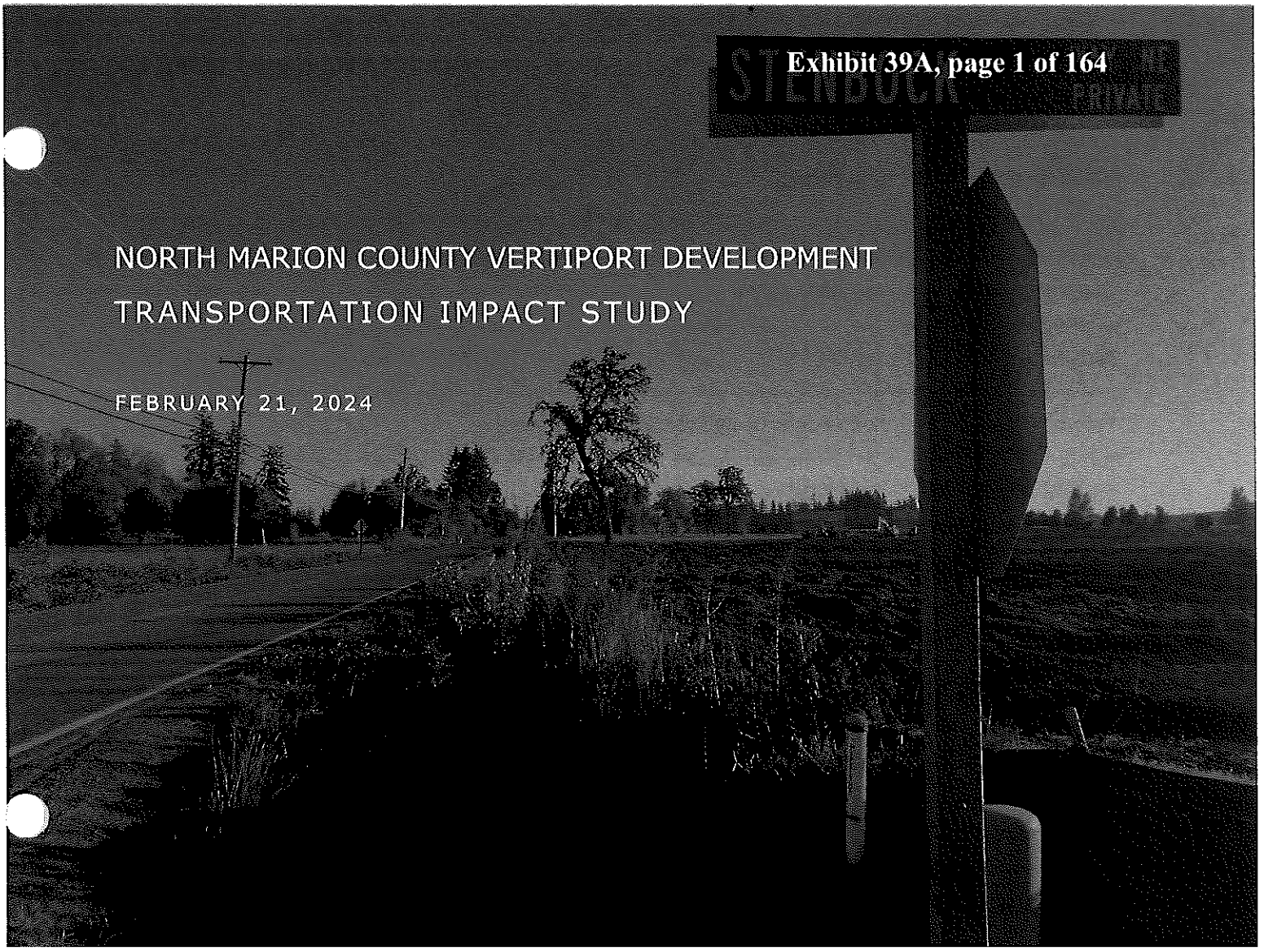

NORTH MARION COUNTY VERTIPORT DEVELOPMENT
TRANSPORTATION IMPACT STUDY

FEBRUARY 21, 2024

PREPARED FOR:

TLM HOLDINGS

DOCUMENT DESCRIPTION

CLIENT	TLM Holdings
DKS Project Number	24239-000
Project Name	North Marion County Vertiport Development
Document Name	Transportation Impact Study

PREPARED BY DKS ASSOCIATES

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INTRODUCTION

This report documents a traffic assessment related to the impacts of a proposed development of vertiport-heliport services located on a currently vacant parcel adjacent to the Aurora State Airport in Marion County, Oregon. The development is a vertiport with tie downs and heliport hangars which include storage spaces and attached vertiport-heliport related office space and heliport shop spaces. The property is currently zoned Exclusive Farm Use (EFU), which allows for transportation facilities (like the proposed vertiport) as a conditional use.

Table 1 provides more details regarding the study area and characteristics of the proposed project.

TABLE 1: STUDY AREA AND PROPOSED PROJECT CHARACTERISTICS

STUDY AREA	
NUMBER OF INTERSECTIONS	7 existing intersections, 3 site access driveways
ANALYSIS PERIOD(S)	Weekday AM peak hour (peak hour between 7-9 AM) and PM peak hour (peak hour between 4-6 PM)
PROPOSED DEVELOPMENT	
SIZE AND LAND USE	vertiport-heliport tie-downs, hangars with storage spaces and attached vertiport-heliport office and heliport shop spaces
PROJECT TRIPS	38 AM peak hour trips, 38 PM peak hour trips, and 316 average weekday trips
VEHICLE ACCESS POINTS	Two access points along Airport Road and one access point on Stenbock Way
OTHER TRANSPORTATION FACILITIES	
PEDESTRIAN FACILITIES	No existing facilities
BICYCLE FACILITIES	Bicycle lanes along Arndt Road
TRANSIT FACILITIES	Route 3X SMART Transit stops at the Airport Road/Arndt Road intersection

The following chapters of this report document the existing conditions of the study area, including roadway classification, bicycle and pedestrian facilities, existing traffic operations, and existing safety conditions. The report then discusses the impact the proposed site plan will have on the surrounding transportation network and provides recommendations whether mitigation is required.

EXISTING CONDITIONS

This chapter details the existing study area conditions including the proposed site development, existing bicycle and pedestrian facilities, existing transit facilities, roadway network, future planned projects, existing traffic volumes and operations, and crash analysis. Supporting details are provided in the appendix.

STUDY AREA

The proposed development is located on the east edge of the Aurora State Airport, shown in Figure 1 and will include vertiport-heliport tie-downs, hangars with storage spaces and attached vertiport-heliport office and heliport shop spaces. There will be two access points to Airport Road and one access point to Stenbock Way. The following sections present a summary of the roadway network including the existing characteristics of the bicycle and pedestrian facilities, public transportation services, and any future planned projects in the study area.

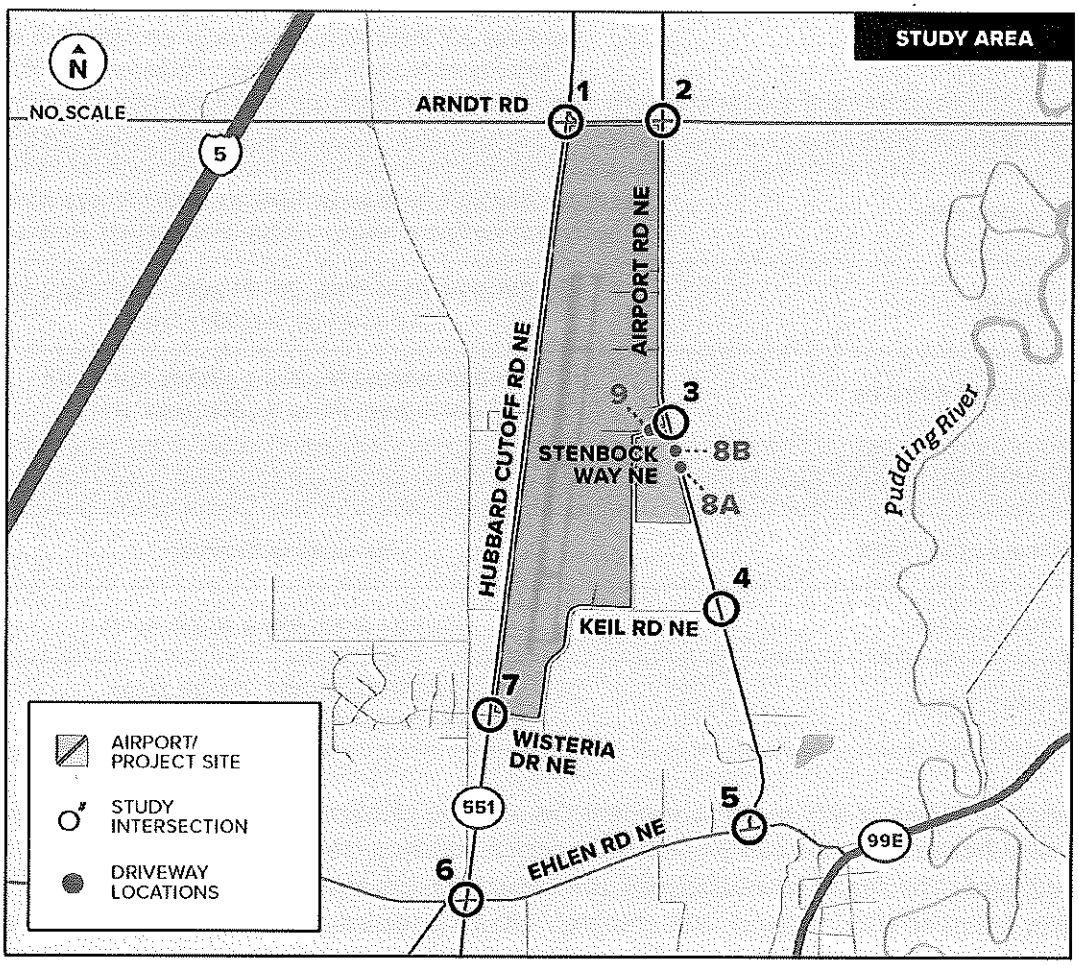

FIGURE 1: STUDY AREA

ROADWAY NETWORK

All of the roadways within the study area, except a small segment of Ehlen Road, are classified as rural roadways under either ODOT or Marion County jurisdiction. The above-mentioned short segment of Ehlen Road and the intersection of Airport Road/Ehlen Road are within the City of Aurora city limits and would be considered an urban roadway. However, both roadways are owned and maintained by Marion County, and the county's TSP and other standards shall govern the determination of transportation impacts and necessary mitigations at these locations.

The transportation characteristics of the roadways within the study area are shown in Table 2. The table includes the functional classification, number of travel lanes, posted speed, and facilities for bicyclists, pedestrians, and public transit. The functional classification specifies the purpose of the facility and is a determining factor of applicable cross-section, access spacing, and intersection performance standards.

TABLE 2: EXISTING STUDY AREA ROADWAY CHARACTERISTICS

ROADWAY	JURISDICTION	FUNCTIONAL CLASSIFICATION	LANES	POSTED SPEED	SIDEWALK	BIKE LANES	TRANSIT FACILITIES
OR 551	ODOT	State Highway - Rural Minor Arterial	2	55 mph	No	No [a]	None
ARNDT ROAD	Marion County	Rural Minor Arterial	4	45 mph	No	Yes	SMART 3X Bus Stop
AIRPORT ROAD	Marion County	Rural Major Collector	2	35/55 mph [b]	No	No	SMART 3X Bus Stop
KEIL ROAD	Marion County	Rural Minor Collector	2	35 mph	No	No	None
EHLEN ROAD	Marion County [c]	Rural Minor Arterial	2	35/45 mph [d]	No	No	None

[a] OR 551 has shoulders, approximately six feet, which are wide enough for bicycles.

[b] Airport Rd is 55 mph from Arndt Rd to just north of Smith Lane and 35 mph from just north of Smith Lane to Ehlen Rd.

[c] A short segment on the east end of Ehlen Road is within the Aurora City Limits and is classified as an urban roadway; However, the Marion County standards are still applicable and do not change based on this designation.

[d] Ehlen Road is 45 mph from OR 551 to Kahle Lane NE and 35 mph from Kahle Lane NE to just east of Airport Road NE.

The existing bicycle and pedestrian facilities near the proposed site include six foot bicycle lanes on Arndt Road east of OR 551. There is a short segment of sidewalk on each corner of the Arndt Road/Airport Road intersection. There is one transit stop within the project vicinity that is serviced by Route 3X (Canby) of the South Metro Area Regional Transit (SMART). The stop is located at Arndt Road/Airport Road and has headways of approximately 1-hour in the morning and evening peak weekday commute periods.

EXISTING TRAFFIC VOLUMES AND OPERATIONS

An analysis of the 2023 existing intersection operations was performed for the study intersections to ensure the transportation network meets Marion County and ODOT performance standards. Intersections are the focus of the analysis because they are the controlling bottlenecks of traffic flow and the ability of a roadway system to carry traffic efficiently is nearly always diminished in their vicinity.

Intersection operations were analyzed for the AM and PM peak hours. Turning movement counts were collected on September 19th, 2023, during the AM (7:00-9:00 a.m.) and PM (4:00-6:00 p.m.) peak periods at each of the following study intersections.

- Airport Road /Arndt Road
- Airport Road /Keil Road
- Airport Road /Ehlen Road
- Airport Road/Stenbock Way
- OR-551/Arndt Road
- OR-551/Keil Road
- OR-551/Ehlen Road

SEASONAL ADJUSTMENT FACTOR

The traffic count data collected in September 2023 represents a period where traffic volumes are lower than the average weekday conditions. Adjustments to ODOT facilities are required so that traffic volumes analyzed represent the 30th highest hour volume (30HV) as identified in the methodology from the ODOT Analysis Procedural Manual. To determine when the 30HV conditions occur, data is examined from Automatic Traffic Recorder (ATR) stations that record traffic highway volumes year-round. The Hubbard ATR #24-016 on OR-551 just south of Ehlen Road was deemed appropriate to utilize due to its proximity to the project site. The September traffic counts were adjusted to the peak month of August by a seasonal factor of 1.05 using volume data from 2016 through 2020.[1] The supporting ATR data and calculation is included in the appendix. The Seasonal Adjustment Factor was applied to the AM and PM peak hour volumes. The adjusted 2023 traffic volumes are shown in Figure 2 below.

[1] It should be noted that in 2021 there was an equipment outage from June through August and in 2022 there was construction near the ATR between May and August, so these years were not used in the Seasonal Adjustment Factor calculations.

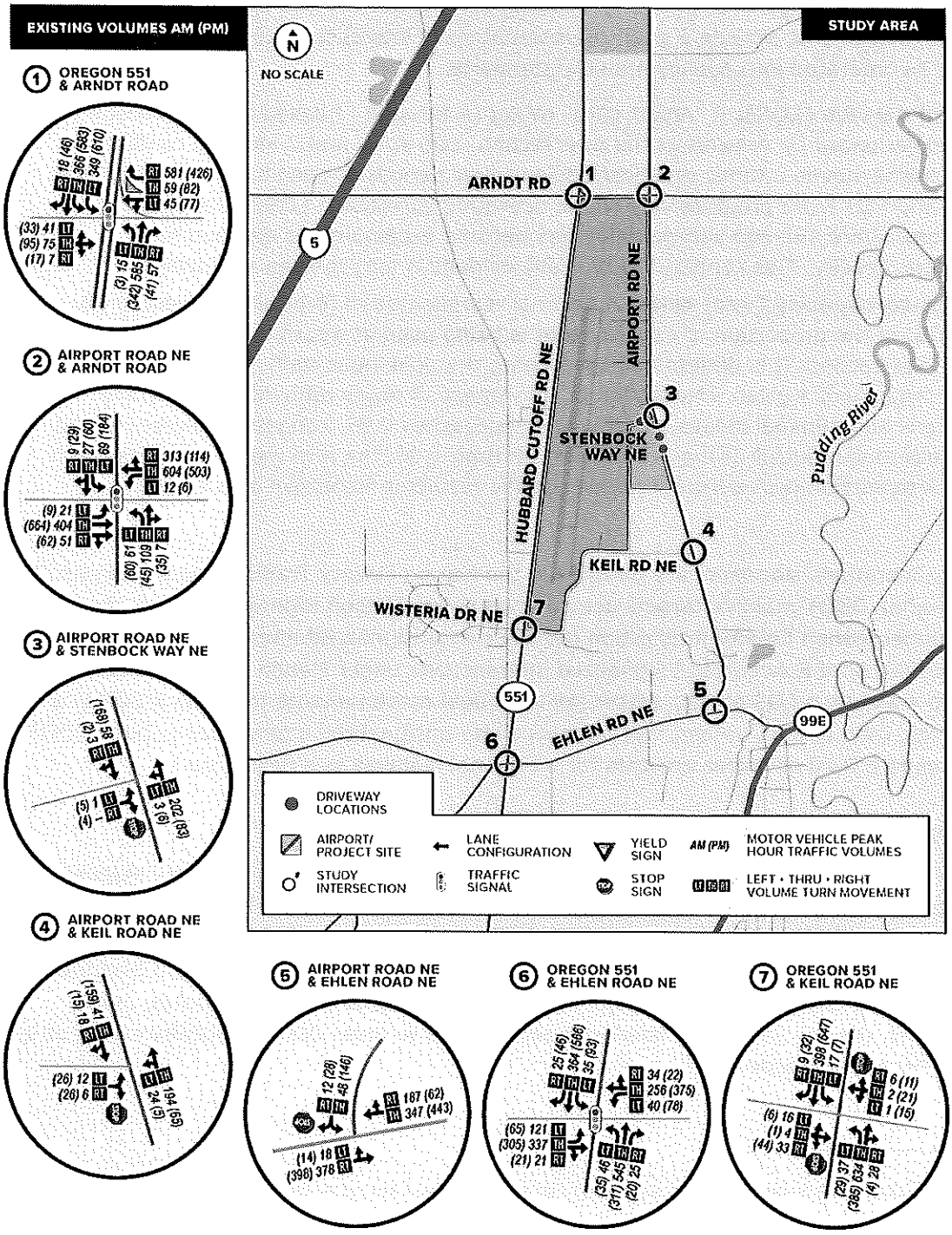

FIGURE 2: 2023 EXISTING CONDITIONS TRAFFIC VOLUMES

INTERSECTION PERFORMANCE MEASURES

Level of service (LOS) ratings and volume-to-capacity (v/c) ratios are two commonly used performance measures that provide a good representation of intersection operations. In addition, they are often incorporated into agency mobility standards.

- **Level of service (LOS):** A "report card" rating (A through F) based on the average delay experienced by vehicles at the intersection. LOS A, B, and C indicate conditions where traffic moves without significant delays over periods of peak hour travel demand. LOS D and LOS E are progressively worse operating conditions. LOS F represents conditions where average vehicle delay has become excessive and demand has exceeded capacity. This condition is typically evident in long queues and delays.
- **Volume-to-capacity (v/c) ratio:** A decimal representation (typically between 0.00 and 1.00) of the proportion of capacity that is being used at a turn movement, approach leg, or intersection. It is determined by dividing the peak hour traffic volume by the hourly capacity of a given intersection or movement. A lower ratio indicates smooth operations and minimal delays. As the ratio approaches 0.95, congestion increases and performance is reduced. If the ratio is greater than 1.00, the turn movement, approach leg, or intersection is oversaturated and usually results in excessive queues and long delays.

Marion County operations standards are outlined in the Marion County Traffic Impact Analysis (TIA) Requirements while ODOT mobility targets are outlined in the Oregon Highway Plan. All study intersections under Marion County jurisdiction require that unsignalized intersections maintain a Level of Service (LOS) of E or better.[2] Signalized intersections under Marion County jurisdiction[3] are required to maintain a LOS of D or better (all individual movements to maintain a LOS E or better) with a v/c ratio of 0.85 or less.[4] All signalized and unsignalized intersections under ODOT jurisdiction require a 0.70 or better v/c ratio for a regional highway in a rural area.[5]

EXISTING VEHICLE OPERATIONS

Existing study intersection operations were evaluated based on the Highway Capacity Manual (HCM) 6th Edition methodology for signalized and unsignalized intersections.[6] Specific parameters for ODOT and Marion County were applied based on the ODOT Analysis and Procedures Manual (APM) and Marion County Traffic Impact Analysis Requirements, respectively. Table 3 lists the study intersection's existing volume to capacity (v/c) ratio, delay, and LOS. As shown, under existing conditions, the OR-551/Ehlen Road intersection fails to meet ODOT's mobility target of v/c ≤ 0.70 for the AM and PM peak hours.

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[2] Marion County standards for all-way stop intersections do not apply as there are no all-way stop intersections in the study area.

[3] A short segment of Ehlen Road is within the Aurora City Limits and UGB. However, the City of Aurora TSP defers to the Marion County operations standards as Marion County owns and maintains the roadway. (Aurora TSP, 2009, Table 3-2)

[4] TIA Requirements Policy and Procedures - Methodologies and Analysis Parameters. Marion County. 2015.

[5] Oregon Highway Plan Table 6. Oregon Department of Transportation. 2023.

[6] *Highway Capacity Manual, Sixth Edition | A Guide for Multimodal Mobility Analysis*, Transportation Research Board, Washington D.C., 2016.

TABLE 3: 2023 EXISTING PEAK HOUR STUDY INTERSECTION OPERATIONS

INTERSECTION	JURIS-DICTION	MOBILITY TARGET/ OPERATING STANDARD	AM PEAK HOUR			PM PEAK HOUR		
			V/C	DELAY	LOS	V/C	DELAY	LOS
SIGNALIZED								
AIRPORT ROAD/ ARNDT ROAD	Marion County	0.85 v/c; LOS D	0.84	37.5	D	0.63	18.2	B
OR-551/ ARNDT ROAD	ODOT	0.70 v/c	0.69	21.6	C	0.62	19.8	B
OR-551/ EHLEN ROAD	ODOT	0.70 v/c	**0.75**	35.4	D	**0.79**	40.8	D
TWO-WAY STOP-CONTROLLED								
AIRPORT ROAD/ KEIL ROAD	Marion County	LOS E	0.03 EB	10.2	A/B	0.10 EB	10.4	A/B
AIRPORT ROAD/ EHLEN ROAD	Marion County	LOS E	0.23 SB	20.8	A/C	0.73 SB	46.6	A/E
OR-551/ KEIL ROAD	ODOT	0.70 v/c	0.27 SB	9.5	A/C	0.39 WB	45.4	A/E
AIRPORT ROAD/ STENBOCK WAY	Marion County	LOS E	0.01 EB	10.3	A/B	0.02 EB	10.4	A/B

Signalized Intersections:
v/c = Volume-to-Capacity Ratio of Intersection
Delay = Average Stopped Delay per Vehicle (sec)
LOS = Level of Service of Intersection

Two-Way Stop-Controlled Intersections:
v/c = Volume-to-Capacity Ratio of Worst Movement
Delay = Critical Movement Approach Delay (sec)
LOS = Level of Service of Major Street/Minor Street

Bold/Highlighted: Intersection fails to meet operating standards/mobility targets.

SAFETY ANALYSIS

The most recent five years (2017 - 2021) of available crash data for the study area was obtained from the Oregon Department of Transportation (ODOT) and was used to evaluate the safety performance of the study intersections. During the five-year study period, there were a total of 134 crashes with 106 crashes at the study intersections and 28 crashes along the study segments (Figure 3).

