<b>8:30</b>	<b>8:37</b>	<b>8:40</b>	<b>8:51</b>	<b>8:56</b>
<b>8:53PM</b>	<b>9:03</b>	<b>9:15</b>	<b>9:30</b>	<b>9:37</b>	<b>9:40</b>	<b>9:51</b>	<b>9:56</b>
<b>9:53PM</b>	<b>10:03</b>	<b>10:15</b>	<b>10:30</b>	<b>10:37</b>	<b>10:40</b>	<b>10:51</b>	<b>10:56</b>

\* This is an estimated timepoint for public guidance only. Buses will proceed on arrival to the next timepoint. This may be before the time shown on our schedule.

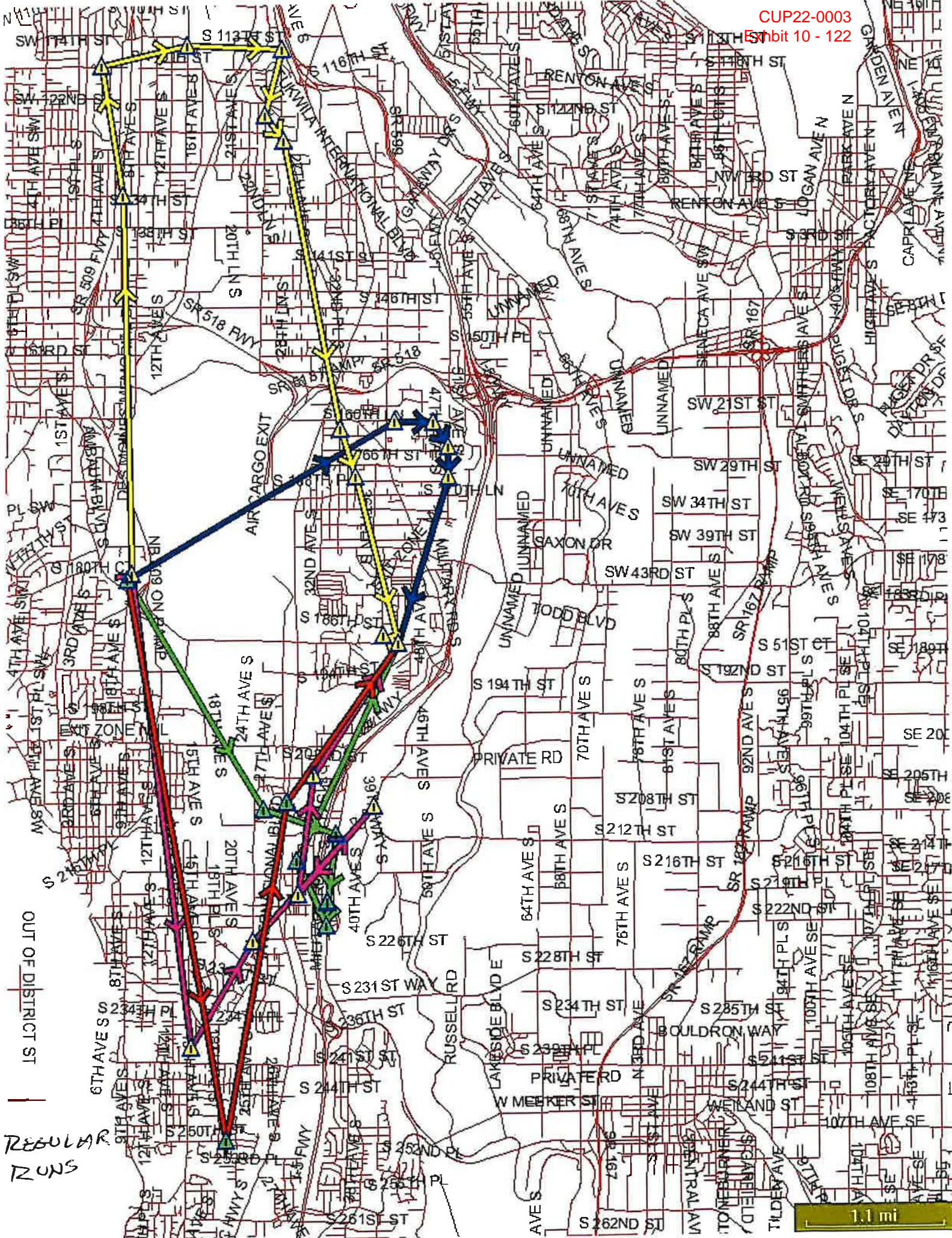
# 574 SeaTac – Lakewood

SeaTac/Airport Link Station	SeaTac/Airport	Kent/Des Moines Fwy Station*	Kent/Des Moines Fwy Station*	Federal Way TC Bay 5	Tacoma Dome Station Zone H*	SR 512 P&R Zone H*	Lakewood TC Zone L*
4:33AM	4:40	4:51	4:54	5:00	5:11	5:24	5:33
5:33AM	5:40	5:51	5:54	6:00	6:11	6:24	6:33
6:33AM	6:40	6:51	6:54	7:00	7:13	7:26	7:35
7:33AM	7:40	7:51	7:54	8:00	8:13	8:26	8:35
8:33AM	8:40	8:51	8:54	9:00	9:13	9:26	9:35
9:33AM	9:40	9:51	9:54	10:00	10:13	10:26	10:35
10:33AM	10:40	10:52	10:55	11:01	11:15	11:30	11:39
11:33AM	11:40	11:52	11:55	<b>12:01</b>	<b>12:16</b>	<b>12:30</b>	<b>12:39</b>
<b>12:03PM</b>	<b>12:10</b>	<b>12:22</b>	<b>12:25</b>	<b>12:31</b>	<b>12:46</b>	<b>1:00</b>	<b>1:09</b>
<b>12:33PM</b>	<b>12:40</b>	<b>12:52</b>	<b>12:55</b>	<b>1:01</b>	<b>1:16</b>	<b>1:30</b>	<b>1:39</b>
<b>1:03PM</b>	<b>1:10</b>	<b>1:22</b>	<b>1:25</b>	<b>1:31</b>	<b>1:46</b>	<b>2:00</b>	<b>2:09</b>
<b>1:33PM</b>	<b>1:40</b>	<b>1:52</b>	<b>1:55</b>	<b>2:01</b>	<b>2:15</b>	<b>2:29</b>	<b>2:38</b>
<b>2:03PM</b>	<b>2:10</b>	<b>2:22</b>	<b>2:25</b>	<b>2:31</b>	<b>2:45</b>	<b>2:59</b>	<b>3:08</b>
