WISEMARK COMMONS

Arlington, WA

TRAFFIC IMPACT ANALYSIS (TIA)

August 17, 2023

HEATH & ASSOCIATES

Transportation Planning & Engineering

WISEMARK COMMONS
TRAFFIC IMPACT ANALYSIS

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WISEMARK COMMONS
TRAFFIC IMPACT ANALYSIS

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WISEMARK COMMONS
TRAFFIC IMPACT ANALYSIS

1. INTRODUCTION

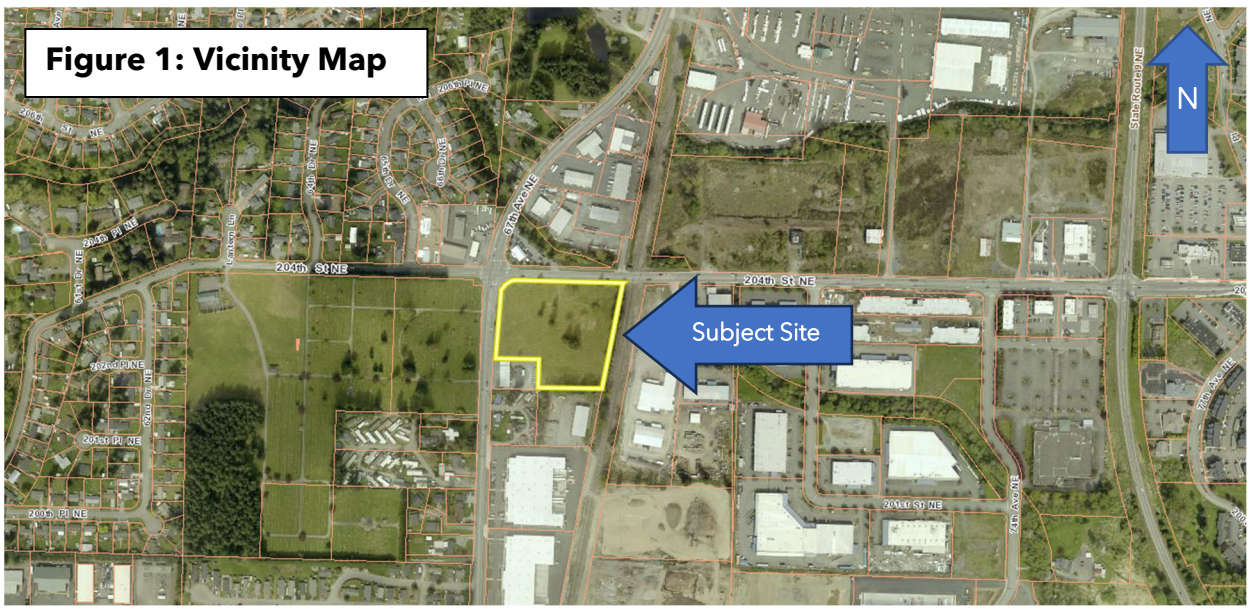
The main goals of this study focus on the assessment of existing roadway conditions and forecasts of newly generated project traffic. The first task includes the review of general roadway information on the adjacent street system and baseline vehicular volumes. Forecasts of future traffic and dispersion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

2. PROJECT DESCRIPTION

Wisemark Commons is a proposed mixed-use development comprising ~150 apartment units and ~15,400 square feet of commercial/retail space located within the city of Arlington. The subject site is located on the southeast corner of 204th Street NE & 67th Avenue NE, situated on 4.91-acres within tax parcel #: 31051400200600. Access to the subject site is proposed via:

- A full movement driveway extending east from 67th Avenue NE
- A westerly right-in only driveway extending south from 204th Street NE
- An easterly full movement driveway extending south from 204th Street NE opposite 69th Avenue NE

Figure 1 below depicts the roadway network servicing the subject site. Figure 2 on the following page highlights the site layout.



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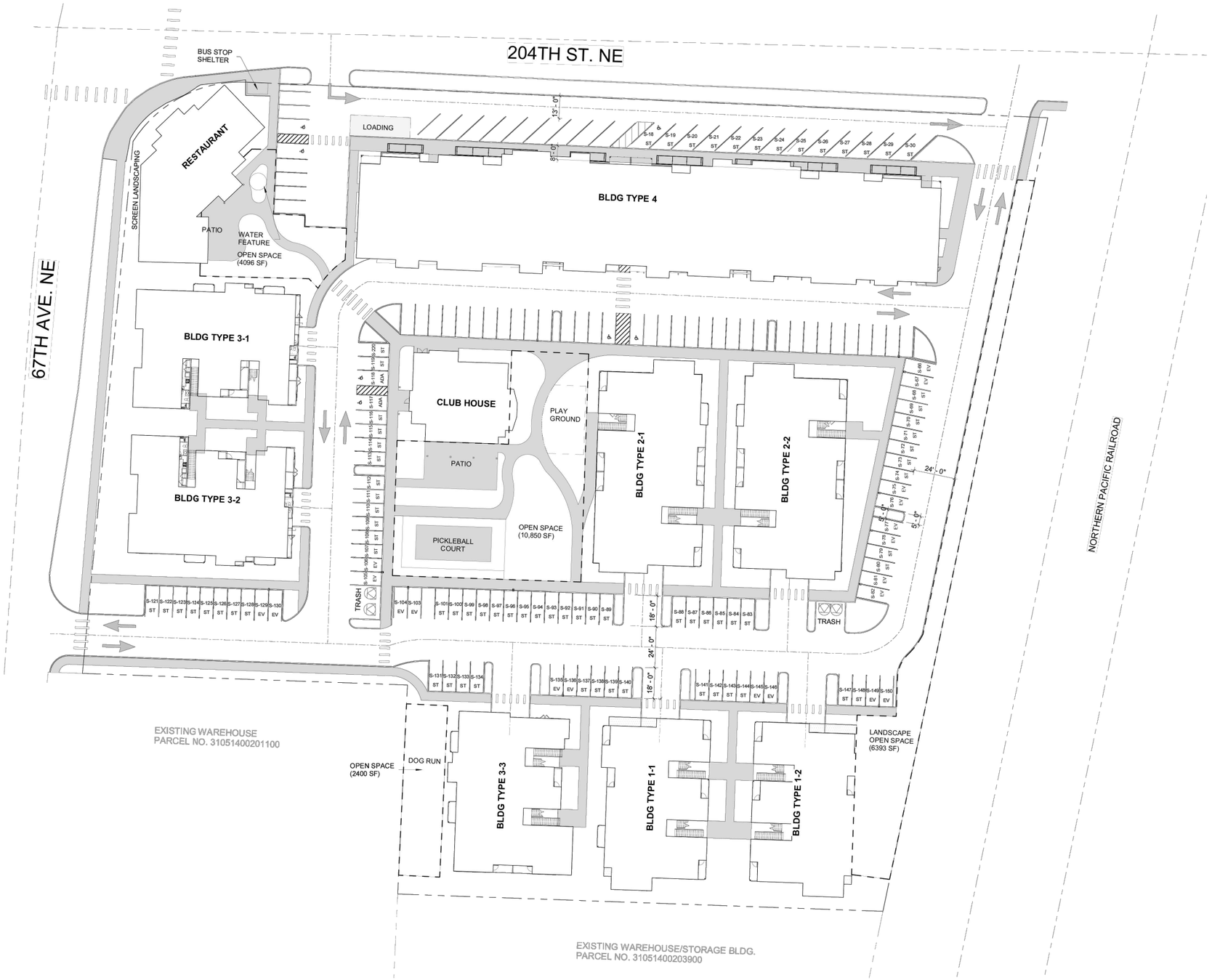

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CONCEPTUAL SITE PLAN
FIGURE 2

3. EXISTING CONDITIONS

3.1 Existing Street System

The street network serving the proposed project consists of a variety of roadways. The major roadways serving the site are listed and described below.

204th Street NE: is an east-west, 2- to 3-lane roadway bordering the subject site to the north. Additional turn-lanes are provided at major intersections. West of 67th Avenue NE, the roadway provides one travel lane in either direction and is classified as an Urban Major Collector. Shoulder composition along this roadway segment varies, though grass/gravel is predominantly available west of 65th Drive NE. Between 67th Avenue NE and SR 9, 204th Street NE is classified as an Urban Minor Arterial and predominantly provides one travel lane in either direction and a center two-way left-turn lane (TWLTL) or left-turn pockets. However, this center median is restricted for ~205-feet east of 69th Avenue NE. Curb, gutter and sidewalk are provided along this roadway segment. The Centennial Trail, a 10-foot wide multi-purpose paved trail, is located on the north side of 204th Street NE between 67th Avenue NE and 69th Avenue NE. The posted speed limit is 35-mph.

67th Avenue NE: is a north-south, multi-lane Urban Minor Arterial bordering the subject site to the west. In the vicinity of the subject site, the roadway provides one travel lane in either direction and a center two-way left-turn lane (TWLTL) or left-turn pockets. Curb, gutter and sidewalk are available along both sides of the roadway. The Centennial Trail, a 10-foot wide multi-purpose paved trail, is located on the east side of 67th Avenue NE, south of 204th Street NE. The posted speed limit is 35-mph.

3.2 Existing Peak Hour Volumes

Field data for this study was obtained and collected by our firm in July of 2023 at the following study intersections:

1. 211th Pl NE & SR 530
2. 211th Pl NE & 67th Ave NE
3. 204th St NE & 67th Ave NE
4. 204th St NE & SR 9
5. 172nd St NE & 67th Ave NE

A. Access Through-Volumes on 67th Ave NE
B. West Access Through-Volumes on 204th St N
C. 204th St NE & East Access/69th Ave NE

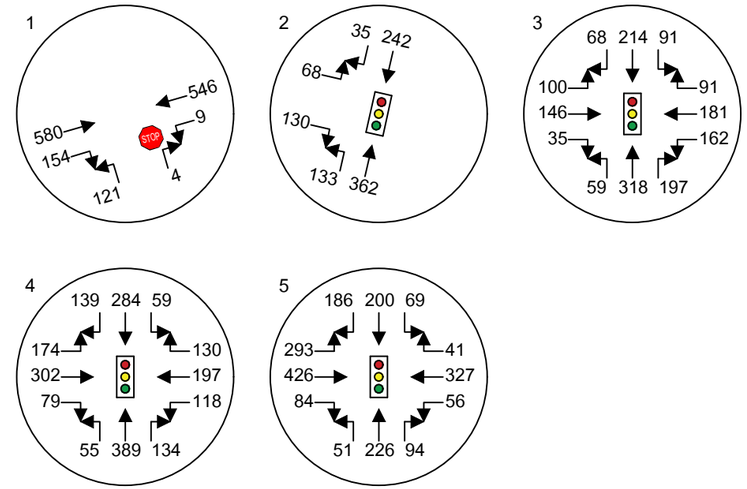
Counts were performed between the PM peak period of 4:00 PM - 6:00 PM, which generally represents peak roadway conditions during a typical 24-hour period. The single hour exhibiting highest overall intersection volumes is then derived (peak hour) and is used for analysis for each respective location. Figure 3 on the following page identifies baseline PM peak hour volumes. Full count sheets have been attached in the appendix for reference. It should be noted that the 211th Place NE & SR 530 intersection comprised a two-way stop-control design at the time of field counts (July 2023). However, a roundabout was constructed at the intersection in August of 2023, which is modeled under forecast conditions.

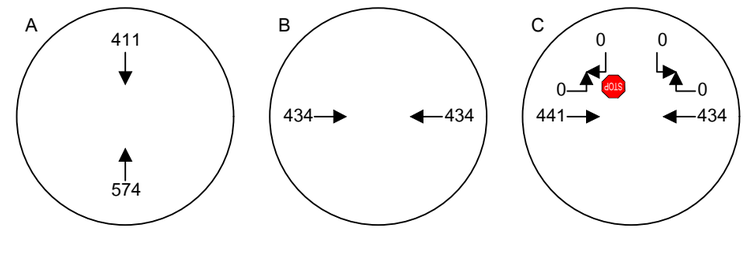
N

STUDY INTERSECTIONS (10+ PM PEAK HOUR TRIPS)

1. 211TH PL NE & SR 530
2. 211TH PL NE & 67TH AVE NE
3. 204TH ST NE & 67TH AVE NE
4. 204TH ST NE & SR 9
5. 172ND ST NE & 67TH AVE NE

A. ACCESS & 67TH AVE NE
B. 204TH ST NE & WEST ACCESS (INGRESS ONLY)
C. 204TH ST NE & EAST ACCESS/69TH AVE NE





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EXISTING PM PEAK HOUR VOLUMES
FIGURE 3

3.3 Transit Service

A review of Community Transit service system indicates that Routes 220 and 230 provide service in the immediate vicinity of the proposed development. The nearest bus stops are located along the 204th Street NE project frontage. Seating is currently provided at the bus stop situated on the 204th Street NE project frontage. Moreover, overhead lighting is available along the north side of the roadway. Frontage improvements may include constructing a ~5-foot wide landscape strip between the curb and sidewalk to provide a buffer between motor vehicles and non-motorists.

Route 220, Arlington - Smokey Point, provides service from the Smokey Point Transit Center to Broadway Street & E Gilman Avenue in Arlington. Weekday service is provided from 7:20 AM – 7:42 PM with approximately 60-minute headways. Saturday service is provided from 6:52 AM – 8:14 PM with approximately 60-minute headways. Sunday service is provided from 7:52 AM – 8:13 PM with approximately 60-minute headways. Route 230, Darrington - Smokey Point, provides service from the Smokey Point Transit Center to Darrington Street & Givens Avenue in Darrington. On weekdays, one eastbound and one westbound bus provides service during both the AM and PM commuter hours. No weekend service is provided. Refer to Community Transit's Schedules and Maps for further public transportation details.

3.4 Non-Motorist Infrastructure

Sidewalk segments are provided along 67th Avenue NE and along 204th Street NE east of 65th Drive NE. Moreover, the Centennial Trail is located on the east side of 67th Avenue NE, which spans the project frontage. The trail jogs easterly along the north side of 204th Street NE, jogging northerly again at 69th Avenue NE. The paved trail width varies from 10- to 12-feet. The Centennial Trail traverses northerly to the Skagit County line and southerly to the city of Snohomish, spanning approximately 30-miles. As the trail is located along the project frontage, immediate trail access is available to future project residents for family bicycle travel/trips. Moreover, the trail provides commuting opportunities as traverses through the cities of Arlington, Marysville, Lake Stevens and Snohomish.

Sidewalk will be provided along the 67th Avenue NE and 204th Street NE project frontage upon full build-out. Moreover, pedestrian actuated crossings and ADA curb ramps are provided at 67th Avenue NE & 204th Street NE. Overall, non-motorist facilities are present in the subject site vicinity, facilitating pedestrian travel to nearby transit and commercial amenities.

3.5 Roadway Improvements

A review of the City of Arlington's Six-Year Transportation Improvement Program (2023-2028) and WSDOT Statewide Transportation Improvement Program (2023-2025) indicates that the following projects are currently planned in the vicinity of Wisemark Commons development. No projects were identified within the vicinity of the subject site within Snohomish County's Transportation Improvement Program (2023 – 2028).

Table 1: Transportation Improvement Projects

Name	Location	Improvement	Cost
City of Arlington TIP			
SR-531 Widening (Project #R-14A)	43rd Ave NE to 67th Ave NE	Widen SR-531 (172nd Street NE) between 43rd Ave NE and 67th Ave NE.	TBD
SR 530 Roundabouts (Project #R-14A)	at 59th Ave and 211th Place	The roundabouts finished construction in August 2023. Final striping and landscaping is to throughout the remainder of the month.	$2,002,000
67th Ave and 188th St Signal (Project #I-???)	Intersection	Construct a traffic signal	TBD
204th St NE and 74th Ave NE (Project #I-9)	Intersection	Construction of a signal with ADA compliant crosswalks and bus pull-outs	TBD
211th Pl NE: 67th Ave NE to SR 530 (Item #8)	211th Pl NE: 67th Ave NE to SR 530	Rehabilitate 211th Pl NE into an urban corridor with 12-ft wide multiuse trail, street/ped lights, embankment stabilization, etc.	TBD
204th St Corridor Improvements (Item #13)	74th Ave to 69th Ave	Construct urban corridor with 2 through lanes, separated on-street reverse-angle parking, shared drop lanes, bike lanes, planted median	TBD
74th Ave Extension (Item #28)	204th North to Portage Creek	Extend 74th Ave as a 3-lane urban section	TBD
71st Ave Extension (Item #29)	204th North to 74th Ave	Extend 74th Ave as a 3-lane urban section; Includes intersection improvements	TBD
74th Ave NE Trail Segment (Project #T-10)	Arlington Valley Road trail to 204th St NE	Construct a multiuse trail along the w side of 74th Ave NE between north end of Arlington Valley Road trail and 204th St NE trail segment	TBD
North Airport Blvd to 67th Ave Trail (Item #35)	Airport Blvd to 67th Ave	Create multiuse trail from Airport Blvd to 67th Ave via Airport Trail; new trail on Cemetery Rd	TBD
204th St NE Portage Creek Trail (Item #36)	SR-9 to Centennial Trail	Multi use Trail along Portage Creek from SR-9 to Centennial Trail	TBD
188th St NE BNSF Rail/Trail Crossing Project (Item #38)	188th St NE BNSF Rail/Trail Crossing	Realign and improve the trail crossing of BNSF railroad on 188th St NE. Improvements to extend from 67th Ave west to 100-ft past BNSF ROW	TBD
WSDOT STIP			
74th Ave Trail (STIP ID ARL-18)	Arlington Valley Road trail to 204th St NE	Construct a multiuse trail along the w side of 74th Ave NE between north end of Arlington Valley Road trail and 204th St NE trail segment	$737,637

3.6 Level of Service

Existing intersection delays were determined through the use of the *Highway Capacity Manual* 7th Edition. Capacity analysis is used to determine level of service (LOS) which is an established measure of congestion for transportation facilities. The range[1] for intersection level of service is LOS A to LOS F with the former indicating the best operating conditions with low control delays and the latter indicating the worst conditions with heavy control delays. Detailed descriptions of intersection LOS are given in the 2016 Highway Capacity Manual. Level of service calculations were made through the use of the *Synchro 12 and SIDRA 9* analysis programs. For signalized intersections and roundabouts, LOS is determined by the intersection's overall weighted average delay for each approaching leg. Side-street stop-controlled intersection LOS is determined by the approach with the highest delay. Table 2 presents existing PM peak hour LOS delays for the key intersections of study.

Again, it should be noted that the 211th Place NE & SR 530 intersection comprised a stop-controlled design at the time of field counts. However, a roundabout has since been constructed at the intersection, which opened August 2023. As such, the intersection was modeled under both configurations.

Table 2: Existing Weekday PM Peak Hour Level of Service

Delays given in seconds per vehicle

Ref. #	Intersection	Control	Movement	LOS	Delay
1	211th Pl NE & SR 530	Stop RAB	NB Overall	**E** A	**43.2** 5.7
2	211th Pl NE & 67th Ave NE	Signal	Overall	A	6.0
3	204th St NE & 67th Ave NE	Signal	Overall	B	17.5
4	204th St NE & SR 9	Signal	Overall	C	21.2
5	172nd St NE & 67th Ave NE	Signal	Overall	C	22.4
C	204th St NE & 69th Ave NE	Stop	SB	A	0.0

[1] *Signalized Intersections - Level of Service*

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

Stop Controlled Intersections – Level of Service

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

Highway Capacity Manual, 7th Edition

The City of Arlington has adopted LOS D standards for all City arterials and state highways. Moreover, WSDOT has adopted standards of LOS D for SR 9 and LOS C for SR 530. Existing PM peak hour conditions at the study intersections are shown to operate with delays at LOS E or better. As shown in the table, the roundabout improvement at 211th Place NE & SR 530 was shown to improve service levels to acceptable LOS A conditions.

4. FORECAST TRAFFIC DEMAND & ANALYSIS

4.1 Project Trip Generation

Trip generation is used to determine the magnitude of project impacts on the surrounding street system. This is usually denoted by the quantity or specific number of new trips that enter and exit a project during a designated time period, such as a specific peak hour (AM or PM) or an entire day. Data presented in this report was taken from the Institute of Transportation Engineer's publication Trip Generation, 11th Edition. The following land uses were utilized to derive trip generation:

Residential
The project is proposing approximately 150 dwelling units. ITE Land Use Code (LUC) 220 – Multi-Family Housing (Low-Rise) with dwelling units as the input variable and rates were utilized to determine trip estimates. Residential buildings are to comprise two floors of apartment units over parking garages.

Commercial Space
A ~3,400 square foot restaurant is proposed on the northwest corner of the site. The remaining ~12,000 square feet of commercial space is contained within the ground floor of Building 4, which fronts 204th Street NE. No specific tenants are identified at this time, but the remaining space is planned for professional office and/or miscellaneous retail. All commercial space was grouped together and classified under LUC 822 – Strip Retail (>40k) so as to account for a variety of potential end-users.

It should be noted that the proposed project is anticipated to generate trips from internal capture (i.e., customers/residents already on-site) and pass-by (i.e., customers already on the adjacent street system) in addition to new trips. Concerning internal capture, a single trip entering the site for one facility may subsequently use a variety of other services offered on-site. Moreover, residents within the multi-family space may utilize commercial/retail services on-site. The complimentary uses on-site are anticipated to generate an internal trip capture reduction of approximately 20% in the PM peak hour as derived via the NCHRP 8-51 Internal Trip Capture Estimation Tool, which has also been applied to the average weekday daily traffic (AWDT). A 0% internal capture rate was derived for the AM peak hour as retail establishments generally open later in the day. Internal capture sheets have been attached to the appendix for reference.

Also considered are pass-by trips, or motorists already passing by the site who decide to make an intermediate stop before proceeding to their primary destination. Pass-by percentages based on similar ITE data were applied to all proposed retail/ commercial space on-site. As no ITE data is available for LUC 822 – Strip Retail (>40k), pass-by data for the most similar land use, LUC 821 – Shopping Plaza (40k-150k) was applied to the proposed land use. ITE reports a 40% pass-by rate for the similar land use (LUC 821 – Shopping Plaza (40k-150k)). These trips are not considered as new but will impact the site's access points.

Table 3 below provides a project trip generation summary based off of ITE data. Illustrated are total project trips, internal link reductions, pass-by trips and primary project trips for average weekday daily traffic (AWDT) and the AM and PM peak hours. Available in the appendix is a use-specific breakdown including rates used for calculations.

Table 3: Project Trip Generation

Trip Type	AWDT	AM Peak-Hour Trips			PM Peak-Hour Trips		
		In	Out	Total	In	Out	Total
Total Trips	1850	36	60	**96**	99	79	**178**
Internal Link Reduction[2]	-370	-0	-0	**-0**	-20	-16	**-36**
Pass-By Reduction[3]	-269	-7	-7	**-14**	-16	-16	**-32**
Total New Primary	1211	29	53	**82**	63	47	**110**

As summarized in Table 3, trips to and from the site are broken into internal capture, pass-by and primary. In total, 1,211 new primary vehicular trips per weekday are expected as a result of the proposed development with 82 primary trips occurring during the AM peak hour and 110 primary trips occurring during the PM peak hour. Moreover, approximately 14 AM peak hour and 32 PM peak hour trips are anticipated to be generated from the development in the form of pass-by.