One fatal crash occurred in July 2021 involving a bicyclist that was struck from behind by a driver. This crash occurred along OR 551 between Arndt Road and Keil Road. There were five crashes in the study area that resulted in severe injuries, including one crash along the project site frontage. The crash occurred when a southbound driver ran off the road and into the ditch. The two primary types of collisions were rear-end (66 crashes) and turning (43 crashes) and the most common contributing factors were failure to avoid (42 crashes) or not yielding (34 crashes).

CRASH RATE

The total number of crashes observed at an intersection is typically related to the volume of traffic traveling through said intersection. Because of this relationship, a commonly used measure to evaluate the safety performance of an intersection is the intersection crash rate, which is the number of crashes per year per million entering vehicles (MEV). ODOT has developed a list of critical crash rates which represent the expected crash rate for different types of intersections across the state. If the calculated crash rate is higher than the corresponding ODOT critical crash rate, this would indicate a potential safety concern and would warrant additional safety investigations.

As shown in Table 4, the three signalized intersections of Airport Road/Arndt Road, OR-551/Arndt Road, and OR-551/Ehlen Road had high

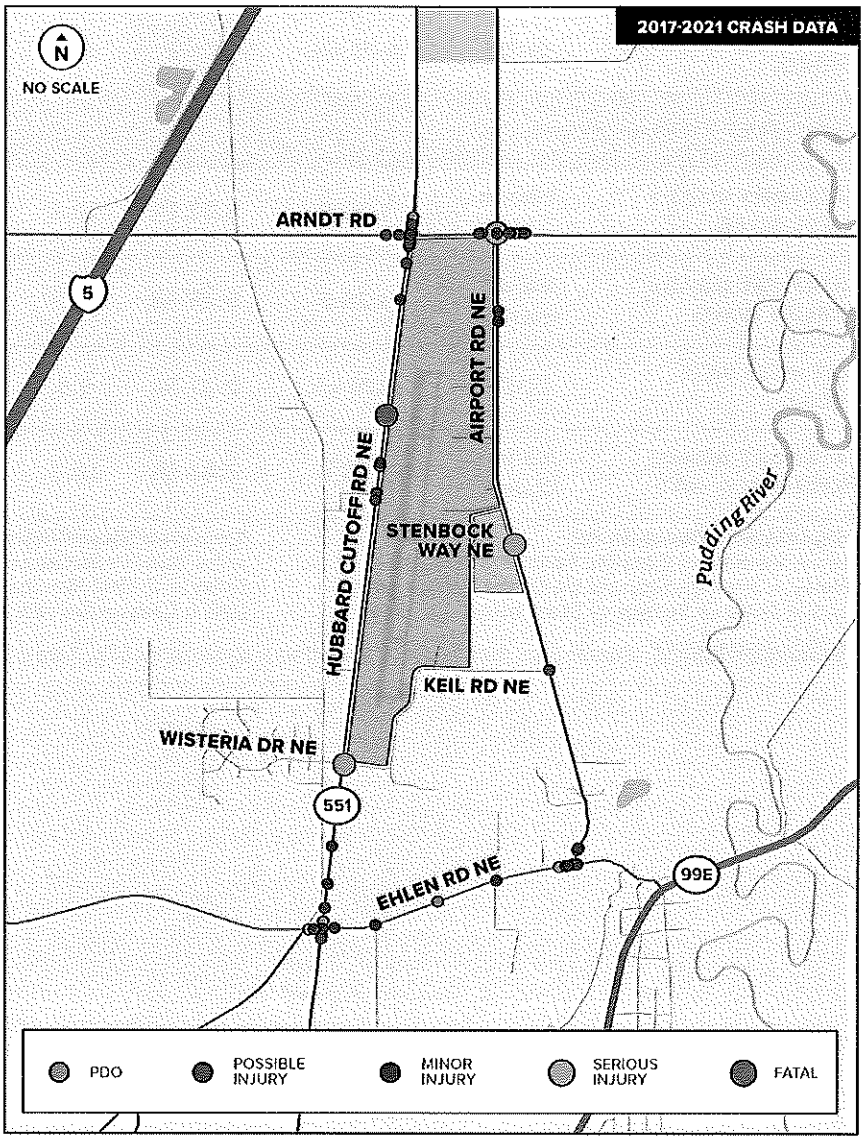

FIGURE 3: 2017 TO 2021 COLLISIONS

crash rates that exceeds the ODOT Critical Crash Rate. As noted earlier, safety improvements were implemented in 2020 at the intersection of OR-551/Ehlen Road, the effects of which are not fully reflected in the crash rate yet.

TABLE 4: STUDY INTERSECTION CRASHES (2017-2021)

INTERSECTION	CRASH FREQUENCY (BY SEVERITY)				ADT	ODOT CRITICAL CRASH RATE	OBSERVED CRASH RATE
	FATAL	INJURY	PDO	TOTAL			
OR-551/ ARNDT ROAD	0	17	12	29	23,550	0.579	**0.675**
AIRPORT ROAD/ ARNDT ROAD	0	26	11	37	17,710	0.579	**1.145**
AIRPORT ROAD/ STENBOCK WAY	0	0	0	0	2,680	0.475	0.000
AIRPORT ROAD / KEIL ROAD	0	1	0	1	2,960	0.475	0.185
AIRPORT ROAD/ EHLEN ROAD	0	4	3	7	10,910	0.475	0.352
OR-551/ EHLEN ROAD	0	22	16	38	19,370	0.579	**1.075**
OR-551/ KEIL ROAD	0	2	0	2	12,020	1.080	0.091

[a] PDO = Property damage only
[b] Critical crash rates according to 90th Percentile rate from ODOT APM Exhibit 4-1
[c] Crash rate = average annual crashes per million entering vehicles (MEV); MEV estimates based on PM peak-hour traffic count

Bold/Highlighted: Intersection is over the critical crash rate.

SAFETY PRIORITY INDEX SYSTEM (SPIS)

The Safety Priority Index System (SPIS) is a ranking system developed by ODOT to identify potential safety problems on state highways. SPIS scores are developed based upon crash frequency, severity, and rate for a 0.10 mile or variable length segment along the state highway over a rolling three-year window (i.e., every year it is updated with the most recent three years).

A prioritized list of the top 15th percentile of statewide SPIS sites is created for each region, and the top 5th percentile are investigated by the five Region Traffic managers' offices. Based on the 2020 SPIS list, Airport Road/Arndt Road is in the top 95% percentile. OR-551/Ehlen Road is in the top 85th percentile. However, it should be noted that OR-551/Ehlen Road was recently reconfigured in 2020 and included the addition of left turn lanes on the eastbound and westbound approaches. Because the SPIS data is based on crashes between 2017 – 2019, the recent safety improvements and their effects on safety at OR-551/Ehlen Road are not yet reflected in the current SPIS list.

RECOMMENDED SAFETY IMPROVEMENTS

Of the 29 crashes that occurred at the OR-551/Arndt Road intersection, the majority of crashes were rear-end crashes (16 crashes) or turning crashes (7 crashes). The most common cause for crashes here were "Failure to Avoid" (11 crashes) and "Improper Turning" (4 crashes). It is recommended that safety improvements such as advanced flashing signal ahead warning signage be installed at the OR-551/Arndt Road intersection, specifically in the northbound direction and eastbound direction, to address these crash patterns.

Of the 37 crashes that occurred at the Airport Road/Arndt Road intersection, two crashes resulted in severe injuries. The majority of crashes that occurred at this intersection were turning crashes (20 crashes) or rear-end crashes (11 crashes). The most common cause for crashes here were "Failure to Yield" (17 crashes) and "Failure to Avoid" (9 crashes). Both of the severe injury crashes occurred in the evening between 4PM – 6PM. It is recommended that safety improvements such as protected-permissive left turn phasing on the northbound and southbound approaches, advanced signal heads, and advanced signal warning signage be installed at the Airport Road/Arndt Road intersection to address these crash patterns.

PROJECT IMPACTS

The proposed development on the east edge of the Aurora State Airport is a "Vertiport." The proposed Vertiport is composed of verticopter/helicopter tie downs and hangars and charging stations. There are maintenance shops and parts storage with supporting offices shown on the proposed site plan. The maintenance shops are used for repairing and maintaining aircraft components. The parts storage space would primarily be used for the storage of FAA required parts for verticopters and helicopters with supporting office space for maintenance staff, pilots, and inspectors. The offices would contain libraries of manuals and log books for aircraft and for each of their parts and be used for weather data and flight planning. The verticopters/helicopters stored, maintained, and repaired at the proposed vertiport are the only ones using the facility.

To evaluate the impacts of the proposed development, the vehicle operations at the identified study intersections under future no-build and build conditions with the proposal were analyzed.

TRIP GENERATION

Trip generation is the method used to estimate the number of vehicles a development adds to site driveways and the adjacent roadway network during a specified period (i.e., such as the PM peak hour). Trip generation estimates are performed using trip rates surveyed at similar land uses, as provided by the Institute of Transportation Engineers (ITE).[7]

The site is proposed to include the following different uses:

- Verticopter/helicopter tie downs and hangar space
- Verticopter/helicopter parts storage space and maintenance shop with supporting offices. The maintenance shops will be used for repairing and maintaining aircraft components. The supporting offices will be a place for pilots and maintenance staff to fill out paperwork and store required documents when not flying or working in the shop. This is different from a traditional office space where employees would perform their primary work duties at a desk for the duration of a full day, consistently day-to-day.

There are three hangar buildings and one headquarters building shown on the site plan.

- Hangar V is only for the storage of verticopters and helicopters and will not contain any maintenance shops or supporting offices. Therefore, it is assumed to not generate any independent vehicle trips.
- Hangar W and Hangar X are proposed to house verticopter and helicopters as well as provide space for parts storage and maintenance shops with supporting offices. This combination of storage, shop, and office is best matched by the Warehouse ITE Land Use (LU Code 150), which is described as "...primarily devoted to the storage of materials, but it may also include office and maintenance areas".
- The Vertiport Headquarters building will have a mix of traditional office space and maintenance shop space. For trip generation purposes, it was assumed that approximately 50% of the floorspace would be general office (ITE LU Code 710) and 50% would be verticopter-helicopter maintenance shops (ITE LU Code 150).

[7] *Trip Generation Manual, 11th Edition*, Institute of Transportation Engineers, 2021.

TABLE 5: BUILDING SQUARE FOOT BREAKDOWN BY USE

BUILDING	SIZE (SQUARE FEET)	BREAKDOWN OF USE	SIZE (SQUARE FEET)	TRIP GENERATION LAND USE CODE
HANGAR V	38,916	Verticopter and Helicopter Hangars	38,916	None
HANGAR W	76,160	Verticopter and Helicopter Hangars	32,000	None
		Parts Storage & Maintenance Shop with Supporting Offices	44,160	LU Code 150
HANGAR X	57,560	Verticopter and Helicopter Hangars	32,000	None
		Parts Storage & Maintenance Shop with Supporting Offices	25,560	LU Code 150
VERTIPORT HEADQUARTERS	31,316	General Office	15,658	LU Code 710
		Maintenance Shop	15,658	LU Code 150

Based on the ITE manual, the proposed site is estimated to generate 316 average daily trips, 38 (32 in, 6 out) AM peak hour trips and 38 (8 in, 30 out) PM peak hour trips.

TABLE 6: TRIP GENERATION SUMMARY FOR PROPOSED DEVELOPMENT

LAND USE (ITE CODE)	TRIP GEN RATE [A]	UNITS	AM PEAK HOUR			PM PEAK HOUR			DAILY TRIPS
			IN	OUT	TOTAL	IN	OUT	TOTAL	
WAREHOUSE (150)	0.17 (0.18)	85.4 KSF	11	3	14	4	11	15	146
GENERAL OFFICE (710)	1.52 (1.44)	15.7 KSF	21	3	24	4	19	23	170
		TOTAL	**32**	**6**	**38**	**8**	**30**	**38**	**316**

Note:

A. XX (YY) = AM peak rate (PM peak rate) in trips per 1,000 square feet of gross floor area

B. KSF = 1,000 square feet

TRIP DISTRIBUTION

Trip distribution provides an estimation of where project-related trips would be coming from and going to within the study area. It is given as percentages at key gateways to the study area and is used to route project trips through the study intersections. The trip distribution, estimated using the existing traffic counts, is shown in Figure 4 on the following page.

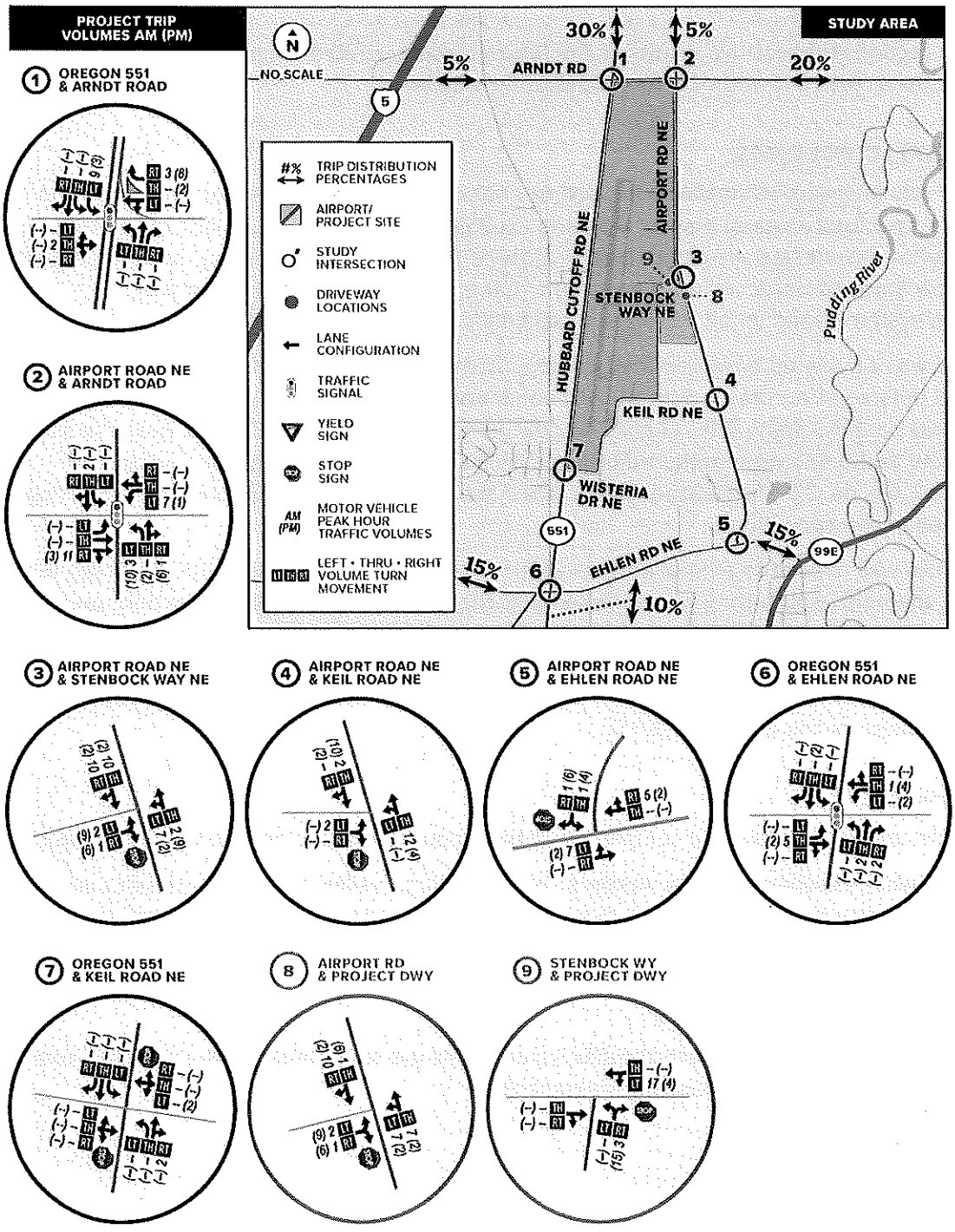

FIGURE 4: PROJECT TRIPS AND TRIP DISTRIBUTION

PROJECT IMPACT ANALYSIS

The following sections present the results of the future traffic operations analysis at each of the study intersections, with and without the proposed development.

FUTURE TRAFFIC VOLUMES

Future traffic volumes were estimated and used to analyze future intersection operations at the intersection for two future years: Year of Opening (2025) and Short-Term (2030). The future analysis scenarios include various combinations of three types of traffic: existing, background, and project. The background traffic includes the traffic that is expected to be added to the transportation system based on an increase in regional population and development.

A growth rate was calculated based on methodology from ODOT's Analysis Procedure Manual.[8] OR-551 is located outside of Aurora's urban growth boundary and using historical trends to estimate a growth rate was deemed applicable. Current and future traffic volumes on OR-551 near the site (mile posts 1.49 and 3.46) were gathered from ODOT's Future Volumes Table and an annual growth rate of 2.0% on OR-551 between Arndt Road and Ehlen Road was calculated. Supporting data is included in the appendix.

This growth rate was applied to all movements at the OR-551/Arndt Road and OR-551/Ehlen Road intersections, the north-south through movements at the OR-551/Keil Road intersection, and the east-west movements at the Arndt Road/Airport Road and Ehlen Road/Airport Road intersections. The growth rate was selectively applied to the study intersections to accurately model the expected background growth in traffic. It is anticipated that any growth on Airport Road in the future will be due to the expansion of the airport facilities.

PLANNED PROJECTS

All future traffic operations assumed completion of the following planned Marion County project:

> **Marion County Flashing Yellow Arrows:** Install flashing yellow arrows for all left turn movements at the Airport Road/Arndt Road intersection to allow for protective and permissive left turns. Optimized signal timing was assumed as part of this project.

OPENING YEAR (2025) ANALYSIS

Figure 5 and Figure 6 show the expected traffic volumes for the study area for the Opening Year 2025 No Build and Build (with proposed development).

[8] *Analysis Procedure Manual, Version 2,* Chapter 6: Future Year Forecasting, ODOT, Last updated November 2018.

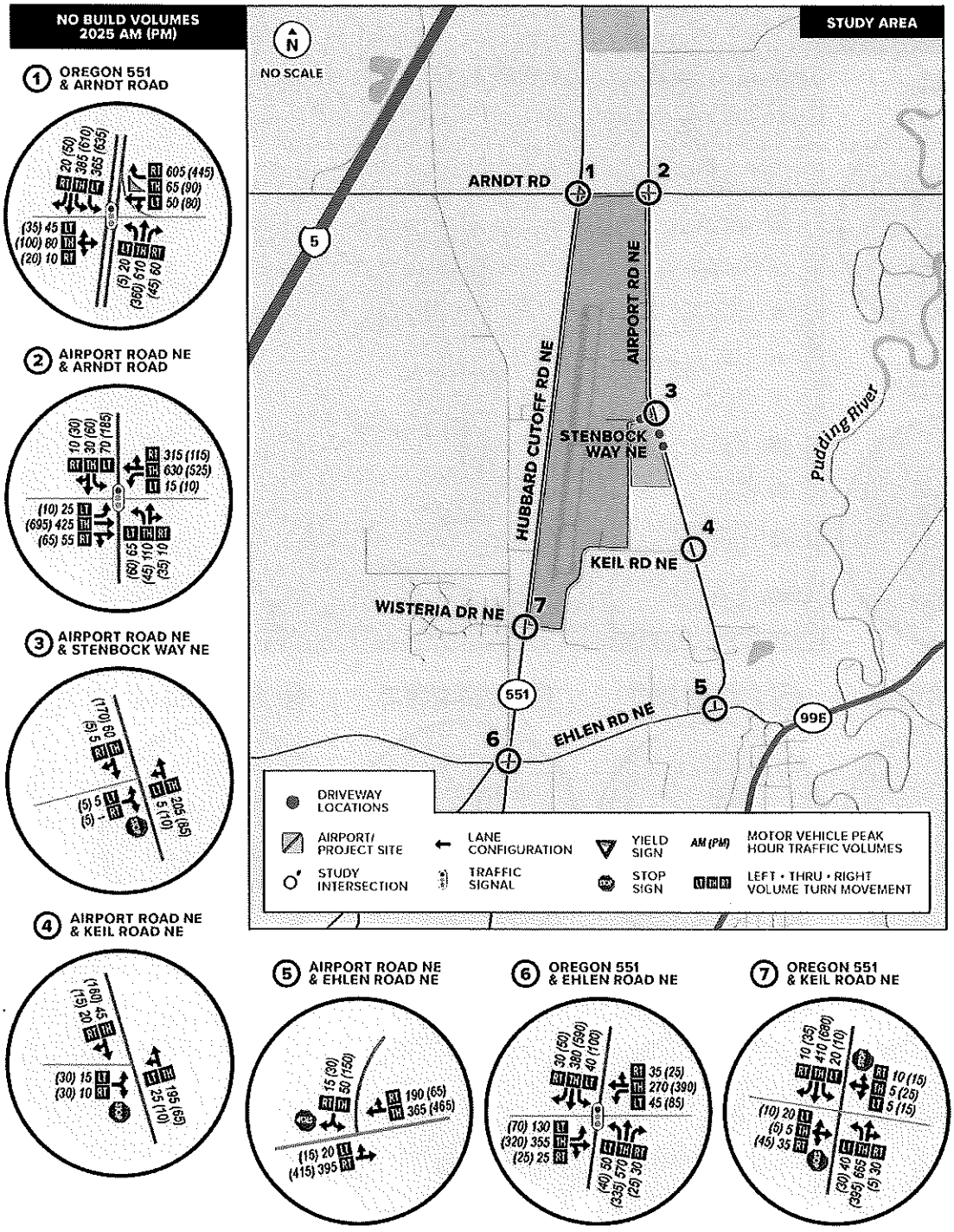

FIGURE 5: 2025 NO BUILD TRAFFIC VOLUMES

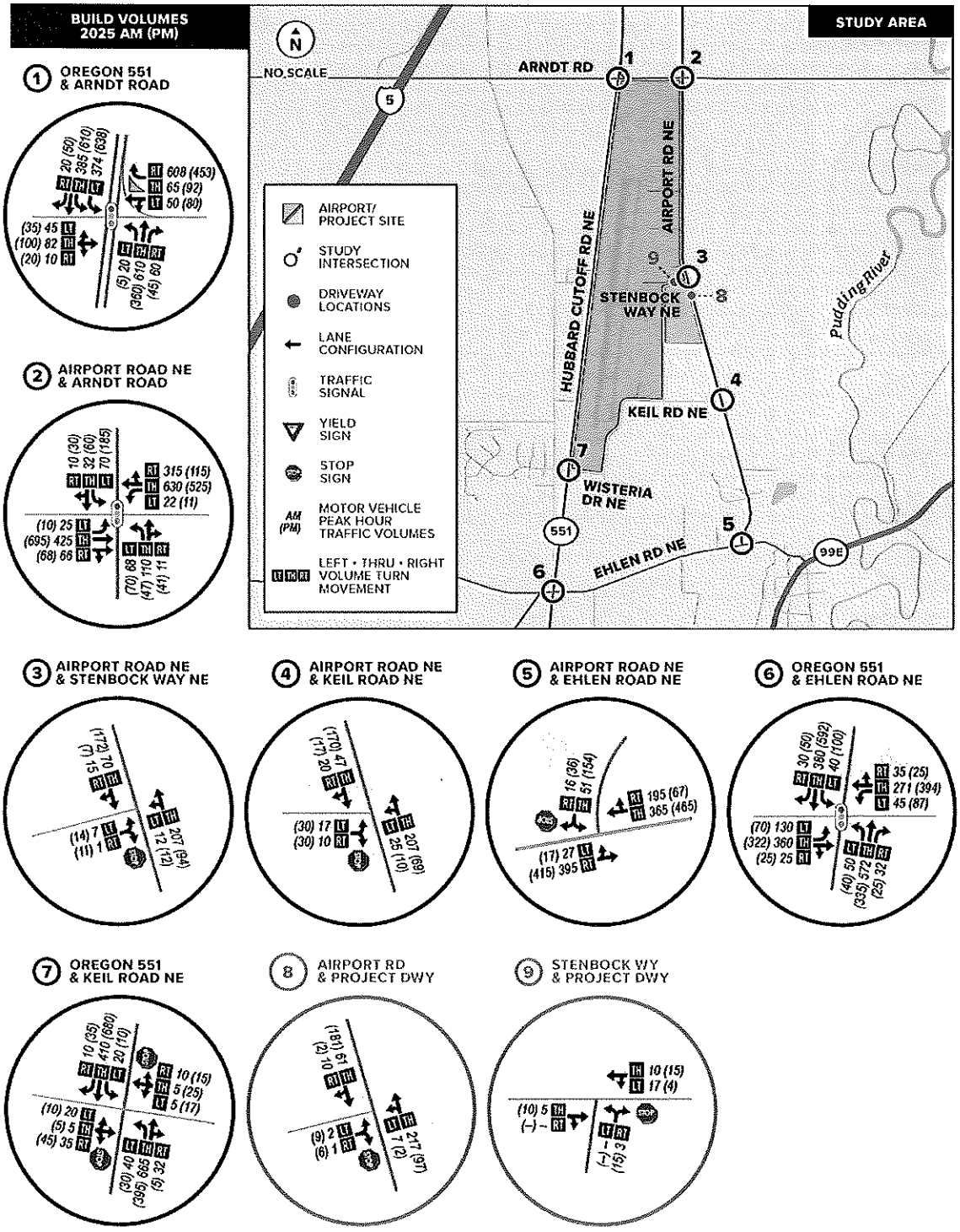

FIGURE 6: 2025 BUILD TRAFFIC VOLUMES

It is anticipated that the proposed development will be completed in 2025. Table 7 lists the 2025 No Build intersection operations and Table 8 lists the 2025 Build intersection operations. As shown, by 2025, all three signalized intersections will exceed the v/c mobility target in the No Build scenario. Additionally, the Airport Road / Ehlen Road intersection is projected to operate at LOS F, exceeding the Marion County LOS target. With the proposed development, the v/c at the three signals are projected to see no increase or a minimal increase in v/c ratio. At the Airport Road / Ehlen Road intersection, the LOS remains unchanged (LOS F on the minor street approaches). Mitigation measures are discussed in the *Mitigation Strategies* section.