<b>2:33PM</b>	<b>2:40</b>	<b>2:52</b>	<b>2:55</b>	<b>3:01</b>	<b>3:15</b>	<b>3:29</b>	<b>3:38</b>
<b>3:03PM</b>	<b>3:10</b>	<b>3:22</b>	<b>3:25</b>	<b>3:31</b>	<b>3:45</b>	<b>3:59</b>	<b>4:08</b>
<b>3:33PM</b>	<b>3:40</b>	<b>3:52</b>	<b>3:55</b>	<b>4:01</b>	<b>4:15</b>	<b>4:29</b>	<b>4:38</b>
<b>4:03PM</b>	<b>4:10</b>	<b>4:22</b>	<b>4:25</b>	<b>4:31</b>	<b>4:45</b>	<b>4:59</b>	<b>5:08</b>
<b>4:33PM</b>	<b>4:40</b>	<b>4:52</b>	<b>4:55</b>	<b>5:01</b>	<b>5:15</b>	<b>5:29</b>	<b>5:38</b>
<b>5:03PM</b>	<b>5:10</b>	<b>5:22</b>	<b>5:25</b>	<b>5:31</b>	<b>5:45</b>	<b>5:59</b>	<b>6:08</b>
<b>5:33PM</b>	<b>5:40</b>	<b>5:52</b>	<b>5:55</b>	<b>6:01</b>	<b>6:15</b>	<b>6:29</b>	<b>6:38</b>
<b>6:03PM</b>	<b>6:10</b>	<b>6:22</b>	<b>6:25</b>	<b>6:31</b>	<b>6:45</b>	<b>6:59</b>	<b>7:08</b>
<b>6:33PM</b>	<b>6:40</b>	<b>6:52</b>	<b>6:55</b>	<b>7:01</b>	<b>7:15</b>	<b>7:29</b>	<b>7:38</b>
<b>7:03PM</b>	<b>7:10</b>	<b>7:21</b>	<b>7:24</b>	<b>7:30</b>	<b>7:44</b>	<b>7:58</b>	<b>8:07</b>
<b>7:33PM</b>	<b>7:40</b>	<b>7:51</b>	<b>7:54</b>	<b>8:00</b>	<b>8:14</b>	<b>8:28</b>	<b>8:37</b>
<b>8:33PM</b>	<b>8:40</b>	<b>8:51</b>	<b>8:54</b>	<b>9:00</b>	<b>9:14</b>	<b>9:28</b>	<b>9:37</b>
<b>9:33PM</b>	<b>9:40</b>	<b>9:51</b>	<b>9:54</b>	<b>10:00</b>	<b>10:14</b>	<b>10:28</b>	<b>10:37</b>
<b>10:33PM</b>	<b>10:40</b>	<b>10:51</b>	<b>10:54</b>	<b>11:00</b>	<b>11:14</b>	<b>11:28</b>	<b>11:37</b>
<b>11:33PM</b>	<b>11:40</b>	<b>11:51</b>	<b>11:54</b>	12:00AM	12:14	12:28	12:37

\* This is an estimated timepoint for public guidance only. Buses will proceed on arrival to the next timepoint. This may be before the time shown on our schedule.