[2] An internal link reduction of 20% was applied to all proposed on-site land uses for AWDT and the PM peak hour, which was derived via the NCHRP 8-51 Internal Trip Capture Estimation Tool. A 0% internal capture rate was applied to AM peak hour trip generation.

[3] Pass-by rates were derived from the Institute of Transportation Engineers, *2021 Pass-By Tables for ITE Trip Gen Appendices* (2021). As no pass-by data is available for LUC 822 – Strip Retail Plaza (<40k), data for LUC 821 – Shopping Plaza (40 - 150k) was utilized. PM Rate: 40%. This rate was applied to ADT and AM.

4.2 Distribution & Assignment

Trip distribution describes the anticipated travel routes for inbound and outbound project traffic during the peak hour study period. PM peak hour trips are primarily comprised of commuter-based (returning home) and recreational-based trips. Primary and pass-by PM peak hour trips generated by the project are expected to follow the general pattern as shown in Figures 4 and 5, respectively. Trips were assigned to the proposed project accesses based on the site layout and optimal travel routing.

New development in the city of Arlington is subject to potential traffic mitigation measures though an interlocal agreement (ILA) with Snohomish County. Therefore, a comprehensive trip distribution effort was performed for the proposed Wisemark Commons development whereby trip dissemination was illustrated out to approximately three peak hour trips. Figures A and B, attached in the appendix, illustrate development-generated directional AM and PM peak hour trips, respectively. Also identified are road sections with planned improvements in the project area, as outlined in the County's Transportation Needs Report, Appendix D. As illustrated in the figures, no road improvements are impacted by three or more development-generated directional PM peak hour trips. As such, the proportionate share amount to Snohomish County is calculated to be zero.

Moreover, an ILA with WSDOT is being performed, in which Option 1B (proportionate share mitigation based on standard amount) is currently selected. All associated ILA worksheets have been attached in the appendix.

4.3 Future Peak Hour Volumes

A three-year horizon of 2026 was used to analyze future conditions. Background volumes at the intersections of study were derived by applying a 3.0 percent compound annual growth rate to the existing volumes illustrated in Figure 3. This growth rate was derived from historic WSDOT AADT volumes along SR 9 in the vicinity of the subject site, which show a ~2.7 percent compound annual growth rate from 2016 (12,000 ADT) to 2019 (13,000 AADT).

Moreover, pipeline volumes from the Safeway Arlington and Arlington Air Industrial projects were accounted for in forecast volumes. PM peak hour pipeline volumes are illustrated in Figure 6. Figures 7 and 8 represent forecast 2026 PM peak hour volumes without and with project traffic.

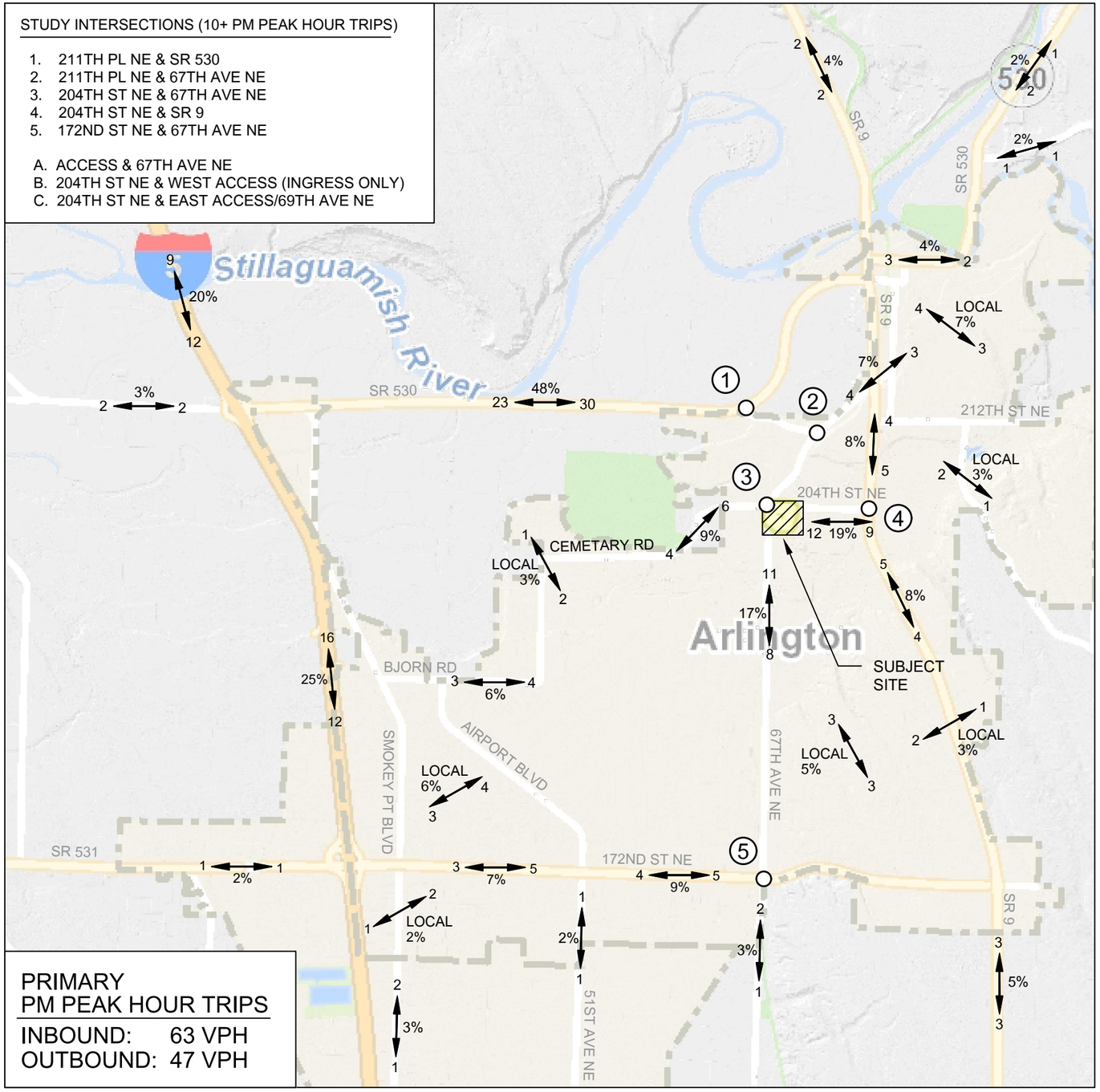
Lastly, a roundabout was constructed at the intersection of SR 530 & 211st Place NE in August 2023, which was modeled under forecast conditions.

N

STUDY INTERSECTIONS (10+ PM PEAK HOUR TRIPS)

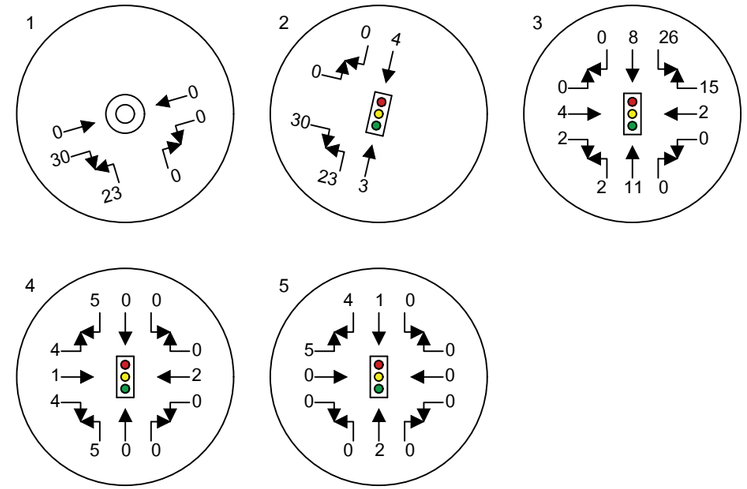
1. 211TH PL NE & SR 530
2. 211TH PL NE & 67TH AVE NE
3. 204TH ST NE & 67TH AVE NE
4. 204TH ST NE & SR 9
5. 172ND ST NE & 67TH AVE NE

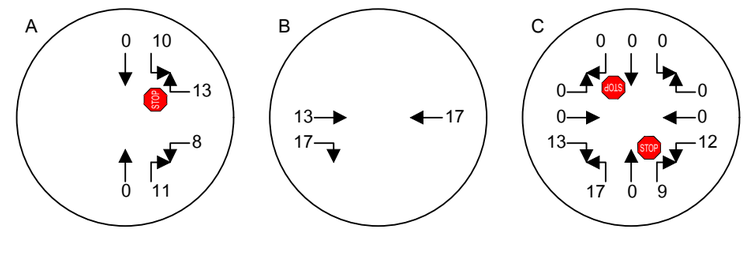
A. ACCESS & 67TH AVE NE
B. 204TH ST NE & WEST ACCESS (INGRESS ONLY)
C. 204TH ST NE & EAST ACCESS/69TH AVE NE

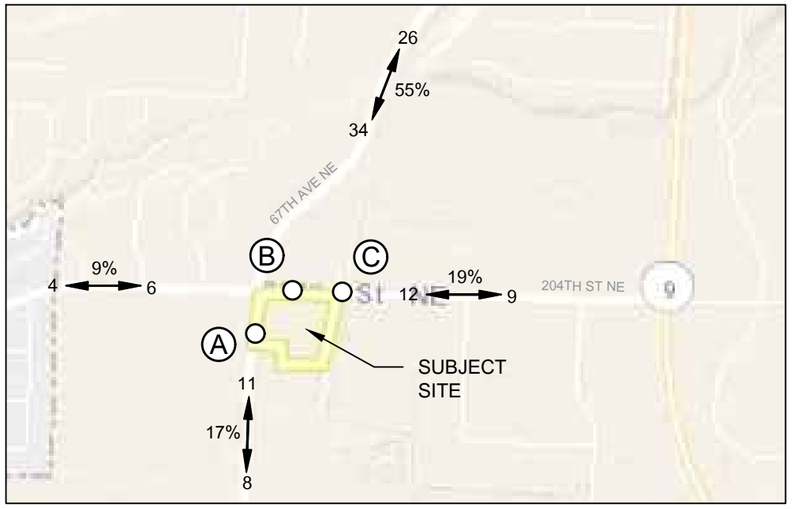


PRIMARY
PM PEAK HOUR TRIPS

INBOUND: 63 VPH
OUTBOUND: 47 VPH







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PM PEAK HOUR PRIMARY TRIP DISTRIBUTION & ASSIGNMENT
FIGURE 4

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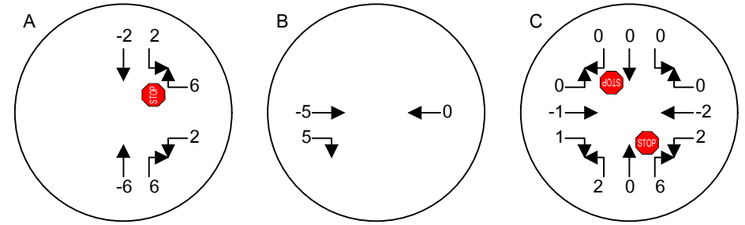

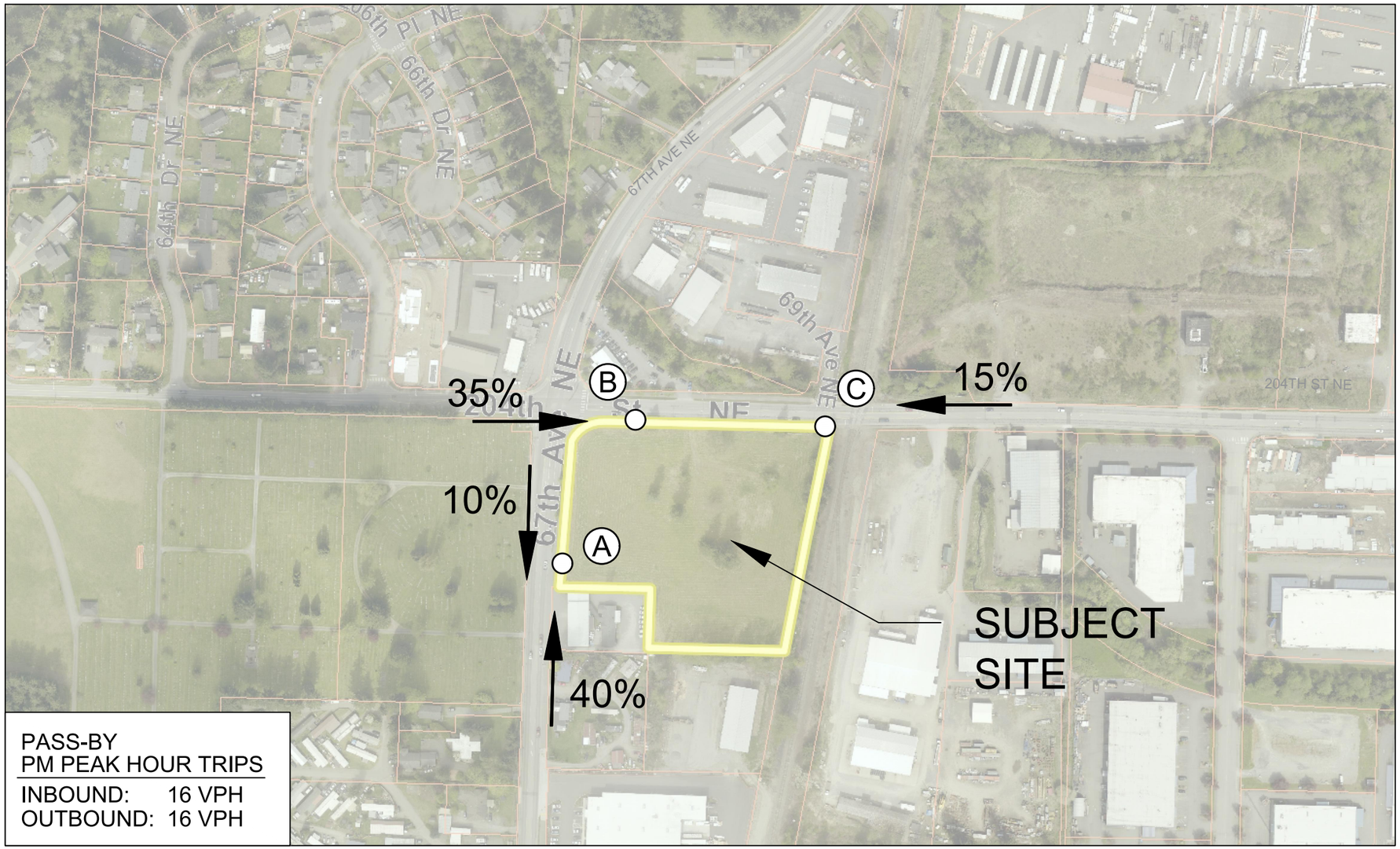

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PM PEAK HOUR PASS-BY TRIP DISTRIBUTION & ASSIGNMENT
FIGURE 5

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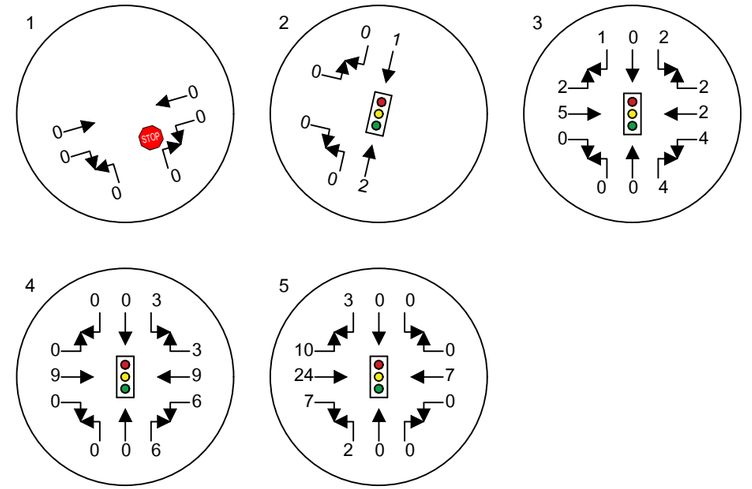
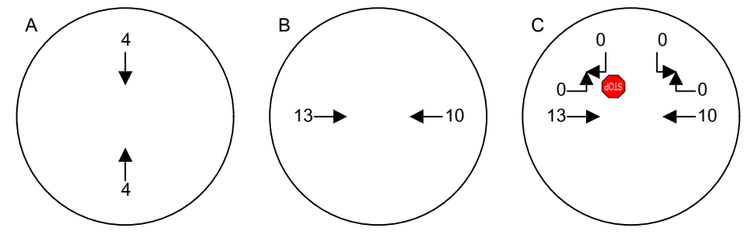
STUDY INTERSECTIONS (10+ PM PEAK HOUR TRIPS)

1. 211TH PL NE & SR 530
2. 211TH PL NE & 67TH AVE NE
3. 204TH ST NE & 67TH AVE NE
4. 204TH ST NE & SR 9
5. 172ND ST NE & 67TH AVE NE

A. ACCESS & 67TH AVE NE
B. 204TH ST NE & WEST ACCESS (INGRESS ONLY)
C. 204TH ST NE & EAST ACCESS/69TH AVE NE





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PM PEAK HOUR PIPELINE VOLUMES
FIGURE 6

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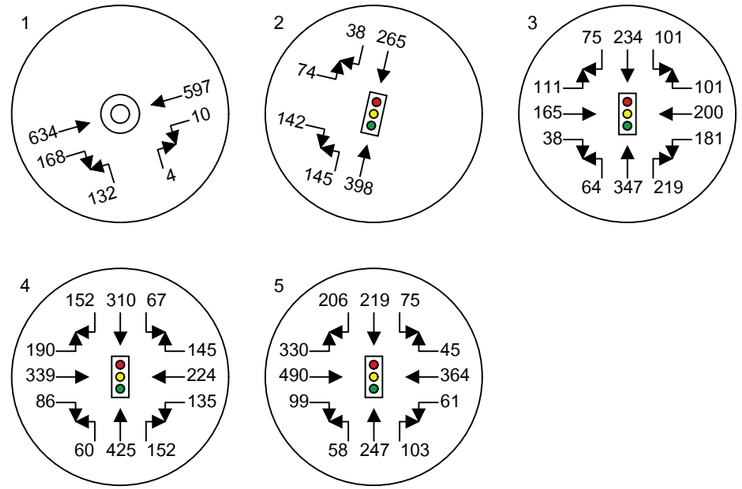
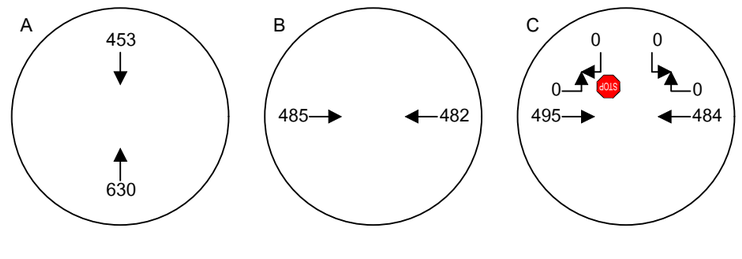
STUDY INTERSECTIONS (10+ PM PEAK HOUR TRIPS)

1. 211TH PL NE & SR 530
2. 211TH PL NE & 67TH AVE NE
3. 204TH ST NE & 67TH AVE NE
4. 204TH ST NE & SR 9
5. 172ND ST NE & 67TH AVE NE

A. ACCESS & 67TH AVE NE
B. 204TH ST NE & WEST ACCESS (INGRESS ONLY)
C. 204TH ST NE & EAST ACCESS/69TH AVE NE





WISEMARK COMMONS

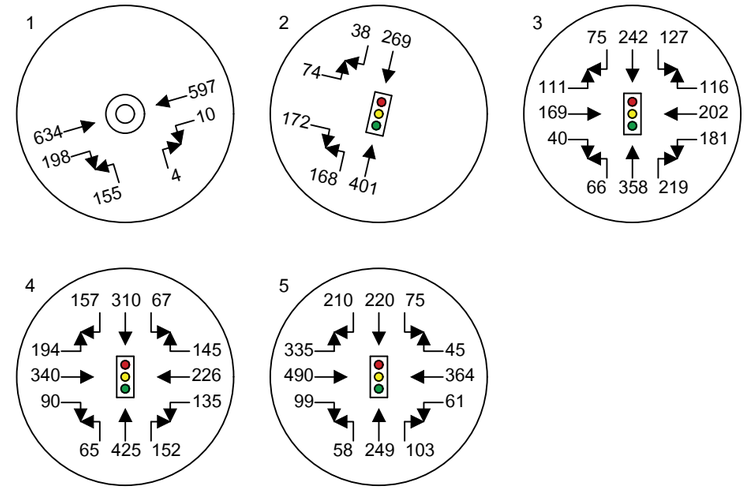
FORECAST 2026 PM PEAK HOUR BACKGROUND VOLUMES
FIGURE 7

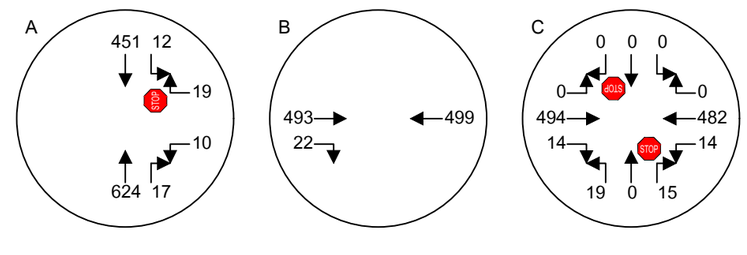
N

STUDY INTERSECTIONS (10+ PM PEAK HOUR TRIPS)

1. 211TH PL NE & SR 530
2. 211TH PL NE & 67TH AVE NE
3. 204TH ST NE & 67TH AVE NE
4. 204TH ST NE & SR 9
5. 172ND ST NE & 67TH AVE NE

A. ACCESS & 67TH AVE NE
B. 204TH ST NE & WEST ACCESS (INGRESS ONLY)
C. 204TH ST NE & EAST ACCESS/69TH AVE NE





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FORECAST 2026 PM PEAK HOUR VOLUMES WITH PROJECT
FIGURE 8

4.4 Future Level of Service

Level of service analyses were made of the future PM peak hour volumes without (background) and with project related trips added to the key roadways and intersections. This analysis once again involved the use of the *Synchro 12* analysis program. As previously noted, analysis for the newly constructed roundabout at SR 530 & 211th Place NE involved the use of the *SIDRA 9* analysis program. Delays for the study intersections under future conditions are shown below in Table 4.

Table 4: Forecast 2026 Weekday Peak Hour Level of Service

Delays Given in Seconds per Vehicle

				Without Project		*With Project*	
Ref. #	**Intersection**	**Control**	**Movement**	**LOS**	**Delay**	**LOS**	**Delay**
1	211th Pl NE & SR 530	RAB	Overall	A	5.8	A	6.0
2	211th Pl NE & 67th Ave NE	Signal	Overall	A	6.2	A	6.7
3	204th St NE & 67th Ave NE	Signal	Overall	B	18.7	B	19.5
4	204th St NE & SR 9	Signal	Overall	C	24.4	C	24.6
5	172nd St NE & 67th Ave NE	Signal	Overall	C	26.0	C	26.3
A	Access & 67th Ave NE	Stop	SB	-	-	B	14.7
B	204th St NE & W Access	Stop	WB	-	-	A	0.0
C	204th St NE & E Access/69th Ave NE	Stop	NB	A	0.0	C	20.9

As shown in Table 4, forecast 2026 weekday peak hour delays are shown to operate with up to LOS C conditions with or without the proposed development at all study intersections. As such, no level of service deficiencies are identified with the study intersections and proposed accesses, which are shown to meet City and WSDOT standards.