TABLE 7: 2025 NO BUILD INTERSECTION OPERATIONS

INTERSECTION	JURIS-DICTION	MOBILITY TARGET/ OPERATING STANDARD	AM PEAK HOUR			PM PEAK HOUR		
			V/C	DELAY	LOS	V/C	DELAY	LOS
SIGNALIZED								
AIRPORT ROAD/ ARNDT ROAD	Marion County	0.85 v/c and LOS D	**0.95**	50.5	D	0.69	20.5	C
OR-551/ ARNDT ROAD	ODOT	0.70 v/c	**0.73**	23.7	C	0.66	21.9	C
OR-551/ EHLEN ROAD	ODOT	0.70 v/c	**0.79**	40.3	D	**0.83**	46.3	D
TWO-WAY STOP-CONTROLLED								
AIRPORT ROAD/ KEIL ROAD	Marion County	LOS E	0.04 EB	10.2	A/B	0.11 EB	10.6	A/B
AIRPORT ROAD/ EHLEN ROAD	Marion County	LOS E	0.26 SB	22.2	A/C	0.80 SB	58.2	**A/F**
OR-551/ KEIL ROAD	ODOT	0.70 v/c	0.33 EB	30.9	A/D	0.49 WB	55.0	A/F
AIRPORT ROAD/ STENBOCK WAY	Marion County	LOS E	0.01 EB	10.4	A/B	0.02 EB	10.4	A/B

Signalized Intersections:
v/c = Volume-to-Capacity Ratio of Intersection
Delay = Average Stopped Delay per Vehicle (sec)
LOS = Level of Service of Intersection

Two-Way Stop-Controlled Intersections:
v/c = Volume-to-Capacity Ratio of Worst Movement
Delay = Critical Movement Approach Delay (sec)
LOS = Level of Service of Major Street/Minor Street

Bold/Highlighted: Intersection fails to meet operating standards/mobility targets.

TABLE 8: 2025 BUILD INTERSECTION OPERATIONS

INTERSECTION	JURIS-DICTION	MOBILITY TARGET/ OPERATING STANDARD	AM PEAK HOUR [A]			PM PEAK HOUR [A]		
			V/C	DELAY	LOS	V/C	DELAY	LOS
SIGNALIZED								
AIRPORT ROAD/ ARNDT ROAD	Marion County	0.85 v/c and LOS D	**0.95 (+0.00)**	50.4 (-0.1)	D (-)	0.70 (+0.01)	21.3 (+2.9)	C (-)
OR-551/ ARNDT ROAD	ODOT	0.70 v/c	**0.74 (+0.01)**	24.1 (+0.4)	C (-)	0.66 (+0.00)	22.0 (+0.1)	C (-)
OR-551/ EHLEN ROAD	ODOT	0.70 v/c	**0.79 (+0.00)**	40.8 (+0.5)	D (-)	**0.83 (+0.00)**	47.1 (+0.8)	D (-)
TWO-WAY STOP-CONTROLLED								
AIRPORT ROAD/ KEIL ROAD	Marion County	LOS E	0.04 EB (+0.00)	10.4 (+0.2)	A/B (-/-)	0.11 EB (+0.00)	10.8 (+0.2)	A/B (-/-)
AIRPORT ROAD/ EHLEN ROAD	Marion County	LOS E	0.28 SB (+0.02)	23.1 (+0.9)	A/C (-/-)	0.85 SB (+0.05)	65.8 (+7.6)	**A/F** (-/-)
OR-551/ KEIL ROAD	ODOT	0.70 v/c	0.33 EB (+0.00)	31.3 (+0.4)	A/D (-/-)	0.52 WB (+0.03)	57.9 (+2.9)	A/F (-/-)
AIRPORT ROAD/ STENBOCK WAY	Marion County	LOS E	0.01 EB (+0.00)	10.5 (+0.1)	A/B (-/-)	0.05 EB (+0.03)	10.8 (+0.4)	A/B (-/-

Signalized Intersections:
v/c = Volume-to-Capacity Ratio of Intersection
Delay = Average Stopped Delay per Vehicle (sec)
LOS = Level of Service of Intersection

Two-Way Stop-Controlled Intersections:
v/c = Volume-to-Capacity Ratio of Worst Movement
Delay = Critical Movement Approach Delay (sec)
LOS = Level of Service of Major Street/Minor Street

Bold/Highlighted: Intersection fails to meet operating standards/mobility targets.

A. The number in parentheses represents the difference from No Build.

SHORT-TERM (2030) ANALYSIS

Figure 7 and Figure 8 show the expected traffic volumes for the study area for the Short-Term 2030 No Build and Build (with proposed development).

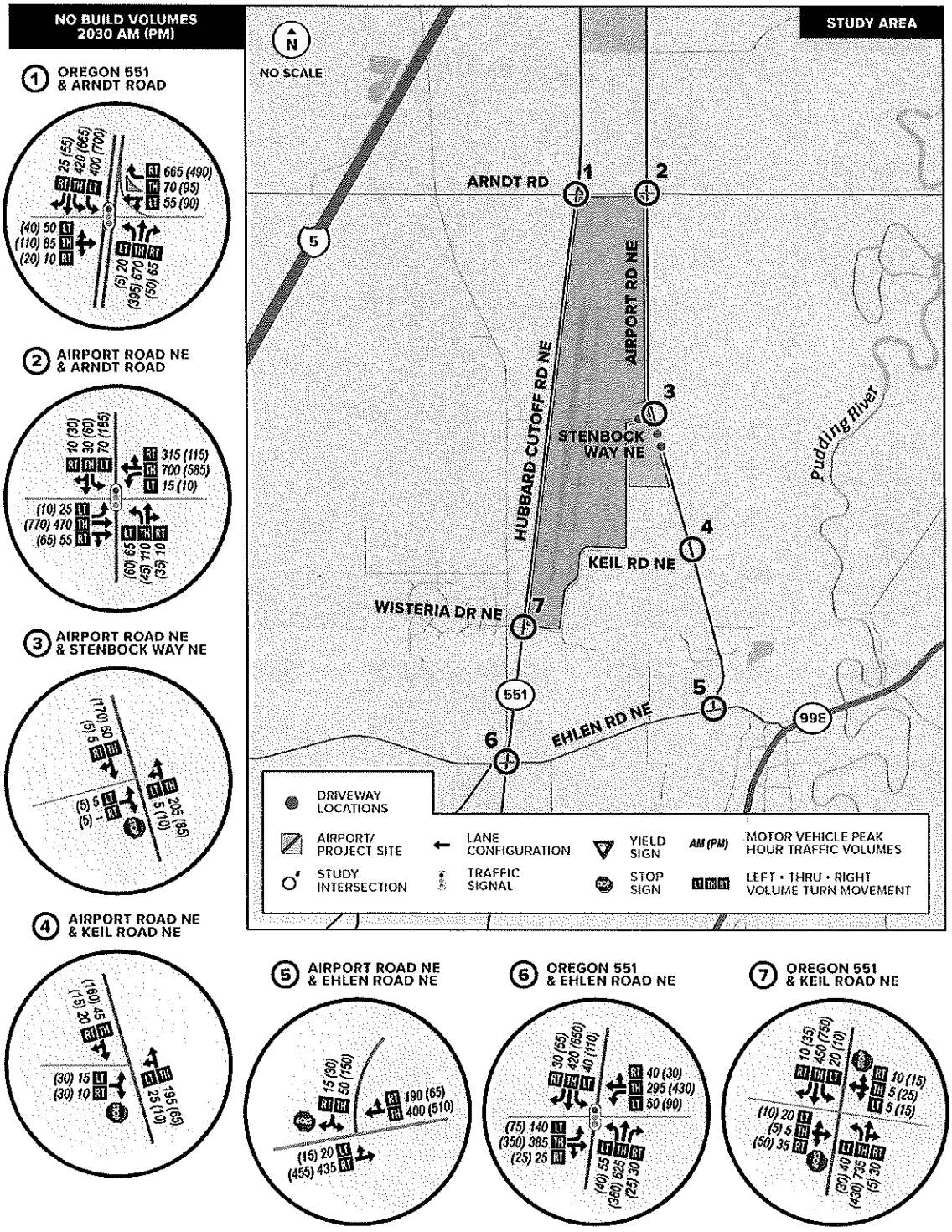

FIGURE 7: 2030 NO BUILD TRAFFIC VOLUMES

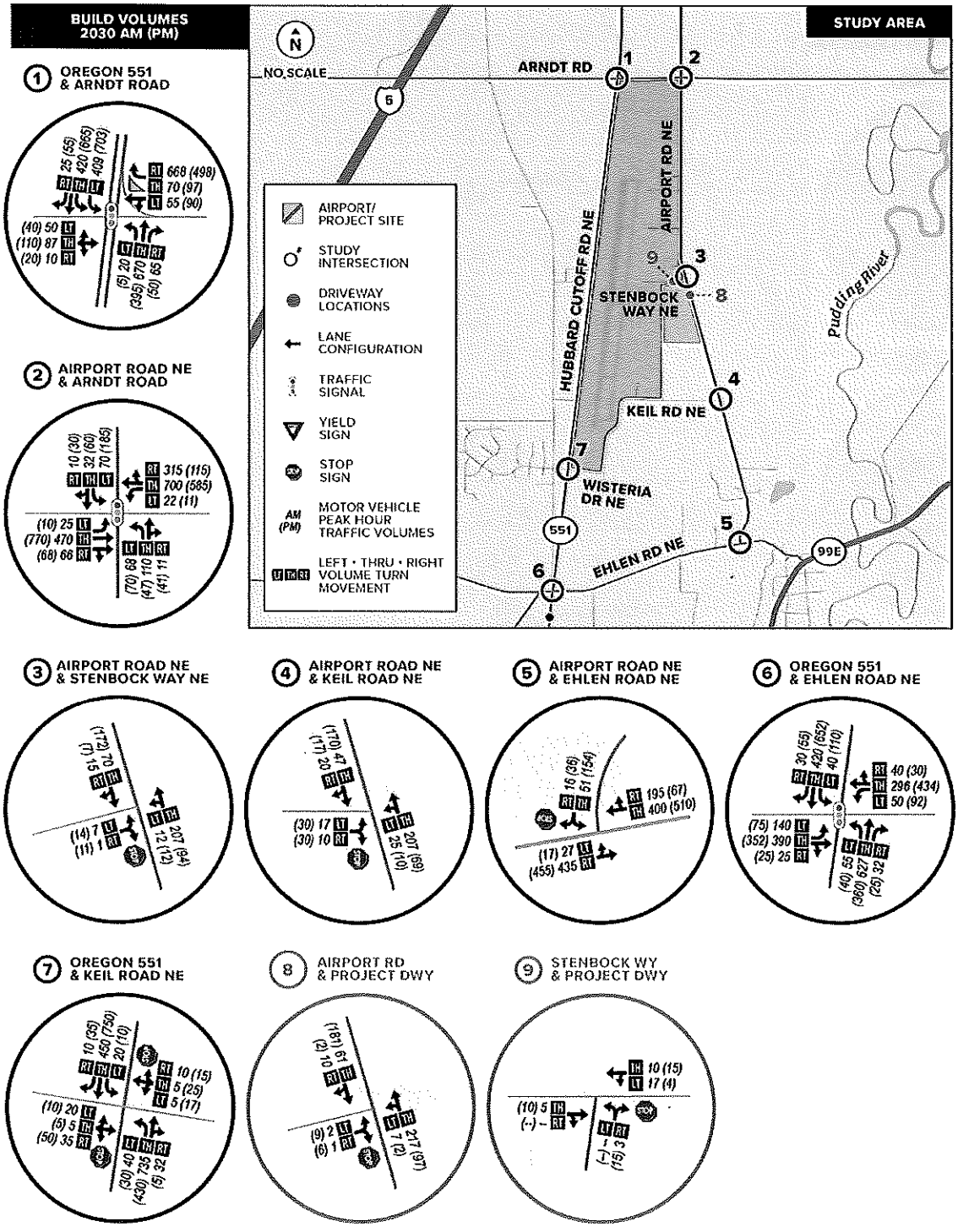

FIGURE 8: 2030 BUILD TRAFFIC VOLUMES

Table 9 lists the 2030 No Build intersection operations and Table 10 lists the 2030 Build intersection operations. As in 2025, the three signalized intersection and the intersection of Airport Road/Ehlen Road will exceed the applicable operating standards/mobility targets in both the No Build and Build scenarios in 2030. The additional traffic generated by the proposed project will increase the v/c by 0.01 or less at all signalized intersections, and the LOS at the Airport Road/Ehlen Road intersection will remain unchanged at LOS F. Mitigation measures that are proportional to the level of development being proposed will be required by both Marion County and ODOT, as discussed in the *Mitigation Strategies* section.

TABLE 9: 2030 NO BUILD INTERSECTION OPERATIONS

INTERSECTION	JURIS-DICTION	MOBILITY TARGET/ OPERATING STANDARD	AM PEAK HOUR			PM PEAK HOUR		
			V/C	DELAY	LOS	V/C	DELAY	LOS
SIGNALIZED								
AIRPORT ROAD/ ARNDT ROAD	Marion County	0.85 v/c and LOS D	**1.00**	**65.7**	**E**	0.73	21.5	C
OR-551/ ARNDT ROAD	ODOT	0.70 v/c	**0.81**	27.6	C	**0.72**	27.6	C
OR-551/ EHLEN ROAD	ODOT	0.70 v/c	**0.86**	48.8	D	**0.91**	59.5	E
TWO-WAY STOP-CONTROLLED								
AIRPORT ROAD/ KEIL ROAD	Marion County	LOS E	0.04 EB	10.2	A/B	0.11 EB	10.6	A/B
AIRPORT ROAD/ EHLEN ROAD	Marion County	LOS E	0.29 SB	25.1	A/D	0.92 SB	85.1	**A/F**
OR-551/ KEIL ROAD	ODOT	0.70 v/c	0.40 EB	39.0	A/E	0.61 WB	79.5	B/F
AIRPORT ROAD/ STENBOCK WAY	Marion County	LOS E	0.01 EB	10.4	A/B	0.02 EB	10.4	A/B

Signalized Intersections:
v/c = Volume-to-Capacity Ratio of Intersection
Delay = Average Stopped Delay per Vehicle (sec)
LOS = Level of Service of Intersection

Two-Way Stop-Controlled Intersections:
v/c = Volume-to-Capacity Ratio of Worst Movement
Delay = Critical Movement Approach Delay (sec)
LOS = Level of Service of Major Street/Minor Street

Bold/Highlighted: Intersection fails to meet operating standards/mobility targets.

TABLE 10: 2030 BUILD INTERSECTION OPERATIONS

INTERSECTION	JURIS-DICTION	MOBILITY TARGET/ OPERATING STANDARD	AM PEAK HOUR [A]			PM PEAK HOUR [A]		
			V/C	DELAY	LOS	V/C	DELAY	LOS
SIGNALIZED								
AIRPORT ROAD/ ARNDT ROAD	Marion County	0.85 v/c and LOS D	**1.00 (+0.00)**	**65.4 (-0.3)**	**E (-)**	0.74 (+0.01)	22.2 (+0.7)	C (-)
OR-551/ ARNDT ROAD	ODOT	0.70 v/c	**0.82 (+0.01)**	28.2 (+0.6)	C (-)	**0.72 (+0.00)**	27.8 (+0.2)	C (-)
OR-551/ EHLEN ROAD	ODOT	0.70 v/c	**0.86 (+0.00)**	49.3 (+0.5)	D (-)	**0.91 (+0.00)**	60.7 (+1.2)	E (-)
TWO-WAY STOP-CONTROLLED								
AIRPORT ROAD/ KEIL ROAD	Marion County	LOS E	0.04 EB (+0.00)	10.4 (+0.2)	A/B (-/-)	0.11 EB (+0.00)	10.8 (+0.2)	A/B (-/-
AIRPORT ROAD/ EHLEN ROAD	Marion County	LOS E	0.31 SB (+0.02)	26.3 (+1.2)	A/D (-/-)	0.97 SB (+0.05)	96.9 (+11.8)	A/**F** (-/-)
OR-551/ KEIL ROAD	ODOT	0.70 v/c	0.40 EB (+0.00)	39.4 (+0.4)	B/E (A/-)	0.64 WB (+0.03)	85.4 (+5.9)	B/F (-/-)
AIRPORT ROAD/ STENBOCK WAY	Marion County	LOS E	0.01 EB (+0.00)	10.5 (+0.1)	A/B (-/-)	0.05 EB (+0.03)	10.8 (+0.4)	A/B (-/-)

Signalized Intersections:
v/c = Volume-to-Capacity Ratio of Intersection
Delay = Average Stopped Delay per Vehicle (sec)
LOS = Level of Service of Intersection

Two-Way Stop-Controlled Intersections:
v/c = Volume-to-Capacity Ratio of Worst Movement
Delay = Critical Movement Approach Delay (sec)
LOS = Level of Service of Major Street/Minor Street

Bold/Highlighted: Intersection fails to meet operating standards/mobility targets.

A. The number in parentheses represents the difference from No Build.

MITIGATION STRATEGIES

As discussed in the traffic operations sections above, four of the study intersections do not meet the applicable Marion County operating standards or ODOT mobility targets under 2030 conditions (with and without the proposed project). The mitigation requirements vary by agency and are described below.

- **For Marion County intersections**, the developer is not required to construct the full mitigation to bring an intersection back to standards. Instead, the developer can contribute partial funds towards the mitigation, in proportion to the amount of traffic being generated.
- **For ODOT intersections**, the developer is required to construct the mitigation because ODOT has no mechanism for receiving or retaining private funds. However, the cost of the mitigation must be reasonable for the level of development. In cases where the cost of mitigating to standards is disproportionate to the development, construction of smaller-scale mitigations that provide an incremental operational or safety benefit may be accepted.

RECOMMENDED MITIGATIONS

AIRPORT ROAD/ARNDT ROAD (MARION COUNTY)

This intersection fails to meet the County's operating standard in the future 2030 No Build scenario. The proposed project does not degrade operations performance measures (the v/c ratio and LOS remain unchanged) with the addition of project-generated traffic. Therefore, the proposed project has no significant impact warranting mitigation.

TIS Mitigations to Standards: No mitigations are required.

AIRPORT ROAD/EHLEN ROAD (MARION COUNTY)

This intersection fails to meet the County's operating standard of LOS E in the future 2030 No Build scenarios. The proposed project does not degrade operations performance measures (the LOS remains unchanged).

However, because there is a transportation improvement project identified in the City of Aurora's Transportation System Plan for the intersection of Airport Road/Ehlen Road[9], the County requires that the developer pay a proportionate share of the cost to install the identified improvements in the City TSP. The proportionate share is determined based on number of trips that this development would add to the intersection divided by the total number of trips at the intersection. The proportionate share percentage for this development is 1.2%.[10] Based on planning level cost estimates, the estimated cost of the traffic signal and additional turn lanes is $2,000,000, making the developer's proportionate share cost $24,000.

[9] The transportation improvement project consists of signalizing the intersection and adding an eastbound left turn lane, a southbound left turn lane, and westbound right turn lane.

[10] The peak hour project-generated trips (14 trips) divided by the 2030 total vehicle volumes at the intersection (1,239 vehicles per hour).

TIS Mitigations to Standards: No transportation improvements are required to be constructed; however, the developer shall contribute a proportionate share of 1.2% of the total cost to install the identified TSP improvement project to Marion County.

ARNDT ROAD/OR-551 (ODOT)

This intersection does not meet ODOT's mobility target under Existing 2023 conditions. The proposed project has a very minimal impact to the intersection, resulting in a maximum increase of 0.01 v/c ratio in 2030.

Calculated values for v/c ratios that are within 0.03 of the adopted target are considered to comply with the target, as reflected in the Oregon Highway Plan (OHP), Action 1F.5 regarding mobility targets and best traffic engineering practices. The reason is that transportation engineering is not an exact science and necessarily requires making educated assumptions that introduce a level of uncertainty to the analysis results and findings. Assumptions that result in v/c ratio within 0.03 of the target is within the well-understood margin of error and so are considered to demonstrate compliance with the target. Therefore, the proposed project has no significant impact warranting mitigation.

TIS Mitigations to Standards: No mitigations are required.

EHLEN ROAD/OR-551 (ODOT)

This intersection fails to meet ODOT's mobility target in the future 2030 No Build scenario. The proposed project does not degrade operations performance measures (the v/c ratio remains unchanged) with the addition of project-generated traffic. Therefore, the proposed project has no significant impact warranting mitigation.

TIS Mitigations: No mitigations are required.

SITE PLAN REVIEW

The site plan includes approximately 102,916 square feet of proposed vertiport-heliport storage and hangar space and 101,036 square feet of proposed vertiport-heliport related maintenance shop and supporting office space. The site plan also includes 97 proposed parking spaces. The site plan shows sufficient aisle width for parking maneuvers and a sufficient number of access points for emergency vehicle access.