# School Bus Information



OUT OF DISTRICT ST

REGULAR  
RUNS

1.1 mi

Run ID: TYE.001  
 Route ID: 102  
 Run Description: TYE & CHI REG ED

Days: MTWUF--

CUP22-0003  
 Exhibit 10 - 123

Stop Time	Description	Service ID	Assign Stop Load	Assign Run Load	Miles	Acc Miles
06:59 AM	CLOCK IN / PRETRIP	@CP.002001	0	0	0.0000	0.0000
07:14 AM	DEPART BUS GARAGE	@CP.002004	0	0	0.0000	0.0000
07:23 AM	2503 S 208TH ST	TYE.016001	4	4	4.1953	4.1953
07:28 AM	MILITARY RD S & S 211TH ST (SB)	CHI.008001	10	14	1.4311	5.6263
07:30 AM	MILITARY RD S @ S 220TH ST (SB)	TYE.022001	4	18	0.5523	6.1786
07:30 AM	MILITARY RD S @ S 220TH ST (SB)	CHI.020001	3	21	0.0000	6.1786
07:33 AM	MILITARY RD & S 222ND PL (NB @ SKYVIEW APTS)	CHI.012001	10	31	0.4225	6.6011
07:33 AM	MILITARY RD & S 222ND PL (NB @ SKYVIEW APTS)	TYE.002001	17	48	0.0000	6.6011
07:36 AM	21420 30TH AV S (YELLOW HOUSE)	CHI.016001	16	64	0.7547	7.3559
07:36 AM	21420 30TH AV S (YELLOW HOUSE)	TYE.052001	22	86	0.0000	7.3559
07:45 AM	School: TYEE HIGH SCHOOL	TYE.000001	0	39	3.0930	10.4489
07:50 AM	SCHOOL: CHINOOK	CHI.000001	0	0	0.2076	10.6564

Run ID: TYE.002  
 Route ID: 123  
 Run Description: TYE & CHI REG ED

Days: MTWUF--

CUP22-0003  
 Exhibit 10 - 124

Stop Time	Description	Service ID	Assign Stop Load	Assign Run Load	Miles	Acc Miles
07:07 AM	CLOCK IN / PRETRIP	@CP.002001	0	0	0.0000	0.0000
07:22 AM	DEPART BUS GARAGE	@CP.002004	0	0	0.0000	0.0000
07:32 AM	S 160TH ST @ 43RD AV S	TYE.014001	7	7	3.9123	3.9123
07:32 AM	S 160TH ST @ 43RD AV S	CHI.002001	6	13	0.0000	3.9123
07:34 AM	S 160TH ST @ 48TH AV S	TYE.003001	8	21	0.3059	4.2182
07:34 AM	S 160TH ST @ 48TH AV S	CHI.001001	7	28	0.0000	4.2182
07:36 AM	51ST AV S & S 163RD PL	TYE.004001	12	40	0.3208	4.5390
07:36 AM	51ST AV S & S 163RD PL	CHI.010001	11	51	0.0000	4.5390
07:38 AM	51ST AV S @ S 167TH ST	TYE.013001	12	63	0.2322	4.7712
07:38 AM	51ST AV S @ S 167TH ST	CHI.028001	21	84	0.0000	4.7712
07:45 AM	School: TYEE HIGH SCHOOL	TYE.000001	0	45	2.2932	7.0644
07:50 AM	SCHOOL: CHINOOK	CHI.000001	0	0	0.2076	7.2720

Run ID: TYE.003  
 Route ID: 118  
 Run Description: TYE & CHI REG ED

Days: MTWUF--

CUP22-0003  
 Exhibit 10 - 125

Stop Time	Description	Service ID	Assign Stop Load	Assign Run Load	Miles	Acc Miles
06:45 AM	CLOCK IN / PRETRIP	@CP.002001	0	0	0.0000	0.0000
07:01 AM	BUS GARAGE	@CP.014001	0	0	0.1167	0.1167
07:12 AM	DES MOINES ELEM (BUS ZONE)	SCH.094001	3	3	4.4350	4.5517
07:17 AM	22447 24TH AVE S (MIDWAY ON STREET)	STY.098001	1	4	1.5652	6.1169
07:17 AM	22447 24TH AVE S (MIDWAY ON STREET)	SCH.064001	5	9	0.0000	6.1169
07:26 AM	ORILLIA RD S @ S 209TH PL (SB)(ENTRANCE TO BELVEDERE)	TYE.024001	6	15	4.3388	10.4557
07:26 AM	ORILLIA RD S @ 39TH WAY S (SB)(ENTRANCE TO BELVEDERE)	CHI.026001	3	18	0.0000	10.4557
07:34 AM	21900 30TH AVE S	TYE.020001	6	24	1.7593	12.2150
07:34 AM	21900 30TH AVE S	SCH.013001	11	35	0.0000	12.2150
07:38 AM	MADRONA ELEM BUS ZONE (32ND AVE S & S 204TH ST)	TYE.015001	9	44	1.5150	13.7299
07:38 AM	MADRONA ELEM BUS ZONE (32ND AVE S & S 204TH ST)	CHI.019001	42	86	0.0000	13.7299
07:45 AM	School: TYEE HS SPRECIAL ED	STY.000001	0	85	2.3955	16.1254
07:45 AM	School: TYEE HIGH SCHOOL	TYE.000001	0	64	0.0000	16.1254
07:50 AM	SCHOOL: CHINOOK SP	SCH.000001	0	45	0.2076	16.3330
07:50 AM	SCHOOL: CHINOOK	CHI.000001	0	0	0.0000	16.3330