4.5 Project Access & Sight Distance

Three driveways are proposed to serve the subject site. One driveway is proposed to extend east from 67th Avenue NE and two driveways are proposed to extend south from 204th Street NE. Given the westerly 204th Street NE driveway's proximity to the 204th Street NE & 67th Avenue NE intersection, the access is to support right-in movements only. The easterly driveway is proposed to be aligned opposite 69th Avenue NE, supporting full turning movements. This driveway is located in close proximity to the easterly active BNSF Railway. As such, it is recommended that coordination be made with BNSF and/or the City to ensure that proper driveway spacing and/or rail crossing signage or other enhancements is provided within the vicinity of the site access.

Entering sight lines were evaluated at the 67th Avenue NE driveway and the easterly 204th Street NE access. In accordance with AASHTO standards, the 35-mph posted speed limits (45-mph design speed) on both access roadways (67th Avenue NE and 204th Street NE) would require approximately 530-feet[4] of entering sight lines. At the 67th Avenue NE access, sight lines are available northerly to the roadway's intersection with 204th Street NE. To the south, sight lines are available in excess of 600-feet. At the proposed easterly 204th Street NE driveway, sight lines are available westerly to the roadway's intersection with 67th Avenue NE. To the east, sight lines are available in excess of 600-feet. Overall, no sight distance deficiencies are identified at this time with the access proposal.

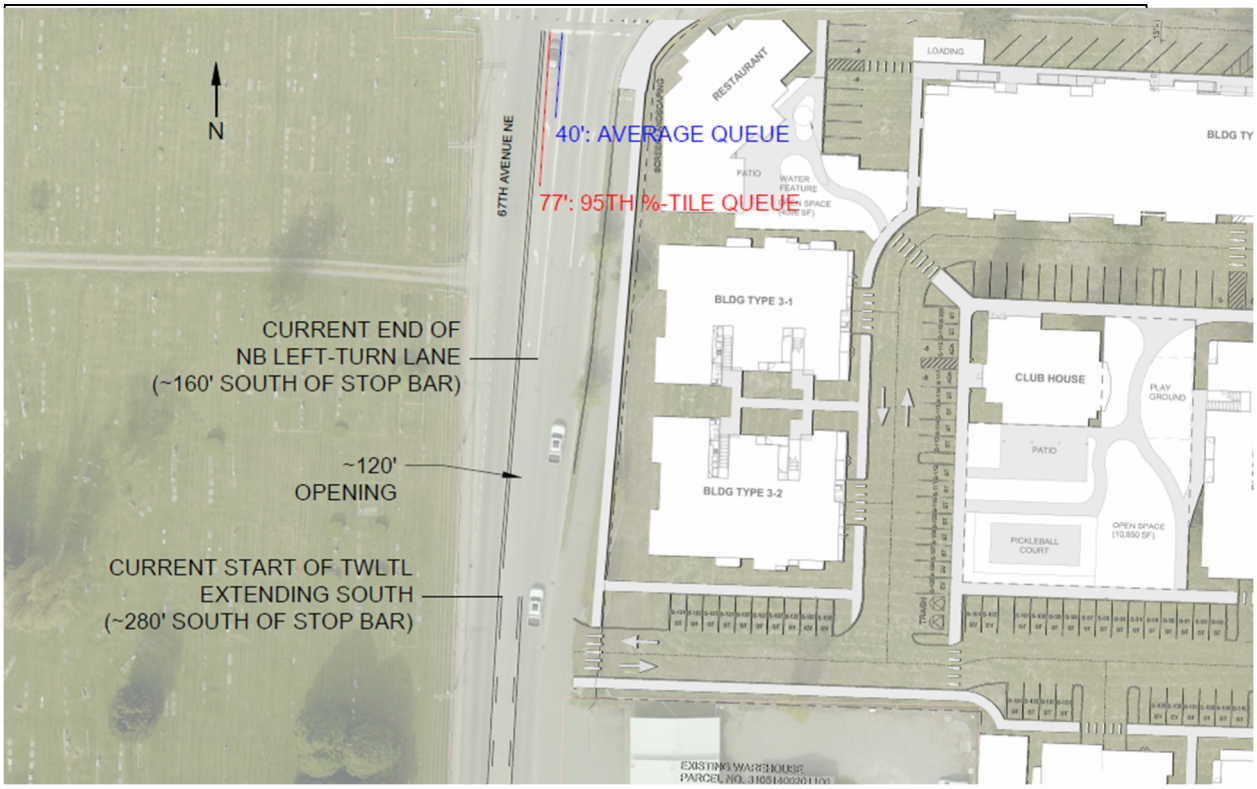
4.6 Queuing Analysis

The northbound left-turn lane of 204th Street NE & 67th Avenue NE transitions into a two-way left-turn lane approximately 265-feet south of the lane's stop bar. As such, approximately 60-feet of two-way left-turn lane storage is available along the 67th Avenue NE project frontage. Given the limited storage space north of the access, it may be recommended to reduce the northbound left-turn lane opening or pocket length and extend/increase the two-way left-turn lane (TWLTL) storage northerly along 67th Avenue NE. To deduce if this will generate any detrimental impacts to queuing at the northerly intersection, northbound left-turn lane queues were examined at 204th Street NE & 67th Avenue NE using *SimTraffic* modeling software.

Under forecast 2026 conditions with project traffic, a 95th percentile queue of approximately four vehicles (77-feet) was estimated during the PM peak hour. With a

[4] Given the additional center lane that must be crossed both on 204th Street NE and 67th Avenue NE, an additional 0.50-seconds was added to the time gap (8.0-second total) for calculation inputs.

~160-foot left-turn pocket and ~120-foot lane opening, there is excess left-turn lane storage within the northbound left-turn lane at 204th Street NE & 67th Avenue NE. The graphic below depicts the estimated forecast queues. Additionally illustrated is the current left-turn lane length (160-feet) and the current start of the TWLTL that extends southerly.



As shown, peak forecast northbound left-turn lane queues are anticipated to be contained within the existing 160-foot left-turn lane pocket. If the left-turn pocket were reduced by approximately 20- to 50-feet, queues would still be accommodated within the lane. Subsequently, the TWLTL could be extended that distance northerly, better accommodating southbound left-turn maneuvers from 67th Avenue NE into the subject site. Moreover, the 120-foot opening may also be reduced by a length of up to 20-feet, additionally allowing a northerly extension of the TWLTL. The restriping could enhance operations and reduce potential conflicts.

4.7 Left Turn Warrant Analysis

Turn lanes are a means of providing necessary storage space for left turning vehicles at intersections. Left turn warrants were analyzed at the proposed easterly 204th Street NE driveway located opposite 69th Avenue NE. Procedures described by the WSDOT Design Manual Exhibit 1310-7a were used to ascertain storage requirements. Based on the criteria set forth in the warrant calculations, a left turn lane *would not be warranted* under forecast 2026 PM peak hour conditions at the proposed access intersection. Turn lane exhibit sheets have been included in the appendix.

It should be noted that the center two-way left-turn lane on 204th Street NE is currently restricted for ~205-feet east of 69th Avenue NE due to proximity of the BNSF railroad crossing, which is situated approximately 50-feet east of 69th Avenue NE. Given the driveway's proximity to the BNSF Railway line and that no left-turn lane is warranted at the access, no modification to the center lane striping on 204th Street NE is identified at this time. However, it is recommended that coordination be made with BNSF and the City to determine whether any modifications, enhancements, advanced warning signage, or other measures are needed.

5. CONCLUSIONS & MITIGATION

Wisemark Commons proposes for the development of 150 multi-family dwelling units and approximately 15,400 square feet of retail/office space within the city of Arlington. The subject site comprises approximately 4.91-acres within tax parcel #: 31051400200600. Access to the subject site is proposed via one driveway extending east from 67th Avenue NE and two driveways extending south from 204th Street NE. The westerly 204th Street NE access is to accommodate right-in only movements. A conceptual site plan illustrating the overall configuration of the project and access proposal is provided in Figure 2.

Based on ITE data, the proposed development is anticipated to generate approximately 1211 average weekday daily primary trips with 82 (29 in / 53 out) AM peak hour primary trips and 110 (63 in / 47 out) PM peak hour primary trips. A level of service (LOS) analysis was performed using a three-year horizon which included a background growth rate, pipeline development and project-generated traffic added to the roadway network.

Existing and forecast level of service (LOS) at the outlying study intersections are shown operate acceptably with LOS C or better conditions, meeting City standards. The proposed development is not shown to adversely impact the surrounding

roadway system. All proposed accesses are projected to operate with acceptable service levels.

Based on the findings of this report the following mitigation is proposed for the Wisemark Commons development:

1. Pay Traffic Impact Fees (TIF) as required by the City of Arlington and/or supplemental interlocal agreements. Exact fees would be calculated and assessed by the City upon review of the traffic study. Initial interlocal agreements are included in the appendix.

2. It is recommended to restripe a small segment of 67th Avenue NE to provide additional storage within the two-way left-turn lane (TWLTL). This may be achieved by reducing the length of the existing northbound left-turn lane at 67th Avenue NE & 204th Street NE and/or reducing the length of the lanes opening. Coordination should be made with the City regarding this potential striping modification.

3. Coordination between the City and BNSF should be made to determine whether any modifications/additional signage is needed in the 204th Street NE proposed access vicinity due to proximity to rail crossing.

No other mitigation is identified at this time.

WISEMARK COMMONS
TRAFFIC IMPACT ANALYSIS

APPENDIX

INTERSECTION COUNT SHEETS

Heath & Associates

PO Box 397 Puyallup, WA 98371

File Name : 5172a
Site Code : 00005172
Start Date : 7/20/2023
Page No : 1

Groups Printed- Passenger + - Heavy

	SR 530 Southbound			211th Pl NE Westbound			SR 530 Northbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
04:00 PM	132	1	133	1	26	27	40	139	179	339
04:15 PM	145	7	152	1	18	19	41	148	189	360
04:30 PM	126	1	127	1	45	46	48	138	186	359
04:45 PM	123	1	124	2	33	35	29	148	177	336
Total	526	10	536	5	122	127	158	573	731	1394
05:00 PM	152	0	152	0	25	25	36	146	182	359
05:15 PM	135	2	137	2	26	28	44	129	173	338
05:30 PM	122	1	123	2	19	21	49	131	180	324
05:45 PM	108	2	110	0	15	15	39	111	150	275
Total	517	5	522	4	85	89	168	517	685	1296
Grand Total	1043	15	1058	9	207	216	326	1090	1416	2690
Apprch %	98.6	1.4		4.2	95.8		23	77		
Total %	38.8	0.6	39.3	0.3	7.7	8	12.1	40.5	52.6	
Passenger +	999	15	1014	9	205	214	314	1054	1368	2596
% Passenger +	95.8	100	95.8	100	99	99.1	96.3	96.7	96.6	96.5
Heavy	44	0	44	0	2	2	12	36	48	94
% Heavy	4.2	0	4.2	0	1	0.9	3.7	3.3	3.4	3.5

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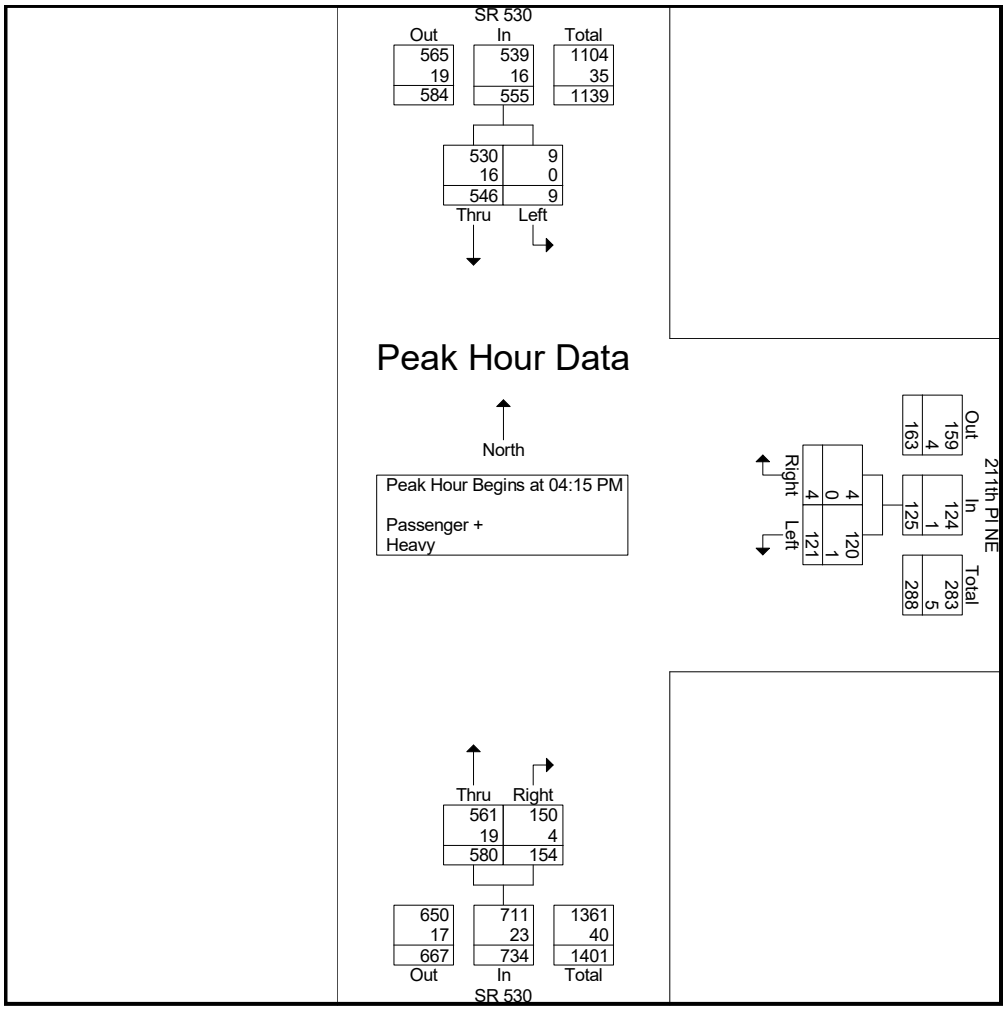
PO Box 397 Puyallup, WA 98371

File Name : 5172a
Site Code : 00005172
Start Date : 7/20/2023
Page No : 2

	SR 530 Southbound			211th Pl NE Westbound			SR 530 Northbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	145	**7**	**152**	1	18	19	41	**148**	**189**	**360**
04:30 PM	126	1	127	1	**45**	**46**	**48**	138	186	359
04:45 PM	123	1	124	**2**	33	35	29	148	177	336
05:00 PM	**152**	0	152	0	25	25	36	146	182	359
Total Volume	546	9	555	4	121	125	154	580	734	1414
% App. Total	98.4	1.6		3.2	96.8		21	79		
PHF	.898	.321	.913	.500	.672	.679	.802	.980	.971	.982
Passenger +	530	9	539	4	120	124	150	561	711	1374
% Passenger +	97.1	100	97.1	100	99.2	99.2	97.4	96.7	96.9	97.2
Heavy	16	0	16	0	1	1	4	19	23	40
% Heavy	2.9	0	2.9	0	0.8	0.8	2.6	3.3	3.1	2.8



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File Name : 5172d
Site Code : 00005172
Start Date : 7/20/2023
Page No : 1

Groups Printed- Passenger + - Heavy

	67th Ave NE Southbound			67th Ave NE Northbound			211th Pl NE Eastbound			
Start Time	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
04:00 PM	6	54	60	82	37	119	25	18	43	222
04:15 PM	10	63	73	102	18	120	37	17	54	247
04:30 PM	9	65	74	87	48	135	35	16	51	260
04:45 PM	10	64	74	78	33	111	25	17	42	227
Total	35	246	281	349	136	485	122	68	190	956
05:00 PM	6	50	56	95	34	129	33	18	51	236
05:15 PM	7	53	60	76	36	112	36	15	51	223
05:30 PM	10	37	47	72	20	92	36	17	53	192
05:45 PM	7	42	49	53	17	70	53	21	74	193
Total	30	182	212	296	107	403	158	71	229	844
Grand Total	65	428	493	645	243	888	280	139	419	1800
Apprch %	13.2	86.8		72.6	27.4		66.8	33.2		
Total %	3.6	23.8	27.4	35.8	13.5	49.3	15.6	7.7	23.3	
Passenger +	65	414	479	638	241	879	265	138	403	1761
% Passenger +	100	96.7	97.2	98.9	99.2	99	94.6	99.3	96.2	97.8
Heavy	0	14	14	7	2	9	15	1	16	39
% Heavy	0	3.3	2.8	1.1	0.8	1	5.4	0.7	3.8	2.2

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PO Box 397 Puyallup, WA 98371

File Name : 5172d
Site Code : 00005172
Start Date : 7/20/2023
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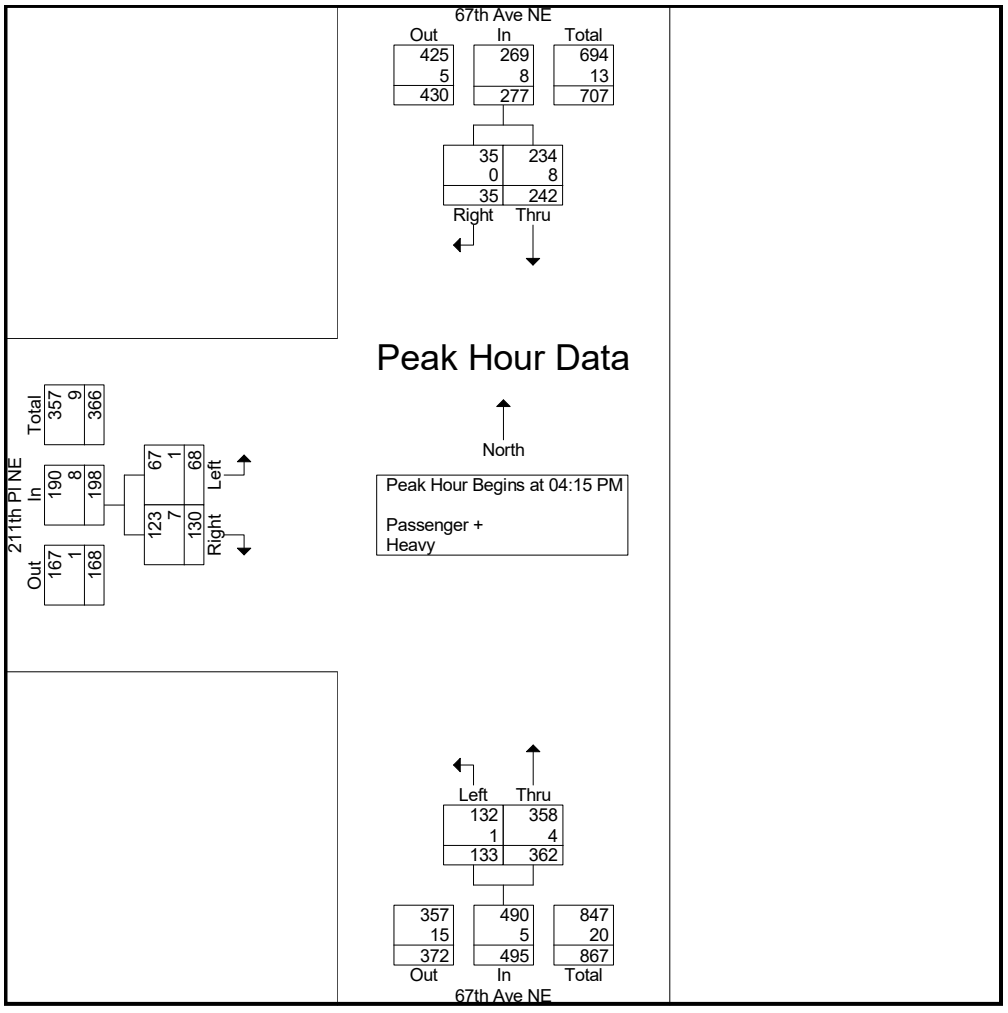
	67th Ave NE Southbound			67th Ave NE Northbound			211th Pl NE Eastbound			
Start Time	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	**10**	63	73	**102**	18	120	**37**	17	**54**	247
04:30 PM	9	**65**	**74**	87	**48**	**135**	35	16	51	**260**
04:45 PM	10	64	74	78	33	111	25	17	42	227
05:00 PM	6	50	56	95	34	129	33	**18**	51	236
Total Volume	35	242	277	362	133	495	130	68	198	970
% App. Total	12.6	87.4		73.1	26.9		65.7	34.3		
PHF	.875	.931	.936	.887	.693	.917	.878	.944	.917	.933
Passenger +	35	234	269	358	132	490	123	67	190	949
% Passenger +	100	96.7	97.1	98.9	99.2	99.0	94.6	98.5	96.0	97.8
Heavy	0	8	8	4	1	5	7	1	8	21
% Heavy	0	3.3	2.9	1.1	0.8	1.0	5.4	1.5	4.0	2.2



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PO Box 397 Puyallup, WA 98371

File Name : 5172e
Site Code : 00005172
Start Date : 7/20/2023
Page No : 1

Groups Printed- Passenger + - Heavy

	67th Ave NE Southbound				204th St NE Westbound				67th Ave NE Northbound				204th St NE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	12	51	27	90	24	35	40	99	47	79	20	146	6	42	25	73	408
04:15 PM	19	56	24	99	18	28	39	85	42	76	7	125	7	42	31	80	389
04:30 PM	16	62	20	98	18	63	55	136	46	84	18	148	10	37	22	69	451
04:45 PM	20	52	23	95	30	49	30	109	31	68	9	108	11	39	26	76	388
Total	67	221	94	382	90	175	164	429	166	307	54	527	34	160	104	298	1636
05:00 PM	13	44	24	81	25	41	38	104	78	90	25	193	7	28	21	56	434
05:15 PM	14	57	16	87	23	33	42	98	46	75	10	131	7	40	22	69	385
05:30 PM	16	38	29	83	14	37	44	95	40	61	7	108	6	41	18	65	351
05:45 PM	12	42	36	90	10	30	34	74	46	46	2	94	3	28	19	50	308
Total	55	181	105	341	72	141	158	371	210	272	44	526	23	137	80	240	1478
Grand Total	122	402	199	723	162	316	322	800	376	579	98	1053	57	297	184	538	3114
Apprch %	16.9	55.6	27.5		20.2	39.5	40.2		35.7	55	9.3		10.6	55.2	34.2		
Total %	3.9	12.9	6.4	23.2	5.2	10.1	10.3	25.7	12.1	18.6	3.1	33.8	1.8	9.5	5.9	17.3	
Passenger +	120	380	196	696	158	314	312	784	371	573	97	1041	54	292	182	528	3049
% Passenger +	98.4	94.5	98.5	96.3	97.5	99.4	96.9	98	98.7	99	99	98.9	94.7	98.3	98.9	98.1	97.9
Heavy	2	22	3	27	4	2	10	16	5	6	1	12	3	5	2	10	65
% Heavy	1.6	5.5	1.5	3.7	2.5	0.6	3.1	2	1.3	1	1	1.1	5.3	1.7	1.1	1.9	2.1