PROJECT FRONTAGE

Frontage improvements along Airport Road will be required to bring the roadway to current Marion County design standards for Rural Major Collectors. The standard for Rural Major Collectors includes a minimum paved width of 22 feet, 5-foot gravel shoulders, and a minimum right-of-way width of 60 feet.

SITE ACCESSES

The site will be accessed via one proposed driveway access along Airport Road and via Stenbock Way NE (an existing private road). The spacing between the proposed driveway on Airport Road and the nearest intersection or driveway is approximately 570 feet, which meets the Marion County access spacing standards for major collectors.[11] Based on preliminary observations, there are no sight distance restrictions at the existing driveway or study intersections.[12] However, prior to occupancy, sight distance at any existing access points will need to be verified, documented, and stamped by a registered professional Civil or Traffic Engineer licensed in the State of Oregon.

Table 11 below shows the traffic operations at the proposed site accesses for Opening Year (2025) and the Short-Term (2030) Build scenarios. It was assumed that 50 percent of the project trips would use site access on Stenbock Way and the remaining 50 percent would use the proposed driveway on Airport Road. As shown, the proposed driveways meet the Marion County operating standard where applicable.

TABLE 11: BUILD DRIVEWAY OPERATIONS

INTERSECTION	JURIS-DICTION	MOBILITY TARGET/ OPERATING STANDARD	AM PEAK HOUR			PM PEAK HOUR		
			V/C	DELAY	LOS	V/C	DELAY	LOS
OPENING YEAR (2025)								
AIRPORT ROAD / PROJECT DWY	Marion County	LOS E	0.01 EB	9.9	A/A	0.03 EB	10.7	A/B
STENBOCK WAY / PROJECT DWY	Private	-	0.00 NB	8.4	A/A	0.02 NB	10.5	A/A
SHORT-TERM (2030)								
AIRPORT ROAD / PROJECT DWY	Marion County	LOS E	0.01 EB	9.9	A/A	0.03 EB	10.4	A/B
STENBOCK WAY / PROJECT DWY	Private	-	0.00 NB	8.4	A/A	0.02 NB	8.5	A/A

Signalized Intersections:
v/c = Volume-to-Capacity Ratio of Intersection
Delay = Average Stopped Delay per Vehicle (sec)
LOS = Level of Service of Intersection

Two-Way Stop-Controlled Intersections:
v/c = Volume-to-Capacity Ratio of Worst Movement
Delay = Critical Movement Approach Delay (sec)
LOS = Level of Service of Major Street/Minor Street

TURN LANE WARRANT ANALYSIS

Turn lane warrant analyses were performed for the proposed site access points along Airport Road using the criteria provided in the ODOT Analysis Procedures Manual[13] for left turn and right turn

[11] *Marion County Rural Transportation System Plan, 2005*. Table 10-1. Access spacing requirements between minor intersections or private access is 300 feet on major collector roadways.

[12] Preliminary sight distance evaluations were completed on August 2, 2017.

[13] Chapter 12 Unsignalized Intersection Analysis, Analysis Procedures Manual, ODOT, 2023.

lanes. It was assumed that the vehicles turning into the project site would be split 50 percent to the Stenbock Way driveway and the remaining 50 percent would use the proposed driveway on Airport Road. Northbound left turn lanes were not warranted at the proposed site access on Airport Road or at Stenbock Way. Right turn lanes were also not warranted at the Stenbock Way intersection or the proposed site access. The results and supporting documentation can be found in the appendix.

ON-SITE VEHICLE PARKING

The proposed project is to comply with Marion County code for the number of vehicular parking stalls that are provided on site[14]. The County code states that the site is to provide one parking stall for every 5,000 square feet for industrial uses and one parking stall for every 300 square feet for office uses. Using the same land use breakdown as was used for the trip generation, this results a required 95 parking stalls for the site.

TABLE 12: BUILD DRIVEWAY OPERATIONS

BUILDING	LAND USE (PER PARKING CODE)	PARKING STALL REQUIREMENT	SIZE (SQUARE FEET)	REQUIRED NUMBER OF PARKING STALLS
HANGAR V	Industrial	1 stall for every 5,000 square feet	38,916	8
HANGAR W	Industrial	1 stall for every 5,000 square feet	76,160	18
HANGAR X	Industrial	1 stall for every 5,000 square feet	57,560	14
VERTIPORT HEADQUARTERS	Industrial	1 stall for every 5,000 square feet	15,658	3
	Office	1 stall for every 300 square feet	15,658	52
		TOTAL	**203, 952**	**95**

For comparison, the parking rate at the adjacent airport businesses was calculated using the building footprints of the SECAP, H.D., and Lynx Jet Center buildings near Yellow Gate Lane and Keil Road. Combined, these buildings have a floor area of 564,793 square feet and provide a combined total of 392 parking spaces. This results in a parking rate of 1 parking space per 1,441 square feet of building. If this parking rate is applied to the proposed vertiport-heliport site, the resulting number of parking stalls would be 97 parking spaces.

The proposed site plan shows 97 parking spaces. This meets Marion County vehicle parking requirements and the comparative parking rate for similar land uses nearby.

Refer to the appendix for detailed vehicle parking calculations.

[14] City of Aumsville Development Regulations – Vehicle and bicycle parking space regulations – Pg 87

CONDITIONAL USE EVALUATION

The proposed project is a conditional use under the current Marion County zoning of Exclusive Farm Use (EFU). Because the proposed project is a conditionally permitted land use under the EFU zoning, the site must show that it "will not force a significant change, or significantly increase the cost of, accepted farm or forest practices on surrounding lands devoted to farm or forest use."[15] To evaluate this criterion from a transportation perspective, a calculation of the added vehicle travel delay for key agricultural routes through the study area due to the project is provided below.

Two hypothetical routes for agricultural vehicles in the study area were identified to estimate any added vehicle delays that may be incurred by farmers engaged in accepted farming practices on surrounding lands as the result of the proposed project. The two hypothetical routes are shown in Figure 9.

The two hypothetical travel routes are between Smith Gardens on the west side of OR-551 and agricultural land just east of Airport Road. One route travels between the two sites via Arndt Road to the north and the other route travels via Keil Road to the south. The length of the routes and estimated increase in vehicle delays on both routes are shown in the following table.

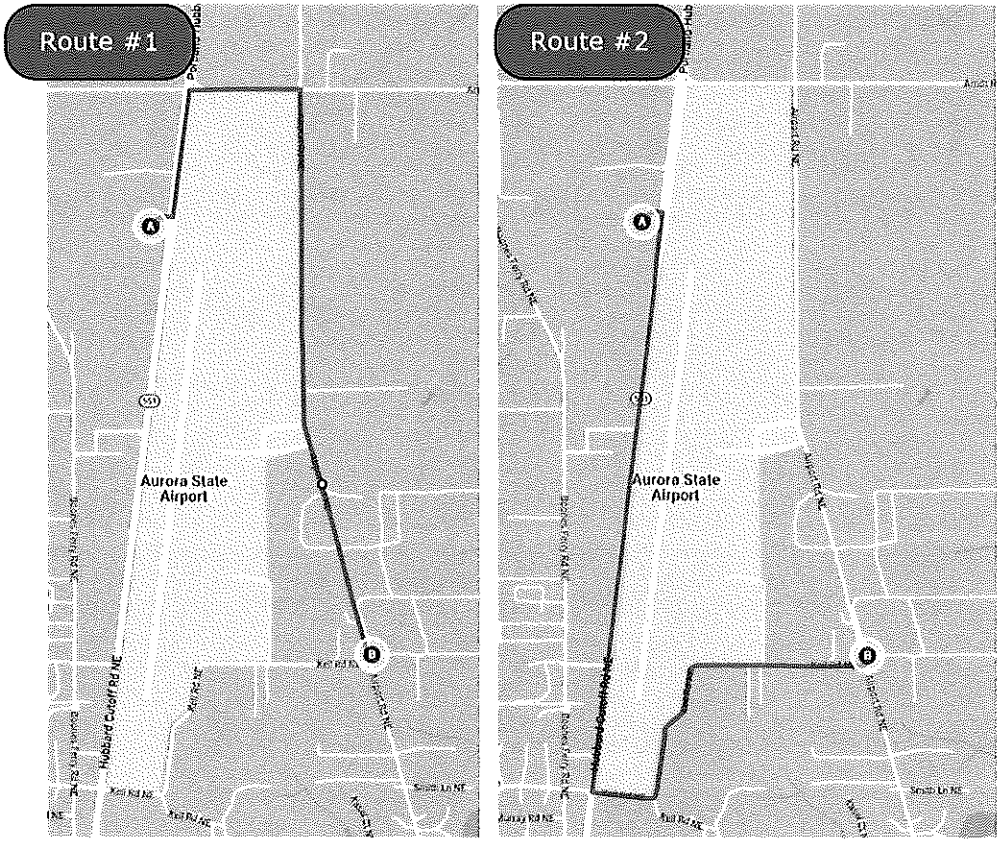

FIGURE 9: HYPOTHETICAL AGRICULTURAL ROUTES IN STUDY AREA

[15] Section 17.136.060, Marion County Zoning Code.

As shown, the added vehicle delay is minimal (<5 seconds or 2% increase). The additional traffic generated by the proposed conditional use would not impart a significant impact on the travel times experienced by agricultural vehicles in the vicinity of the project site, satisfying the approval criteria in the zoning code.

TABLE 13: ADDED VEHICLE DELAYS ON KEY AGRICULTURAL ROUTES

ROUTE	LENGTH (MILES)	APPROXIMATE TRAVEL TIME	VEHICLE DELAY ADDED TO ROUTE	
			AM PEAK HOUR	PM PEAK HOUR
Route #1 – via Arndt Road	1.8 miles	4-5 minutes	< 5 secs	< 5 secs
Route #2 – via Keil Road	2.1 miles	4-5 minutes	< 5 secs	< 5 secs

SUMMARY

The proposed North Marion County Vertiport will develop a vertiport-heliport transportation facility (a conditional use in EFU zones) consisting of vertiport-heliport tie downs, hangar space, parts storage, maintenance shops, and supporting offices, on a currently vacant parcel adjacent to the Aurora Airport in Marion County, Oregon. This traffic impact study evaluated the potential impacts of this project on the surrounding transportation network.

NO-BUILD CONDITIONS

- Four of the study intersections fail to meet applicable operating standards or mobility targets in the No-Build condition, including OR-551/Arndt Road, Airport Road/Arndt Road, OR-551/Ehlen Road, and Airport Road/Ehlen Road.
- Two study intersections (Airport Road/Arndt Road and OR-551/Arndt Road) have existing safety deficiencies based on historical safety performance.

PROJECT IMPACTS

- The proposed vertiport is expected to generate 316 average daily trips, 38(32 in, 6 out) AM peak hour trips and 38 (8 in, 30 out) PM peak hour trips.
- The same four study intersections that fail to meet applicable operating standards or mobility targets under No-Build conditions will continue to fail under Build conditions. However, the addition of project-generated trips will not degrade operations according to the performance standards. Therefore, the project has no significant impact and no mitigations are required with the exception of Airport Road/Ehlen Road.
- Because the intersection of Airport Road/Ehlen Road is identified in the City of Aurora Transportation System Plan as failing under future conditions, there is a transportation improvement project identified for the intersection. Marion County requires that the developer pay their proportionate share towards the cost of the identified TSP improvement project.
- The proposed development is not expected to cause a significant adverse impact on the surrounding agricultural operations based on an assessment of travel times in the vicinity of the project site. Hypothetical routes for agricultural vehicles are expected to see an increase in travel time of less than five seconds during peak hours.

RECOMMENDED MITIGATIONS

- **Airport Road Frontage Improvements:** Half-street frontage improvements along Airport Road are required to meet current design standards for rural major collector roadways. The standard for Rural Major Collectors includes a minimum paved width of 22 feet, 5-foot gravel shoulders, and a minimum right-of-way width of 60 feet.
- **Proportionate Share:** The developer shall contribute a proportionate share of 1.2% of the total cost to install the identified TSP improvement project at Airport Road/Ehlen Road to Marion County. Based on planning-level cost estimates, the cost of the identified TSP improvement project is $2,000,000, making the developer's proportionate share cost $24,000.

TRANSPORTATION PLANNING RULE

We are advised that it is legally unclear whether the provisions of the Transportation Planning Rule (TPR) apply, apart from those expressly specified as applicable per OAR 660-012-0070. Because of this uncertainty, we are asked to apply other potentially applicable provisions of the TPR as a precaution only, without conceding they apply. Accordingly, we address the provisions of the TPR other than OAR 660-012-0070 as a precaution only, without taking any position about whether they apply here.

The requirements of Oregon Administrative Rule (OAR) 660-012-0060, the Transportation Planning Rule (TPR), must be met for proposed comprehensive plan zoning amendments. The intent of the TPR (OAR 660-12-0060) is to ensure that future land use and traffic growth is consistent with transportation system planning and does not create a significant effect on the surrounding transportation system beyond currently allowed uses.

The definition of a "significant effect" varies by jurisdiction and no such definition is provided in the Marion County code currently. According to the Oregon Highway Plan (OHP)[16], a net increase of **less than 400 daily trips** does not qualify as a significant effect. While the OHP is not applicable to County roads, it provides a reasonable estimate of a significant effect for TPR analysis purposes.

Based on the trip generation estimate presented in Table 6, the trip generation for the proposed conditional use is **316 daily trips**. Therefore, under this proposed development, it can be concluded that the comprehensive plan map amendment would not have a significant effect on the transportation system and therefore, this conditional use complies with the TPR requirements.

[16] 1999 Oregon Highway Plan, Action 1F.5, Pages 80-81.

APPENDIX

DKS

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CONTENTS

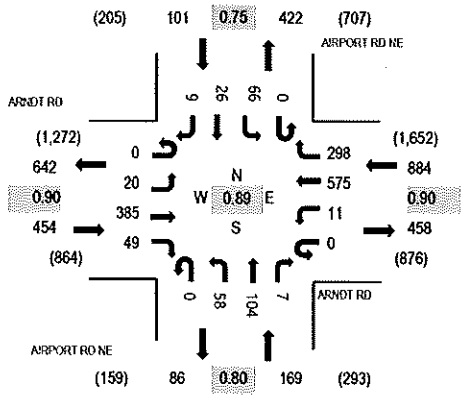
SECTION 1. TRAFFIC COUNT DATA

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

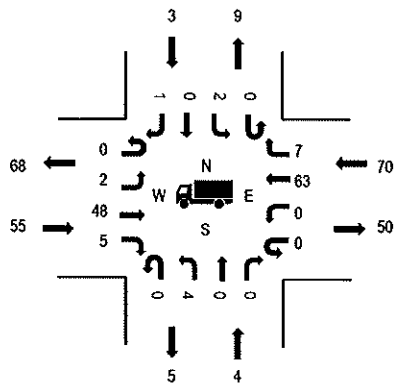
Location: 1 AIRPORT RD NE & ARNDT RD AM
Date: Tuesday, September 19, 2023
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:25 AM - 07:40 AM

Peak Hour

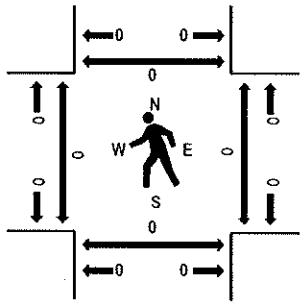
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	12.1%	0.90
WB	7.9%	0.90
NB	2.4%	0.80
SB	3.0%	0.75
All	8.2%	0.89

Traffic Counts - Motorized Vehicles

Interval Start Time	ARNDT RD Eastbound				ARNDT RD Westbound				AIRPORT RD NE Northbound				AIRPORT RD NE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	1	28	3	0	1	52	20	0	8	6	0	0	2	1	1	123	1,608
7:05 AM	0	1	27	1	0	0	67	22	0	2	5	1	0	3	4	0	133	1,591
7:10 AM	0	1	23	1	0	1	41	25	0	9	11	0	0	5	1	0	118	1,593
7:15 AM	0	0	28	2	0	3	42	26	0	1	10	2	0	3	2	0	119	1,598
7:20 AM	0	2	44	6	0	0	59	27	0	3	15	2	0	1	1	1	161	1,596
7:25 AM	0	1	36	7	0	2	59	24	0	6	11	0	0	12	3	1	163	1,561
7:30 AM	0	3	18	0	0	2	53	18	0	6	9	0	0	7	5	2	131	1,519
7:35 AM	0	1	48	5	0	0	56	37	0	4	9	0	0	7	1	1	169	1,501
7:40 AM	0	2	38	4	0	1	41	36	0	7	4	0	0	4	2	0	139	1,454
7:45 AM	0	4	23	6	0	1	42	32	0	4	10	0	0	6	4	2	134	1,452
7:50 AM	0	1	41	2	0	0	34	19	0	1	5	0	0	8	2	0	113	1,432
7:55 AM	0	3	31	4	0	0	38	12	0	7	9	2	0	8	0	1	115	1,414
8:00 AM	0	4	28	2	0	1	37	20	0	0	2	1	0	9	1	1	106	1,406
8:05 AM	0	2	29	4	0	1	51	19	0	8	10	1	0	8	1	1	135	
8:10 AM	0	3	30	4	0	1	55	23	0	3	1	0	0	1	1	1	123	
8:15 AM	0	2	25	2	0	1	38	21	0	3	11	0	0	8	4	2	117	
8:20 AM	0	3	23	6	0	1	56	20	0	7	7	0	0	2	1	0	126	
8:25 AM	0	0	30	6	0	2	45	8	0	5	8	1	0	2	3	1	111	
8:30 AM	0	1	34	2	0	0	40	12	0	5	10	1	0	8	0	0	113	
8:35 AM	0	3	25	6	0	2	58	15	0	2	4	0	0	6	1	0	122	
8:40 AM	0	2	33	2	0	0	55	21	0	7	2	1	0	11	3	0	137	
8:45 AM	0	2	35	4	0	0	44	13	0	1	6	0	0	5	2	2	114	
8:50 AM	0	4	24	2	0	1	43	9	0	4	1	1	0	4	1	1	95	
8:55 AM	0	1	24	3	0	0	45	10	0	6	5	0	0	8	2	3	107	
Count Total	0	47	725	92	0	21	1,142	489	0	109	171	13	0	138	46	21	3,014	
Peak Hour	0	20	385	49	0	11	575	298	0	58	104	7	0	66	26	9	1,608	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	2	0	8	0	10	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	1	0	7	0	8	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	4	1	3	0	8	7:10 AM	0	0	0	1	1	7:10 AM	0	0	0	0	0
7:15 AM	5	0	7	0	12	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	6	0	2	0	8	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	6	0	11	2	19	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	4	2	6	1	13	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	10	0	3	0	13	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	7	0	4	0	11	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	6	1	6	0	13	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	3	0	7	0	10	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	1	0	6	0	7	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0
8:00 AM	5	0	10	2	17	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	1	1	4	0	6	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0
8:10 AM	3	0	7	1	11	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0
8:15 AM	3	0	1	3	7	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	5	0	6	0	11	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	2	0	7	1	10	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	5	1	5	1	12	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	6	0	13	1	20	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	7	2	4	1	14	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	10	0	5	0	15	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
8:50 AM	5	0	9	0	14	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	6	0	2	1	9	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	113	8	143	14	278	Count Total	0	0	0	1	1	Count Total	0	0	0	0	0
Peak Hour	55	4	70	3	132	Peak Hour	0	0	0	1	1	Peak Hour	0	0	0	0	0

ALL TRAFFIC DATA SERVICES
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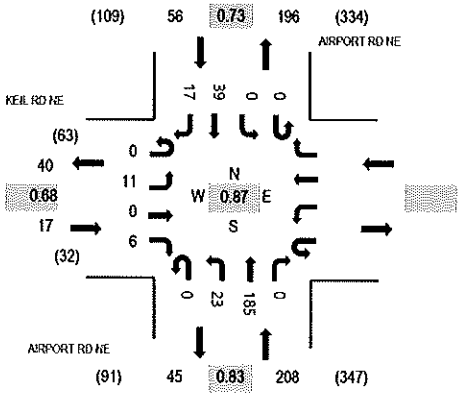
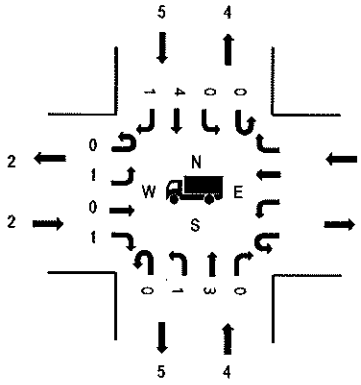
Location: 2 AIRPORT RD NE & KEIL RD NE AM
Date: Tuesday, September 19, 2023
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:25 AM - 07:40 AM

Peak Hour

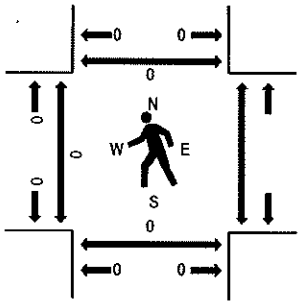
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	11.8%	0.68
WB		
NB	1.9%	0.83
SB	8.9%	0.73
All	3.9%	0.87