Run ID: TYE.004  
 Route ID: 129  
 Run Description: TYE & CHI REG ED

Days: MTWUF--

CUP22-0003  
 Exhibit 10 - 126

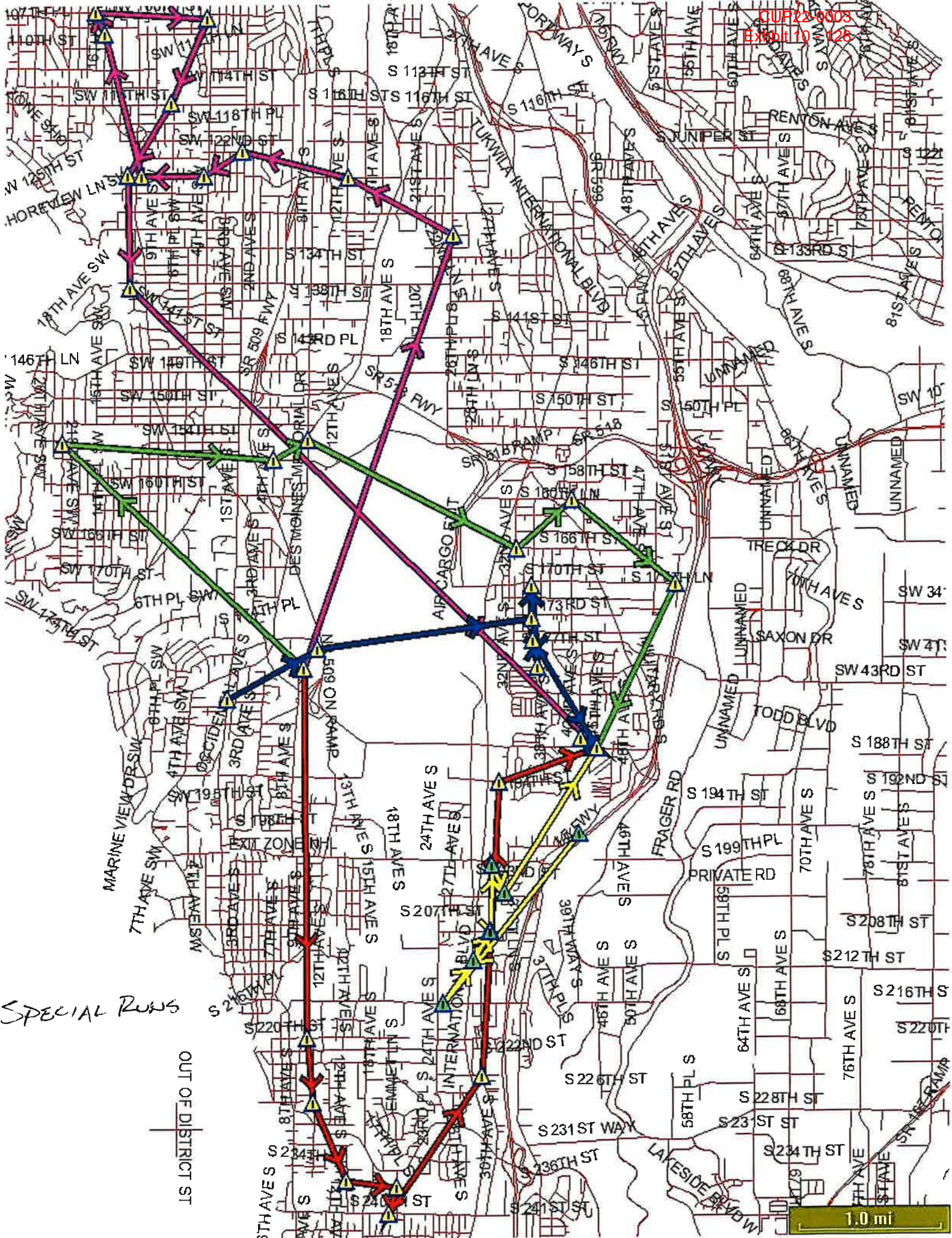
Stop Time	Description	Service ID	Assign Stop Load	Assign Run Load	Miles	Acc Miles
06:59 AM	CLOCK IN / PRETRIP	@CP.002001	0	0	0.0000	0.0000
07:14 AM	DEPART BUS GARAGE	@CP.002004	0	0	0.0000	0.0000
07:27 AM	2121 S 250TH ST	SCH.016001	1	1	5.3994	5.3994
07:35 AM	PAC HWY S, 1/4 BLK N OF S 208TH ST (NB) (PULL OFF)	TYE.005001	45	46	3.3057	8.7051
07:39 AM	PAC HWY S, 1/4 BLK N OF S 208TH ST (NB) PULL-OFF)	CHI.018001	64	110	0.0000	8.7051
07:45 AM	School: TYEE HIGH SCHOOL	TYE.000001	0	65	2.3886	11.0938
07:50 AM	SCHOOL: CHINOOK	CHI.000001	0	1	0.2076	11.3013
07:50 AM	SCHOOL: CHINOOK SP	SCH.000001	0	0	0.0000	11.3013