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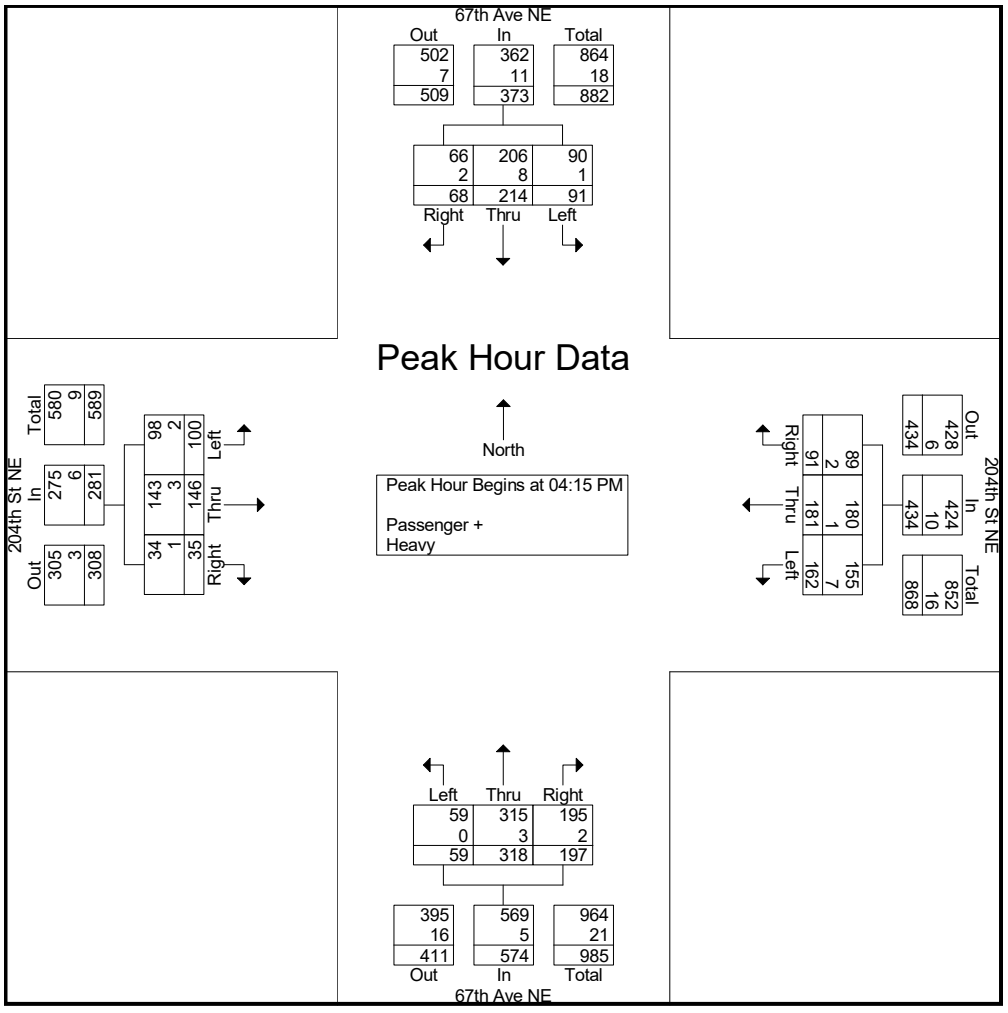
File Name : 5172e
Site Code : 00005172
Start Date : 7/20/2023
Page No : 2

	67th Ave NE Southbound				204th St NE Westbound				67th Ave NE Northbound				204th St NE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	19	56	**24**	**99**	18	28	39	85	42	76	7	125	7	**42**	**31**	**80**	389
04:30 PM	16	**62**	20	98	18	**63**	**55**	**136**	46	84	18	148	10	37	22	69	**451**
04:45 PM	**20**	52	23	95	**30**	49	30	109	31	68	9	108	**11**	39	26	76	388
05:00 PM	13	44	24	81	25	41	38	104	**78**	**90**	**25**	**193**	7	28	21	56	434
Total Volume	68	214	91	373	91	181	162	434	197	318	59	574	35	146	100	281	1662
% App. Total	18.2	57.4	24.4		21	41.7	37.3		34.3	55.4	10.3		12.5	52	35.6		
PHF	.850	.863	.948	.942	.758	.718	.736	.798	.631	.883	.590	.744	.795	.869	.806	.878	.921
Passenger +	66	206	90	362	89	180	155	424	195	315	59	569	34	143	98	275	1630
% Passenger +	97.1	96.3	98.9	97.1	97.8	99.4	95.7	97.7	99.0	99.1	100	99.1	97.1	97.9	98.0	97.9	98.1
Heavy	2	8	1	11	2	1	7	10	2	3	0	5	1	3	2	6	32
% Heavy	2.9	3.7	1.1	2.9	2.2	0.6	4.3	2.3	1.0	0.9	0	0.9	2.9	2.1	2.0	2.1	1.9



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PO Box 397 Puyallup, WA 98371

File Name : 5172h
Site Code : 00005172
Start Date : 7/20/2023
Page No : 1

Groups Printed- Passenger + - Heavy

	SR 9 Southbound				204th St NE Westbound				SR 9 Northbound				204th St NE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	32	68	16	116	25	50	27	102	37	94	12	143	19	74	49	142	503
04:15 PM	34	72	23	129	40	46	36	122	33	103	15	151	18	67	34	119	521
04:30 PM	43	70	10	123	29	49	25	103	29	95	15	139	21	77	50	148	513
04:45 PM	30	74	10	114	36	52	30	118	35	97	13	145	21	84	41	146	523
Total	139	284	59	482	130	197	118	445	134	389	55	578	79	302	174	555	2060
05:00 PM	30	68	17	115	19	48	31	98	36	81	16	133	22	84	49	155	501
05:15 PM	33	67	20	120	31	51	26	108	26	80	9	115	14	70	43	127	470
05:30 PM	27	63	21	111	38	63	43	144	44	83	13	140	23	85	34	142	537
05:45 PM	23	63	14	100	45	56	34	135	32	75	14	121	19	76	18	113	469
Total	113	261	72	446	133	218	134	485	138	319	52	509	78	315	144	537	1977
Grand Total	252	545	131	928	263	415	252	930	272	708	107	1087	157	617	318	1092	4037
Apprch %	27.2	58.7	14.1		28.3	44.6	27.1		25	65.1	9.8		14.4	56.5	29.1		
Total %	6.2	13.5	3.2	23	6.5	10.3	6.2	23	6.7	17.5	2.7	26.9	3.9	15.3	7.9	27	
Passenger +	240	531	130	901	261	412	250	923	270	695	102	1067	155	611	313	1079	3970
% Passenger +	95.2	97.4	99.2	97.1	99.2	99.3	99.2	99.2	99.3	98.2	95.3	98.2	98.7	99	98.4	98.8	98.3
Heavy	12	14	1	27	2	3	2	7	2	13	5	20	2	6	5	13	67
% Heavy	4.8	2.6	0.8	2.9	0.8	0.7	0.8	0.8	0.7	1.8	4.7	1.8	1.3	1	1.6	1.2	1.7

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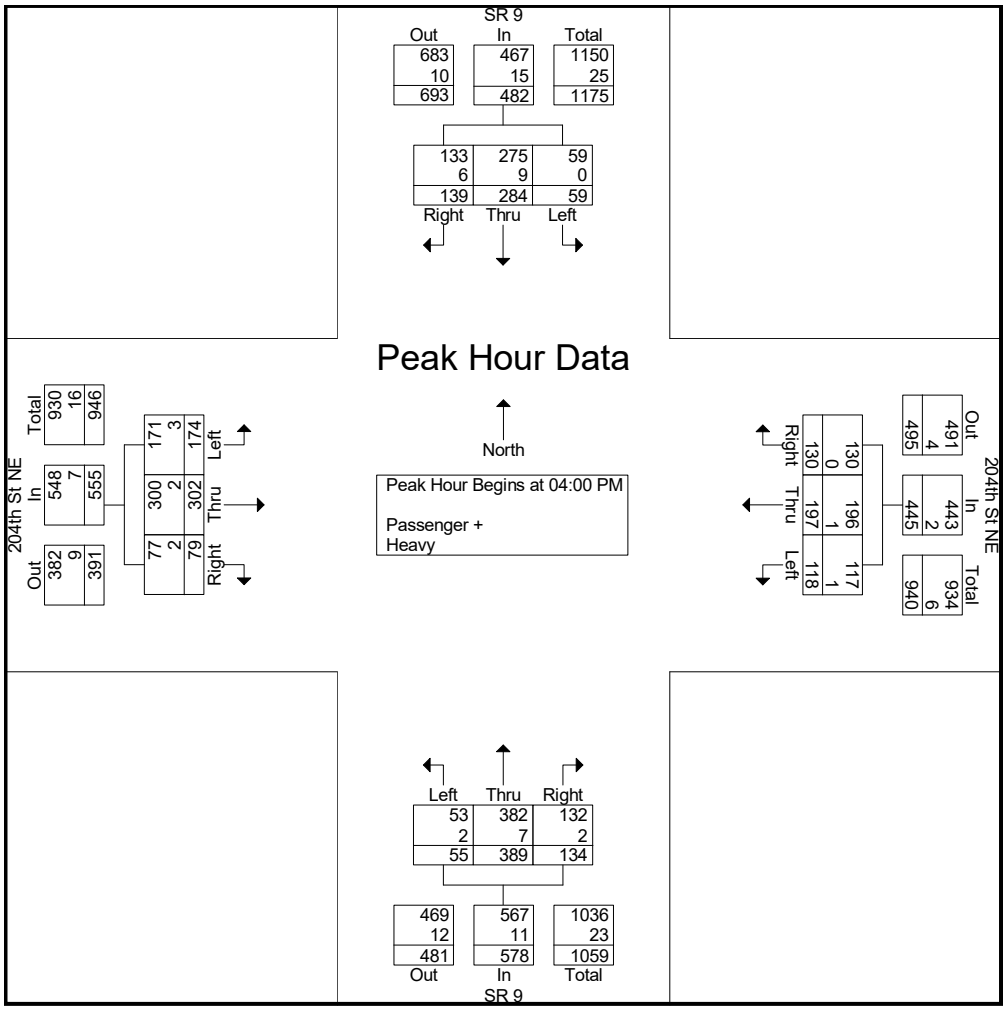
PO Box 397 Puyallup, WA 98371

File Name : 5172h
Site Code : 00005172
Start Date : 7/20/2023
Page No : 2

	SR 9 Southbound				204th St NE Westbound				SR 9 Northbound				204th St NE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	32	68	16	116	25	50	27	102	**37**	94	12	143	19	74	49	142	503
04:15 PM	34	72	**23**	**129**	**40**	46	**36**	**122**	33	**103**	**15**	**151**	18	67	34	119	521
04:30 PM	**43**	70	10	123	29	49	25	103	29	95	15	139	**21**	77	**50**	**148**	513
04:45 PM	30	**74**	10	114	36	**52**	30	118	35	97	13	145	21	**84**	41	146	**523**
Total Volume	139	284	59	482	130	197	118	445	134	389	55	578	79	302	174	555	2060
% App. Total	28.8	58.9	12.2		29.2	44.3	26.5		23.2	67.3	9.5		14.2	54.4	31.4		
PHF	.808	.959	.641	.934	.813	.947	.819	.912	.905	.944	.917	.957	.940	.899	.870	.938	.985
Passenger +	133	275	59	467	130	196	117	443	132	382	53	567	77	300	171	548	2025
% Passenger +	95.7	96.8	100	96.9	100	99.5	99.2	99.6	98.5	98.2	96.4	98.1	97.5	99.3	98.3	98.7	98.3
Heavy	6	9	0	15	0	1	1	2	2	7	2	11	2	2	3	7	35
% Heavy	4.3	3.2	0	3.1	0	0.5	0.8	0.4	1.5	1.8	3.6	1.9	2.5	0.7	1.7	1.3	1.7



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File Name : 5172i
Site Code : 00005172
Start Date : 7/20/2023
Page No : 1

Groups Printed- Passenger + - Heavy

	67th Ave NE Southbound				172nd St NE Westbound				67th Ave NE Northbound				172nd St NE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	44	51	13	108	18	57	12	87	22	46	15	83	29	122	46	197	475
04:15 PM	51	45	19	115	13	104	13	130	19	60	12	91	12	90	67	169	505
04:30 PM	47	53	13	113	13	79	19	111	28	47	8	83	28	112	76	216	523
04:45 PM	46	55	14	115	8	85	17	110	17	57	19	93	20	118	71	209	527
Total	188	204	59	451	52	325	61	438	86	210	54	350	89	442	260	791	2030
05:00 PM	42	47	23	112	7	59	7	73	30	62	12	104	24	106	79	209	498
05:15 PM	43	36	17	96	13	73	15	101	15	49	14	78	16	113	60	189	464
05:30 PM	31	39	15	85	7	71	12	90	21	58	12	91	22	112	62	196	462
05:45 PM	22	35	11	68	7	69	13	89	25	39	11	75	17	99	65	181	413
Total	138	157	66	361	34	272	47	353	91	208	49	348	79	430	266	775	1837
Grand Total	326	361	125	812	86	597	108	791	177	418	103	698	168	872	526	1566	3867
Apprch %	40.1	44.5	15.4		10.9	75.5	13.7		25.4	59.9	14.8		10.7	55.7	33.6		
Total %	8.4	9.3	3.2	21	2.2	15.4	2.8	20.5	4.6	10.8	2.7	18.1	4.3	22.5	13.6	40.5	
Passenger +	324	356	122	802	80	584	107	771	174	416	97	687	165	865	514	1544	3804
% Passenger +	99.4	98.6	97.6	98.8	93	97.8	99.1	97.5	98.3	99.5	94.2	98.4	98.2	99.2	97.7	98.6	98.4
Heavy	2	5	3	10	6	13	1	20	3	2	6	11	3	7	12	22	63
% Heavy	0.6	1.4	2.4	1.2	7	2.2	0.9	2.5	1.7	0.5	5.8	1.6	1.8	0.8	2.3	1.4	1.6

Heath & Associates

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File Name : 5172i
Site Code : 00005172
Start Date : 7/20/2023
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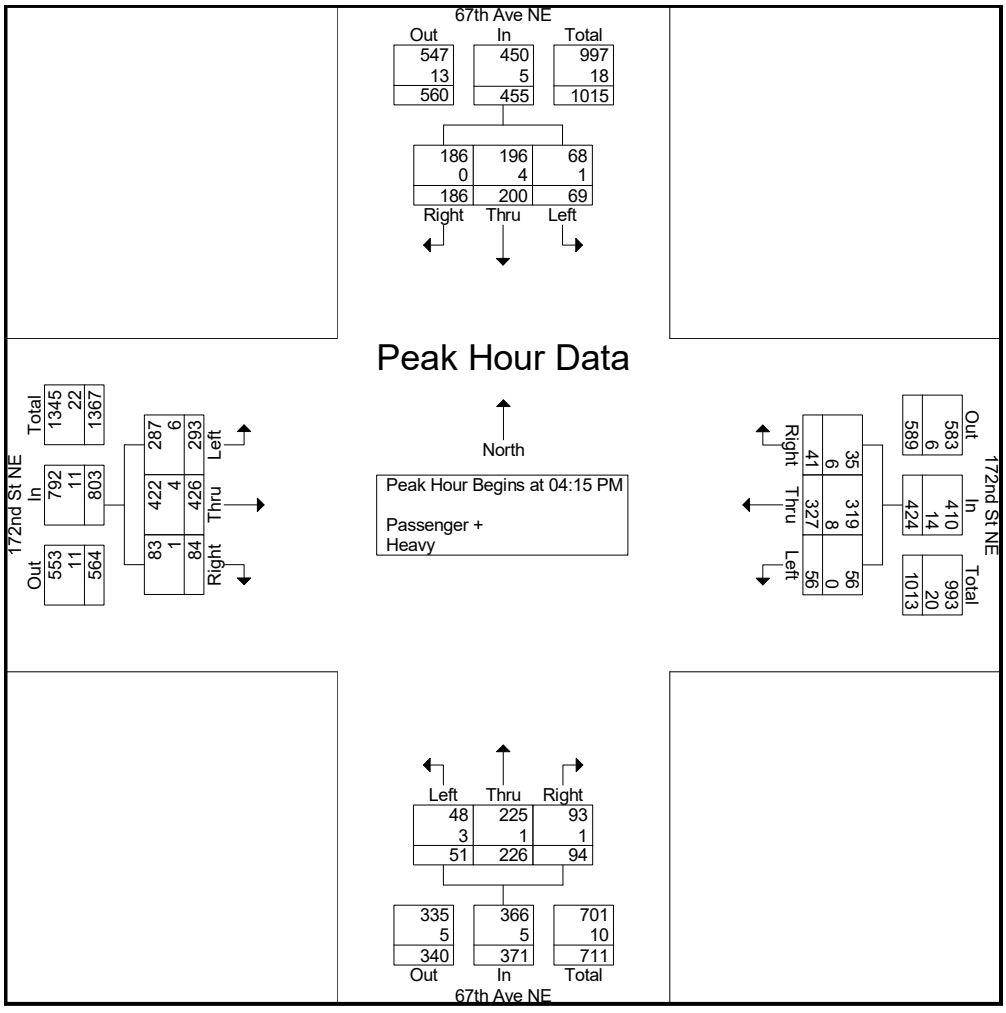
	67th Ave NE Southbound				172nd St NE Westbound				67th Ave NE Northbound				172nd St NE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	**51**	45	19	**115**	**13**	**104**	13	**130**	19	60	12	91	12	90	67	169	505
04:30 PM	47	53	13	113	13	79	**19**	111	28	47	8	83	**28**	112	76	**216**	523
04:45 PM	46	**55**	14	115	8	85	17	110	17	57	**19**	93	20	**118**	71	209	**527**
05:00 PM	42	47	**23**	112	7	59	7	73	**30**	**62**	12	**104**	24	106	**79**	209	498
Total Volume	186	200	69	455	41	327	56	424	94	226	51	371	84	426	293	803	2053
% App. Total	40.9	44	15.2		9.7	77.1	13.2		25.3	60.9	13.7		10.5	53.1	36.5		
PHF	.912	.909	.750	.989	.788	.786	.737	.815	.783	.911	.671	.892	.750	.903	.927	.929	.974
Passenger +	186	196	68	450	35	319	56	410	93	225	48	366	83	422	287	792	2018
% Passenger +	100	98.0	98.6	98.9	85.4	97.6	100	96.7	98.9	99.6	94.1	98.7	98.8	99.1	98.0	98.6	98.3
Heavy	0	4	1	5	6	8	0	14	1	1	3	5	1	4	6	11	35
% Heavy	0	2.0	1.4	1.1	14.6	2.4	0	3.3	1.1	0.4	5.9	1.3	1.2	0.9	2.0	1.4	1.7



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File Name : 5172f
Site Code : 00005172
Start Date : 7/20/2023
Page No : 1

Groups Printed- Passenger + - Heavy

	Access Southbound			204th St NE Westbound			204th St NE Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
04:00 PM	4	2	6	1	0	1	0	0	0	7
04:15 PM	3	2	5	3	0	3	0	0	0	8
04:30 PM	0	0	0	2	0	2	0	0	0	2
04:45 PM	2	2	4	3	0	3	0	0	0	7
Total	9	6	15	9	0	9	0	0	0	24
05:00 PM	2	4	6	0	0	0	0	0	0	6
05:15 PM	3	1	4	4	0	4	0	0	0	8
05:30 PM	2	0	2	2	0	2	0	0	0	4
05:45 PM	1	2	3	3	0	3	0	0	0	6
Total	8	7	15	9	0	9	0	0	0	24
Grand Total	17	13	30	18	0	18	0	0	0	48
Apprch %	56.7	43.3		100	0		0	0		
Total %	35.4	27.1	62.5	37.5	0	37.5	0	0	0	
Passenger +	11	13	24	18	0	18	0	0	0	42
% Passenger +	64.7	100	80	100	0	100	0	0	0	87.5
Heavy	6	0	6	0	0	0	0	0	0	6
% Heavy	35.3	0	20	0	0	0	0	0	0	12.5

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File Name : 5172f
Site Code : 00005172
Start Date : 7/20/2023
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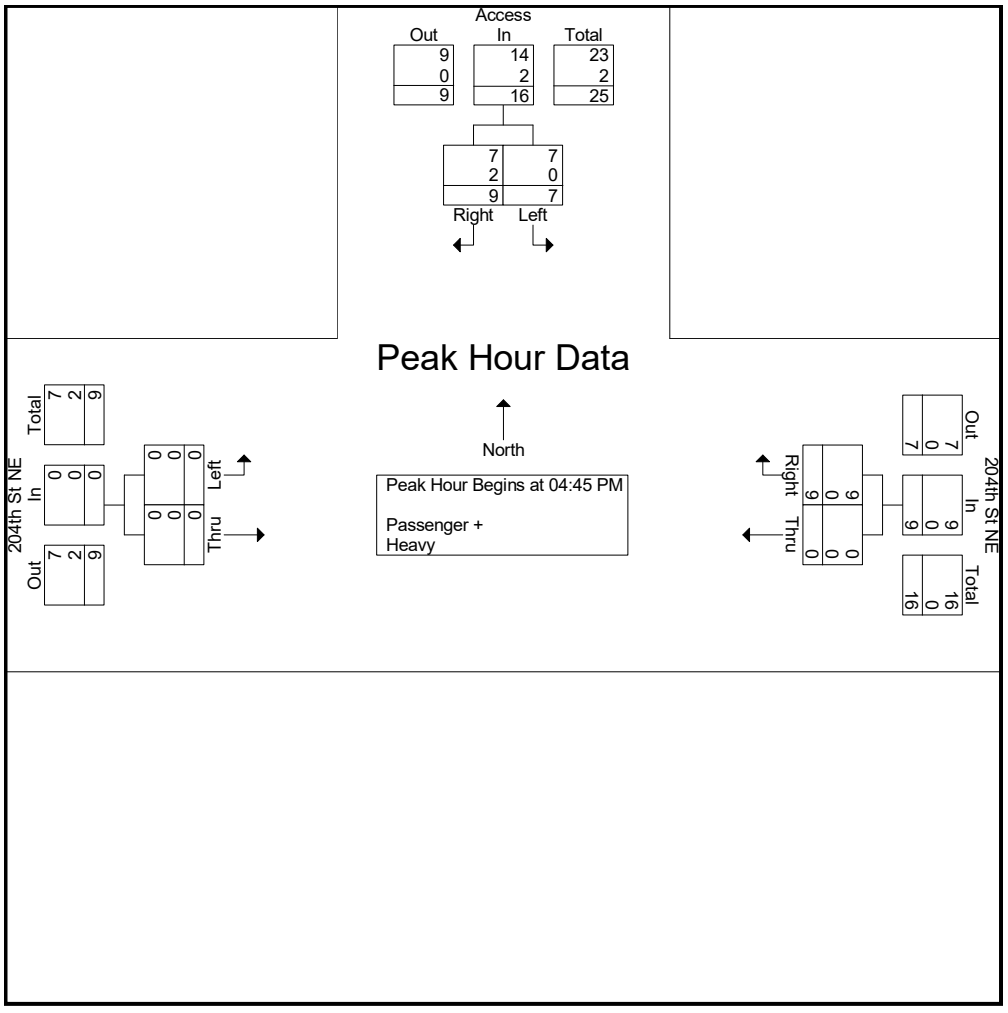
	Access Southbound			204th St NE Westbound			204th St NE Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	2	2	4	3	0	3	0	0	0	7
05:00 PM	2	**4**	**6**	0	0	0	0	0	0	6
05:15 PM	**3**	1	4	**4**	0	**4**	0	0	0	**8**
05:30 PM	2	0	2	2	0	2	0	0	0	4
Total Volume	9	7	16	9	0	9	0	0	0	25
% App. Total	56.2	43.8		100	0		0	0		
PHF	.750	.438	.667	.563	.000	.563	.000	.000	.000	.781
Passenger +	7	7	14	9	0	9	0	0	0	23
% Passenger +	77.8	100	87.5	100	0	100	0	0	0	92.0
Heavy	2	0	2	0	0	0	0	0	0	2
% Heavy	22.2	0	12.5	0	0	0	0	0	0	8.0