Traffic Counts - Motorized Vehicles

Interval Start Time	KEIL RD NE Eastbound				Westbound				AIRPORT RD NE Northbound				AIRPORT RD NE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	3	0	2					0	1	14	0	0	0	4	2	26	281
7:05 AM	0	1	0	0					0	1	16	0	0	0	4	3	25	280
7:10 AM	0	0	0	0					0	2	10	0	0	0	1	1	14	276
7:15 AM	0	0	0	0					0	4	25	0	0	0	2	1	32	271
7:20 AM	0	1	0	0					0	1	11	0	0	0	3	0	16	264
7:25 AM	0	1	0	0					0	1	21	0	0	0	5	2	30	270
7:30 AM	0	1	0	0					0	3	14	0	0	0	8	3	29	263
7:35 AM	0	1	0	2					0	3	13	0	0	0	2	1	22	250
7:40 AM	0	0	0	2					0	0	25	0	0	0	2	1	30	243
7:45 AM	0	0	0	0					0	2	9	0	0	0	4	1	16	224
7:50 AM	0	2	0	0					0	2	16	0	0	0	3	1	24	221
7:55 AM	0	1	0	0					0	3	11	0	0	0	1	1	17	210
8:00 AM	0	2	0	2					0	2	15	0	0	0	2	2	25	207
8:05 AM	0	1	0	1					0	0	13	0	0	0	4	2	21	
8:10 AM	0	0	0	1					0	1	5	0	0	0	1	1	9	
8:15 AM	0	1	0	0					0	1	16	0	0	0	5	2	25	
8:20 AM	0	0	0	0					0	1	14	0	0	0	6	1	22	
8:25 AM	0	1	0	0					0	1	9	0	0	0	2	0	13	
8:30 AM	0	2	0	0					0	3	19	0	0	0	2	0	26	
8:35 AM	0	1	0	0					0	0	10	0	0	0	4	0	15	
8:40 AM	0	1	0	0					0	2	4	0	0	0	4	0	11	
8:45 AM	0	0	0	0					0	0	9	0	0	0	3	1	13	
8:50 AM	0	2	0	0					0	0	7	0	0	0	3	1	13	
8:55 AM	0	0	0	0					0	1	6	0	0	0	6	1	14	
Count Total	0	22	0	10					0	35	312	0	0	0	81	28	488	
Peak Hour	0	11	0	6					0	23	185	0	0	0	39	17	281	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles EB	NB	WB	SB	Total	Interval Start Time	Bicycles on Roadway EB	NB	WB	SB	Total	Interval Start Time	Pedestrians/Bicycles on Crosswalk EB	NB	WB	SB	Total
7:00 AM	0	0		1	1	7:00 AM	0	0		0	0	7:00 AM	0	0		0	0
7:05 AM	0	0		0	0	7:05 AM	0	0		0	0	7:05 AM	0	0		0	0
7:10 AM	0	1		0	1	7:10 AM	0	0		0	0	7:10 AM	0	0		0	0
7:15 AM	0	0		1	1	7:15 AM	0	0		1	1	7:15 AM	0	0		0	0
7:20 AM	0	0		0	0	7:20 AM	0	0		0	0	7:20 AM	0	0		0	0
7:25 AM	0	1		2	3	7:25 AM	0	0		0	0	7:25 AM	0	0		0	0
7:30 AM	1	1		1	3	7:30 AM	0	0		0	0	7:30 AM	0	0		0	0
7:35 AM	1	0		0	1	7:35 AM	0	0		0	0	7:35 AM	0	0		0	0
7:40 AM	0	0		0	0	7:40 AM	0	0		0	0	7:40 AM	0	0		0	0
7:45 AM	0	0		0	0	7:45 AM	0	0		0	0	7:45 AM	0	0		0	0
7:50 AM	0	0		0	0	7:50 AM	0	0		0	0	7:50 AM	0	0		0	0
7:55 AM	0	1		0	1	7:55 AM	0	0		0	0	7:55 AM	0	0		0	0
8:00 AM	0	1		0	1	8:00 AM	0	0		0	0	8:00 AM	0	0		0	0
8:05 AM	0	0		1	1	8:05 AM	0	0		0	0	8:05 AM	0	0		0	0
8:10 AM	1	0		0	1	8:10 AM	0	0		0	0	8:10 AM	0	0		0	0
8:15 AM	0	1		0	1	8:15 AM	0	0		0	0	8:15 AM	0	0		0	0
8:20 AM	0	0		2	2	8:20 AM	0	0		0	0	8:20 AM	0	0		0	0
8:25 AM	0	2		0	2	8:25 AM	0	0		0	0	8:25 AM	1	0		0	1
8:30 AM	1	1		0	2	8:30 AM	0	0		0	0	8:30 AM	0	0		0	0
8:35 AM	0	0		0	0	8:35 AM	0	0		0	0	8:35 AM	0	0		0	0
8:40 AM	0	0		0	0	8:40 AM	0	0		0	0	8:40 AM	0	0		0	0
8:45 AM	0	0		0	0	8:45 AM	0	0		0	0	8:45 AM	0	0		0	0
8:50 AM	1	0		0	1	8:50 AM	0	0		0	0	8:50 AM	0	0		0	0
8:55 AM	0	0		1	1	8:55 AM	0	0		0	0	8:55 AM	0	0		0	0
Count Total	5	9		9	23	Count Total	0	0		1	1	Count Total	1	0		0	1
Peak Hour	2	4		5	11	Peak Hour	0	0		1	1	Peak Hour	0	0		0	0

ALL TRAFFIC DATA SERVICES
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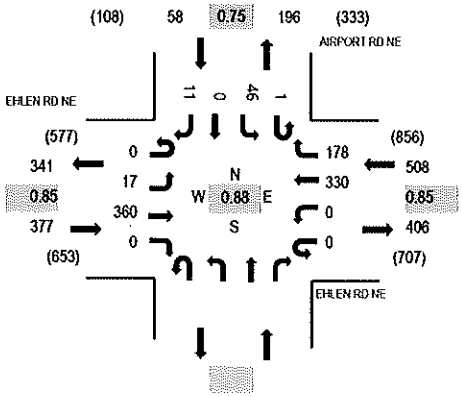
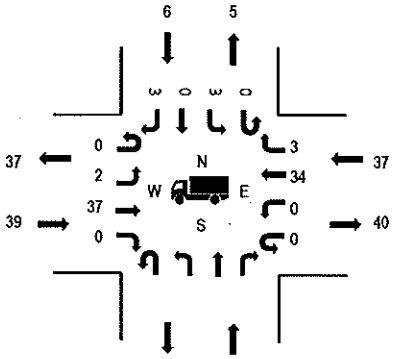
Location: 3 AIRPORT RD NE & EHLEN RD NE AM
Date: Tuesday, September 19, 2023
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:25 AM - 07:40 AM

Peak Hour

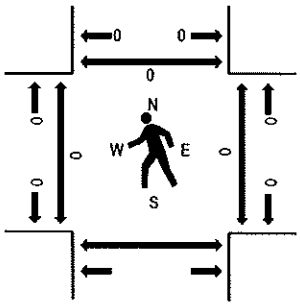
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	10.3%	0.85
WB	7.3%	0.85
NB		
SB	10.3%	0.75
All	8.7%	0.88

Traffic Counts - Motorized Vehicles

Interval Start Time	EHLEN RD NE Eastbound				EHLEN RD NE Westbound				Northbound				AIRPORT RD NE Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
7:00 AM	0	1	32	0	0	0	21	11					0	7	0	0	72	905
7:05 AM	0	0	21	0	0	0	19	23					0	4	0	0	67	922
7:10 AM	0	3	19	0	0	0	5	3					0	1	0	1	32	906
7:15 AM	0	0	32	0	0	0	41	26					0	3	0	1	103	943
7:20 AM	0	1	22	0	0	0	26	15					0	2	0	3	69	894
7:25 AM	0	4	36	0	0	0	26	14					0	3	0	1	86	880
7:30 AM	0	2	39	0	0	0	34	11					0	8	0	1	95	862
7:35 AM	0	1	26	0	0	0	35	19					0	5	0	1	87	820
7:40 AM	0	5	29	0	0	0	17	21					0	3	0	2	77	781
7:45 AM	0	0	33	0	0	0	30	8					0	6	0	0	77	780
7:50 AM	0	2	44	0	0	0	17	13					0	3	0	0	79	749
7:55 AM	0	0	32	0	0	0	15	12					0	2	0	0	61	720
8:00 AM	0	0	28	0	0	0	33	21					1	5	0	1	89	712
8:05 AM	0	1	14	0	0	0	23	8					0	4	0	1	51	
8:10 AM	0	1	25	0	0	0	31	10					0	2	0	0	69	
8:15 AM	0	1	19	0	0	0	18	12					0	4	0	0	54	
8:20 AM	0	1	15	0	0	0	16	16					0	5	0	2	55	
8:25 AM	0	4	33	0	0	0	14	14					0	2	0	1	68	
8:30 AM	0	1	10	0	0	0	28	11					0	2	0	1	53	
8:35 AM	0	0	23	0	0	0	16	6					0	2	0	1	48	
8:40 AM	0	4	25	0	0	0	33	8					0	6	0	0	76	
8:45 AM	0	0	20	0	0	0	22	3					0	0	0	1	46	
8:50 AM	0	0	25	0	0	0	13	7					0	4	0	1	50	
8:55 AM	0	1	18	0	0	0	22	7					0	4	0	1	53	
Count Total	0	33	620	0	0	0	557	299					1	87	0	20	1,617	
Peak Hour	0	17	360	0	0	0	330	178					1	46	0	11	943	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	6		3	1	10	7:00 AM	0		0	0	0	7:00 AM	0		0	0	0
7:05 AM	1		1	0	2	7:05 AM	0		0	0	0	7:05 AM	0		0	0	0
7:10 AM	3		2	0	5	7:10 AM	0		0	0	0	7:10 AM	0		0	0	0
7:15 AM	5		1	0	6	7:15 AM	0		0	0	0	7:15 AM	0		0	0	0
7:20 AM	2		4	0	6	7:20 AM	0		0	0	0	7:20 AM	0		0	0	0
7:25 AM	6		3	0	9	7:25 AM	0		0	0	0	7:25 AM	0		0	0	0
7:30 AM	3		1	2	6	7:30 AM	0		0	0	0	7:30 AM	0		0	0	0
7:35 AM	1		3	2	6	7:35 AM	0		0	0	0	7:35 AM	0		0	0	0
7:40 AM	2		1	0	3	7:40 AM	0		0	0	0	7:40 AM	0		0	0	0
7:45 AM	3		5	0	8	7:45 AM	0		0	0	0	7:45 AM	0		0	0	0
7:50 AM	5		3	0	8	7:50 AM	0		0	0	0	7:50 AM	0		0	0	0
7:55 AM	4		4	0	8	7:55 AM	0		0	0	0	7:55 AM	0		0	0	0
8:00 AM	2		3	0	5	8:00 AM	0		0	0	0	8:00 AM	0		0	0	0
8:05 AM	3		4	1	8	8:05 AM	0		0	0	0	8:05 AM	0		0	0	0
8:10 AM	3		5	1	9	8:10 AM	0		0	0	0	8:10 AM	0		0	0	0
8:15 AM	3		3	0	6	8:15 AM	0		0	0	0	8:15 AM	0		0	0	0
8:20 AM	2		3	2	7	8:20 AM	0		0	0	0	8:20 AM	0		0	0	0
8:25 AM	2		2	0	4	8:25 AM	0		0	0	0	8:25 AM	0		0	0	0
8:30 AM	1		3	0	4	8:30 AM	0		0	0	0	8:30 AM	0		0	0	0
8:35 AM	5		0	0	5	8:35 AM	0		0	0	0	8:35 AM	0		0	0	0
8:40 AM	5		4	0	9	8:40 AM	0		0	0	0	8:40 AM	0		0	0	0
8:45 AM	3		2	1	6	8:45 AM	0		0	0	0	8:45 AM	0		0	0	0
8:50 AM	3		1	0	4	8:50 AM	0		0	0	0	8:50 AM	0		0	0	0
8:55 AM	6		4	1	11	8:55 AM	0		0	0	0	8:55 AM	0		0	0	0
Count Total	79		65	11	155	Count Total	0		0	0	0	Count Total	0		0	0	0
Peak Hour	39		37	6	82	Peak Hour	0		0	0	0	Peak Hour	0		0	0	0

ALL TRAFFIC DATA SERVICES
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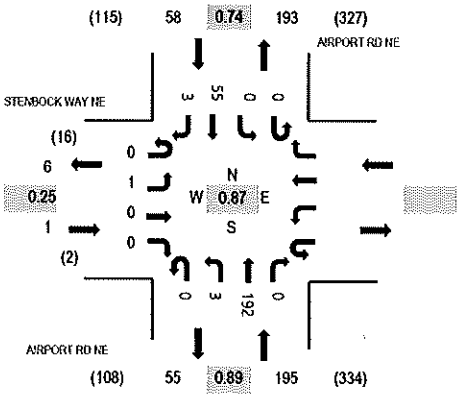
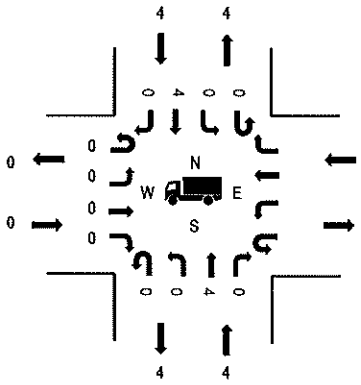
Location: 4 AIRPORT RD NE & STENBOCK WAY NE AM
Date: Tuesday, September 19, 2023
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:25 AM - 07:40 AM

Peak Hour

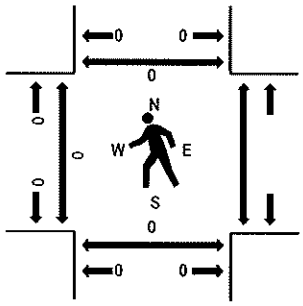
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.25
WB		
NB	2.1%	0.89
SB	6.9%	0.74
All	3.1%	0.87

Traffic Counts - Motorized Vehicles

Interval Start Time	STENBOCK WAY NE Eastbound U-Turn	Left	Thru	Right	Westbound U-Turn	Left	Thru	Right	AIRPORT RD NE Northbound U-Turn	Left	Thru	Right	AIRPORT RD NE Southbound U-Turn	Left	Thru	Right	Total	Rolling Hour
7:00 AM	0	0	0	0					0	0	16	0	0	0	7	0	23	254
7:05 AM	0	0	0	0					0	0	17	0	0	0	8	0	25	247
7:10 AM	0	0	0	0					0	0	11	0	0	0	0	0	11	245
7:15 AM	0	0	0	0					0	0	21	0	0	0	2	1	24	243
7:20 AM	0	1	0	0					0	0	13	0	0	0	3	0	17	240
7:25 AM	0	0	0	0					0	0	21	0	0	0	9	0	30	245
7:30 AM	0	0	0	0					0	0	16	0	0	0	8	0	24	231
7:35 AM	0	0	0	0					0	0	15	0	0	0	4	0	19	230
7:40 AM	0	0	0	0					0	3	16	0	0	0	4	0	23	229
7:45 AM	0	0	0	0					0	0	17	0	0	0	5	1	23	216
7:50 AM	0	0	0	0					0	0	18	0	0	0	3	0	21	207
7:55 AM	0	0	0	0					0	0	11	0	0	0	2	1	14	193
8:00 AM	0	0	0	0					0	1	12	0	0	0	3	0	16	197
8:05 AM	0	0	0	0					0	0	17	0	0	0	6	0	23	
8:10 AM	0	0	0	0					0	2	4	0	0	0	3	0	9	
8:15 AM	0	0	0	0					0	0	15	0	0	0	6	0	21	
8:20 AM	0	0	0	0					0	0	15	0	0	0	6	1	22	
8:25 AM	0	0	0	0					0	0	11	0	0	0	3	2	16	
8:30 AM	0	0	0	0					0	2	19	0	0	0	2	0	23	
8:35 AM	0	0	0	0					0	0	12	0	0	0	6	0	18	
8:40 AM	0	0	0	0					0	0	5	0	0	0	3	2	10	
8:45 AM	0	0	0	0					0	0	9	0	0	0	5	0	14	
8:50 AM	0	0	0	0					0	0	4	0	0	0	3	0	7	
8:55 AM	0	0	0	1					0	0	11	0	0	0	6	0	18	
Count Total	0	1	0	1					0	8	326	0	0	0	107	8	451	
Peak Hour	0	1	0	0					0	3	192	0	0	0	55	3	254	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	0	0		0	0	7:00 AM	0	0		0	0	7:00 AM	0	0		0	0
7:05 AM	0	0		0	0	7:05 AM	0	0		0	0	7:05 AM	0	0		0	0
7:10 AM	0	1		0	1	7:10 AM	0	0		1	1	7:10 AM	0	0		0	0
7:15 AM	0	0		1	1	7:15 AM	0	0		0	0	7:15 AM	0	0		0	0
7:20 AM	0	0		0	0	7:20 AM	0	0		0	0	7:20 AM	0	0		0	0
7:25 AM	0	0		2	2	7:25 AM	0	0		0	0	7:25 AM	0	0		0	0
7:30 AM	0	2		0	2	7:30 AM	0	0		0	0	7:30 AM	0	0		0	0
7:35 AM	0	0		1	1	7:35 AM	0	0		0	0	7:35 AM	0	0		0	0
7:40 AM	0	0		0	0	7:40 AM	0	0		0	0	7:40 AM	0	0		0	0
7:45 AM	0	1		0	1	7:45 AM	0	0		0	0	7:45 AM	0	0		0	0
7:50 AM	0	0		0	0	7:50 AM	0	0		0	0	7:50 AM	0	0		0	0
7:55 AM	0	0		0	0	7:55 AM	0	0		0	0	7:55 AM	0	0		0	0
8:00 AM	0	1		0	1	8:00 AM	0	0		0	0	8:00 AM	0	0		0	0
8:05 AM	0	0		1	1	8:05 AM	0	0		0	0	8:05 AM	0	0		0	0
8:10 AM	0	0		0	0	8:10 AM	0	0		0	0	8:10 AM	0	0		0	0
8:15 AM	0	0		0	0	8:15 AM	0	0		0	0	8:15 AM	0	0		0	0
8:20 AM	0	0		1	1	8:20 AM	0	0		0	0	8:20 AM	0	0		0	0
8:25 AM	0	2		0	2	8:25 AM	0	0		0	0	8:25 AM	0	0		0	0
8:30 AM	0	1		1	2	8:30 AM	0	0		0	0	8:30 AM	0	0		0	0
8:35 AM	0	1		1	2	8:35 AM	0	0		0	0	8:35 AM	0	0		0	0
8:40 AM	0	0		0	0	8:40 AM	0	0		0	0	8:40 AM	0	0		0	0
8:45 AM	0	0		0	0	8:45 AM	0	0		0	0	8:45 AM	0	0		0	0
8:50 AM	0	0		0	0	8:50 AM	0	0		0	0	8:50 AM	0	0		0	0
8:55 AM	0	1		1	2	8:55 AM	0	0		0	0	8:55 AM	0	0		0	0
Count Total	0	10		9	19	Count Total	0	0		1	1	Count Total	0	0		0	0
Peak Hour	0	4		4	8	Peak Hour	0	0		1	1	Peak Hour	0	0		0	0

ALL TRAFFIC DATA SERVICES
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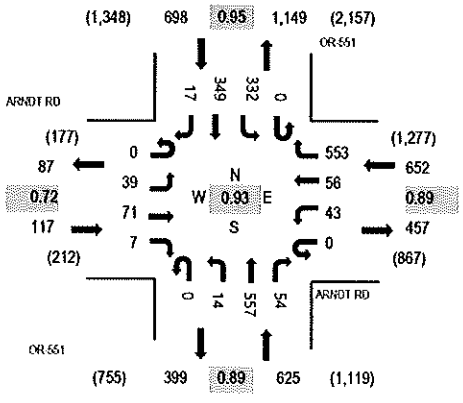
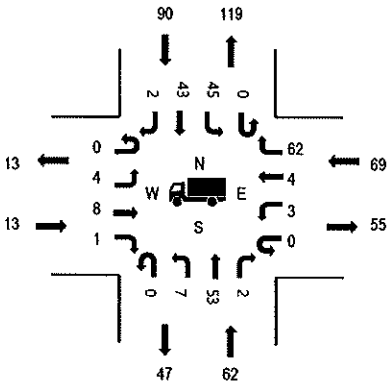
Location: 5 OR-551 & ARNDT RD AM
Date: Tuesday, September 19, 2023
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour

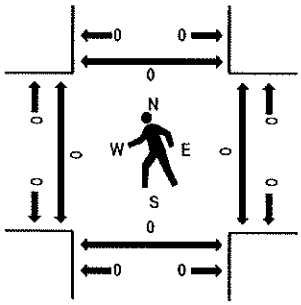
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	11.1%	0.72
WB	10.6%	0.89
NB	9.9%	0.89
SB	12.9%	0.95
All	11.2%	0.93

Traffic Counts - Motorized Vehicles

Interval Start Time	ARNDT RD Eastbound				ARNDT RD Westbound				OR-551 Northbound				OR-551 Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	1	4	1	0	7	6	56	0	1	28	3	0	25	28	3	163	2,092
7:05 AM	0	2	2	0	0	2	3	58	0	2	47	5	0	26	35	1	183	2,077
7:10 AM	0	1	4	1	0	2	4	45	0	1	60	1	0	14	29	2	164	2,064
7:15 AM	0	1	9	0	0	3	4	44	0	1	52	3	0	26	30	2	176	2,066
7:20 AM	0	5	1	1	0	3	4	54	0	0	55	3	0	40	36	0	202	2,040
7:25 AM	0	4	8	1	0	4	5	48	0	3	54	5	0	29	22	3	186	2,010
7:30 AM	0	3	13	1	0	6	7	50	0	1	38	5	0	24	27	0	175	1,969
7:35 AM	0	4	7	2	0	4	3	48	0	0	33	2	0	34	26	0	163	1,927
7:40 AM	0	0	6	0	0	1	7	44	0	1	59	5	0	34	26	1	184	1,893
7:45 AM	0	5	9	0	0	4	3	44	0	3	52	8	0	25	32	1	186	1,883
7:50 AM	0	6	5	0	0	4	3	29	0	1	41	6	0	29	29	2	155	1,870
7:55 AM	0	7	3	0	0	3	7	33	0	0	38	8	0	26	29	2	156	1,869
8:00 AM	0	2	2	0	0	5	5	33	0	0	31	4	0	33	30	3	148	1,864
8:05 AM	0	2	3	0	0	5	1	49	0	2	50	4	0	20	32	2	170	
8:10 AM	0	5	4	1	0	6	3	46	0	3	35	2	0	33	26	2	166	
8:15 AM	0	4	8	0	0	6	4	41	0	1	35	2	0	22	24	2	149	
8:20 AM	0	2	5	2	0	5	2	51	0	1	43	5	0	24	30	2	172	
8:25 AM	0	5	4	1	0	2	3	41	0	0	32	2	0	27	25	3	145	
8:30 AM	0	5	3	1	0	3	6	45	0	0	16	4	0	34	13	3	133	
8:35 AM	0	3	2	0	0	2	4	49	0	0	18	1	0	26	21	3	129	
8:40 AM	0	2	3	4	0	1	2	52	0	0	44	3	0	32	23	8	174	
8:45 AM	0	1	4	2	0	4	6	40	0	1	48	4	0	32	29	2	173	
8:50 AM	0	1	4	1	0	8	2	40	0	0	55	6	0	20	15	2	154	
8:55 AM	0	3	6	0	0	2	7	44	0	2	35	5	0	17	27	3	151	
Count Total	0	74	119	19	0	92	101	1,084	0	24	999	96	0	652	644	52	3,956	
Peak Hour	0	39	71	7	0	43	56	553	0	14	557	54	0	332	349	17	2,092	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	0	4	8	3	15	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	0	5	6	5	16	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	0	7	4	4	15	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	2	5	7	5	19	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	0	4	2	11	17	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	2	7	11	5	25	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	1	6	7	13	27	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	2	3	5	11	21	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	2	7	4	11	24	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	1	4	6	8	19	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	1	5	3	8	17	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	2	5	6	6	19	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0
8:00 AM	0	2	9	6	17	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	1	6	4	12	23	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0
8:10 AM	3	4	7	5	19	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0
8:15 AM	5	4	5	6	20	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	3	2	5	7	17	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	1	5	4	7	17	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	4	4	8	6	22	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	0	4	12	9	25	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	3	5	6	11	25	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	2	4	5	14	25	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
8:50 AM	1	6	7	5	19	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	1	4	4	12	21	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	37	112	145	190	484	Count Total	0	0	0	0	0	Count Total	0	0	0	0	0
Peak Hour	13	62	69	90	234	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0

ALL TRAFFIC DATA SERVICES
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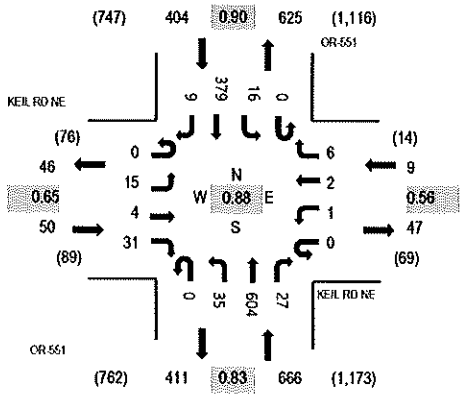
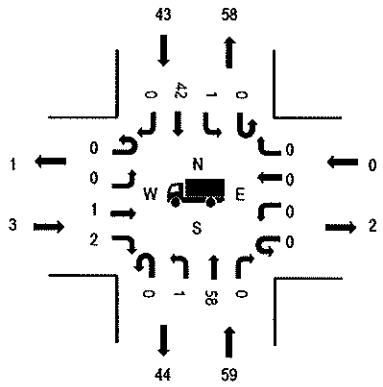
Location: 6 OR-551 & KEIL RD NE AM
Date: Tuesday, September 19, 2023
Peak Hour: 07:05 AM - 08:05 AM
Peak 15-Minutes: 07:10 AM - 07:25 AM