Run ID: TYE.005  
 Route ID: 125  
 Run Description: TYE & CHI DL AND HC

Days: MTWUF--

CUP22-0003  
 Exhibit 10 - 127

Stop Time	Description	Service ID	Assign Stop Load	Assign Run Load	Miles	Acc Miles
06:41 AM	CLOCK IN 15 MIN PRETRIP	@CP.014001	0	0	0.0000	0.0000
06:56 AM	BUS GARAGE	@CP.014031	0	0	0.0000	0.0000
07:05 AM	CEDARHURST (BUS ZONE)	SCH.095001	2	2	4.3922	4.3922
07:11 AM	OLD BEVERLY PK SCHOOL (11595 3RD AVE S)	SCH.022001	2	4	1.8025	6.1947
07:17 AM	SOUTHERN HTS @ CROSSWALK	SCH.033001	4	8	1.0729	7.2676
07:24 AM	11315 26TH AV S (VERANDA GREEN)	STY.096001	1	9	1.4047	8.6723
07:28 AM	HILLTOP (ON STREET)	SCH.097001	1	10	0.8483	9.5206
07:30 AM	MILITARY RD S @ S 125TH ST (NB)	SCH.074001	1	11	0.8034	10.3241
07:31 AM	MILITARY RD S @ S 125TH ST (NB)	STY.095001	1	12	0.0000	10.3241
07:39 AM	34TH AVE S 1/4 BLK S OF S 161ST ST	TYE.008001	33	45	3.2307	13.5547
07:39 AM	34TH AV S 1/4 BLK S OF S 161ST ST	CHI.023001	30	75	0.0000	13.5547
07:42 AM	16750 37TH AVE S (MCMICKEN ELEM ON STREET)	CHI.039001	3	78	0.5017	14.0564
07:49 AM	School: TYEE HIGH SCHOOL	TYE.000001	0	45	2.1358	16.1922
07:49 AM	School: TYEE HS SPRECIAL ED	STY.000001	0	43	0.0000	16.1922
07:50 AM	SCHOOL: CHINOOK	CHI.000001	0	10	0.2076	16.3998
07:50 AM	SCHOOL: CHINOOK SP	SCH.000001	0	0	0.0000	16.3998



SPECIAL RUNS  
OUT OF DISTRICT ST



Run ID: STY.001  
 Route ID: 206  
 Run Description: SP ED RUN (MSWC)

Days: MTWUF--

CUP22-0003  
 Exhibit 10 - 129

Stop Time	Description	Service ID	Assign Stop Load	Assign Run Load	Miles	Acc Miles
06:22 AM	CLOCK IN/ 15 MIN PRE TRIP	@CP.014031	0	0	0.0000	0.0000
06:37 AM	BUS GARAGE	@CP.014001	0	0	0.0000	0.0000
06:48 AM	2414 S 130TH PL (SWC)	STY.042001	1	1	5.6330	5.6330
06:56 AM	1211 S 124TH ST (MON)	SCH.112001	1	2	1.1706	6.8036
07:01 AM	SW 122ND ST @ 1ST AVE SW	STY.004001	1	3	1.6587	8.4623
07:03 AM	SW 124TH ST @ 5TH AVE SW	SCH.109002	1	4	0.4335	8.8958
07:06 AM	1137 SW 124TH ST (MON)	STY.035001	1	5	0.4481	9.3439
07:09 AM	10790 16TH AVE SW (CENTERWOOD APTS)	SCH.093003	1	6	1.1424	10.4864
07:10 AM	1710 SW 106TH ST	STY.086001	1	7	0.2231	10.7095
07:16 AM	427 SW 106TH ST	STY.024001	1	8	1.1100	11.8195
07:19 AM	EVERGREEN HIGH SCHOOL (MSWC) (LOAD ZONE)	STY.084001	1	9	0.8958	12.7153
07:28 AM	SW 124TH ST @ 12TH CT SW (FIRE HYDR)(TURNAROUND)(VIEWRIDGE V	SCH.021001	2	11	0.9591	13.6744
07:32 AM	13819 12TH AV SW (NB)(BLDG 29)(ALCOVE APTS)	STY.053001	1	12	1.2566	14.9311
07:45 AM	School: TYEE HS SPRECIAL ED	STY.000001	0	5	7.3297	22.2608
07:50 AM	SCHOOL: CHINOOK SP	SCH.000001	0	0	0.2076	22.4684

Run ID: STY.002

Days: MTWUF--

CUP22-0003  
Exhibit 10 - 130

Route ID: 207

Run Description: SP ED RUN (MON) (SWC) (NURSE)

Stop Time	Description	Service ID	Assign Stop Load	Assign Run Load	Miles	Acc Miles
06:38 AM	CLOCK IN/ 15 MIN PRE TRIP	@CP.014031	0	0	0.0000	0.0000
06:53 AM	BUS GARAGE	@CP.014001	0	0	0.0000	0.0000
07:03 AM	OLD DES MOINES ELEM	SCH.114001	1	1	3.2792	3.2792
07:06 AM	22725 10TH AVE S(SWC)(NURSE)(OXYGEN)	SCH.005001	1	2	0.4991	3.7782
07:07 AM	22725 10TH AVE S (MON)	STY.003001	1	3	0.0000	3.7782
07:16 AM	14TH AVE S @ S 235TH PL	STY.011001	1	4	0.7839	4.5621
07:20 AM	23641 20TH AV S (NEWPORT APTS)	SCH.073001	0	4	1.0326	5.5947
07:23 AM	S 240TH ST @ 19TH AVE S (EB)	SCH.103002	6	10	0.9352	6.5299
07:28 AM	22415 30TH AVE S	STY.094001	2	12	1.7131	8.2430
07:36 AM	S 192ND ST @ 32ND AVE S	STY.088001	1	13	3.3549	11.5979
07:40 AM	School: TYEE HS SPRECIAL ED	STY.000001	0	8	1.2831	12.8811
07:45 AM	SCHOOL: CHINOOK SP	SCH.000001	0	0	0.2076	13.0886