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File Name : 5172g
Site Code : 00005172
Start Date : 7/20/2023
Page No : 1

Groups Printed- Passenger + - Heavy

	69th Ave NE Southbound			204th St NE Westbound			204th St NE Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0		0	0		0	0		
Total %										
Passenger +										0
% Passenger +	0	0	0	0	0	0	0	0	0	0
Heavy										0
% Heavy	0	0	0	0	0	0	0	0	0	0

Heath & Associates

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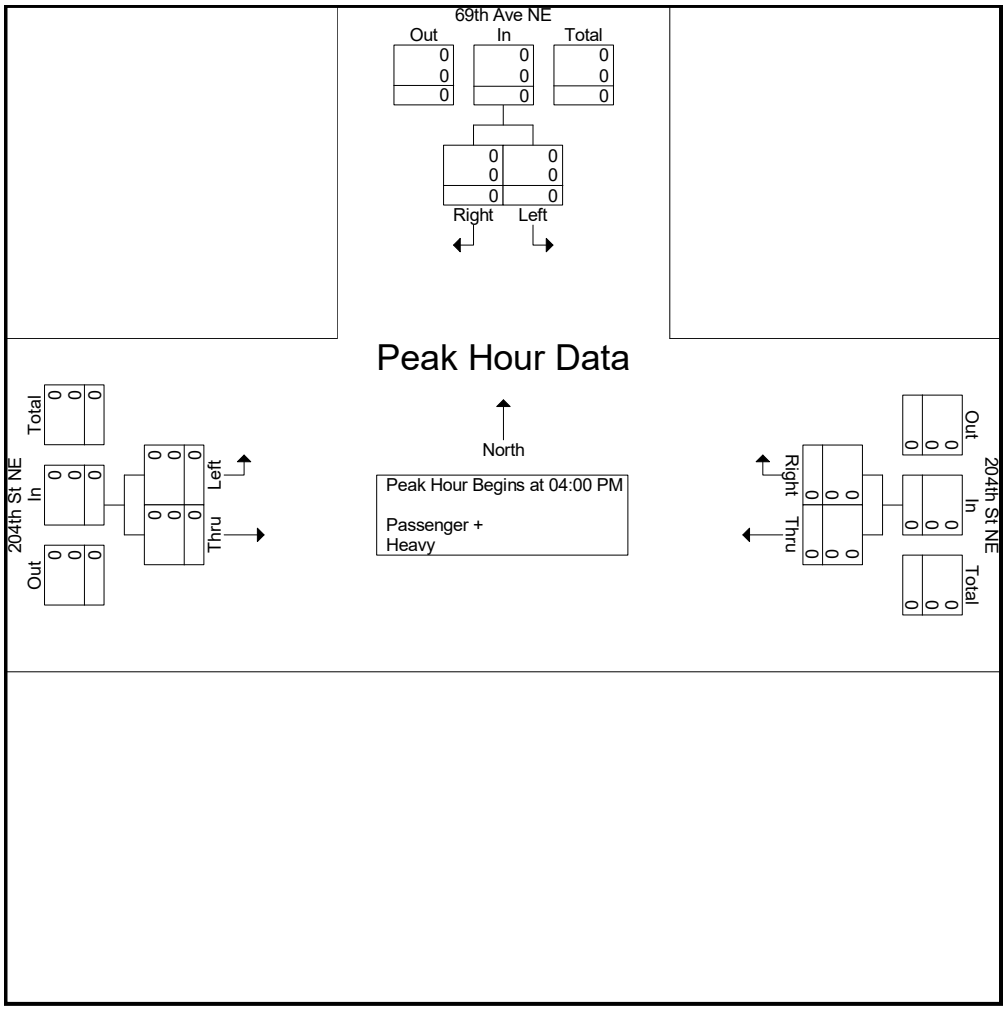
File Name : 5172g
Site Code : 00005172
Start Date : 7/20/2023
Page No : 2

	69th Ave NE Southbound			204th St NE Westbound			204th St NE Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Passenger +	0	0	0	0	0	0	0	0	0	0
% Passenger +	0	0	0	0	0	0	0	0	0	0
Heavy	0	0	0	0	0	0	0	0	0	0
% Heavy	0	0	0	0	0	0	0	0	0	0



WISEMARK COMMONS
TRAFFIC IMPACT ANALYSIS

APPENDIX

NCHRP 8-51 INTERNAL TRIP CAPTURE
ESTIMATION SPREADSHEETS

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Wisemark Commons	**Organization:**	Heath & Associates
Project Location:	Arlington, WA	**Performed By:**	PW
Scenario Description:	Full Buildout	**Date:**	8/15/2023
Analysis Year:	2023	**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

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

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	822	15,400	sq. ft.	36.3	21.8	14.5
Restaurant				0		
Cinema/Entertainment				0		
Residential	220	150	Dwelling Units	60	14.4	45.6
Hotel				0		
All Other Land Uses[2]				0		
Total				96.3	36.2	60.1

Table 2-A: Mode Split and Vehicle Occupancy Estimates

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

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

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

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

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

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	97	36	61
Internal Capture Percentage	0%	0%	0%
External Vehicle-Trips[3]	97	36	61
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

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

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

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

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

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

[4]Person-Trips

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

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Wisemark Commons
Analysis Period:	**AM Street Peak Hour**

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

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	21.8	22	1.00	14.5	15
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	14.4	14	1.00	45.6	46
Hotel	1.00	0	0	1.00	0	0

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

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	4		2	0	2	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	0	9	0		0
Hotel	0	0	0	0	0	

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

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		7	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	2		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	4	0	0		0
Hotel	0	1	0	0	0	

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

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	0	22	22	22	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	14	14	14	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

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

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	0	15	15	15	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	46	46	46	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

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

[2]Person-Trips

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

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

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Wisemark Commons	**Organization:**	Heath & Associates
Project Location:	Arlington, WA	**Performed By:**	PW
Scenario Description:	Full Buildout	**Date:**	8/15/2023
Analysis Year:	2023	**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

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

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	822	15,400	sq. ft.	101.4	50.7	50.7
Restaurant				0		
Cinema/Entertainment				0		
Residential	220	150	Dwelling Units	76.5	48.2	28.3
Hotel				0		
All Other Land Uses[2]				0		
Total				177.9	98.9	79

Table 2-P: Mode Split and Vehicle Occupancy Estimates

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

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

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

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

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	13	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	5	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	178	99	79
Internal Capture Percentage	20%	18%	23%
External Vehicle-Trips[3]	142	81	61
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

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

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	10%	25%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	27%	18%
Hotel	N/A	N/A

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

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

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

[4]Person-Trips

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

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Wisemark Commons
Analysis Period:	**PM Street Peak Hour**

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

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	50.7	51	1.00	50.7	51
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	48.2	48	1.00	28.3	28
Hotel	1.00	0	0	1.00	0	0

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

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	1		15	2	13	3
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	12	6	0		1
Hotel	0	0	0	0	0	

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

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		4	0	0	2	0
Retail	0		0	0	22	0
Restaurant	0	26		0	8	0
Cinema/Entertainment	0	2	0		2	0
Residential	0	5	0	0		0
Hotel	0	1	0	0	0	

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

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	5	46	51	46	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	13	35	48	35	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

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

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	13	38	51	38	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	5	23	28	23	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

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

[2]Person-Trips

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

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

WISEMARK COMMONS
TRAFFIC IMPACT ANALYSIS

APPENDIX

ITE TRIP GENERATION SPREADSHEET

Heath & Associates Transportation Engineering
Project: Wisemark Commons
Jurisdiction: Arlington

Trip Generation Summary

Average Weekday Daily

Development	Land Use	LUC	Variable	Value	Rate	Distribution		Total Trips			Internal Capture		Pass-by Trips		Primary Trips		
						In	Out	In	Out	Total	%	Total	%	Total	In	Out	Total
Full Build-Out	Multifamily Housing (Mid-Rise)	#220	Dwelling Units	150	6.74	50%	50%	505.5	505.5	1011.0	20.0%	202.2	0%	0.0	404.4	404.4	808.8
	Strip Retail	#822	1000 sqft	15.4	54.45	50%	50%	419.3	419.3	838.5	20.0%	167.7	40%	268.3	201.2	201.2	402.5
							Totals	**924.8**	**924.8**	**1849.5**	**Totals**	**369.9**	**Totals**	**268.3**	**605.6**	**605.6**	**1211.3**

Weekday AM Peak Hour

Development	Land Use	LUC	Variable	Value	Rate	Distribution		Total Trips			Internal Capture		Pass-by Trips		Primary Trips		
						In	Out	In	Out	Total	%	Total	%	Total	In	Out	Total
Full Build-Out	Multifamily Housing (Mid-Rise)	#220	Dwelling Units	150	0.4	24%	76%	14.4	45.6	60.0	0%	0.0	0%	0.0	14.4	45.6	60.0
	Strip Retail	#822	1000 sqft	15.4	2.36	60%	40%	21.8	14.5	36.3	0%	0.0	40%	14.5	13.1	8.7	21.8
							Totals	**36.2**	**60.1**	**96.3**	**Totals**	**0.0**	**Totals**	**14.54**	**27.5**	**54.3**	**81.8**

Weekday PM Peak Hour

Development	Land Use	LUC	Variable	Value	Rate	Distribution		Total Trips			Internal Capture		Pass-by Trips		Primary Trips		
						In	Out	In	Out	Total	%	Total	%	Total	In	Out	Total
Full Build-Out	Multifamily Housing (Mid-Rise)	#220	Dwelling Units	150	0.51	63%	37%	48.2	28.3	76.5	20%	15.3	0%	0.0	38.6	22.6	61.2
	Strip Retail	#822	1000 sqft	15.4	6.59	50%	50%	50.7	50.7	101.5	20%	20.3	40.0%	32.5	24.4	24.4	48.7
								98.9	**79.0**	**178.0**	**Totals**	**35.6**	**Totals**	**32.48**	**62.9**	**47.0**	**109.91**

Sources:
Institute of Transportation Engineers, *Trip Generation Manual,* 11th Edition, (2021).
Pass-by rates were derived from the Institute of Transportation Engineers, 2021 Pass-By Tables for ITE Trip Gen Appendices (2021)
NCHRP 8-51 Internal Trip Capture Estimation Too

WISEMARK COMMONS
TRAFFIC IMPACT ANALYSIS

APPENDIX

EXISTING LEVEL OF SERVICE

Intersection	
Int Delay, s/veh	3.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	580	154	9	546	121	4
Future Vol, veh/h	580	154	9	546	121	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Yield	-	None	-	None
Storage Length	-	125	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	3	3	1	3	1	1
Mvmt Flow	592	157	9	557	123	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	592	0	1167	592
Stage 1	-	-	-	-	592	-
Stage 2	-	-	-	-	576	-
Critical Hdwy	-	-	4.11	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	2.209	-	3.509	3.309
Pot Cap-1 Maneuver	-	-	989	-	215	508
Stage 1	-	-	-	-	555	-
Stage 2	-	-	-	-	564	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	989	-	212	508
Mov Cap-2 Maneuver	-	-	-	-	212	-
Stage 1	-	-	-	-	555	-
Stage 2	-	-	-	-	557	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.14	43.16
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	216	-	-	989	-
HCM Lane V/C Ratio	0.59	-	-	0.009	-
HCM Control Delay (s/veh)	43.2	-	-	8.7	0
HCM Lane LOS	E	-	-	A	A
HCM 95th %tile Q(veh)	3.3	-	-	0	-

MOVEMENT SUMMARY

Site: 1 [Existing PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

SR 530 & 211th Pl NE
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: 211th Pl NE															
3	L2	All MCs	123	1.0	123	1.0	0.144	12.0	LOS B	0.7	18.6	0.59	0.72	0.59	31.7
18	R2	All MCs	4	1.0	4	1.0	0.144	7.6	LOS A	0.7	18.6	0.59	0.72	0.59	32.0
Approach			128	1.0	128	1.0	0.144	11.9	LOS B	0.7	18.6	0.59	0.72	0.59	31.7
East: SR 530															
1	L2	All MCs	9	3.0	9	3.0	0.466	9.8	LOS A	3.4	86.2	0.41	0.48	0.41	33.9
6	T1	All MCs	557	1.0	557	1.0	0.466	5.5	LOS A	3.4	86.2	0.41	0.48	0.41	34.5
Approach			566	1.0	566	1.0	0.466	5.6	LOS A	3.4	86.2	0.41	0.48	0.41	34.5
West: SR 530															
2	T1	All MCs	592	3.0	592	3.0	0.567	4.8	LOS A	5.2	132.9	0.12	0.44	0.12	35.4
12	R2	All MCs	157	3.0	157	3.0	0.567	4.6	LOS A	5.2	132.9	0.12	0.44	0.12	35.1
Approach			749	3.0	749	3.0	0.567	4.7	LOS A	5.2	132.9	0.12	0.44	0.12	35.4
All Vehicles			1443	2.1	1443	2.1	0.567	5.7	LOS A	5.2	132.9	0.28	0.48	0.28	34.7

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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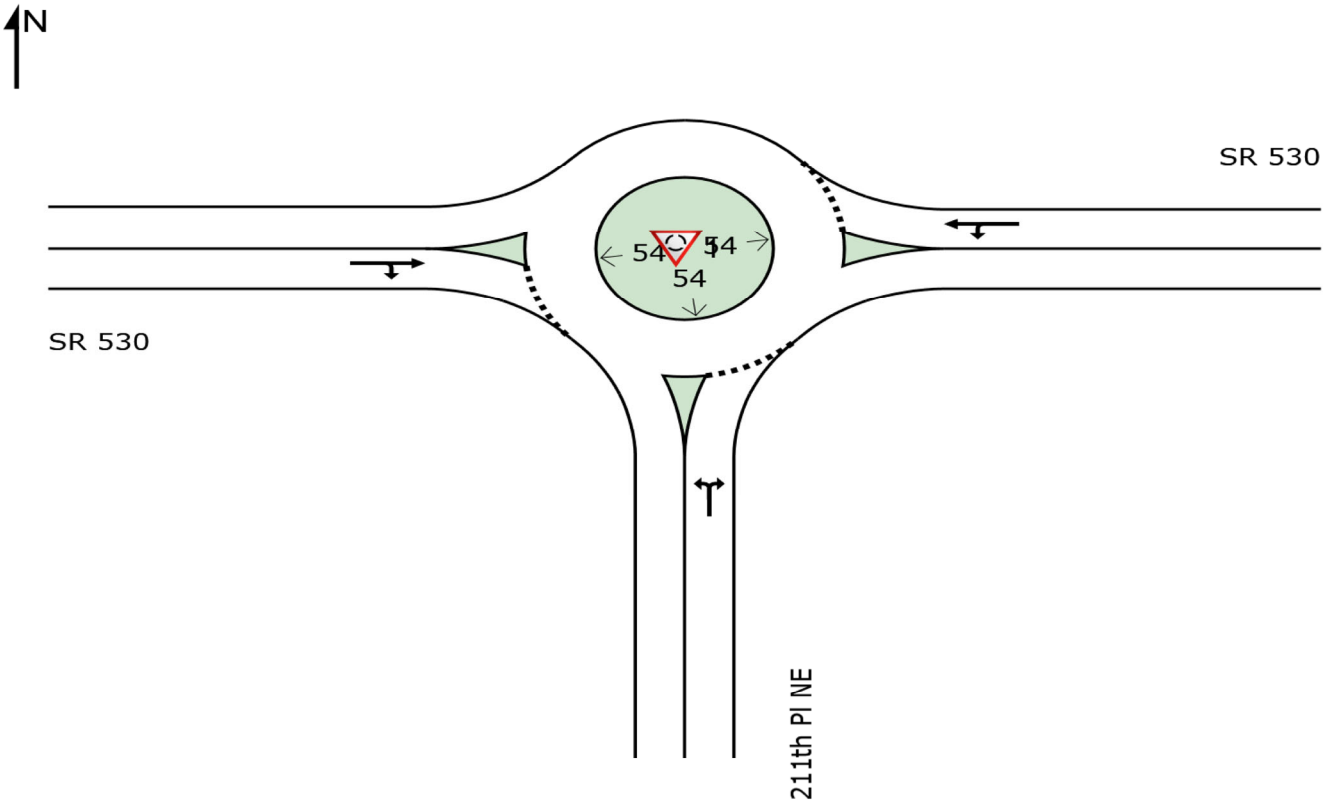
SITE LAYOUT

Site: 1 [Existing PM (Site Folder: General)]

SR 530 & 211th Pl NE
Site Category: (None)
Roundabout

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



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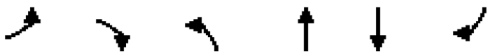
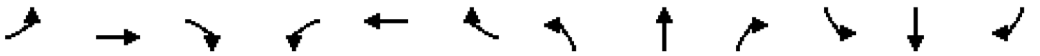


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	68	130	133	362	242	35
Future Volume (veh/h)	68	130	133	362	242	35
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1826	1885	1885	1856	1885
Adj Flow Rate, veh/h	73	140	143	389	260	38
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	5	1	1	3	1
Cap, veh/h	289	251	680	836	702	103
Arrive On Green	0.16	0.16	0.44	0.44	0.44	0.44
Sat Flow, veh/h	1781	1547	1090	1885	1583	231
Grp Volume(v), veh/h	73	140	143	389	0	298
Grp Sat Flow(s),veh/h/ln	1781	1547	1090	1885	0	1814
Q Serve(g_s), s	0.8	1.9	2.3	3.3	0.0	2.5
Cycle Q Clear(g_c), s	0.8	1.9	4.8	3.3	0.0	2.5
Prop In Lane	1.00	1.00	1.00			0.13
Lane Grp Cap(c), veh/h	289	251	680	836	0	805
V/C Ratio(X)	0.25	0.56	0.21	0.47	0.00	0.37
Avail Cap(c_a), veh/h	2457	2134	2558	4086	0	3931
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.4	8.8	5.8	4.5	0.0	4.2
Incr Delay (d2), s/veh	0.5	1.9	0.2	0.4	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.5	0.3	0.4	0.0	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	8.8	10.7	6.0	4.9	0.0	4.5
LnGrp LOS	A	B	A	A		A
Approach Vol, veh/h	213			532	298	
Approach Delay, s/veh	10.1			5.2	4.5	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		14.6		8.2		14.6
Change Period (Y+Rc), s		4.5		4.5		4.5
Max Green Setting (Gmax), s		49.5		31.5		49.5
Max Q Clear Time (g_c+I1), s		6.8		3.9		4.5
Green Ext Time (p_c), s		3.3		0.7		2.0

Intersection Summary	
HCM 7th Control Delay, s/veh	6.0
HCM 7th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	146	35	162	181	91	59	318	197	91	214	68
Future Volume (veh/h)	100	146	35	162	181	91	59	318	197	91	214	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1856	1841	1885	1870	1885	1885	1885	1885	1841	1856
Adj Flow Rate, veh/h	109	159	38	176	197	99	64	346	214	99	233	74
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	3	4	1	2	1	1	1	1	4	3
Cap, veh/h	362	283	68	451	271	136	384	495	420	359	373	118
Arrive On Green	0.08	0.19	0.19	0.11	0.23	0.23	0.06	0.26	0.26	0.07	0.28	0.28
Sat Flow, veh/h	1781	1459	349	1753	1183	595	1795	1885	1598	1795	1339	425
Grp Volume(v), veh/h	109	0	197	176	0	296	64	346	214	99	0	307
Grp Sat Flow(s),veh/h/ln	1781	0	1808	1753	0	1778	1795	1885	1598	1795	0	1764
Q Serve(g_s), s	2.4	0.0	5.0	3.9	0.0	7.8	1.3	8.4	5.8	2.0	0.0	7.7
Cycle Q Clear(g_c), s	2.4	0.0	5.0	3.9	0.0	7.8	1.3	8.4	5.8	2.0	0.0	7.7
Prop In Lane	1.00		0.19	1.00		0.33	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	362	0	351	451	0	407	384	495	420	359	0	491
V/C Ratio(X)	0.30	0.00	0.56	0.39	0.00	0.73	0.17	0.70	0.51	0.28	0.00	0.62
Avail Cap(c_a), veh/h	629	0	1198	792	0	1320	510	1660	1407	528	0	1623
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.7	0.0	18.4	13.8	0.0	18.0	12.6	16.8	15.9	12.5	0.0	15.9
Incr Delay (d2), s/veh	0.5	0.0	1.4	0.5	0.0	2.5	0.2	1.8	1.0	0.4	0.0	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	2.0	1.4	0.0	3.0	0.4	3.3	1.9	0.7	0.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.1	0.0	19.8	14.3	0.0	20.5	12.8	18.6	16.8	12.9	0.0	17.2
LnGrp LOS	B		B	B		C	B	B	B	B		B
Approach Vol, veh/h		306			472			624			406	
Approach Delay, s/veh		18.2			18.2			17.4			16.2	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	17.8	10.2	14.3	7.5	18.6	8.4	16.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	8.5	44.5	15.5	33.5	6.5	46.5	11.5	37.5
Max Q Clear Time (g_c+I1), s	4.0	10.4	5.9	7.0	3.3	9.7	4.4	9.8
Green Ext Time (p_c), s	0.1	2.9	0.3	1.1	0.0	2.0	0.1	1.8