Peak Hour

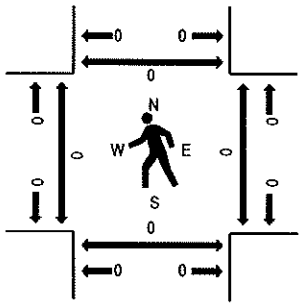
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	6.0%	0.65
WB	0.0%	0.56
NB	8.9%	0.83
SB	10.6%	0.90
All	9.3%	0.88

Traffic Counts - Motorized Vehicles

Interval Start Time	KEIL RD NE Eastbound				KEIL RD NE Westbound				OR-551 Northbound				OR-551 Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	1	2	0	0	0	0	1	0	6	43	2	0	2	26	0	83	1,121
7:05 AM	0	1	1	2	0	0	0	1	0	3	45	3	0	4	33	2	95	1,129
7:10 AM	0	0	0	1	0	0	1	2	0	6	68	2	0	1	32	0	113	1,118
7:15 AM	0	4	0	2	0	0	0	0	0	5	50	2	0	1	36	0	100	1,099
7:20 AM	0	1	0	3	0	0	0	0	0	4	63	2	0	3	29	1	106	1,066
7:25 AM	0	3	1	2	0	0	0	2	0	1	53	2	0	0	37	0	101	1,033
7:30 AM	0	1	0	3	0	0	0	0	0	0	30	1	0	0	24	0	59	1,000
7:35 AM	0	0	0	1	0	0	0	0	0	1	52	2	0	0	43	0	99	989
7:40 AM	0	1	0	4	0	0	0	1	0	2	54	3	0	2	20	0	87	936
7:45 AM	0	1	1	8	0	0	0	0	0	6	56	2	0	1	36	1	112	932
7:50 AM	0	1	0	4	0	0	0	0	0	0	56	2	0	1	26	3	93	918
7:55 AM	0	0	1	0	0	0	0	0	0	3	35	3	0	0	31	0	73	920
8:00 AM	0	2	0	1	0	1	1	0	0	4	42	3	0	3	32	2	91	902
8:05 AM	0	1	1	1	0	0	1	0	0	1	51	1	0	1	25	1	84	
8:10 AM	0	0	0	4	0	0	0	0	0	0	39	1	0	0	48	2	94	
8:15 AM	0	1	0	4	0	0	0	0	0	1	39	1	0	0	17	4	67	
8:20 AM	0	3	0	1	0	0	0	0	0	0	40	0	0	1	25	3	73	
8:25 AM	0	1	1	2	0	0	0	0	0	2	26	1	0	0	35	0	68	
8:30 AM	0	1	0	3	0	1	0	0	0	1	16	1	0	0	25	0	48	
8:35 AM	0	0	0	1	0	0	0	0	0	1	22	0	0	0	22	0	46	
8:40 AM	0	2	0	1	0	0	0	0	0	0	59	1	0	0	20	0	83	
8:45 AM	0	2	0	3	0	0	0	1	0	3	55	2	0	0	32	0	98	
8:50 AM	0	1	0	1	0	0	0	0	0	0	53	3	1	0	36	0	95	
8:55 AM	0	0	0	1	0	1	0	0	0	3	32	1	0	0	16	1	55	
Count Total	0	28	8	53	0	3	3	8	0	53	1,079	41	1	20	706	20	2,023	
Peak Hour	0	15	4	31	0	1	2	6	0	35	604	27	0	16	379	9	1,129	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	2	5	0	2	9	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	1	5	0	4	10	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	0	7	0	0	7	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	1	3	0	3	7	7:15 AM	0	0	1	0	1	7:15 AM	0	0	0	0	0
7:20 AM	1	5	0	2	8	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	0	7	0	3	10	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	0	2	0	4	6	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	0	7	0	10	17	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	0	7	0	4	11	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	0	6	0	3	9	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	0	4	0	3	7	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	0	3	0	4	7	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0
8:00 AM	0	3	0	3	6	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	0	4	0	2	6	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0
8:10 AM	1	3	0	10	14	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	1	1
8:15 AM	0	2	0	1	3	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	0	3	0	8	11	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	0	7	0	4	11	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	2	6	1	8	17	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	0	2	0	3	5	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	0	5	0	6	11	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	0	8	0	6	14	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	1	1
8:50 AM	0	3	0	7	10	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	0	8	0	3	11	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	8	115	1	103	227	Count Total	0	0	1	0	1	Count Total	0	0	0	2	2
Peak Hour	3	59	0	43	105	Peak Hour	0	0	1	0	1	Peak Hour	0	0	0	0	0

ALL TRAFFIC DATA SERVICES
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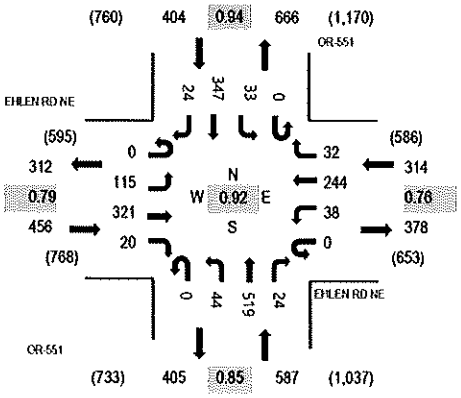
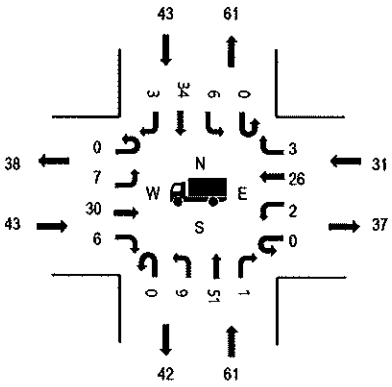
Location: 7 OR-551 & EHLEN RD NE AM
Date: Tuesday, September 19, 2023
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:40 AM - 07:55 AM

Peak Hour

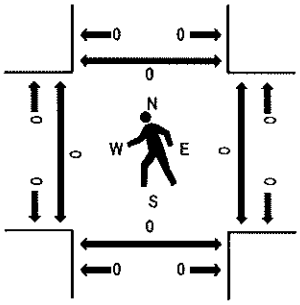
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	9.4%	0.79
WB	9.9%	0.76
NB	10.4%	0.85
SB	10.6%	0.94
All	10.1%	0.92

Traffic Counts - Motorized Vehicles

Interval Start Time	EHLEN RD NE Eastbound				EHLEN RD NE Westbound				OR-551 Northbound				OR-551 Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	11	16	3	0	3	15	2	0	4	46	1	0	4	24	2	131	1,761
7:05 AM	0	8	17	3	0	1	15	1	0	1	46	2	0	2	31	1	128	1,747
7:10 AM	0	8	26	3	0	4	10	0	0	3	50	2	0	0	30	0	136	1,746
7:15 AM	0	9	25	2	0	2	27	5	0	5	43	0	0	3	32	2	155	1,742
7:20 AM	0	9	14	0	0	1	16	1	0	4	63	3	0	4	32	2	149	1,712
7:25 AM	0	10	32	1	0	6	23	3	0	5	38	2	0	4	23	3	150	1,671
7:30 AM	0	6	35	2	0	3	41	3	0	4	17	2	0	3	30	1	147	1,633
7:35 AM	0	8	21	2	0	4	20	8	0	4	55	3	0	3	31	4	163	1,556
7:40 AM	0	9	30	1	0	6	25	2	0	4	50	2	0	2	31	1	163	1,480
7:45 AM	0	9	35	3	0	3	21	1	0	5	40	0	0	3	20	2	142	1,461
7:50 AM	0	11	36	0	0	2	16	5	0	3	48	4	0	3	42	3	172	1,457
7:55 AM	0	17	34	0	0	3	16	1	0	2	23	3	0	2	21	3	125	1,425
8:00 AM	0	8	16	1	0	0	8	1	0	3	41	3	0	5	22	9	117	1,390
8:05 AM	0	11	14	0	0	8	22	3	0	4	34	0	0	1	29	1	127	
8:10 AM	0	7	23	0	0	0	30	4	0	4	28	0	0	6	28	2	132	
8:15 AM	0	7	12	3	0	0	22	1	0	5	42	2	0	3	28	0	125	
8:20 AM	0	7	23	5	0	8	14	2	0	1	23	1	0	4	17	3	108	
8:25 AM	0	8	17	2	0	2	15	2	0	3	21	0	0	12	27	3	112	
8:30 AM	0	1	4	4	0	4	11	3	0	0	13	2	0	3	24	1	70	
8:35 AM	0	3	20	1	0	3	16	2	0	1	20	1	0	4	16	0	87	
8:40 AM	0	14	25	2	0	3	12	3	0	5	44	6	0	1	16	3	134	
8:45 AM	0	11	14	1	0	2	35	2	0	5	41	4	0	3	25	5	148	
8:50 AM	0	4	19	4	0	1	11	3	0	5	54	0	0	6	25	8	140	
8:55 AM	0	5	15	1	0	1	15	3	0	1	28	5	0	1	15	0	90	
Count Total	0	201	523	44	0	70	455	61	0	81	908	48	0	82	619	59	3,151	
Peak Hour	0	115	321	20	0	38	244	32	0	44	519	24	0	33	347	24	1,761	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval	Heavy Vehicles					Interval	Bicycles on Roadway					Interval	Pedestrians/Bicycles on Crosswalk				
Start Time	EB	NB	WB	SB	Total	Start Time	EB	NB	WB	SB	Total	Start Time	EB	NB	WB	SB	Total
7:00 AM	4	3	3	2	12	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	2	4	1	3	10	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	5	8	0	1	14	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	4	3	3	4	14	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	0	8	0	3	11	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	3	6	5	3	17	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	3	2	3	3	11	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	3	8	2	10	23	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	4	6	3	4	17	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	6	8	4	4	21	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	0	2	3	3	8	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	4	3	4	3	14	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0
8:00 AM	2	4	1	3	10	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	4	6	3	3	16	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0
8:10 AM	1	5	5	10	21	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0
8:15 AM	2	5	6	1	14	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	3	2	2	7	14	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	2	6	2	6	16	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	1	6	0	10	17	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	7	0	3	1	11	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	6	7	0	7	20	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	5	7	5	7	24	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
8:50 AM	3	3	1	7	14	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	4	11	5	2	22	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	83	123	64	107	377	Count Total	0	0	0	0	0	Count Total	0	0	0	0	0
Peak Hour	43	61	31	43	178	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0

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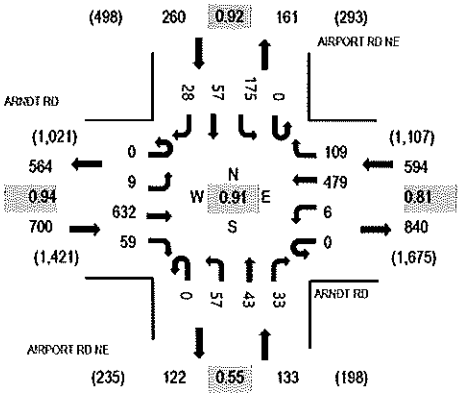
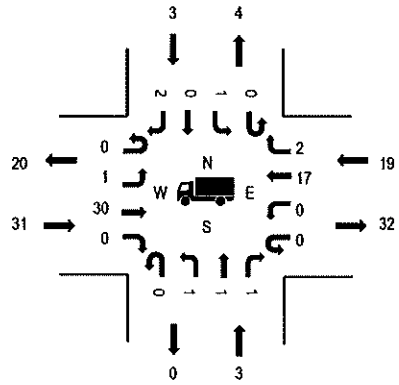
Location: 1 AIRPORT RD NE & ARNDT RD PM
Date: Tuesday, September 19, 2023
Peak Hour: 04:20 PM - 05:20 PM
Peak 15-Minutes: 05:05 PM - 05:20 PM

Peak Hour

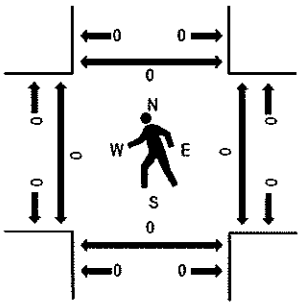
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	4.4%	0.94
WB	3.2%	0.81
NB	2.3%	0.55
SB	1.2%	0.92
All	3.3%	0.91

Traffic Counts - Motorized Vehicles

Interval Start Time	ARNDT RD Eastbound				ARNDT RD Westbound				AIRPORT RD NE Northbound				AIRPORT RD NE Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	1	65	3	0	0	36	9	0	1	1	3	0	21	5	1	146	1,679
4:05 PM	0	1	52	5	0	0	40	18	0	5	3	2	0	11	5	2	144	1,655
4:10 PM	0	1	57	3	0	1	39	12	0	2	0	2	0	12	1	4	134	1,670
4:15 PM	0	3	56	6	0	0	37	6	0	5	6	3	0	20	6	5	153	1,686
4:20 PM	0	0	54	6	0	1	50	8	0	4	2	1	0	17	4	0	147	1,687
4:25 PM	0	2	60	3	0	0	34	10	0	2	3	1	0	14	5	0	134	1,670
4:30 PM	0	0	42	2	0	1	30	4	0	6	1	8	0	14	7	2	117	1,672
4:35 PM	0	0	57	5	0	0	39	9	0	11	11	11	0	6	6	6	161	1,681
4:40 PM	0	1	49	7	0	0	46	9	0	4	5	5	0	12	6	2	146	1,643
4:45 PM	0	2	52	6	0	0	37	8	0	4	3	1	0	18	5	1	137	1,610
4:50 PM	0	0	49	5	0	0	33	6	0	4	4	0	0	16	1	3	121	1,600
4:55 PM	0	0	58	10	0	0	42	9	0	2	3	0	0	9	5	1	139	1,598
5:00 PM	0	3	52	5	0	1	26	8	0	5	2	1	0	15	4	0	122	1,545
5:05 PM	0	1	49	3	0	2	56	16	0	5	3	1	0	15	5	4	159	
5:10 PM	0	0	56	6	0	1	37	13	0	4	2	3	0	18	5	5	150	
5:15 PM	0	0	54	1	0	0	49	10	0	6	4	1	0	21	4	4	154	
5:20 PM	0	0	60	7	0	0	41	5	0	0	1	0	0	8	5	3	130	
5:25 PM	0	1	64	6	0	1	31	8	0	1	3	1	0	14	6	0	136	
5:30 PM	0	0	48	2	0	1	39	10	0	3	0	1	0	13	9	0	126	
5:35 PM	0	1	55	4	0	0	34	9	0	1	0	0	0	13	4	2	123	
5:40 PM	0	1	56	6	0	0	25	6	0	1	2	1	0	11	3	1	113	
5:45 PM	0	0	58	2	0	1	32	4	0	2	1	2	0	20	3	2	127	
5:50 PM	0	1	54	4	0	1	28	6	0	3	4	1	0	11	5	1	119	
5:55 PM	0	1	32	5	0	1	26	6	0	3	1	0	0	8	2	1	86	
Count Total	0	20	1,289	112	0	12	887	208	0	84	65	49	0	337	111	50	3,224	
Peak Hour	0	9	632	59	0	6	479	109	0	57	43	33	0	175	57	28	1,687	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval	Heavy Vehicles					Interval	Bicycles on Roadway					Interval	Pedestrians/Bicycles on Crosswalk				
Start Time	EB	NB	WB	SB	Total	Start Time	EB	NB	WB	SB	Total	Start Time	EB	NB	WB	SB	Total
4:00 PM	4	0	3	2	9	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	1	2	4	2	9	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	6	0	1	0	7	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	2	0	1	3	6	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	4	0	2	0	6	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	3	0	2	0	5	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	1	1	0	0	2	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	1	1	3	0	5	4:35 PM	0	1	0	0	1	4:35 PM	0	0	0	0	0
4:40 PM	3	0	0	0	3	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	5	0	0	0	5	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	1	1	4	0	6	4:50 PM	0	0	0	0	0	4:50 PM	0	0	1	0	1
4:55 PM	3	0	3	0	6	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	2	0	0	0	2	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	0	0	2	0	2	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	1	0	2	1	4	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	1	0	1	2	4	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	1	0	2	1	4	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	2	0	1	0	3	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	2	0	4	0	6	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	2	0	1	0	3	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	1	0	0	0	1	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	1	0	1	0	2	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	2	1	0	0	3	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	55	6	37	11	109	Count Total	0	1	0	0	1	Count Total	0	0	1	0	1
Peak Hour	31	3	19	3	56	Peak Hour	0	1	0	0	1	Peak Hour	0	0	1	0	1

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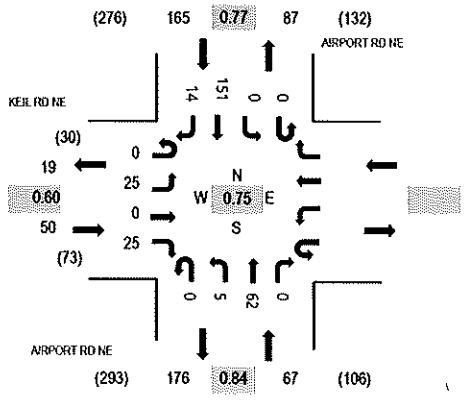
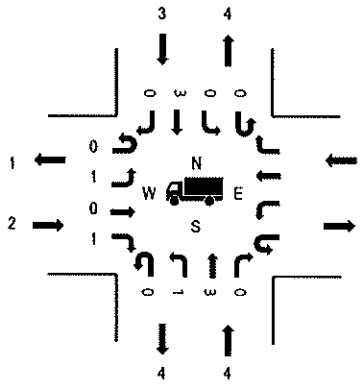
Location: 2 AIRPORT RD NE & KEIL RD NE PM
Date: Tuesday, September 19, 2023
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 04:30 PM - 04:45 PM

Peak Hour

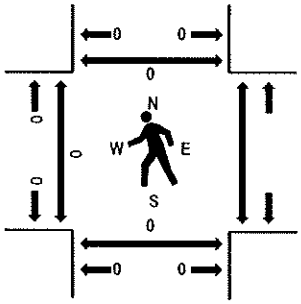
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	4.0%	0.60
WB		
NB	6.0%	0.84
SB	1.8%	0.77
All	3.2%	0.75

Traffic Counts - Motorized Vehicles

Interval Start Time	KEIL RD NE Eastbound				Westbound				AIRPORT RD NE Northbound				AIRPORT RD NE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	3	0	2					0	0	5	0	0	0	8	0	18	270
4:05 PM	0	1	0	1					0	1	2	0	0	0	14	0	19	274
4:10 PM	0	1	0	2					0	0	2	0	0	0	9	1	15	273
4:15 PM	0	3	0	4					0	2	8	0	0	0	12	1	30	282
4:20 PM	0	1	0	4					0	0	2	0	0	0	17	1	25	263
4:25 PM	0	1	0	0					0	1	3	0	0	0	5	1	11	255
4:30 PM	0	3	0	4					0	0	7	0	0	0	21	1	36	264
4:35 PM	0	5	0	4					0	0	9	0	0	0	15	4	37	237
4:40 PM	0	4	0	1					0	0	3	0	0	0	11	2	21	208
4:45 PM	0	0	0	1					0	0	7	0	0	0	15	2	25	204
4:50 PM	0	1	0	0					0	1	4	0	0	0	10	0	16	192
4:55 PM	0	0	0	2					0	0	3	0	0	0	12	0	17	191
5:00 PM	0	2	0	1					0	0	7	0	0	0	11	1	22	185
5:05 PM	0	2	0	3					0	0	4	0	0	0	8	1	18	
5:10 PM	0	3	0	1					0	1	5	0	0	0	14	0	24	
5:15 PM	0	1	0	1					0	0	3	0	0	0	5	1	11	
5:20 PM	0	0	0	0					0	2	4	0	0	0	11	0	17	
5:25 PM	0	0	0	0					0	0	1	0	0	0	9	0	10	
5:30 PM	0	1	0	0					0	1	2	0	0	0	12	3	19	
5:35 PM	0	0	0	2					0	0	0	0	0	0	6	0	8	
5:40 PM	0	0	0	2					0	0	2	0	0	0	12	1	17	
5:45 PM	0	1	0	1					0	1	5	0	0	0	5	0	13	
5:50 PM	0	2	0	0					0	0	5	0	0	0	8	0	15	
5:55 PM	0	1	0	1					0	0	3	0	0	0	6	0	11	
Count Total	0	36	0	37					0	10	96	0	0	0	256	20	455	
Peak Hour	0	25	0	25					0	5	62	0	0	0	151	14	282	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

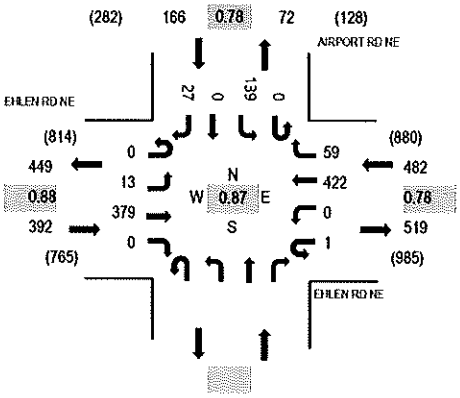
Interval	Heavy Vehicles					Interval	Bicycles on Roadway					Interval	Pedestrians/Bicycles on Crosswalk				
Start Time	EB	NB	WB	SB	Total	Start Time	EB	NB	WB	SB	Total	Start Time	EB	NB	WB	SB	Total
4:00 PM	1	2		0	3	4:00 PM	0	0		0	0	4:00 PM	0	0		0	0
4:05 PM	0	1		0	1	4:05 PM	0	0		0	0	4:05 PM	0	0		0	0
4:10 PM	0	0		1	1	4:10 PM	0	0		0	0	4:10 PM	0	0		0	0
4:15 PM	1	1		2	4	4:15 PM	0	0		0	0	4:15 PM	0	0		0	0
4:20 PM	1	0		1	2	4:20 PM	0	0		0	0	4:20 PM	0	0		0	0
4:25 PM	0	0		0	0	4:25 PM	0	0		0	0	4:25 PM	0	0		0	0
4:30 PM	0	2		0	2	4:30 PM	1	0		0	1	4:30 PM	0	0		0	0
4:35 PM	0	0		0	0	4:35 PM	0	0		0	0	4:35 PM	0	0		0	0
4:40 PM	0	0		0	0	4:40 PM	0	0		0	0	4:40 PM	0	0		0	0
4:45 PM	0	1		0	1	4:45 PM	0	1		0	1	4:45 PM	0	0		0	0
4:50 PM	0	0		0	0	4:50 PM	0	0		0	0	4:50 PM	0	0		0	0
4:55 PM	0	0		0	0	4:55 PM	0	0		0	0	4:55 PM	0	0		0	0
5:00 PM	0	0		0	0	5:00 PM	0	0		0	0	5:00 PM	0	0		0	0
5:05 PM	0	0		0	0	5:05 PM	0	0		0	0	5:05 PM	0	0		0	0
5:10 PM	0	0		0	0	5:10 PM	0	0		0	0	5:10 PM	0	0		0	0
5:15 PM	0	0		0	0	5:15 PM	0	0		0	0	5:15 PM	0	0		0	0
5:20 PM	0	0		1	1	5:20 PM	0	0		0	0	5:20 PM	0	0		0	0
5:25 PM	0	0		0	0	5:25 PM	0	0		0	0	5:25 PM	0	0		0	0
5:30 PM	0	0		1	1	5:30 PM	0	0		0	0	5:30 PM	0	0		0	0
5:35 PM	0	0		0	0	5:35 PM	0	0		0	0	5:35 PM	0	0		0	0
5:40 PM	0	0		0	0	5:40 PM	0	0		0	0	5:40 PM	0	0		0	0
5:45 PM	0	0		0	0	5:45 PM	0	0		0	0	5:45 PM	0	0		0	0
5:50 PM	0	0		0	0	5:50 PM	0	0		0	0	5:50 PM	0	0		0	0
5:55 PM	0	1		0	1	5:55 PM	0	0		0	0	5:55 PM	0	0		0	0
Count Total	3	8		6	17	Count Total	1	1		0	2	Count Total	0	0		0	0
Peak Hour	2	4		3	9	Peak Hour	1	1		0	2	Peak Hour	0	0		0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