Run ID: STY.004  
 Route ID: 220  
 Run Description: SP ED RUN (MON)

Days: MTWUF--

CUP22-0003  
 Exhibit 10 - 131

Stop Time	Description	Service ID	Assign Stop Load	Assign Run Load	Miles	Acc Miles
07:16 AM	Deadhead - SCHOOL: WOODSIDE	SWO.000006	0	0	0.0000	0.0000
07:24 AM	19649 MILITARY RD S (PULL OFF)	SCH.102001	1	1	3.3689	3.3689
07:31 AM	2459 S 216TH ST (MAJESTIC BAY APTS)(EB)	STY.083001	1	2	2.4689	5.8379
07:33 AM	2825 S 211TH ST (MON)	SCH.068001	1	3	0.8261	6.6640
07:35 AM	3124 S 208TH ST (SANDPIPER APTS)	STY.048002	11	14	0.3252	6.9892
07:35 AM	3124 S 208TH ST (SANDPIPER APTS)	SCH.085002	5	19	0.3850	7.3742
07:37 AM	20036 30TH AVE S (MON)	STY.089002	1	20	0.6998	8.0741
07:40 AM	MADRONA ELEM	STY.091002	1	21	0.3820	8.4561
07:40 AM	MADRONA ELEM BUS ZONE (OVERLOAD FOR 129)	SCH.113001	0	21	0.0000	8.4561
07:40 AM	MADRONA ELEM	SCH.080001	6	27	0.0000	8.4561
07:45 AM	School: TYEE HS SPRECIAL ED	STY.000001	0	13	2.3955	10.8515
07:50 AM	SCHOOL: CHINOOK SP	SCH.000001	0	0	0.2076	11.0591

Run ID: STY.005  
 Route ID: 219  
 Run Description: SP ED RUN (MON)

Days: MTWUF--

CUP22-0003  
 Exhibit 10 - 132

Stop Time	Description	Service ID	Assign Stop Load	Assign Run Load	Miles	Acc Miles
06:40 AM	CLOCK IN/ 15 MIN PRE TRIP	@CP.014031	0	0	0.0000	0.0000
06:55 AM	BUS GARAGE	@CP.014001	0	0	0.0000	0.0000
07:05 AM	15427 21ST AVE SW	STY.028001	1	1	4.2498	4.2498
07:13 AM	S 156TH ST & 4TH AVE S (EB)	SCH.067001	1	2	2.0998	6.3496
07:16 AM	15405 DES MOI MEM DR (MON) (DISCOVERY LANDING APTS)	SCH.018001	2	4	0.6775	7.0271
07:24 AM	3213 S 166TH ST	SCH.050001	2	6	4.2023	11.2294
07:29 AM	4015 S 160TH ST	SCH.040001	1	7	0.7489	11.9782
07:37 AM	5150 S 172 ND LN (DEAD END CUL-DA-SAC)	STY.082001	2	9	1.8350	13.8133
07:45 AM	School: TYEE HS SPRECIAL ED	STY.000001	0	6	2.2259	16.0392
07:50 AM	SCHOOL: CHINOOK SP	SCH.000001	0	0	0.2076	16.2468

Run ID: STY.006  
 Route ID: 214  
 Run Description: SP ED RUN

Days: MTWUF--

CUP22-0003  
 Exhibit 10 - 133

Stop Time	Description	Service ID	Assign Stop Load	Assign Run Load	Miles	Acc Miles
07:14 AM	Deadhead - SCHOOL: WOODSIDE	SWO.000006	0	0	0.0000	0.0000
07:18 AM	18243 1ST AV S (SB) (PULL OFF) MANHATTEN APT	STY.021001	1	1	0.9580	0.9580
07:21 AM	10TH AVE S @ S 177TH PL	SCH.101001	1	2	1.4042	2.3621
07:33 AM	17332 34TH AVE S	STY.034001	2	4	3.5538	5.9159
07:34 AM	34TH AVE S @ S 172ND ST	STY.093001	1	5	0.2284	6.1443
07:38 AM	3508 S 180TH ST (SHANNON SOUTH APTS)	STY.068001	1	6	1.2782	7.4225
07:38 AM	3508 S 180TH ST (SHANNON SOUTH APTS)	SCH.061001	4	10	0.0000	7.4225
07:40 AM	3425 S 176TH ST (WEDGEWOOD MANOR)	STY.087001	3	13	0.5051	7.9277
07:45 AM	School: TYEE HS SPRECIAL ED	STY.000001	0	5	1.8746	9.8023
07:50 AM	SCHOOL: CHINOOK SP	SCH.000001	0	0	0.2076	10.0098

# Queue Length Calculations

Arrivals **276** / 20 mins l **Increased from ITE estiamte** based on proportion of existing parent drop-off to ITE estimate of existing parent drop-off