Intersection Summary	
HCM 7th Control Delay, s/veh	17.5
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	174	302	79	118	197	130	55	389	134	59	284	139
Future Volume (veh/h)	174	302	79	118	197	130	55	389	134	59	284	139
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1885	1856	1885	1885	1885	1841	1870	1870	1885	1856	1841
Adj Flow Rate, veh/h	176	305	80	119	199	131	56	393	135	60	287	140
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	1	3	1	1	1	4	2	2	1	3	4
Cap, veh/h	404	412	344	320	349	296	87	486	167	93	681	572
Arrive On Green	0.11	0.22	0.22	0.08	0.19	0.19	0.05	0.36	0.36	0.05	0.37	0.37
Sat Flow, veh/h	1781	1885	1572	1795	1885	1598	1753	1331	457	1795	1856	1560
Grp Volume(v), veh/h	176	305	80	119	199	131	56	0	528	60	287	140
Grp Sat Flow(s),veh/h/ln	1781	1885	1572	1795	1885	1598	1753	0	1788	1795	1856	1560
Q Serve(g_s), s	4.8	9.4	2.6	3.3	6.0	4.5	2.0	0.0	16.6	2.0	7.2	3.9
Cycle Q Clear(g_c), s	4.8	9.4	2.6	3.3	6.0	4.5	2.0	0.0	16.6	2.0	7.2	3.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	404	412	344	320	349	296	87	0	652	93	681	572
V/C Ratio(X)	0.44	0.74	0.23	0.37	0.57	0.44	0.64	0.00	0.81	0.64	0.42	0.24
Avail Cap(c_a), veh/h	737	1496	1248	572	1345	1140	408	0	2422	417	2514	2113
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	22.7	20.1	18.7	23.1	22.6	29.1	0.0	17.9	29.0	14.8	13.7
Incr Delay (d2), s/veh	0.7	2.6	0.3	0.7	1.5	1.0	7.6	0.0	2.5	7.3	0.4	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	4.2	0.9	1.3	2.6	1.7	1.0	0.0	6.5	1.0	2.8	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.3	25.3	20.4	19.4	24.6	23.6	36.7	0.0	20.3	36.3	15.2	14.0
LnGrp LOS	B	C	C	B	C	C	D		C	D	B	B
Approach Vol, veh/h		561			449			584			487	
Approach Delay, s/veh		22.4			22.9			21.9			17.4	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	27.3	9.2	18.1	7.6	27.4	11.3	16.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	14.5	84.5	13.5	49.5	14.5	84.5	18.5	44.5
Max Q Clear Time (g_c+I1), s	4.0	18.6	5.3	11.4	4.0	9.2	6.8	8.0
Green Ext Time (p_c), s	0.1	4.2	0.2	2.2	0.1	2.4	0.4	1.7

Intersection Summary	
HCM 7th Control Delay, s/veh	21.2
HCM 7th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	293	426	84	56	327	41	51	226	94	69	200	186
Future Volume (veh/h)	293	426	84	56	327	41	51	226	94	69	200	186
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1885	1870	1678	1811	1885	1885	1885	1870	1885
Adj Flow Rate, veh/h	302	439	87	58	337	42	53	233	97	71	206	192
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	1	1	1	2	15	6	1	1	1	2	1
Cap, veh/h	444	689	584	341	422	53	248	351	146	319	254	237
Arrive On Green	0.15	0.37	0.37	0.05	0.26	0.26	0.05	0.28	0.28	0.05	0.29	0.29
Sat Flow, veh/h	1781	1885	1598	1795	1631	203	1725	1264	526	1795	891	830
Grp Volume(v), veh/h	302	439	87	58	0	379	53	0	330	71	0	398
Grp Sat Flow(s),veh/h/ln	1781	1885	1598	1795	0	1834	1725	0	1790	1795	0	1721
Q Serve(g_s), s	8.0	13.6	2.6	1.6	0.0	13.6	1.5	0.0	11.5	1.9	0.0	15.1
Cycle Q Clear(g_c), s	8.0	13.6	2.6	1.6	0.0	13.6	1.5	0.0	11.5	1.9	0.0	15.1
Prop In Lane	1.00		1.00	1.00		0.11	1.00		0.29	1.00		0.48
Lane Grp Cap(c), veh/h	444	689	584	341	0	475	248	0	497	319	0	491
V/C Ratio(X)	0.68	0.64	0.15	0.17	0.00	0.80	0.21	0.00	0.66	0.22	0.00	0.81
Avail Cap(c_a), veh/h	1041	2406	2039	400	0	1591	338	0	1497	415	0	1454
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.6	18.5	15.0	17.8	0.0	24.4	18.2	0.0	22.5	17.4	0.0	23.4
Incr Delay (d2), s/veh	1.8	1.0	0.1	0.2	0.0	3.1	0.4	0.0	1.5	0.3	0.0	3.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	5.7	0.9	0.7	0.0	6.0	0.6	0.0	4.8	0.8	0.0	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	17.5	19.5	15.1	18.0	0.0	27.5	18.7	0.0	24.1	17.8	0.0	26.7
LnGrp LOS	B	B	B	B		C	B		C	B		C
Approach Vol, veh/h		828			437			383			469	
Approach Delay, s/veh		18.3			26.3			23.3			25.3	
Approach LOS		B			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	30.2	7.7	24.6	15.4	22.7	8.3	24.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.7	89.9	6.9	59.5	34.5	61.1	7.5	58.9
Max Q Clear Time (g_c+I1), s	3.6	15.6	3.5	17.1	10.0	15.6	3.9	13.5
Green Ext Time (p_c), s	0.0	3.4	0.0	2.9	0.9	2.6	0.0	2.3

Intersection Summary	
HCM 7th Control Delay, s/veh	22.4
HCM 7th LOS	C

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	441	434	0	0	0
Future Vol, veh/h	0	441	434	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	2	1	1	1
Mvmt Flow	0	479	472	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	472	0	-	0	951	472
Stage 1	-	-	-	-	472	-
Stage 2	-	-	-	-	479	-
Critical Hdwy	4.11	-	-	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	2.209	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	1095	-	-	-	289	594
Stage 1	-	-	-	-	630	-
Stage 2	-	-	-	-	625	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1095	-	-	-	289	594
Mov Cap-2 Maneuver	-	-	-	-	418	-
Stage 1	-	-	-	-	630	-
Stage 2	-	-	-	-	625	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1095	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s/veh)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

WISEMARK COMMONS
TRAFFIC IMPACT ANALYSIS

APPENDIX

FORECAST 2026 PEAK HOUR LEVEL OF SERVICE
WITHOUT PROJECT

MOVEMENT SUMMARY

Site: 1 [Forecast 2026 PM Without (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

SR 530 & 211th Pl NE
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: 211th Pl NE															
3	L2	All MCs	135	1.0	135	1.0	0.164	12.5	LOS B	0.9	21.9	0.63	0.73	0.63	31.5
18	R2	All MCs	4	1.0	4	1.0	0.164	8.0	LOS A	0.9	21.9	0.63	0.73	0.63	31.8
Approach			139	1.0	139	1.0	0.164	12.3	LOS B	0.9	21.9	0.63	0.73	0.63	31.5
East: SR 530															
1	L2	All MCs	10	3.0	10	3.0	0.515	10.0	LOS A	4.0	101.9	0.46	0.49	0.46	33.7
6	T1	All MCs	609	1.0	609	1.0	0.515	5.7	LOS A	4.0	101.9	0.46	0.49	0.46	34.4
Approach			619	1.0	619	1.0	0.515	5.8	LOS A	4.0	101.9	0.46	0.49	0.46	34.4
West: SR 530															
2	T1	All MCs	647	3.0	647	3.0	0.620	4.8	LOS A	6.5	165.2	0.14	0.44	0.14	35.4
12	R2	All MCs	171	3.0	171	3.0	0.620	4.6	LOS A	6.5	165.2	0.14	0.44	0.14	35.0
Approach			818	3.0	818	3.0	0.620	4.8	LOS A	6.5	165.2	0.14	0.44	0.14	35.3
All Vehicles			1577	2.1	1577	2.1	0.620	5.8	LOS A	6.5	165.2	0.31	0.49	0.31	34.6

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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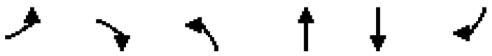
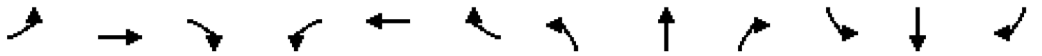


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	74	142	145	398	265	38
Future Volume (veh/h)	74	142	145	398	265	38
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1826	1885	1885	1856	1885
Adj Flow Rate, veh/h	80	153	156	428	285	41
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	5	1	1	3	1
Cap, veh/h	290	252	668	880	740	107
Arrive On Green	0.16	0.16	0.47	0.47	0.47	0.47
Sat Flow, veh/h	1781	1547	1062	1885	1586	228
Grp Volume(v), veh/h	80	153	156	428	0	326
Grp Sat Flow(s),veh/h/ln	1781	1547	1062	1885	0	1814
Q Serve(g_s), s	1.0	2.2	2.7	3.8	0.0	2.8
Cycle Q Clear(g_c), s	1.0	2.2	5.6	3.8	0.0	2.8
Prop In Lane	1.00	1.00	1.00			0.13
Lane Grp Cap(c), veh/h	290	252	668	880	0	847
V/C Ratio(X)	0.28	0.61	0.23	0.49	0.00	0.38
Avail Cap(c_a), veh/h	2235	1941	2379	3916	0	3769
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.9	9.4	6.0	4.5	0.0	4.2
Incr Delay (d2), s/veh	0.5	2.3	0.2	0.4	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.6	0.3	0.5	0.0	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	9.4	11.8	6.2	4.9	0.0	4.5
LnGrp LOS	A	B	A	A		A
Approach Vol, veh/h	233			584	326	
Approach Delay, s/veh	11.0			5.2	4.5	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		15.8		8.5		15.8
Change Period (Y+Rc), s		4.5		4.5		4.5
Max Green Setting (Gmax), s		50.5		30.5		50.5
Max Q Clear Time (g_c+I1), s		7.6		4.2		4.8
Green Ext Time (p_c), s		3.8		0.7		2.2

Intersection Summary	
HCM 7th Control Delay, s/veh	6.2
HCM 7th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	165	38	181	200	101	64	347	219	101	234	75
Future Volume (veh/h)	111	165	38	181	200	101	64	347	219	101	234	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1856	1841	1885	1870	1885	1885	1885	1885	1841	1856
Adj Flow Rate, veh/h	121	179	41	197	217	110	70	377	238	110	254	82
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	3	4	1	2	1	1	1	1	4	3
Cap, veh/h	346	291	67	446	287	146	369	521	442	343	388	125
Arrive On Green	0.08	0.20	0.20	0.12	0.24	0.24	0.06	0.28	0.28	0.07	0.29	0.29
Sat Flow, veh/h	1781	1472	337	1753	1180	598	1795	1885	1598	1795	1333	430
Grp Volume(v), veh/h	121	0	220	197	0	327	70	377	238	110	0	336
Grp Sat Flow(s),veh/h/ln	1781	0	1810	1753	0	1778	1795	1885	1598	1795	0	1763
Q Serve(g_s), s	2.9	0.0	6.1	4.7	0.0	9.3	1.5	9.9	6.9	2.3	0.0	9.1
Cycle Q Clear(g_c), s	2.9	0.0	6.1	4.7	0.0	9.3	1.5	9.9	6.9	2.3	0.0	9.1
Prop In Lane	1.00		0.19	1.00		0.34	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	346	0	358	446	0	433	369	521	442	343	0	513
V/C Ratio(X)	0.35	0.00	0.61	0.44	0.00	0.76	0.19	0.72	0.54	0.32	0.00	0.66
Avail Cap(c_a), veh/h	550	0	1041	759	0	1217	475	1600	1356	455	0	1529
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.9	0.0	20.1	14.6	0.0	19.2	13.2	17.9	16.8	13.3	0.0	17.0
Incr Delay (d2), s/veh	0.6	0.0	1.7	0.7	0.0	2.7	0.2	1.9	1.0	0.5	0.0	1.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	2.4	1.7	0.0	3.7	0.5	4.0	2.3	0.8	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	16.5	0.0	21.8	15.3	0.0	21.9	13.5	19.8	17.9	13.9	0.0	18.4
LnGrp LOS	B		C	B		C	B	B	B	B		B
Approach Vol, veh/h		341			524			685			446	
Approach Delay, s/veh		19.9			19.4			18.5			17.3	
Approach LOS		B			B			B			B	

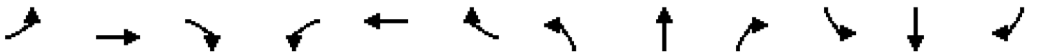
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.6	19.6	11.2	15.3	7.8	20.4	8.7	17.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.5	46.5	16.5	31.5	6.5	47.5	10.5	37.5
Max Q Clear Time (g_c+I1), s	4.3	11.9	6.7	8.1	3.5	11.1	4.9	11.3
Green Ext Time (p_c), s	0.1	3.2	0.4	1.2	0.0	2.2	0.1	2.0

Intersection Summary	
HCM 7th Control Delay, s/veh	18.7
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	339	86	135	224	145	60	425	152	67	310	152
Future Volume (veh/h)	190	339	86	135	224	145	60	425	152	67	310	152
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1885	1856	1885	1885	1885	1841	1870	1870	1885	1856	1841
Adj Flow Rate, veh/h	192	342	87	136	226	146	61	429	154	68	313	154
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	1	3	1	1	1	4	2	2	1	3	4
Cap, veh/h	393	437	365	307	381	323	85	511	183	92	726	610
Arrive On Green	0.11	0.23	0.23	0.08	0.20	0.20	0.05	0.39	0.39	0.05	0.39	0.39
Sat Flow, veh/h	1781	1885	1572	1795	1885	1598	1753	1314	472	1795	1856	1560
Grp Volume(v), veh/h	192	342	87	136	226	146	61	0	583	68	313	154
Grp Sat Flow(s),veh/h/ln	1781	1885	1572	1795	1885	1598	1753	0	1785	1795	1856	1560
Q Serve(g_s), s	6.1	12.5	3.3	4.3	8.0	5.9	2.5	0.0	21.7	2.7	9.1	4.9
Cycle Q Clear(g_c), s	6.1	12.5	3.3	4.3	8.0	5.9	2.5	0.0	21.7	2.7	9.1	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	393	437	365	307	381	323	85	0	694	92	726	610
V/C Ratio(X)	0.49	0.78	0.24	0.44	0.59	0.45	0.72	0.00	0.84	0.74	0.43	0.25
Avail Cap(c_a), veh/h	618	1272	1061	488	1170	991	323	0	2057	355	2163	1819
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.8	26.4	22.9	21.1	26.5	25.7	34.4	0.0	20.3	34.3	16.3	15.1
Incr Delay (d2), s/veh	0.9	3.1	0.3	1.0	1.5	1.0	10.7	0.0	2.8	11.1	0.4	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	5.7	1.2	1.8	3.6	2.2	1.3	0.0	8.8	1.4	3.7	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	20.8	29.5	23.2	22.1	28.0	26.7	45.1	0.0	23.2	45.4	16.7	15.3
LnGrp LOS	C	C	C	C	C	C	D		C	D	B	B
Approach Vol, veh/h		621			508			644			535	
Approach Delay, s/veh		25.9			26.0			25.3			20.0	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	33.0	10.6	21.5	8.1	33.2	12.8	19.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	14.5	84.5	13.5	49.5	13.5	85.5	17.5	45.5
Max Q Clear Time (g_c+I1), s	4.7	23.7	6.3	14.5	4.5	11.1	8.1	10.0
Green Ext Time (p_c), s	0.1	4.8	0.2	2.5	0.1	2.6	0.3	1.9

Intersection Summary	
HCM 7th Control Delay, s/veh	24.4
HCM 7th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	330	490	99	61	364	45	58	247	103	75	219	206
Future Volume (veh/h)	330	490	99	61	364	45	58	247	103	75	219	206
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1885	1870	1678	1811	1885	1885	1885	1870	1885
Adj Flow Rate, veh/h	340	505	102	63	375	46	60	255	106	77	226	212
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	1	1	1	2	15	6	1	1	1	2	1
Cap, veh/h	434	740	627	308	450	55	222	375	156	298	268	251
Arrive On Green	0.16	0.39	0.39	0.05	0.28	0.28	0.04	0.30	0.30	0.05	0.30	0.30
Sat Flow, veh/h	1781	1885	1598	1795	1634	200	1725	1265	526	1795	888	833
Grp Volume(v), veh/h	340	505	102	63	0	421	60	0	361	77	0	438
Grp Sat Flow(s),veh/h/ln	1781	1885	1598	1795	0	1834	1725	0	1791	1795	0	1720
Q Serve(g_s), s	10.6	18.6	3.5	2.1	0.0	18.1	2.0	0.0	14.9	2.4	0.0	19.9
Cycle Q Clear(g_c), s	10.6	18.6	3.5	2.1	0.0	18.1	2.0	0.0	14.9	2.4	0.0	19.9
Prop In Lane	1.00		1.00	1.00		0.11	1.00		0.29	1.00		0.48
Lane Grp Cap(c), veh/h	434	740	627	308	0	505	222	0	531	298	0	519
V/C Ratio(X)	0.78	0.68	0.16	0.20	0.00	0.83	0.27	0.00	0.68	0.26	0.00	0.84
Avail Cap(c_a), veh/h	917	2018	1710	352	0	1296	303	0	1251	385	0	1212
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.3	21.1	16.5	20.5	0.0	28.5	21.2	0.0	25.9	20.1	0.0	27.4
Incr Delay (d2), s/veh	3.1	1.1	0.1	0.3	0.0	3.7	0.6	0.0	1.5	0.5	0.0	3.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	8.0	1.2	0.9	0.0	8.1	0.8	0.0	6.3	1.0	0.0	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	21.4	22.2	16.6	20.8	0.0	32.2	21.9	0.0	27.4	20.5	0.0	31.2
LnGrp LOS	C	C	B	C		C	C		C	C		C
Approach Vol, veh/h		947			484			421			515	
Approach Delay, s/veh		21.3			30.7			26.6			29.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	37.3	8.3	29.7	18.1	27.5	8.7	29.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.9	89.5	7.7	58.9	36.3	59.1	8.2	58.4
Max Q Clear Time (g_c+I1), s	4.1	20.6	4.0	21.9	12.6	20.1	4.4	16.9
Green Ext Time (p_c), s	0.0	4.1	0.0	3.3	1.0	3.0	0.0	2.5

Intersection Summary	
HCM 7th Control Delay, s/veh	26.0
HCM 7th LOS	C

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	495	484	0	0	0
Future Vol, veh/h	0	495	484	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	2	1	1	1
Mvmt Flow	0	538	526	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	526	0	-	0	1064	526
Stage 1	-	-	-	-	526	-
Stage 2	-	-	-	-	538	-
Critical Hdwy	4.11	-	-	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	2.209	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	1046	-	-	-	248	554
Stage 1	-	-	-	-	595	-
Stage 2	-	-	-	-	587	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1046	-	-	-	248	554
Mov Cap-2 Maneuver	-	-	-	-	383	-
Stage 1	-	-	-	-	595	-
Stage 2	-	-	-	-	587	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1046	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s/veh)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

WISEMARK COMMONS
TRAFFIC IMPACT ANALYSIS

APPENDIX

FORECAST 2026 PEAK HOUR LEVEL OF SERVICE
WITH PROJECT

MOVEMENT SUMMARY

Site: 1 [Forecast 2026 PM With (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

SR 530 & 211th Pl NE
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: 211th Pl NE															
3	L2	All MCs	158	1.0	158	1.0	0.192	12.6	LOS B	1.0	26.2	0.64	0.74	0.64	31.5
18	R2	All MCs	4	1.0	4	1.0	0.192	8.1	LOS A	1.0	26.2	0.64	0.74	0.64	31.7
Approach			162	1.0	162	1.0	0.192	12.4	LOS B	1.0	26.2	0.64	0.74	0.64	31.5
East: SR 530															
1	L2	All MCs	10	3.0	10	3.0	0.525	10.1	LOS B	4.1	104.0	0.50	0.51	0.50	33.6
6	T1	All MCs	609	1.0	609	1.0	0.525	5.9	LOS A	4.1	104.0	0.50	0.51	0.50	34.3
Approach			619	1.0	619	1.0	0.525	5.9	LOS A	4.1	104.0	0.50	0.51	0.50	34.3
West: SR 530															
2	T1	All MCs	647	3.0	647	3.0	0.643	4.8	LOS A	7.2	183.3	0.15	0.44	0.15	35.3
12	R2	All MCs	202	3.0	202	3.0	0.643	4.6	LOS A	7.2	183.3	0.15	0.44	0.15	35.0
Approach			849	3.0	849	3.0	0.643	4.8	LOS A	7.2	183.3	0.15	0.44	0.15	35.3
All Vehicles			1631	2.1	1631	2.1	0.643	6.0	LOS A	7.2	183.3	0.33	0.50	0.33	34.5

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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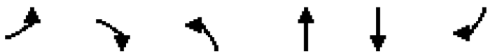
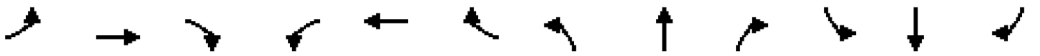


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	74	172	168	401	269	38
Future Volume (veh/h)	74	172	168	401	269	38
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1826	1885	1885	1856	1885
Adj Flow Rate, veh/h	80	185	181	431	289	41
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	5	1	1	3	1
Cap, veh/h	332	289	649	893	753	107
Arrive On Green	0.19	0.19	0.47	0.47	0.47	0.47
Sat Flow, veh/h	1781	1547	1058	1885	1589	225
Grp Volume(v), veh/h	80	185	181	431	0	330
Grp Sat Flow(s),veh/h/ln	1781	1547	1058	1885	0	1815
Q Serve(g_s), s	1.0	2.9	3.5	4.1	0.0	3.1
Cycle Q Clear(g_c), s	1.0	2.9	6.6	4.1	0.0	3.1
Prop In Lane	1.00	1.00	1.00			0.12
Lane Grp Cap(c), veh/h	332	289	649	893	0	860
V/C Ratio(X)	0.24	0.64	0.28	0.48	0.00	0.38
Avail Cap(c_a), veh/h	2116	1838	2124	3520	0	3388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.2	10.0	6.6	4.8	0.0	4.5
Incr Delay (d2), s/veh	0.4	2.4	0.2	0.4	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.8	0.4	0.7	0.0	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	9.6	12.3	6.8	5.2	0.0	4.8
LnGrp LOS	A	B	A	A		A
Approach Vol, veh/h	265			612	330	
Approach Delay, s/veh	11.5			5.7	4.8	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		17.1		9.4		17.1
Change Period (Y+Rc), s		4.5		4.5		4.5
Max Green Setting (Gmax), s		49.5		31.5		49.5
Max Q Clear Time (g_c+I1), s		8.6		4.9		5.1
Green Ext Time (p_c), s		3.9		0.8		2.2