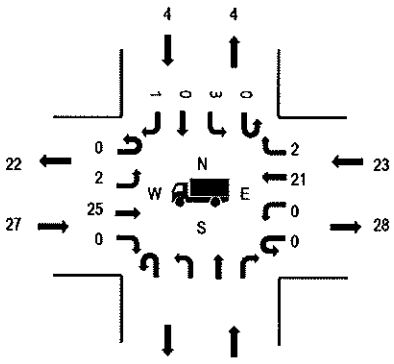
Location: 3 AIRPORT RD NE & EHLEN RD NE PM
Date: Tuesday, September 19, 2023
Peak Hour: 04:05 PM - 05:05 PM
Peak 15-Minutes: 04:05 PM - 04:20 PM

Peak Hour

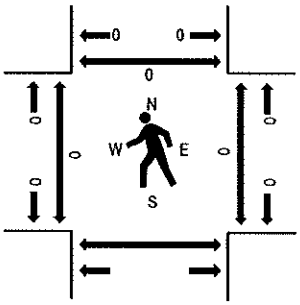
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	6.9%	0.88
WB	4.8%	0.78
NB		
SB	2.4%	0.78
All	5.2%	0.87

Traffic Counts - Motorized Vehicles

Interval Start Time	EHLEN RD NE Eastbound				EHLEN RD NE Westbound				Northbound				AIRPORT RD NE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	3	40	0	0	0	25	6					0	6	0	0	80	1,039
4:05 PM	0	3	28	0	0	0	54	4					0	15	0	1	105	1,040
4:10 PM	0	1	33	0	1	0	43	7					0	11	0	2	98	1,023
4:15 PM	0	1	34	0	0	0	39	6					0	12	0	3	95	1,015
4:20 PM	0	0	40	0	0	0	34	1					0	14	0	5	94	984
4:25 PM	0	2	33	0	0	0	30	5					0	5	0	1	76	965
4:30 PM	0	1	39	0	0	0	37	6					0	12	0	8	103	971
4:35 PM	0	1	29	0	0	0	39	6					0	17	0	3	95	939
4:40 PM	0	1	31	0	0	0	32	2					0	11	0	2	79	920
4:45 PM	0	1	23	0	0	0	31	4					0	12	0	0	71	904
4:50 PM	0	1	22	0	0	0	34	7					0	7	0	1	72	894
4:55 PM	0	0	36	0	0	0	17	5					0	13	0	0	71	897
5:00 PM	0	1	31	0	0	0	32	6					0	10	0	1	81	888
5:05 PM	0	0	38	0	0	0	34	5					0	9	0	2	88	
5:10 PM	0	1	29	0	0	0	38	6					0	12	0	4	90	
5:15 PM	0	3	22	0	0	0	30	4					0	5	0	0	64	
5:20 PM	0	0	33	0	0	0	26	5					0	11	0	0	75	
5:25 PM	0	0	34	0	0	0	38	1					0	9	0	0	82	
5:30 PM	0	2	27	0	0	0	28	1					0	12	0	1	71	
5:35 PM	0	0	29	0	0	0	38	2					0	7	0	0	76	
5:40 PM	0	1	28	0	0	0	16	1					0	14	0	3	63	
5:45 PM	0	2	23	0	0	0	26	5					0	5	0	0	61	
5:50 PM	0	0	27	0	0	0	35	5					0	8	0	0	75	
5:55 PM	0	0	31	0	0	0	20	3					0	7	0	1	62	
Count Total	0	25	740	0	1	0	776	103					0	244	0	38	1,927	
Peak Hour	0	13	379	0	1	0	422	59					0	139	0	27	1,040	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	2		5	1	8	4:00 PM	0		0	0	0	4:00 PM	0		0	0	0
4:05 PM	1		4	0	5	4:05 PM	0		0	0	0	4:05 PM	0		0	0	0
4:10 PM	4		2	0	6	4:10 PM	0		0	0	0	4:10 PM	0		0	0	0
4:15 PM	0		0	2	2	4:15 PM	0		0	0	0	4:15 PM	0		0	0	0
4:20 PM	2		2	2	6	4:20 PM	1		0	0	1	4:20 PM	0		0	0	0
4:25 PM	3		2	0	5	4:25 PM	0		0	0	0	4:25 PM	0		0	0	0
4:30 PM	5		4	0	9	4:30 PM	0		1	0	1	4:30 PM	0		0	1	1
4:35 PM	2		0	0	2	4:35 PM	0		0	0	0	4:35 PM	0		0	0	0
4:40 PM	2		4	0	6	4:40 PM	0		0	0	0	4:40 PM	0		0	0	0
4:45 PM	2		1	0	3	4:45 PM	0		0	0	0	4:45 PM	0		0	0	0
4:50 PM	1		2	0	3	4:50 PM	0		0	0	0	4:50 PM	0		0	0	0
4:55 PM	4		0	0	4	4:55 PM	0		0	0	0	4:55 PM	0		0	0	0
5:00 PM	1		2	0	3	5:00 PM	0		0	0	0	5:00 PM	0		0	0	0
5:05 PM	5		0	0	5	5:05 PM	0		0	0	0	5:05 PM	0		0	0	0
5:10 PM	0		0	0	0	5:10 PM	0		0	0	0	5:10 PM	0		0	0	0
5:15 PM	5		1	0	6	5:15 PM	0		0	0	0	5:15 PM	0		0	0	0
5:20 PM	1		0	1	2	5:20 PM	0		0	0	0	5:20 PM	0		0	0	0
5:25 PM	3		1	0	4	5:25 PM	0		0	0	0	5:25 PM	0		0	0	0
5:30 PM	0		0	1	1	5:30 PM	0		0	0	0	5:30 PM	0		0	0	0
5:35 PM	3		0	0	3	5:35 PM	0		0	0	0	5:35 PM	0		0	0	0
5:40 PM	2		0	0	2	5:40 PM	0		0	0	0	5:40 PM	0		0	0	0
5:45 PM	3		0	0	3	5:45 PM	0		0	0	0	5:45 PM	0		0	0	0
5:50 PM	0		2	0	2	5:50 PM	0		0	0	0	5:50 PM	0		0	0	0
5:55 PM	3		1	0	4	5:55 PM	0		0	0	0	5:55 PM	0		0	0	0
Count Total	54		33	7	94	Count Total	1		1	0	2	Count Total	0		0	1	1
Peak Hour	27		23	4	54	Peak Hour	1		1	0	2	Peak Hour	0		0	1	1

ALL TRAFFIC DATA SERVICES
(303) 216-2439
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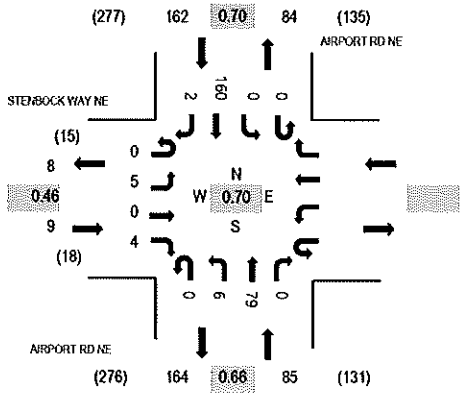
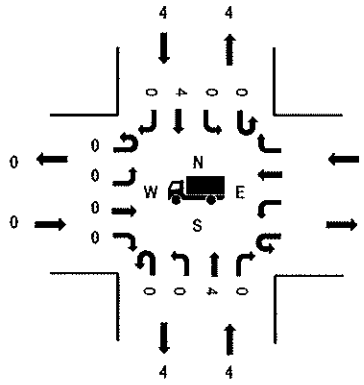
Location: 4 AIRPORT RD NE & STENBOCK WAY NE PM
Date: Tuesday, September 19, 2023
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 04:30 PM - 04:45 PM

Peak Hour

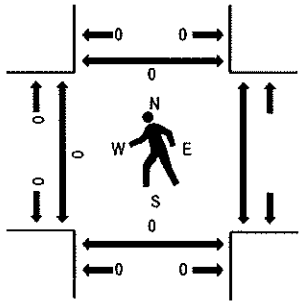
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.46
WB		
NB	4.7%	0.66
SB	2.5%	0.70
All	3.1%	0.70

Traffic Counts - Motorized Vehicles

Interval Start Time	STENBOCK WAY NE Eastbound				Westbound				AIRPORT RD NE Northbound				AIRPORT RD NE Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	0	0	0					0	0	6	0	0	0	7	0	13	250
4:05 PM	0	1	0	1					0	0	4	0	0	0	13	0	19	255
4:10 PM	0	2	0	1					0	0	4	0	0	0	9	0	16	252
4:15 PM	0	0	0	2					0	0	8	0	0	0	13	0	23	256
4:20 PM	0	0	0	1					0	1	4	0	0	0	14	1	21	243
4:25 PM	0	0	0	0					0	0	4	0	0	0	6	0	10	236
4:30 PM	0	0	0	0					0	1	6	0	0	0	22	0	29	243
4:35 PM	0	2	0	0					0	2	13	0	0	0	21	0	39	229
4:40 PM	0	0	0	0					0	1	7	0	0	0	14	1	23	209
4:45 PM	0	0	0	1					0	0	8	0	0	0	14	0	23	193
4:50 PM	0	1	0	0					0	0	4	0	0	0	9	0	14	182
4:55 PM	0	1	0	0					0	0	4	0	0	0	15	0	20	186
5:00 PM	0	0	0	0					0	0	6	0	0	0	10	0	18	176
5:05 PM	0	0	0	0					0	1	5	0	0	0	10	0	16	
5:10 PM	0	1	0	0					0	0	7	0	0	0	12	0	20	
5:15 PM	0	0	0	0					0	0	5	0	0	0	5	0	10	
5:20 PM	0	0	0	0					0	0	3	0	0	0	11	0	14	
5:25 PM	0	0	0	0					0	0	2	0	0	0	14	1	17	
5:30 PM	0	1	0	1					0	0	3	0	0	0	10	0	15	
5:35 PM	0	1	0	0					0	0	0	0	0	0	8	1	10	
5:40 PM	0	0	0	1					0	0	2	0	0	0	11	2	16	
5:45 PM	0	0	0	0					0	0	5	0	0	0	5	2	12	
5:50 PM	0	0	0	0					0	0	8	0	0	0	10	0	18	
5:55 PM	0	0	0	0					0	0	4	0	0	0	5	1	10	
Count Total	0	10	0	8					0	6	125	0	0	0	268	9	426	
Peak Hour	0	5	0	4					0	6	79	0	0	0	160	2	256	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval	Heavy Vehicles					Interval	Bicycles on Roadway					Interval	Pedestrians/Bicycles on Crosswalk				
Start Time	EB	NB	WB	SB	Total	Start Time	EB	NB	WB	SB	Total	Start Time	EB	NB	WB	SB	Total
4:00 PM	0	2		0	2	4:00 PM	0	0		0	0	4:00 PM	0	0		0	0
4:05 PM	0	0		0	0	4:05 PM	0	0		0	0	4:05 PM	0	0		0	0
4:10 PM	0	0		1	1	4:10 PM	0	0		0	0	4:10 PM	0	0		0	0
4:15 PM	0	0		2	2	4:15 PM	0	0		0	0	4:15 PM	0	0		0	0
4:20 PM	0	0		2	2	4:20 PM	0	0		0	0	4:20 PM	0	0		0	0
4:25 PM	0	0		0	0	4:25 PM	0	0		0	0	4:25 PM	0	0		0	0
4:30 PM	0	2		0	2	4:30 PM	0	0		0	0	4:30 PM	0	0		0	0
4:35 PM	0	0		0	0	4:35 PM	0	1		0	1	4:35 PM	0	0		0	0
4:40 PM	0	0		0	0	4:40 PM	0	0		0	0	4:40 PM	0	0		0	0
4:45 PM	0	2		0	2	4:45 PM	0	1		0	1	4:45 PM	0	0		0	0
4:50 PM	0	0		0	0	4:50 PM	0	0		0	0	4:50 PM	0	0		0	0
4:55 PM	0	0		0	0	4:55 PM	0	0		0	0	4:55 PM	0	0		0	0
5:00 PM	0	0		0	0	5:00 PM	0	0		0	0	5:00 PM	0	0		0	0
5:05 PM	0	0		0	0	5:05 PM	0	0		0	0	5:05 PM	0	0		0	0
5:10 PM	0	0		0	0	5:10 PM	0	0		0	0	5:10 PM	0	0		0	0
5:15 PM	0	0		0	0	5:15 PM	0	0		0	0	5:15 PM	0	0		0	0
5:20 PM	0	0		1	1	5:20 PM	0	0		0	0	5:20 PM	0	0		0	0
5:25 PM	0	0		0	0	5:25 PM	0	0		0	0	5:25 PM	0	0		0	0
5:30 PM	0	0		1	1	5:30 PM	0	0		0	0	5:30 PM	0	0		0	0
5:35 PM	0	0		0	0	5:35 PM	0	0		0	0	5:35 PM	0	0		0	0
5:40 PM	0	0		0	0	5:40 PM	0	0		0	0	5:40 PM	0	0		0	0
5:45 PM	0	0		0	0	5:45 PM	0	0		0	0	5:45 PM	0	0		0	0
5:50 PM	0	0		0	0	5:50 PM	0	0		0	0	5:50 PM	0	0		0	0
5:55 PM	0	1		0	1	5:55 PM	0	0		0	0	5:55 PM	0	0		0	0
Count Total	0	7		7	14	Count Total	0	2		0	2	Count Total	0	0		0	0
Peak Hour	0	4		4	8	Peak Hour	0	2		0	2	Peak Hour	0	0		0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
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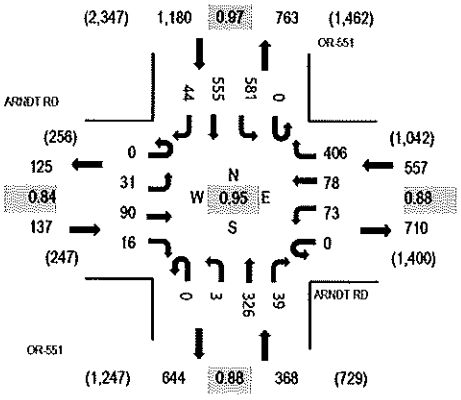
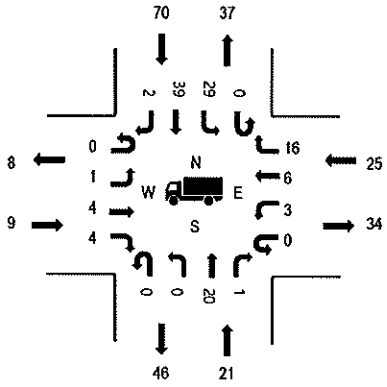
Location: 5 OR-551 & ARNDT RD PM
Date: Tuesday, September 19, 2023
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:05 PM - 04:20 PM

Peak Hour

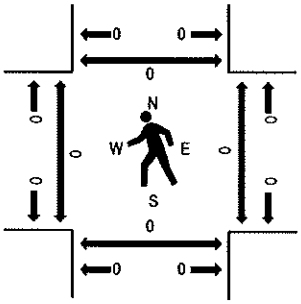
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	6.6%	0.84
WB	4.5%	0.88
NB	5.7%	0.88
SB	5.9%	0.97
All	5.6%	0.95

Traffic Counts - Motorized Vehicles

Interval Start Time	ARNDT RD Eastbound				ARNDT RD Westbound				OR-551 Northbound				OR-551 Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	3	12	1	0	3	3	35	0	0	9	1	0	62	45	5	179	2,242
4:05 PM	0	1	3	4	0	6	9	31	0	1	34	5	0	46	58	2	200	2,224
4:10 PM	0	3	13	1	0	11	5	32	0	0	17	4	0	39	51	4	180	2,217
4:15 PM	0	3	6	2	0	8	4	35	0	1	43	6	0	59	45	6	209	2,238
4:20 PM	0	2	9	2	0	5	6	40	0	0	29	3	0	47	50	5	198	2,233
4:25 PM	0	0	6	2	0	5	4	32	0	0	27	3	0	60	39	4	182	2,209
4:30 PM	0	5	2	2	0	6	4	29	0	0	27	1	0	32	51	5	164	2,205
4:35 PM	0	3	8	0	0	11	7	37	0	0	27	1	0	52	40	1	187	2,217
4:40 PM	0	2	7	0	0	4	9	42	0	0	26	6	0	51	38	2	187	2,208
4:45 PM	0	6	8	2	0	4	10	32	0	0	25	4	0	42	36	1	170	2,171
4:50 PM	0	1	10	0	0	6	4	28	0	1	34	1	0	59	55	6	205	2,208
4:55 PM	0	2	6	0	0	4	13	33	0	0	28	4	0	41	47	3	181	2,159
5:00 PM	0	0	11	0	0	2	6	25	0	0	20	7	0	45	41	4	161	2,123
5:05 PM	0	5	7	0	0	6	13	40	0	2	35	5	0	42	33	5	193	
5:10 PM	0	2	6	1	0	6	6	36	0	1	28	1	0	53	52	4	196	
5:15 PM	0	4	7	3	0	6	5	45	0	0	26	1	0	57	49	6	209	
5:20 PM	0	2	5	3	0	7	13	28	0	1	20	2	0	49	40	4	174	
5:25 PM	0	0	10	2	0	2	6	21	0	0	28	3	0	57	46	3	178	
5:30 PM	0	1	2	0	0	4	3	40	0	1	21	1	0	53	47	3	176	
5:35 PM	0	2	6	0	0	3	5	30	0	0	26	6	0	50	48	2	178	
5:40 PM	0	0	3	1	0	4	6	20	0	1	21	2	0	48	40	4	150	
5:45 PM	0	1	3	0	0	3	5	27	0	5	40	2	0	57	61	3	207	
5:50 PM	0	4	8	0	0	2	5	26	0	0	12	3	0	50	46	0	156	
5:55 PM	0	3	6	2	0	1	4	24	0	2	36	2	0	20	42	3	145	
Count Total	0	55	164	28	0	119	155	768	0	16	639	74	0	1,162	1,100	85	4,365	
Peak Hour	0	31	90	16	0	73	78	406	0	3	326	39	0	581	555	44	2,242	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	1	1	2	4	8	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	1	6	5	9	21	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	1	2	2	8	13	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	0	4	2	6	12	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	0	0	1	8	9	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	2	2	2	4	10	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	1	1	0	7	9	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	0	2	3	3	8	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	1	0	0	4	5	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	2	3	0	9	14	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	0	4	3	7	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	0	4	5	9	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	0	3	0	4	7	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	0	1	1	13	15	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	0	1	2	5	8	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	2	0	3	2	7	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	1	1	1	2	5	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	1	2	3	6	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	3	3	4	10	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	1	1	2	2	6	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	0	1	0	7	8	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	0	2	0	2	4	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	1	1	4	6	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	2	1	2	5	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	13	38	41	120	212	Count Total	0	0	0	0	0	Count Total	0	0	0	0	0
Peak Hour	9	21	25	70	125	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0

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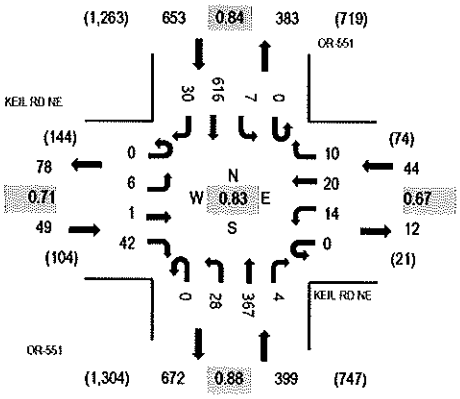
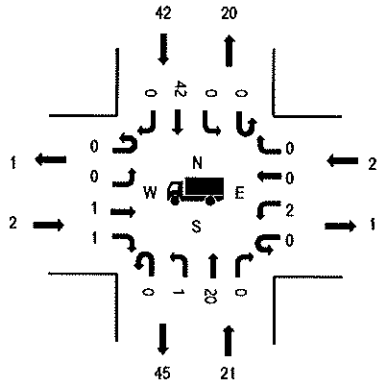
Location: 6 OR-551 & KEIL RD NE PM
Date: Tuesday, September 19, 2023
Peak Hour: 04:05 PM - 05:05 PM
Peak 15-Minutes: 04:05 PM - 04:20 PM

Peak Hour

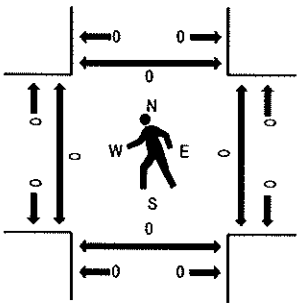
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	4.1%	0.71
WB	4.5%	0.67
NB	5.3%	0.88
SB	6.4%	0.84
All	5.9%	0.83