Service 360 / 20 mins m

Average number of cars in the system

Average waiting time in the system

Average number of cars in the queue

Average waiting time in the queue

Average system utilization

Probability of no cars in system

Probability of n cars in system

- max queue available

l / (m - l) 3.285714 3.285714 vehicles  
 1 / (m - l) 0.011905 180 2.142857 minutes  
 l ^ 2 / m(m - l) 2.519048 2.519048 vehicles  
 l / m(m - l) 0.009127 180 1.642857 minutes  
 l / m 0.766667 77%  
 1 - l / m 0.233333 23%

	$(1 - l / m)$	$(l / m)^n$	$P(n)$
P(0)	0.233333333	1	0.233333
P(1)	0.233333333	0.766666667	0.178889
P(2)	0.233333333	0.587777778	0.137148
P(3)	0.233333333	0.45062963	0.105147
P(4)	0.233333333	0.345482716	0.080613
P(5)	0.233333333	0.264870082	0.061803
P(6)	0.233333333	0.203067063	0.047382
P(7)	0.233333333	0.155684748	0.036326
P(8)	0.233333333	0.119358307	0.02785
P(9)	0.233333333	0.091508035	0.021352
P(10)	0.233333333	0.070156161	0.01637
P(11)	0.233333333	0.05378639	0.01255
P(12)	0.233333333	0.041236232	0.009622
P(13)	0.233333333	0.031614445	0.007377
P(14)	0.233333333	0.024237741	0.005655
P(15)	0.233333333	0.018582268	0.004336
P(16)	0.233333333	0.014246405	0.003324
P(17)	0.233333333	0.010922244	0.002549
P(18)	0.233333333	0.008373721	0.001954

0.233333  
 0.412222  
 0.54937  
 0.654517  
 0.73513  
 0.796933  
 0.844315  
 0.880642  
 0.908492  
 0.929844  
 0.946214  
 0.958764  
 0.968386  
 0.975762  
 0.981418  
 0.985754  
 0.989078  
 0.991626  
 0.993558

Arrivals **276** / 20 mins l **Increased from ITE estimate** based on proportion of existing parent drop-off to ITE estimate of existing parent drop-off

Service 560 / 20 mins m

Average number of cars in the system

$$l / (m - l)$$

Average waiting time in the system

$$1 / (m - l)$$

Average number of cars in the queue

$$l^2 / m(m - l)$$

Average waiting time in the queue

$$l / m(m - l)$$

Average system utilization

$$l / m$$

Probability of no cars in system

$$1 - l / m$$

Probability of n cars in system

$$(1 - l / m) (l / m)^n$$

- max queue available

	$(1 - l / m)$	$(l / m)^n$	P(n)
P(0)	0.507142857	1	0.507143
P(1)	0.507142857	0.492857143	0.249949
P(2)	0.507142857	0.242908163	0.123189
P(3)	0.507142857	0.119719023	0.060715
P(4)	0.507142857	0.059004376	0.029924
P(5)	0.507142857	0.029080728	0.014748
P(6)	0.507142857	0.014332645	0.007269
P(7)	0.507142857	0.007063946	0.003582
P(8)	0.507142857	0.003481516	0.001766
P(9)	0.507142857	0.00171589	0.00087
P(10)	0.507142857	0.000845689	0.000429
P(11)	0.507142857	0.000416804	0.000211
P(12)	0.507142857	0.000205425	0.000104
P(13)	0.507142857	0.000101245	5.13E-05
P(14)	0.507142857	4.98993E-05	2.53E-05
P(15)	0.507142857	2.45932E-05	1.25E-05
P(16)	0.507142857	1.2121E-05	6.15E-06
P(17)	0.507142857	5.9739E-06	3.03E-06
P(18)	0.507142857	2.94428E-06	1.49E-06