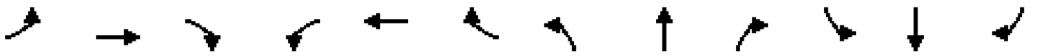
Intersection Summary	
HCM 7th Control Delay, s/veh	6.7
HCM 7th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	169	40	181	202	116	66	358	219	127	242	75
Future Volume (veh/h)	111	169	40	181	202	116	66	358	219	127	242	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1856	1841	1885	1870	1885	1885	1885	1885	1841	1856
Adj Flow Rate, veh/h	121	184	43	197	220	126	72	389	238	138	263	82
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	3	4	1	2	1	1	1	1	4	3
Cap, veh/h	334	306	72	444	285	163	367	526	446	343	404	126
Arrive On Green	0.08	0.21	0.21	0.12	0.25	0.25	0.06	0.28	0.28	0.08	0.30	0.30
Sat Flow, veh/h	1781	1466	343	1753	1125	644	1795	1885	1598	1795	1346	420
Grp Volume(v), veh/h	121	0	227	197	0	346	72	389	238	138	0	345
Grp Sat Flow(s),veh/h/ln	1781	0	1809	1753	0	1769	1795	1885	1598	1795	0	1765
Q Serve(g_s), s	3.0	0.0	6.6	4.9	0.0	10.5	1.6	10.8	7.3	3.1	0.0	9.8
Cycle Q Clear(g_c), s	3.0	0.0	6.6	4.9	0.0	10.5	1.6	10.8	7.3	3.1	0.0	9.8
Prop In Lane	1.00		0.19	1.00		0.36	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	334	0	378	444	0	448	367	526	446	343	0	530
V/C Ratio(X)	0.36	0.00	0.60	0.44	0.00	0.77	0.20	0.74	0.53	0.40	0.00	0.65
Avail Cap(c_a), veh/h	522	0	986	733	0	1148	431	1451	1230	494	0	1481
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.5	0.0	20.7	15.1	0.0	20.0	13.9	18.9	17.6	14.1	0.0	17.6
Incr Delay (d2), s/veh	0.7	0.0	1.5	0.7	0.0	2.9	0.3	2.1	1.0	0.8	0.0	1.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	2.7	1.8	0.0	4.2	0.6	4.4	2.5	1.1	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	17.1	0.0	22.2	15.8	0.0	22.9	14.1	21.0	18.6	14.8	0.0	18.9
LnGrp LOS	B		C	B		C	B	C	B	B		B
Approach Vol, veh/h		348			543			699			483	
Approach Delay, s/veh		20.5			20.3			19.5			17.8	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	20.6	11.5	16.6	7.9	21.9	8.9	19.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	9.5	44.5	16.5	31.5	5.5	48.5	10.5	37.5
Max Q Clear Time (g_c+I1), s	5.1	12.8	6.9	8.6	3.6	11.8	5.0	12.5
Green Ext Time (p_c), s	0.1	3.3	0.4	1.2	0.0	2.2	0.1	2.1

Intersection Summary	
HCM 7th Control Delay, s/veh	19.5
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	194	340	90	135	226	145	65	425	152	67	310	157
Future Volume (veh/h)	194	340	90	135	226	145	65	425	152	67	310	157
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1885	1856	1885	1885	1885	1841	1870	1870	1885	1856	1841
Adj Flow Rate, veh/h	196	343	91	136	228	146	66	429	154	68	313	159
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	1	3	1	1	1	4	2	2	1	3	4
Cap, veh/h	394	439	366	306	378	321	88	510	183	92	722	607
Arrive On Green	0.11	0.23	0.23	0.08	0.20	0.20	0.05	0.39	0.39	0.05	0.39	0.39
Sat Flow, veh/h	1781	1885	1572	1795	1885	1598	1753	1314	472	1795	1856	1560
Grp Volume(v), veh/h	196	343	91	136	228	146	66	0	583	68	313	159
Grp Sat Flow(s),veh/h/ln	1781	1885	1572	1795	1885	1598	1753	0	1785	1795	1856	1560
Q Serve(g_s), s	6.2	12.5	3.5	4.3	8.1	5.9	2.7	0.0	21.8	2.7	9.1	5.1
Cycle Q Clear(g_c), s	6.2	12.5	3.5	4.3	8.1	5.9	2.7	0.0	21.8	2.7	9.1	5.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	394	439	366	306	378	321	88	0	694	92	722	607
V/C Ratio(X)	0.50	0.78	0.25	0.44	0.60	0.46	0.75	0.00	0.84	0.74	0.43	0.26
Avail Cap(c_a), veh/h	638	1270	1059	487	1142	967	346	0	2053	354	2134	1794
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.9	26.4	23.0	21.2	26.7	25.8	34.4	0.0	20.4	34.4	16.5	15.3
Incr Delay (d2), s/veh	1.0	3.1	0.4	1.0	1.5	1.0	11.8	0.0	2.8	11.1	0.4	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	5.7	1.3	1.8	3.6	2.2	1.4	0.0	8.9	1.4	3.7	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	20.9	29.5	23.3	22.2	28.3	26.8	46.3	0.0	23.2	45.5	16.9	15.5
LnGrp LOS	C	C	C	C	C	C	D		C	D	B	B
Approach Vol, veh/h		630			510			649			540	
Approach Delay, s/veh		25.9			26.2			25.6			20.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	33.1	10.6	21.6	8.2	33.1	12.9	19.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	14.5	84.5	13.5	49.5	14.5	84.5	18.5	44.5
Max Q Clear Time (g_c+I1), s	4.7	23.8	6.3	14.5	4.7	11.1	8.2	10.1
Green Ext Time (p_c), s	0.1	4.8	0.2	2.6	0.1	2.6	0.4	1.9

Intersection Summary	
HCM 7th Control Delay, s/veh	24.6
HCM 7th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	335	490	99	61	364	45	58	249	103	75	220	210
Future Volume (veh/h)	335	490	99	61	364	45	58	249	103	75	220	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1885	1870	1678	1811	1885	1885	1885	1870	1885
Adj Flow Rate, veh/h	345	505	102	63	375	46	60	257	106	77	227	216
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	1	1	1	2	15	6	1	1	1	2	1
Cap, veh/h	435	742	629	308	448	55	219	380	157	298	268	255
Arrive On Green	0.16	0.39	0.39	0.05	0.27	0.27	0.04	0.30	0.30	0.05	0.30	0.30
Sat Flow, veh/h	1781	1885	1598	1795	1634	200	1725	1268	523	1795	881	838
Grp Volume(v), veh/h	345	505	102	63	0	421	60	0	363	77	0	443
Grp Sat Flow(s),veh/h/ln	1781	1885	1598	1795	0	1834	1725	0	1791	1795	0	1719
Q Serve(g_s), s	11.0	18.8	3.5	2.1	0.0	18.3	2.0	0.0	15.1	2.5	0.0	20.5
Cycle Q Clear(g_c), s	11.0	18.8	3.5	2.1	0.0	18.3	2.0	0.0	15.1	2.5	0.0	20.5
Prop In Lane	1.00		1.00	1.00		0.11	1.00		0.29	1.00		0.49
Lane Grp Cap(c), veh/h	435	742	629	308	0	504	219	0	536	298	0	523
V/C Ratio(X)	0.79	0.68	0.16	0.20	0.00	0.84	0.27	0.00	0.68	0.26	0.00	0.85
Avail Cap(c_a), veh/h	907	1978	1677	351	0	1264	295	0	1251	372	0	1205
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.6	21.3	16.7	20.8	0.0	29.0	21.5	0.0	26.1	20.3	0.0	27.7
Incr Delay (d2), s/veh	3.3	1.1	0.1	0.3	0.0	3.8	0.7	0.0	1.5	0.5	0.0	3.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	8.1	1.3	0.9	0.0	8.3	0.8	0.0	6.4	1.0	0.0	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	21.9	22.4	16.8	21.1	0.0	32.8	22.1	0.0	27.6	20.7	0.0	31.6
LnGrp LOS	C	C	B	C		C	C		C	C		C
Approach Vol, veh/h		952			484			423			520	
Approach Delay, s/veh		21.6			31.2			26.9			30.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	37.9	8.3	30.3	18.5	27.8	8.7	29.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.9	89.1	7.5	59.5	36.5	58.5	7.7	59.3
Max Q Clear Time (g_c+I1), s	4.1	20.8	4.0	22.5	13.0	20.3	4.5	17.1
Green Ext Time (p_c), s	0.0	4.1	0.0	3.3	1.0	3.0	0.0	2.6

Intersection Summary	
HCM 7th Control Delay, s/veh	26.3
HCM 7th LOS	C

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	19	624	17	12	451
Future Vol, veh/h	10	19	624	17	12	451
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	20	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	4
Mvmt Flow	11	21	678	18	13	490

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1204	688	0	0	697	0
Stage 1	688	-	-	-	-	-
Stage 2	516	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	204	448	-	-	904	-
Stage 1	501	-	-	-	-	-
Stage 2	601	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	201	448	-	-	904	-
Mov Cap-2 Maneuver	339	-	-	-	-	-
Stage 1	501	-	-	-	-	-
Stage 2	592	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	14.68	0	0.23
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	403	904	-
HCM Lane V/C Ratio	-	-	0.078	0.014	-
HCM Control Delay (s/veh)	-	-	14.7	9	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	493	22	0	499	0	0
Future Vol, veh/h	493	22	0	499	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	2	1	1
Mvmt Flow	536	24	0	542	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	560	-	1090	548
Stage 1	-	-	-	-	548	-
Stage 2	-	-	-	-	542	-
Critical Hdwy	-	-	-	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	-	-	0	-	239	538
Stage 1	-	-	0	-	581	-
Stage 2	-	-	0	-	585	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	239	538
Mov Cap-2 Maneuver	-	-	-	-	375	-
Stage 1	-	-	-	-	581	-
Stage 2	-	-	-	-	585	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s/veh)	0	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	494	14	14	482	0	19	0	15	0	0	0
Future Vol, veh/h	0	494	14	14	482	0	19	0	15	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	25	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	2	1	1	1	1	1	1	1
Mvmt Flow	0	537	15	15	524	0	21	0	16	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	524	0	0	552	0	0	1099	1099	545	1091	1107	524
Stage 1	-	-	-	-	-	-	545	545	-	554	554	-
Stage 2	-	-	-	-	-	-	554	554	-	537	552	-
Critical Hdwy	4.11	-	-	4.11	-	-	7.11	6.51	6.21	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Follow-up Hdwy	2.209	-	-	2.209	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1048	-	-	1023	-	-	191	213	541	193	211	555
Stage 1	-	-	-	-	-	-	525	520	-	518	515	-
Stage 2	-	-	-	-	-	-	518	515	-	530	516	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1048	-	-	1023	-	-	187	209	541	183	207	555
Mov Cap-2 Maneuver	-	-	-	-	-	-	187	209	-	183	207	-
Stage 1	-	-	-	-	-	-	525	520	-	518	504	-
Stage 2	-	-	-	-	-	-	507	504	-	514	516	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0.24	20.94	0
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	263	1048	-	-	1023	-	-	-
HCM Lane V/C Ratio	0.141	-	-	-	0.015	-	-	-
HCM Control Delay (s/veh)	20.9	0	-	-	8.6	0	-	0
HCM Lane LOS	C	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	-

WISEMARK COMMONS
TRAFFIC IMPACT ANALYSIS

APPENDIX

QUEUING

Intersection: 3: 67th Ave NE & 204th St NE

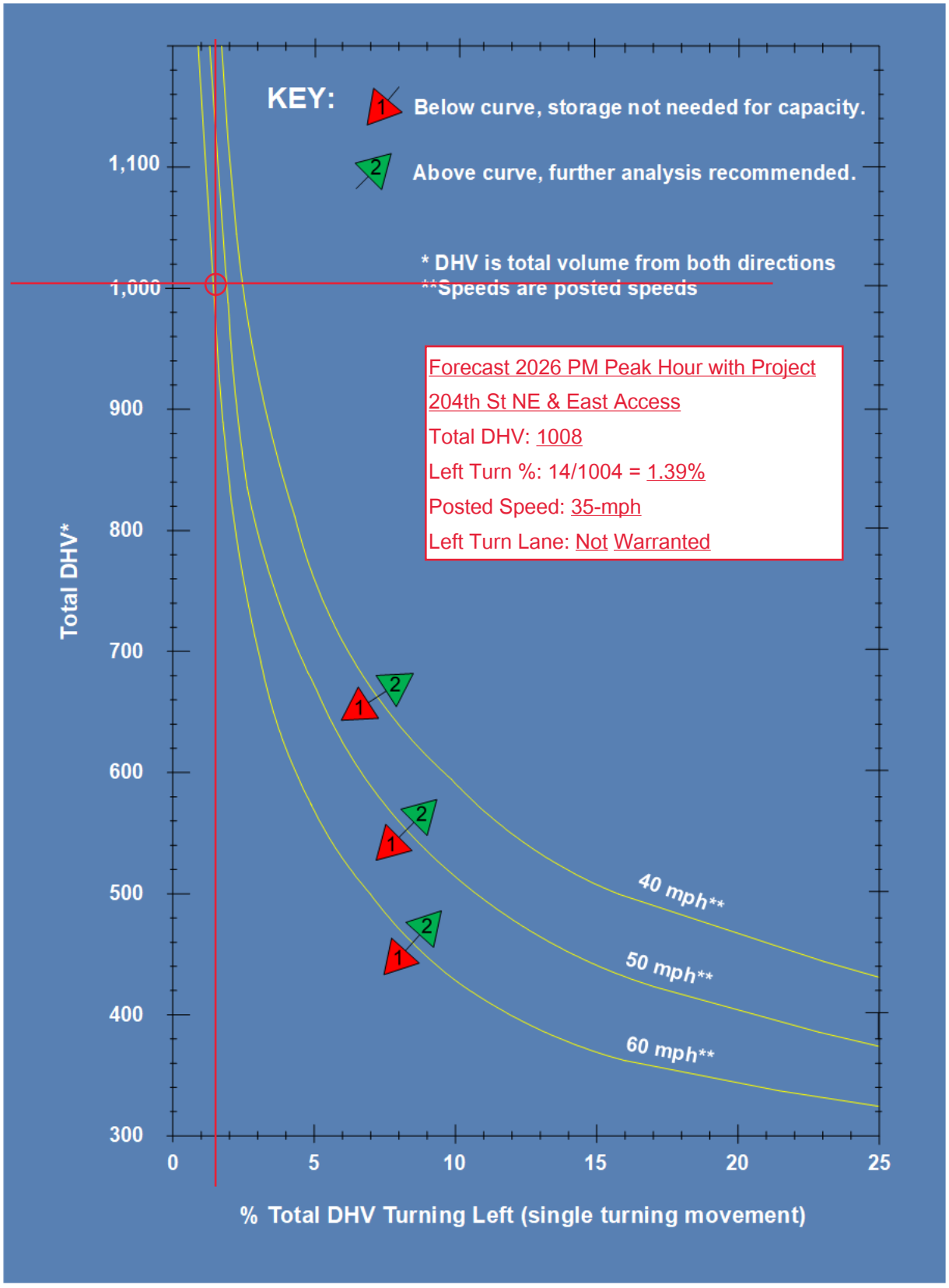
Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	TR
Maximum Queue (ft)	146	251	179	203	97	260	179	150	270
Average Queue (ft)	55	113	90	138	40	158	59	62	125
95th Queue (ft)	109	196	158	213	77	247	123	110	215
Link Distance (ft)		695		186		266			524
Upstream Blk Time (%)			0	3		0	0		
Queuing Penalty (veh)			0	15		2	0		
Storage Bay Dist (ft)	150		185		280		115	205	
Storage Blk Time (%)	0	4	0	3		20	1		1
Queuing Penalty (veh)	0	5	0	6		62	2		1

WISEMARK COMMONS
TRAFFIC IMPACT ANALYSIS

APPENDIX

LEFT TURN LANE WARRANT

Exhibit 1310-7 Left-Turn Storage Guidelines: Two-Lane, Unsignalized



WISEMARK COMMONS
TRAFFIC IMPACT ANALYSIS

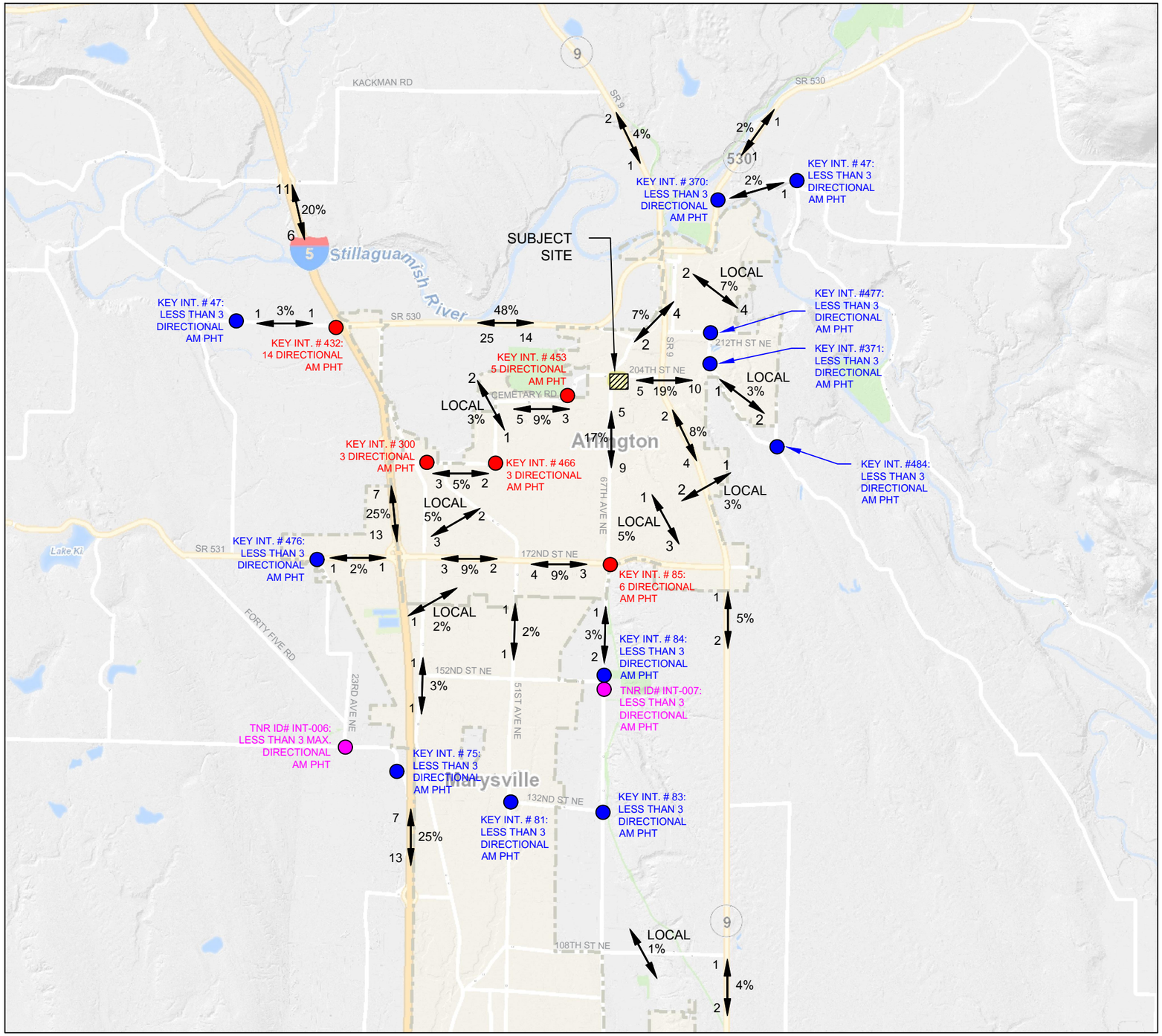
APPENDIX

INTERLOCAL TRIP DISTRIBUTION & ASSIGNMENT

N

PRIMARY
AM PEAK HOUR TRIPS

INBOUND: 29 VPH
OUTBOUND: 53 VPH



= TNR APPENDIX D PROJECT
= KEY INTERSECTION WITHOUT 3+ AM PEAK HOUR TRIPS
= KEY INTERSECTION WITH 3+ AM PEAK HOUR TRIPS

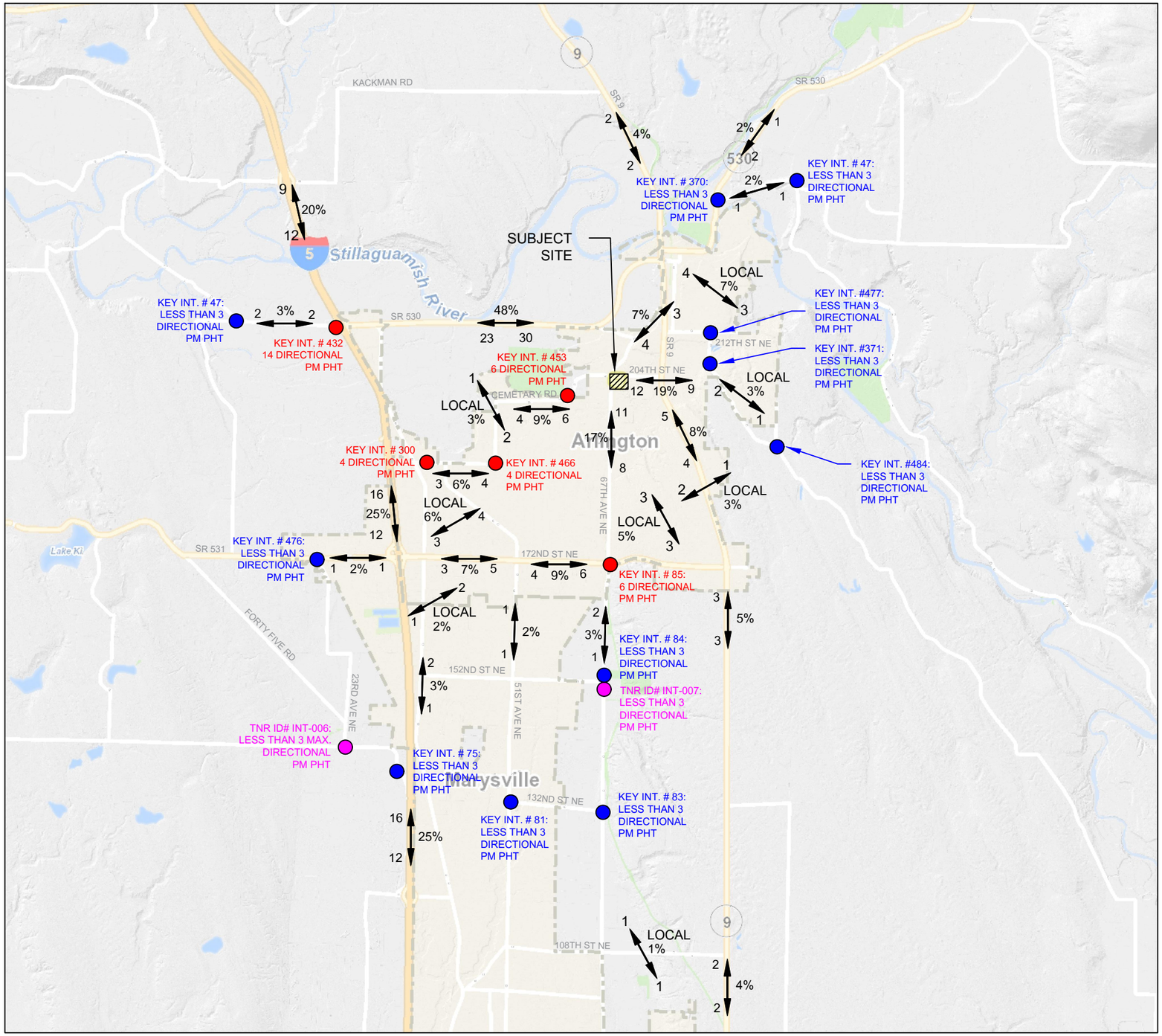
HEATH&ASSOCIATES
Transportation Planning & Engineering

WISEMARK COMMONS
INTERLOCAL AM PEAK HOUR TRIP DISTRIBUTION & ASSIGNMENT
FIGURE A

N

PRIMARY
PM PEAK HOUR TRIPS

INBOUND: 63 VPH
OUTBOUND: 47 VPH



= TNR APPENDIX D PROJECT
= KEY INTERSECTION WITHOUT 3+ PM PEAK HOUR TRIPS
= KEY INTERSECTION WITH 3+ PM PEAK HOUR TRIPS

HEATH&ASSOCIATES
Transportation Planning & Engineering

WISEMARK COMMONS
INTERLOCAL PM PEAK HOUR TRIP DISTRIBUTION & ASSIGNMENT
FIGURE B

WISEMARK COMMONS
TRAFFIC IMPACT ANALYSIS

APPENDIX

KEY INTERSECTION TURNING MOVEMENTS

Project: Wisemark Commons
Date: 8/15/2023

KEY INTERSECTION TURNING MOVEMENTS: AM PEAK HOUR

Intersection ID#	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
#85	3							1			2	4
#300		2			3							
#432		1		13	1					6		
#453		3			5							
#466	2											3

Project: Wisemark Commons
Date: 8/15/2023

KEY INTERSECTION TURNING MOVEMENTS: PM PEAK HOUR

Intersection ID#	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
#85	6							2			1	4
#300		4			3							
#432		2		12	2					12		
#453		6			4							
#466	4											3

WISEMARK COMMONS
TRAFFIC IMPACT ANALYSIS

APPENDIX

SNOHOMISH COUNTY INTERLOCAL AGREEMENT
TRAFFIC WORKSHEET

Snohomish County Traffic Worksheet and Traffic Study Requirements for Developments in the City of Arlington

Snohomish County government, through an interlocal agreement (ILA) with the City of Arlington, may request traffic mitigation measures from any new development in the city that impacts roads in the unincorporated county. The City will impose the requested mitigation to the extent that the City determines that the mitigation is reasonably related to the impacts of the development. To determine the impacts, and to determine reasonable mitigation measures, the City of Arlington requires a traffic study from any development in the city that may have impacts on county roads. This 'traffic study' may be as simple as completing sections one and two of the county traffic worksheet below, or having a professional traffic engineer conduct a formal traffic study consistent with the requirements in section three below.

- If a development generates less than ten peak-hour trips and the applicant chooses Option A for mitigation payment (standard payment by percent of county impact fee), then the applicant will generally only have to fill out the first two sections of this traffic worksheet and complete a mitigation offer (see section four).
- However, if a development generates more than ten peak-hour trips, or if the applicant chooses Option B for mitigation payment (comprehensive impact analysis), then the applicant will have to fill out the first section of this worksheet, complete a separate traffic study consistent with the requirements in section three, and complete a mitigation offer (see Section Four).
- Applicants should submit all documents *to the City* as part of their initial submittal.
- Traffic study requirements for impacts on county roads are based on the County's traffic mitigation ordinance (Chapter 30.66B) and the city/county ILA. At the end of this document find references to the county contacts and county web site (sources for may of the documents related to traffic mitigation).
- Following review of the documents submitted, the County may request supplemental information and analysis as necessary to determine the impacts of the development in accordance with the city/county ILA. The City will require the proposed development to submit the supplemental information and analysis to the extent that the City determines that it is necessary to determine the impacts of the development.

Section One (1) Worksheet General Information

1. Name of Proposed Development Wisemark Commons

   City Development File Number (if known)_____

2. Name, Address and Phone Number of Applicant Goutam Jain
   20924 55th Ave W Lynwood, WA 98036

3. Development Site Address 6804 204th St NE

4. Is it a residential or commercial development? Mixed-Use

5. Description of Development (size and specific type) 150 multi-family dwelling units and ~15,400 SF of commercial/retail space

6. How many new vehicle trips are expected to be generated by the proposed development? (For many common types of developments this information can be provided by the city or the county. For more complex developments trip generation may have to be determined under section three below)

   82 AM Peak Hour 110 PM Peak Hour 1211 Average Daily Trips (ADT)

7. Proportionate Share Impact Mitigation: All applicants have two options in determining the amount of their traffic mitigation payment:

   _____ For determining the amount based on a percentage of the county fee go to section two.

   x For determining the amount based on a comprehensive traffic study go to section three.

Section Two (2) Proportionate Share Determined by Percentage of County Impact Fee

2(a) Calculation of Payment Amount

1. Standard default estimated percentage of trips impacting county roads 70 %

or

2. Other Percentage: (Note: See author's qualifications in section three below.) Estimated percentage of trips impacting county roads from attached trip distribution: _____ %

3. Development New Average Daily Trip Generation (ADT)_____

4. Type of Development (Residential or Commercial)_____

5. County Commercial Fee Rate $_____ 6. County Residential Fee Rate $_____

(Note: Consistent with county code and the ILA, developments pay the rate in effect at the time of their submittal. As of 2/1/06 the rates were $206 for commercial developments and $242 for residential developments. Through ordinance, the County Council can change these rates at any time, so consult with the County or look at Snohomish County Code 30.66B.330 to find the latest fee rates.)

7. Calculation of Proportionate Share Impact Mitigation

_____	×	_____	×	_____	=	$_____
#1 or #2 above: % of trips		#3 above: ADT		#5 or #6 above: Fee Rate		proportionate share mitigating payment

2(b) Determining whether or not an additional traffic study is necessary

Will the development generate more than 10 peak-hour trips *or* are there other impacts that need to be addressed (e.g., level of service, safety, or access and circulation)

_____ No. Skip section three and go to section four.

_____ Yes. Read the introduction to section three and skip to section 3(b).

Section Three (3) Traffic Study Requirements

Introduction: This section outlines requirements for traffic studies for impacts on County roads. If an applicant chooses (or is required) to complete a traffic study, then it should be submitted along with this worksheet and a mitigation offer. (Note on Author's Qualifications: A traffic study under this section must be conducted by an engineer licensed to practice in the state of Washington with special training and experience in traffic engineering and, preferably, membership in the institute of transportation engineers. For individuals/firms not on the City's approved list, the developer will provide, with the traffic study, the credentials of the individual or firm performing the traffic study certifying compliance with these qualifications.)

3(a) Proportionate share impact mitigation based on comprehensive traffic study

1. Development's Trip Generation and Distribution. Determine the PM peak-hour trip generation and distribution for the development consistent with Section 3(b) below.
2. Impacted Improvements. Determine which of the road sections with planned improvements in the county's impact fee cost basis (Transportation Needs Report Appendix D) are impacted by three or more development-generated *directional* PM peak hour trips (PM PHT).
3. Current Counts. For each impacted improvement, provide current traffic counts to determine the PM PHT.
4. Reserve Capacity. Determine "reserve capacity" for each impacted improvement by subtracting the current PM PHT from the maximum service volume (MSV) for the existing facility. Reserve capacity is set to zero if current PM PHT exceeds the MSV. For MSVs see County DPW Rule 4224.
5. New Capacity. New capacity is the incremental increase in PHT that could be accommodated with the planned improvement. Determine the new capacity of each impacted improvement by subtracting the current MSV from the future MSV after the improvement.
6. Chargeable Capacity. For each impacted improvement, add the reserve capacity to the new capacity.
7. Final Adjusted Cost. Find the cost of each impacted improvement and make any adjustments used by the County for tax credits (see Transportation Needs Report Appendix D).
8. Capacity Cost per Peak-Hour Trip. For each impacted improvement, determine the capacity cost per PM PHT by dividing the final adjusted improvement cost by the chargeable capacity.
9. Traffic Impacts. From step one above, take the *total* number of PM PHT (in both directions) impacting each planned improvement.
10. Proportionate Share. For each impacted improvement, determine the proportionate share impact mitigation by multiplying the capacity cost per peak-hour trip by the number of PM PHT impacting the improvement.

3(b) Trip Generation and AM and PM Peak Hour Trip Distribution and Assignment

Calculate AM, PM and Daily trip generation consistent with the ITE Trip Generation Handbook and Snohomish County Public Works Rule 4220. Determine the trip distribution and assignments consistent with the County's document titled "Format for Trip Distributions"(available at County web site, see below).

- Within the developments transportation service area (TSA) the distributions will be carried out to each key intersection at which the approach or departure volumes on any leg have three (3) or more peak hour trips. Get the most current list of key intersections on the web site described below. Trips should be distributed onto the road system as it is expected to be in six years.
- The distribution should be a schematic map showing the broad distributions of trips in terms of percentages on different roads. Show all City boundaries.
- The assignment should be a schematic map with the impacted key intersections identified by ID# and turning movements for each shown in separate diagrams on the same page or on different pages. The assignment should also be presented in tabular form listing each intersection by intersection ID#, and the number of trips at each movement.

3(c) Additional Analysis for Developments Generating More Than Fifty (50) Peak Hour Trips

For large developments (i.e., those generating more than 50 peak-hour trips), the County may request mitigation for impacts on the level of service of County roads, documented safety locations (the County calls such locations "inadequate road conditions" or "IRCs"), and access or circulation. The traffic study requirements below are intended to disclose impacts. Based on this information the County may request through the City that the applicant provide additional information showing possible mitigation measures. If any off-site improvements were needed for mitigation the County would work with the applicant to determine requirements for right-of-way, construction plans, right-of-way use permits, construction/maintenance bonds, and other issues.

Impacts on Level of Service (LOS) of County Arterials

Contact Snohomish County Public Works for the most current list of arterial units in arrears and critical arterial units. Identify any arterial units in arrears or critical arterial units impacted by three or more directional peak-hour trips.

Impacts on Inadequate Road Conditions

Contact Snohomish County Public Works for a list of the current IRCs. Identify any IRCs impacted by three or more peak-hour trips. Note: Unlike LOS impacts in which at least three or more peak hour trips have to be added in one direction to require disclosure (e.g., 3 westbound), for IRCs, any three peak hour trips added to IRC locations are considered an impact for which disclosure is necessary (e.g., 2 westbound plus 1 eastbound).

Impacts on Access or Circulation

The County may request improvements to existing roads to provide safe and efficient access and/or circulation. In some instances, the County may request provisions for future County roads identified in the Comprehensive Plan or in Small Area Transportation Studies. If so, the County will request specific additional information through the City.

Section Four (4) Traffic Mitigation Offer to Snohomish County

The applicant should complete a traffic mitigation offer to Snohomish County that summarizes the mitigation identified in the county traffic worksheet and any additional traffic study. This will facilitate timely review of the development and processing of the application. The form to use for the mitigation offer is titled "Traffic Mitigation Offer to Snohomish County." This form is typically provided to all applicants along with this traffic study checklist. In addition, copies are available from the county contacts or the Snohomish County web site shown below.

Additional Information

County Web Site

Snohomish County Public Works has a web site with many documents related to traffic studies and mitigation requirements for developers. From the Snohomish County Home Page go to:

Departments/Public Works/Divisions/TES/ProgramPlanning/3066B

County Contacts

- Deb Werdal, Snohomish County DPW Traffic, 3000 Rockefeller M/S 607, Everett WA 98201, (425) 388-3184, debra.werdal@co.snohomish.wa.us
- Maria Schmidt, Snohomish County DPW Traffic, 3000 Rockefeller M/S 607, Everett WA 98201, (425) 388-3099, maria.schmidt@co.snohomish.wa.us

WISEMARK COMMONS
TRAFFIC IMPACT ANALYSIS

APPENDIX

TRAFFIC MITIGATION OFFER TO
SNOHOMISH COUNTY

Traffic Mitigation Offer to Snohomish County

The applicant completes part one and submits it to the City with a completed county traffic worksheet. The City completes part two and sends it to the County. The County completes part three and sends it back to the City.

Part One to be completed by Applicant

Basic Development Information

Name of City in which development is located Arlington

Name of Proposed Development Wisemark Commons

City Project File Number (if known)

Name of Applicant Goutam Jain

Address of Applicant 20924 55th Ave W Lynwood, WA 98036

Proportionate Share Calculation: *Choose Option A or B*

☐ Option A: Based on a percentage of the County's adopted impact fee (attach traffic worksheet.)

1. The applicable percentage of the County's fee: _____%

2. Net New Average Daily Traffic: _____ADT

3. The adopted County impact fee for this development: _____$/ADT

4. Total Proportionate Share Amount: $_____

☒ Option B: Based on a comprehensive traffic study (attach traffic worksheet and traffic study)

_■_ No road improvements are impacted. Hence, proportionate share amount is zero ($0).

_____ The following road improvements are impacted. The calculation of proportionate shares is summarized below.

List by Names/Description the Impacted County Projects (attach other pages if necessary)	County Project ID#	PHTs Impacting Project	Capacity Cost per PHT	Proportionate Share Obligation per Impacted Project
1.				
2.				
3.				
4. Total Proportionate Share Amount (sum of obligations for each impacted project)				$0.00

☒ **Trip Distribution and Assignment if required**

If required, attach AM and PM peak-hour trip distribution and assignment. Attach traffic worksheet showing whether or not it is required and traffic study.

☒ **Mitigation of other impacts if required for developments generating more than 50 Peak-Hour Trips**

Mitigation of Impacts on Level of Service

_■_ No impact or not applicable _____ Mitigation as described in attached traffic study.

Mitigation of Impacts on Inadequate Road Conditions

_■_ No impact or not applicable _____ Mitigation as described in attached traffic study.

Mitigation for Impacts on Access or Circulation

_■_ No impact or not applicable _____ Mitigation as described in attached traffic study.

☒ **Written Offer**

The Applicant hereby voluntarily agrees to pay the total proportionate share amount shown above for impacts of the proposed development on the capacity of Snohomish County roads and provide mitigation of all other impacts as indicated above and described in attached documents.

BY: _____ Date: _____

Signature by Authorized Official of Applicant or Authorized Representative

Print Name and Title _____

Instructions to Applicant. Submit this Offer, a completed county traffic worksheet, and any other attachments to the City with your initial application or send directly to Contact.pwCMS@snoco.org.

Part Two: To be completed by the City

Receipt of Written Offer and attachments by City and routing to County

Name of Proposed Development

City Project File Number

Date Received

City Staffer Assigned to Project

Address

Phone

Instructions to City. Send this offer and all attachments to Contact.pwCMS@snoco.org

Received by:

_____ Date: _____ _____

Initialed by City Staffer Print Name and Title

Part Three: To be completed by Snohomish County

Receipt of Offer and attachments by Snohomish County and routing back to City

Name of Proposed Development

City Project File Number

Received by:

_____ Date: _____ _____

Initialed by County Staffer Print Name and Title

Snohomish County Mitigation Request to City

Snohomish County has reviewed the traffic study worksheet and mitigation offer submitted by the applicant and has determined as follows:

☐ Snohomish County requests that the City impose the mitigation offered above as a condition of approval for the Development. Snohomish County agrees to accept changes in the mitigation payment amount shown above resulting from TDM or lot-yield adjustments approved by the City.

☐ Snohomish County requests that the City require additional supplemental information to adequately evaluate the proposed development's impacts.

☐ The information requested is shown in the notes below.

By:

_____ Date: _____ _____

Signature by Authorized County Staffer Print Name and Title

Routing Back to City

Instructions to County Send this offer and all attachments to the City Staffer shown in Part Two above.

Sent by:

_____ Date: _____ _____

Initialed by City Staffer Print Name and Title

Notes

WISEMARK COMMONS
TRAFFIC IMPACT ANALYSIS

APPENDIX

WSDOT INTERLOCAL AGREEMENT
TRAFFIC WORKSHEET

Traffic Analysis Impact Checklist

Washington State Department of Transportation (WSDOT) Northwest Region
Developments within Snohomish County

Attach this completed and signed form to the initial development application.

Contact: WSDOT Snohomish Area Developer Services (206) 440-4912
MS 240, WSDOT NW Region, PO Box 330310, Seattle, WA 98153-9710
Website: www.wsdot.wa.gov/regions/northwest/snohomish/developerservices/snokingdevelopmentserviceshome.htm

Section One (1)

1. **Development Name:** Wisemark Commons **PFN:** _____

2. **Development Location:**
   6804 204th Street NE, Arlington WA

   _____

   a. Transportation Service Area (TSA) (*circle one*): **A** B C D E F

3. **Vicinity Map attached.**

4. **Development Type:** Mixed-Use - 150 multi-family dwelling units & ~15,400 SF of commercial/retail space

5. **Trip Generation:**
   a. Average daily traffic generated: 1211 trips
   b. PM Peak Hour traffic generated: 110 trips

6. **Is PM Peak Hour traffic generated fifty (50) or greater?** [x] **Yes** [ ] **No**

7. **Is the development likely to add ten (10) or more PM Peak-Hour trips to any LOS F or HAL location within the development's TSA?:** [ ] **Yes** [x] **No**
   Detail:

   _____

   _____

8. **If "yes" to Number 6 or 7:**

   [ ] A comprehensive traffic study is required, consistent with the County/WSDOT Traffic Impact Analysis Checklist Section (2).

Signatures and date:

Applicant/Representative: _____ Date: _____

Snohomish County Representative: _____ Date: _____

Attachments:

1. Vicinity Map
2. Report of LOS F or HAL locations, if appropriate
3. Traffic Mitigation Offer to WSDOT: [ ] Short Version [x] Long Version

Exhibit "A"
Interlocal Agreement WDSOT and Snohomish County

White/Green/Yellow - Submit with application Pink - Applicant's copy Goldenrod - DPW's copy
Rev. 02/04

WISEMARK COMMONS
TRAFFIC IMPACT ANALYSIS

APPENDIX

TRAFFIC MITIGATION OFFER TO WSDOT

Long Version Traffic Mitigation Offer to WSDOT

This three-page version is intended for developments required to submit a comprehensive traffic study consistent with Section One *and* Section Two of the WSDOT Traffic Analysis Checklist.

Section One: Offer of Mitigation by Applicant for Proposed Snohomish County Development

This section to be completed by applicant	
Name of Proposed Development Wisemark Commons	Snohomish County Project File Number (Only if this offer is not submitted to PDS with initial application)
Name of Applicant Goutam Jain	
Address of Applicant 20924 55th Ave W Lynwood, WA 98036	

PROPORTIONATE SHARE CALCULATION: *Chose Option 1A or 1B Below*

☐ **Option 1A** for Proportionate Share Mitigation Based on Impacts to Projects in Exhibit C of the WSDOT/COUNTY Interlocal Agreement

WSDOT Improvement ID#	Title/Description of WSDOT Project	ADTs Impacting Improvement	Improvement Cost per ADT	Proportionate Share Obligation
			$	$
			$	$
			$	$
			$	$
			$	$
			$	$
			$	$
		Proportionate Share Sum		$

The APPLICANT hereby voluntarily agrees to pay the proportionate share sum amount shown above for impacts of the DEVELOPMENT on the capacity of state highways, based on the "proportionate share" method adopted in Section 5.2(a) of the applicable version of the WSDOT/COUNTY interlocal agreement (ILA), the list of projects in Exhibit C of the ILA, and information provided in the comprehensive Traffic Study attached hereto.

☒ **Option 1B** for Proportionate Share Mitigation based on standard amount

1	1211	*New Average Daily Traffic (ADT) generated (from Line 5a of* the WSDOT Traffic Study Checklist Section One)
2	$36.00	*The current "standard payment" rate per ADT in Section 5.2(b) of the applicable version of the WSDOT/COUNTY interlocal agreement (ILA)*
3	$ 43,596.00	*Proportionate share calculation (#1 x #2 = #3).*

The APPLICANT hereby voluntarily agrees to pay the amount shown on line #3 above for impacts of the DEVELOPMENT on the capacity of state highways, based on the "standard payment" rate and method adopted in Section 5.2(b) of the applicable version of the WSDOT/COUNTY interlocal agreement (ILA), and based on information provided in the WSDOT Traffic Study Checklist Section One (attached hereto).

HIGH ACCIDENT LOCATIONS (ILA SECTION 5.3.A)

[x] No impact [ ] Mitigation as described in attached document.

LEVEL OF SERVICE AT STATE HIGHWAY INTERSECTIONS (ILA SECTION 5.3.B)

[x] No impact [ ] Mitigation as described in attached document.

INSTALLATION OF TRAFFIC SIGNAL (ILA SECTION 5.4)

[x] No impact or not applicable [ ] Mitigation or other provisions as described in attached document.

CHANNELIZATION REVISIONS (ILA SECTION 5.5)

[x] No impact or not applicable [ ] Mitigation or other provisions as described in attached document.

FRONTAGE IMPROVEMENTS (ILA SECTION 5.6)

[x] No impact or not applicable [ ] Mitigation or other provisions as described in attached document.

RIGHT-OF-WAY REQUIREMENTS (ILA SECTION 5.7)

[x] No impact or not applicable [ ] Mitigation or other provisions as described in attached document.

SETBACK REQUIREMENTS (ILA SECTION 5.8)

[x] No impact or not applicable [ ] Mitigation or other provisions as described in attached document.

ACCESS CONNECTIONS (ILA SECTION 5.9)

[x] No impact or not applicable [ ] Permitted Access to adjacent State Highway verified by DEVELOPER or application made with WSDOT

SUBMITTAL OPTIONS

If this offer and all necessary attachments are submitted to Snohomish County PDS (COUNTY) with the initial development application, then PDS will send all documents to WSDOT for review and comment(s) and WSDOT will send the written offer back to PDS. Otherwise, the applicant is responsible for working directly with WSDOT, submitting the required documents, obtaining WSDOT's signature, and submitting the written offer to PDS

[ ] This offer, Sections One and Two of WSDOT Traffic Study Checklist, and all necessary supporting documentation (one original plus two copies) are hereby submitted to PDS with initial application

[ ] Applicant is working directly with WSDOT

BY:

_____ Date_____ _____

Signature of Applicant or Authorized Representative Print Name and Title

Section Two: Processing by Snohomish County PDS if included with initial application. Otherwise applicant works directly with WSDOT (Section 3).

This section to be completed by Snohomish County PDS

Date Received	Name of PDS Planner Assigned to Project	Phone Number of Planner
Instructions to PDS	*Send this three-page offer, Sections One and Two of WSDOT Traffic Study Checklist, and all attachments to WSDOT and DPW as shown below:*	

1. Original mailed to WSDOT Snohomish Area Development Services, MS 240, WSDOT NW Region, PO Box 330310, Seattle WA 98133-9710
2. Convenience copy mailed to Snohomish County Public Works Land Use Section

BY:

_____Date_____	_____
Initiated by PDS Staff Person	Print Name and Title

Section Three: Review and/or Approval by WSDOT

This section to be completed by WSDOT

WSDOT RECEIPT OF OFFER ATTACHMENT(S)

☐ Original offer, Sections One and Two of WSDOT Traffic Study Checklist, and all attachments received from Snohomish County PDS.

☐ Original offer and attachment(s) received from_____.

BY:

_____Date_____	_____
Initiated by WSDOT Staff Person	Print Name and Title

WSDOT REQUEST

WSDOT has reviewed the traffic study and this mitigation offer submitted by the Applicant and has determined as follows:

☐ WSDOT requests that the COUNTY impose the mitigation offered above as a condition of approval for the DEVELOPMENT. WSDOT agrees to accept changes in the proportionate payment amount shown above resulting from TDM or lot-yield adjustments approved by the COUNTY.

☐ WSDOT requests that the COUNTY require additional supplemental information to adequately evaluate the proposed development's impacts.

☐ The information requested is shown in the attached document.

ROUTING BY WSDOT

☐ Original written offer with all applicable signatures has been mailed to the PDS Planner shown in Section 2 above at Snohomish County PDS, 3000 Rockefeller, Everett WA 98201.

☐ Copy of written offer with all signatures has been mailed to Snohomish County DPW Land Use Division, 3000 Rockefeller, Everett, WA 98201.

Alternatively, in cases in which the form was not submitted to PDS with initial application

☐ Original written offer has been mailed to the applicant shown above and a copy has been mailed to Snohomish County DPW Land Use Division, 2930 Wetmore, Everett, WA 98201

BY:

_____ Date_____	_____
Signature of Authorized WSDOT Official	Print Name and Title

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