0.971831

0.003521

0.478974

0.001735

0.492857

0.507143

0.971831 vehicles

180

0.633803 minutes

180

0.478974 vehicles

0.312374 minutes

49%

51%

0.507143

0.757092

0.880281

0.940996

0.970919

0.985667

0.992936

0.996518

0.998284

0.999154

0.999583

0.999795

0.999899

0.99995

0.999975

0.999988

0.999994

0.999997

0.999999



Arrivals **276** / 20 mins l  
 Service 640 / 20 mins m

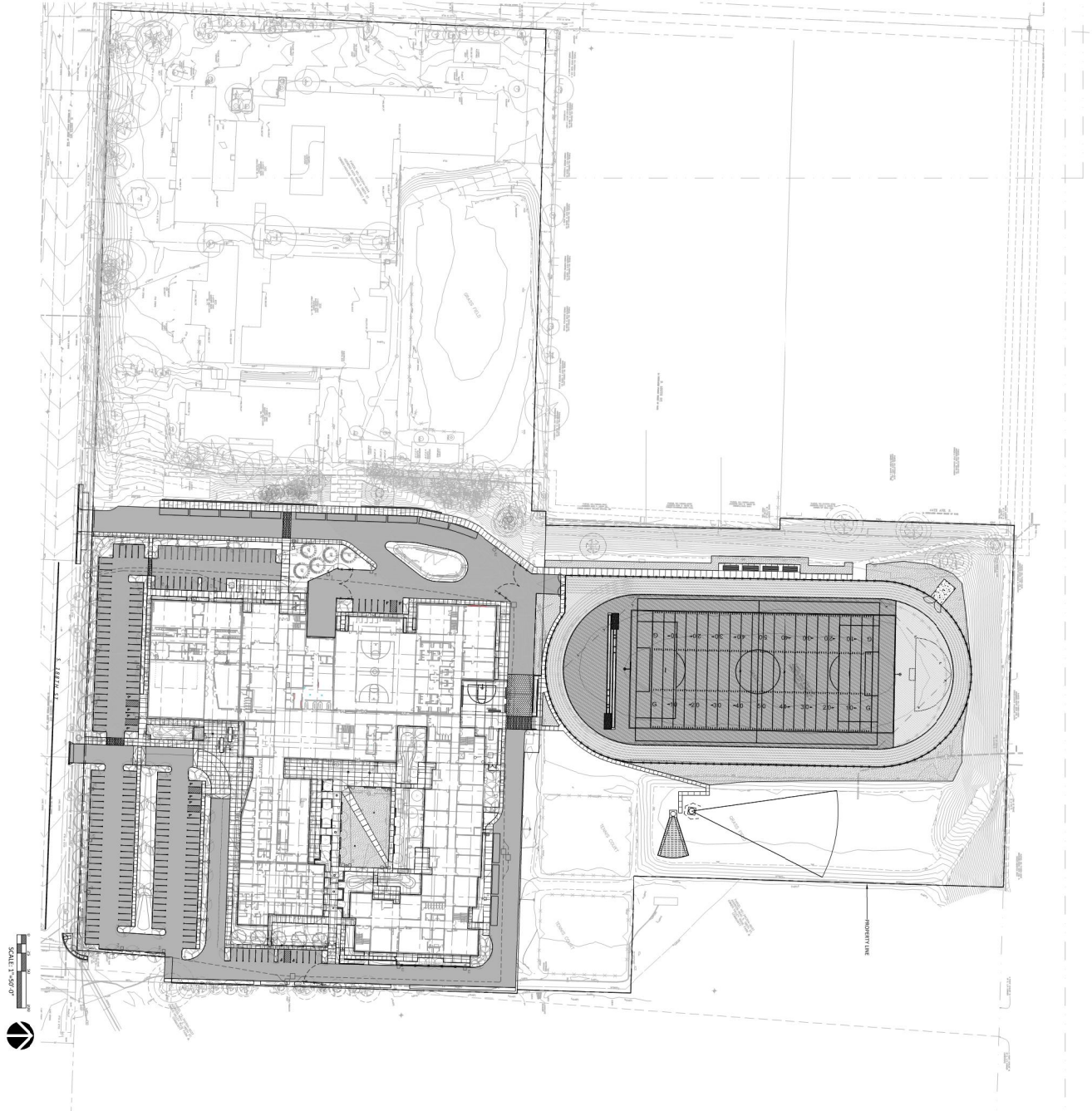
**Increased from ITE estimate** based on proportion of existing parent drop-off to ITE estimate of existing parent drop-off

Average number of cars in the system  $l / (m - l)$  0.758242 0.758242 vehicles  
 Average waiting time in the system  $1 / (m - l)$  180 0.494505 minutes  
 Average number of cars in the queue  $l^2 / m(m - l)$  0.326992 0.326992 vehicles  
 Average waiting time in the queue  $l / m(m - l)$  180 0.213255 minutes  
 Average system utilization  $l / m$  0.43125 43%  
 Probability of no cars in system  $1 - l / m$  0.56875 57%  
 Probability of n cars in system  $(1 - l / m) (l / m)^n$

	$(1 - l / m)$	$(l / m)^n$	P(n)
P(0)	0.56875	1	0.56875
P(1)	0.56875	0.43125	0.245273
P(2)	0.56875	0.185976563	0.105774
P(3)	0.56875	0.080202393	0.045615
P(4)	0.56875	0.034587282	0.019672
P(5)	0.56875	0.014915765	0.008483
P(6)	0.56875	0.006432424	0.003658
P(7)	0.56875	0.002773983	0.001578
P(8)	0.56875	0.00119628	0.00068
P(9)	0.56875	0.000515896	0.000293
P(10)	0.56875	0.00022248	0.000127
P(11)	0.56875	9.59445E-05	5.46E-05
P(12)	0.56875	4.13761E-05	2.35E-05
P(13)	0.56875	1.78434E-05	1.01E-05
P(14)	0.56875	7.69498E-06	4.38E-06
P(15)	0.56875	3.31846E-06	1.89E-06
P(16)	0.56875	1.43109E-06	8.14E-07
P(17)	0.56875	6.17156E-07	3.51E-07
P(18)	0.56875	2.66148E-07	1.51E-07

0.56875  
 0.814023  
 0.919798

# Site Plan



DATE	DESCRIPTION
JANUARY 2022	ISSUED FOR PERMIT
DECEMBER 2021	REVISED
NOVEMBER 2021	REVISED
OCTOBER 2021	REVISED
SEPTEMBER 2021	REVISED
AUGUST 2021	REVISED
JULY 2021	REVISED
JUNE 2021	REVISED
MAY 2021	REVISED
APRIL 2021	REVISED
MARCH 2021	REVISED
FEBRUARY 2021	REVISED
JANUARY 2021	REVISED

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TYEE HIGH SCHOOL REPLACEMENT

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