Traffic Counts - Motorized Vehicles

Interval Start Time	KEIL RD NE Eastbound				KEIL RD NE Westbound				OR-551 Northbound				OR-551 Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	1	0	7	0	2	2	0	0	2	21	0	0	0	49	4	88	1,135
4:05 PM	0	0	1	4	0	1	1	1	0	1	31	1	0	0	73	1	115	1,145
4:10 PM	0	2	0	12	0	0	3	2	0	0	43	0	0	0	59	3	124	1,123
4:15 PM	0	0	0	6	0	1	1	0	0	1	38	1	0	4	53	2	107	1,070
4:20 PM	0	1	0	3	0	1	2	1	0	4	23	0	0	0	48	4	87	1,070
4:25 PM	0	0	0	0	0	0	3	1	0	1	20	0	0	0	49	4	78	1,063
4:30 PM	0	0	0	1	0	0	2	0	0	2	24	0	0	2	46	3	80	1,070
4:35 PM	0	0	0	1	0	5	4	0	0	2	28	1	0	0	52	4	97	1,063
4:40 PM	0	0	0	5	0	1	2	2	0	0	30	0	0	0	43	3	86	1,054
4:45 PM	0	2	0	2	0	2	1	2	0	5	42	1	0	0	40	1	98	1,062
4:50 PM	0	1	0	1	0	1	0	0	0	2	22	0	0	0	54	4	85	1,057
4:55 PM	0	0	0	0	0	0	0	0	0	7	33	0	0	0	49	1	90	1,072
5:00 PM	0	0	0	7	0	2	1	1	0	3	33	0	0	1	50	0	98	1,053
5:05 PM	0	0	0	2	0	3	5	2	0	2	37	1	0	0	39	2	93	
5:10 PM	0	2	0	3	0	0	1	1	0	3	16	0	0	0	44	1	71	
5:15 PM	0	0	0	3	0	0	2	1	0	5	32	0	0	0	59	5	107	
5:20 PM	0	0	0	2	0	1	0	0	0	2	24	0	0	0	51	0	80	
5:25 PM	0	0	0	3	0	0	0	2	0	0	30	0	0	1	47	2	85	
5:30 PM	0	2	0	3	0	1	1	0	0	2	22	1	0	0	39	2	73	
5:35 PM	0	0	1	2	0	0	1	0	0	0	24	1	0	0	56	3	88	
5:40 PM	0	1	0	4	0	0	1	1	0	2	40	1	0	0	44	0	94	
5:45 PM	0	0	0	4	0	0	0	0	0	2	27	1	0	1	55	3	93	
5:50 PM	0	3	0	5	0	0	1	1	0	2	27	0	0	0	57	4	100	
5:55 PM	0	1	0	6	0	1	0	0	0	3	18	0	0	1	40	1	71	
Count Total	0	16	2	86	0	22	34	18	0	53	685	9	0	10	1,196	57	2,188	
Peak Hour	0	6	1	42	0	14	20	10	0	28	367	4	0	7	616	30	1,145	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	5	0	3	8	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	1	2	0	4	7	4:05 PM	0	0	1	0	1	4:05 PM	0	0	0	0	0
4:10 PM	0	4	0	5	9	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	0	2	1	6	9	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	0	2	0	4	6	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	0	0	0	4	4	4:25 PM	0	1	0	0	1	4:25 PM	0	0	0	0	0
4:30 PM	1	2	0	6	9	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	0	2	0	3	5	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	0	0	0	1	1	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	0	3	1	3	7	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	0	0	3	3	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	2	0	2	4	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	0	2	0	1	3	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	0	0	0	7	7	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	0	1	0	3	4	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	1	0	1	2	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	0	3	0	3	6	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	3	0	1	4	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	1	0	1	2	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	0	0	0	1	1	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	1	2	0	4	7	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	0	1	0	4	5	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	4	0	3	7	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	3	42	2	73	120	Count Total	0	1	1	0	2	Count Total	0	0	0	0	0
Peak Hour	2	21	2	42	67	Peak Hour	0	1	1	0	2	Peak Hour	0	0	0	0	0

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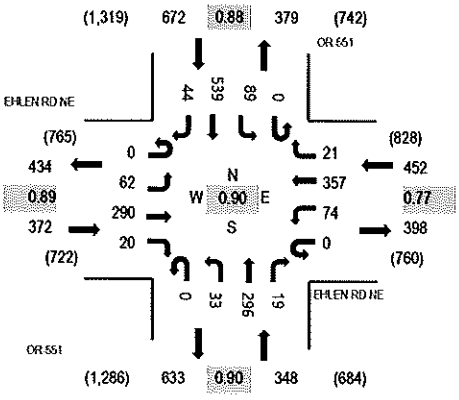
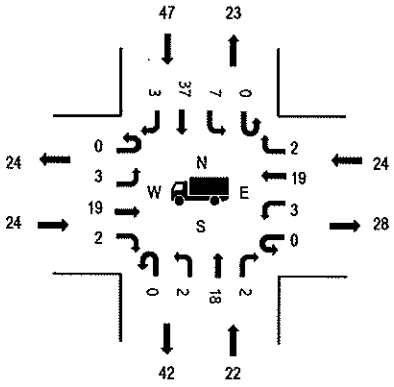
Location: 7 OR-551 & EHLEN RD NE PM
Date: Tuesday, September 19, 2023
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:10 PM - 04:25 PM

Peak Hour

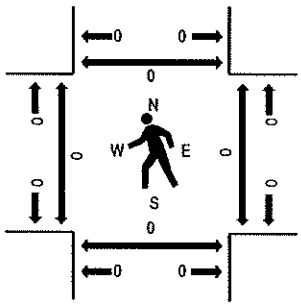
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	6.5%	0.89
WB	5.3%	0.77
NB	6.3%	0.90
SB	7.0%	0.88
All	6.3%	0.90

Traffic Counts - Motorized Vehicles

Interval Start Time	EHLEN RD NE Eastbound				EHLEN RD NE Westbound				OR-551 Northbound				OR-551 Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	0	30	4	0	7	26	2	0	3	18	0	0	15	50	7	162	1,844
4:05 PM	0	6	19	0	0	4	21	1	0	4	29	1	0	7	52	2	146	1,844
4:10 PM	0	8	23	4	0	6	46	3	0	3	29	2	0	9	42	2	177	1,844
4:15 PM	0	7	25	3	0	12	35	2	0	2	31	1	0	9	49	2	178	1,803
4:20 PM	0	2	34	1	0	7	34	4	0	1	18	1	0	4	52	0	159	1,771
4:25 PM	0	4	20	1	0	4	26	0	0	3	20	7	0	10	61	4	160	1,764
4:30 PM	0	4	33	2	0	4	30	3	0	5	20	0	0	6	42	5	154	1,748
4:35 PM	0	8	19	1	0	5	41	0	0	2	29	1	0	8	41	8	163	1,716
4:40 PM	0	13	24	2	0	8	31	0	0	1	19	3	0	4	36	1	142	1,690
4:45 PM	0	2	21	0	0	4	28	4	0	1	31	2	0	5	37	4	139	1,703
4:50 PM	0	2	25	2	0	6	17	1	0	1	21	0	0	4	39	4	122	1,686
4:55 PM	0	6	17	0	0	7	22	1	0	7	30	1	0	8	38	5	142	1,713
5:00 PM	0	10	20	0	0	2	18	0	0	3	40	0	0	11	57	1	162	1,709
5:05 PM	0	5	29	3	0	9	35	1	0	0	22	5	0	6	27	4	146	
5:10 PM	0	3	20	3	0	4	22	1	0	0	25	0	0	6	50	2	136	
5:15 PM	0	6	16	5	0	4	39	1	0	1	21	3	0	7	44	2	149	
5:20 PM	0	2	22	4	0	4	22	0	0	2	26	1	0	10	51	5	149	
5:25 PM	0	2	38	2	0	6	27	1	0	3	21	0	0	7	34	3	144	
5:30 PM	0	3	13	1	0	6	22	1	0	2	25	1	0	6	39	3	122	
5:35 PM	0	5	22	4	0	6	19	2	0	0	22	1	0	7	48	1	137	
5:40 PM	0	8	24	5	0	10	20	2	0	3	32	4	0	2	45	0	155	
5:45 PM	0	4	17	3	0	6	17	1	0	0	17	1	0	6	46	4	122	
5:50 PM	0	3	22	3	0	14	22	2	0	1	26	1	0	7	46	2	149	
5:55 PM	0	4	19	0	0	11	19	0	0	6	19	2	0	6	51	1	138	
Count Total	0	117	552	53	0	156	639	33	0	54	592	38	0	170	1,077	72	3,553	
Peak Hour	0	62	290	20	0	74	357	21	0	33	296	19	0	89	539	44	1,844	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	3	4	1	3	11	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	1	4	3	0	8	4:05 PM	0	1	0	0	1	4:05 PM	0	0	0	0	0
4:10 PM	3	1	3	9	16	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	1	1	1	3	6	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	2	1	4	7	14	4:20 PM	1	0	0	0	1	4:20 PM	0	0	0	0	0
4:25 PM	1	2	2	4	9	4:25 PM	1	0	0	0	1	4:25 PM	0	0	0	0	0
4:30 PM	3	2	3	7	15	4:30 PM	0	0	1	0	1	4:30 PM	0	0	0	0	0
4:35 PM	2	1	1	3	7	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	2	2	3	2	9	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	2	1	1	3	7	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	2	0	2	4	8	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	2	3	0	2	7	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	2	3	1	1	7	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	3	0	1	3	7	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	0	1	0	5	6	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	5	0	1	2	8	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	0	3	0	3	6	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	3	3	0	2	8	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	1	1	1	1	4	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	4	0	0	1	5	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	1	3	0	4	8	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	2	1	0	5	8	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	4	1	1	6	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	3	0	1	2	6	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	48	41	30	77	196	Count Total	2	1	1	0	4	Count Total	0	0	0	0	0
Peak Hour	24	22	24	47	117	Peak Hour	2	1	1	0	4	Peak Hour	0	0	0	0	0

SECTION 2. SEASONAL ADJUSTMENT FACTOR CALCULATIONS

Seasonal Adjustment Factor Calculations Using ATR #24-016

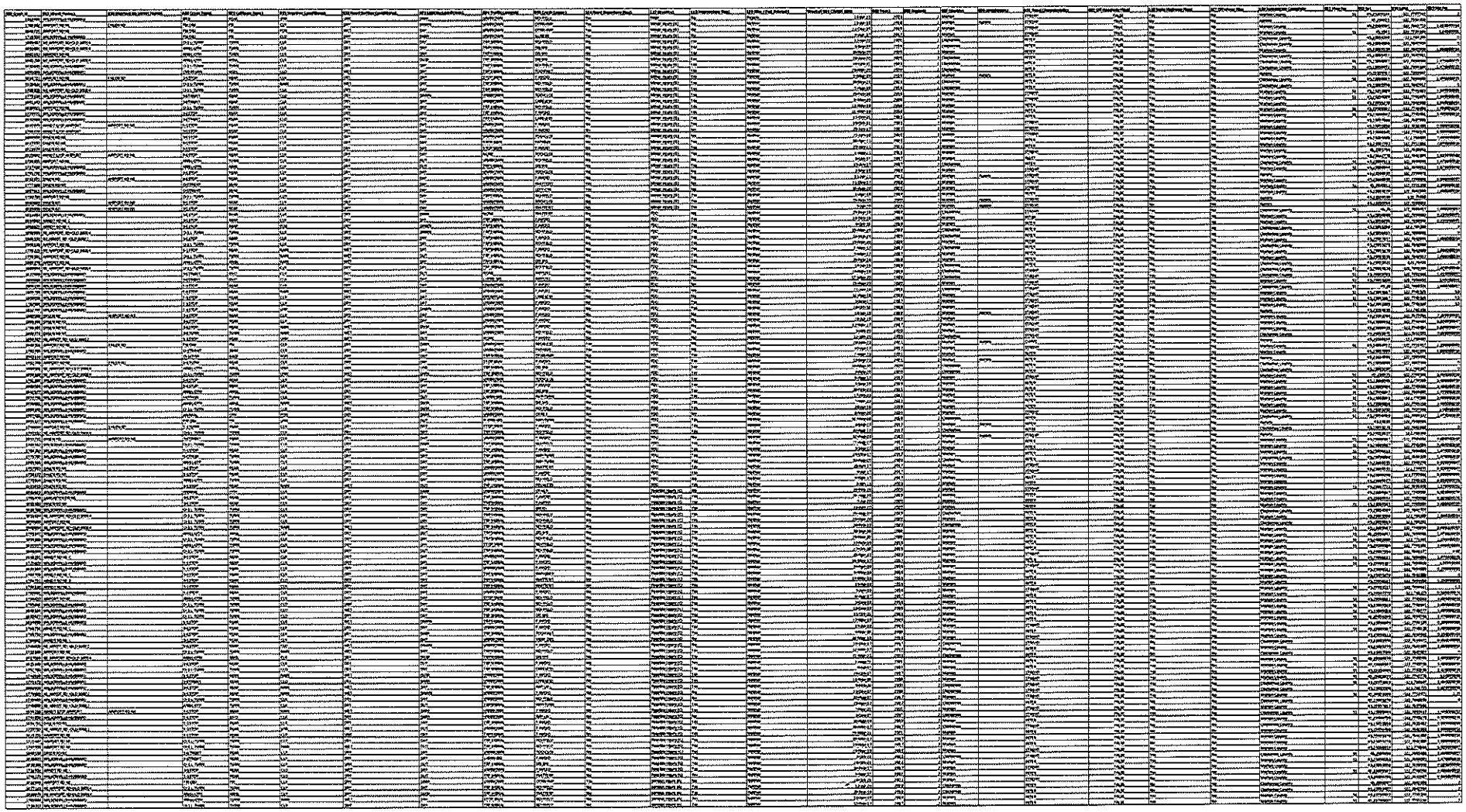
		2022	2021	2020	2019	2018	2017	2016	
Weekday Traffic	Peak Month (August)	See Comments Below		10174	10715	10332	11053	9848	
	Count Count (Sept)			9538	10332	10211	10232	9472	
Percent ADT	Peak Month (August)			118	112	109	121	111	114
	Count Count (Sept)			111	108	107	112	107	109
				1.06	1.04	1.02	1.08	1.04	

Seasonal Adjustment
1.05

Comments:
2021 - Equipment outage Jun - August
2022 - Construction from May - Aug, volumes were estimated for those months

Note: Remove highest and lowest values

SECTION 3: CRASH DATA



SECTION 4: GROWTH RATE CALCULATIONS

Future Highway Volumes Table (ODOT)

HWY	MP	DIR	HS	Description	2019	2021	2022	2042	RSQ	RSQ	Growth Rate	
051	1.49	1		South of Arndt Road, Clackamas-Marion County Line [0.02 mile]		13400		17600	0.8889	0.8889	1.49%	
051	3.46	1		North of Ehlen Road [0.02 mile]		11800		15700	0.8431	0.8431	1.57%	
											1.53%	Average, Round up to 2%

Growth Rate = (Future Volume - Existing Volume)/Existing Volume
(Future Year - Existing Year)

SECTION 5: HCM REPORTS - EXISTING 2023 AM AND PM

HCM 6th Signalized Intersection Summary
1: Airport Road & Arndt Road

Existing (2023) - S.A. AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	385	49	11	575	298	58	104	7	66	26	9
Future Volume (veh/h)	20	385	49	11	575	298	58	104	7	66	26	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1586	1586	1586	1641	1641	1641	1723	1723	1723	1709	1709	1709
Adj Flow Rate, veh/h	24	454	58	13	678	352	68	123	8	78	31	11
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	12	12	12	8	8	8	2	2	2	3	3	3
Cap, veh/h	69	1784	227	57	660	343	283	278	18	207	208	74
Arrive On Green	0.05	0.66	0.64	0.04	0.65	0.63	0.17	0.17	0.15	0.17	0.17	0.15
Sat Flow, veh/h	1511	2690	342	1563	1009	524	1365	1600	104	1249	1197	425
Grp Volume(v), veh/h	24	253	259	13	0	1030	68	0	131	78	0	42
Grp Sat Flow(s),veh/h/ln	1511	1507	1525	1563	0	1533	1365	0	1704	1249	0	1621
Q Serve(g_s), s	1.5	6.5	6.6	0.8	0.0	62.0	4.2	0.0	6.5	5.7	0.0	2.1
Cycle Q Clear(g_c), s	1.5	6.5	6.6	0.8	0.0	62.0	6.3	0.0	6.5	12.2	0.0	2.1
Prop In Lane	1.00		0.22	1.00		0.34	1.00		0.06	1.00		0.26
Lane Grp Cap(c), veh/h	69	999	1011	57	0	1002	283	0	296	207	0	282
V/C Ratio(X)	0.35	0.25	0.26	0.23	0.00	1.03	0.24	0.00	0.44	0.38	0.00	0.15
Avail Cap(c_a), veh/h	350	999	1011	363	0	1002	506	0	575	411	0	547
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	43.9	6.5	6.6	44.4	0.0	16.8	35.9	0.0	35.1	40.5	0.0	33.4
Incr Delay (d2), s/veh	2.2	0.4	0.4	1.5	0.0	35.7	0.3	0.0	0.8	0.8	0.0	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	0.6	1.7	1.8	0.3	0.0	26.4	1.4	0.0	2.6	1.7	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.1	6.9	7.0	45.9	0.0	52.5	36.2	0.0	35.9	41.3	0.0	33.6
LnGrp LOS	D	A	A	D	A	F	D	A	D	D	A	C
Approach Vol, veh/h		536			1043			199			120	
Approach Delay, s/veh		8.7			52.4			36.0			38.6	
Approach LOS		A			D			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		20.5	8.3	66.0		20.5	7.4	66.9				
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s		30.0	20.0	60.0		30.0	20.0	60.0				
Max Q Clear Time (g_c+I1), s		14.2	3.5	64.0		8.5	2.8	8.6				
Green Ext Time (p_c), s		0.3	0.0	0.0		0.6	0.0	18.0				

Intersection Summary	
HCM 6th Ctrl Delay	37.5
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	6	23	185	39	17
Future Vol, veh/h	11	6	23	185	39	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	12	12	2	2	9	9
Mvmt Flow	13	7	28	223	47	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	337	58	68	0	-	0
Stage 1	58	-	-	-	-	-
Stage 2	279	-	-	-	-	-
Critical Hdwy	6.52	6.32	4.12	-	-	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.408	2.218	-	-	-
Pot Cap-1 Maneuver	639	981	1533	-	-	-
Stage 1	940	-	-	-	-	-
Stage 2	746	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	626	981	1533	-	-	-
Mov Cap-2 Maneuver	626	-	-	-	-	-
Stage 1	920	-	-	-	-	-
Stage 2	746	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1533	-	718	-	-
HCM Lane V/C Ratio	0.018	-	0.029	-	-
HCM Control Delay (s)	7.4	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		⅄	
Traffic Vol, veh/h	17	360	330	178	46	11
Future Vol, veh/h	17	360	330	178	46	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	9	9	9	9	9	9
Mvmt Flow	20	430	394	212	55	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	606	0	-	0	970	500
Stage 1	-	-	-	-	500	-
Stage 2	-	-	-	-	470	-
Critical Hdwy	4.19	-	-	-	6.49	6.29
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	2.281	-	-	-	3.581	3.381
Pot Cap-1 Maneuver	939	-	-	-	273	557
Stage 1	-	-	-	-	595	-
Stage 2	-	-	-	-	615	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	939	-	-	-	265	557
Mov Cap-2 Maneuver	-	-	-	-	265	-
Stage 1	-	-	-	-	578	-
Stage 2	-	-	-	-	615	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	20.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	939	-	-	-	295
HCM Lane V/C Ratio	0.022	-	-	-	0.231
HCM Control Delay (s)	8.9	0	-	-	20.8
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.9

HCM 6th Signalized Intersection Summary
4: OR 551 & Arndt Road

Existing (2023) - S.A. AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	71	7	43	56	553	14	557	54	332	349	17
Future Volume (veh/h)	39	71	7	43	56	553	14	557	54	332	349	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adj Flow Rate, veh/h	44	80	8	49	63	0	16	629	61	375	394	19
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	11	11	11	11	11	11	11	11	11	11	11	11
Cap, veh/h	105	134	12	122	119		36	912	773	487	1138	944
Arrive On Green	0.11	0.13	0.11	0.11	0.13	0.00	0.02	0.57	0.57	0.16	0.71	0.71
Sat Flow, veh/h	388	1006	90	491	888	1356	1524	1600	1356	2956	1600	1328
Grp Volume(v), veh/h	132	0	0	112	0	0	16	629	61	375	394	19
Grp Sat Flow(s),veh/h/ln	1484	0	0	1379	0	1356	1524	1600	1356	1478	1600	1328
Q Serve(g_s), s	0.7	0.0	0.0	0.0	0.0	0.0	0.9	25.4	1.8	11.1	8.6	0.4
Cycle Q Clear(g_c), s	7.8	0.0	0.0	7.1	0.0	0.0	0.9	25.4	1.8	11.1	8.6	0.4
Prop In Lane	0.33		0.06	0.44		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	218	0	0	211	0		36	912	773	487	1138	944
V/C Ratio(X)	0.60	0.00	0.00	0.53	0.00		0.44	0.69	0.08	0.77	0.35	0.02
Avail Cap(c_a), veh/h	549	0	0	532	0		259	1089	923	1152	1138	944
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	0.0	0.0	37.6	0.0	0.0	43.9	13.9	8.8	36.4	5.0	3.9
Incr Delay (d2), s/veh	2.0	0.0	0.0	2.1	0.0	0.0	6.2	1.8	0.1	1.9	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	0.0	2.5	0.0	0.0	0.4	7.6	0.5	3.8	1.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.9	0.0	0.0	39.7	0.0	0.0	50.0	15.7	8.9	38.3	5.3	3.9
LnGrp LOS	D	A	A	D	A		D	B	A	D	A	A
Approach Vol, veh/h		132			112			706			788	
Approach Delay, s/veh		39.9			39.7			15.9			21.0	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.2	68.8		16.2	19.0	55.9		16.2				
Change Period (Y+Rc), s	4.5	6.0		6.0	4.5	6.0		6.0				
Max Green Setting (Gmax), s	15.0	60.0		31.0	35.0	60.0		31.0				
Max Q Clear Time (g_c+I1), s	2.9	10.6		9.1	13.1	27.4		9.8				
Green Ext Time (p_c), s	0.0	16.6		0.4	1.5	22.5		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		21.6	
HCM 6th LOS		C	

Notes

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

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑		↰	↑	↱
Traffic Vol, veh/h	15	4	31	1	2	6	35	604	27	16	379	9
Future Vol, veh/h	15	4	31	1	2	6	35	604	27	16	379	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	500	-	-	500	-	160
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	9	9	9	9	9	9	9	9	9	9	9	9
Mvmt Flow	18	5	37	1	2	7	42	721	32	19	452	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1316	1327	452	1338	1322	737	463	0	0	753	0	0
Stage 1	490	490	-	821	821	-	-	-	-	-	-	-
Stage 2	826	837	-	517	501	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.59	6.29	7.19	6.59	6.29	4.19	-	-	4.19	-	-
Critical Hdwy Stg 1	6.19	5.59	-	6.19	5.59	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.59	-	6.19	5.59	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4.081	3.381	3.581	4.081	3.381	2.281	-	-	2.281	-	-
Pot Cap-1 Maneuver	130	150	593	126	151	407	1062	-	-	826	-	-
Stage 1	547	537	-	359	379	-	-	-	-	-	-	-
Stage 2	356	372	-	529	531	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	120	141	593	110	142	407	1062	-	-	826	-	-
Mov Cap-2 Maneuver	120	141	-	110	142	-	-	-	-	-	-	-
Stage 1	525	525	-	345	364	-	-	-	-	-	-	-
Stage 2	334	357	-	480	519	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	24.6	20.9	0.4	0.4
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1062	-	-	243	237	826	-	-
HCM Lane V/C Ratio	0.039	-	-	0.246	0.045	0.023	-	-
HCM Control Delay (s)	8.5	-	-	24.6	20.9	9.5	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.9	0.1	0.1	-	-

HCM 6th Signalized Intersection Summary
6: OR 551 & Ehlen Road

Existing (2023) - S.A. AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	321	20	38	244	32	44	519	24	33	347	24
Future Volume (veh/h)	115	321	20	38	244	32	44	519	24	33	347	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1614	1614	1614	1614	1614	1614	1614	1614	1614	1614	1614	1614
Adj Flow Rate, veh/h	131	366	23	43	278	37	50	592	27	38	396	27
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, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	159	453	28	53	324	43	61	779	660	45	762	646
Arrive On Green	0.10	0.30	0.29	0.03	0.23	0.22	0.04	0.48	0.48	0.03	0.47	0.47
Sat Flow, veh/h	1537	1502	94	1537	1394	186	1537	1614	1367	1537	1614	1367
Grp Volume(v), veh/h	131	0	389	43	0	315	50	592	27	38	396	27
Grp Sat Flow(s),veh/h/ln	1537	0	1597	1537	0	1580	1537	1614	1367	1537	1614	1367
Q Serve(g_s), s	8.8	0.0	23.7	2.9	0.0	20.2	3.4	31.6	1.1	2.6	18.1	1.1
Cycle Q Clear(g_c), s	8.8	0.0	23.7	2.9	0.0	20.2	3.4	31.6	1.1	2.6	18.1	1.1
Prop In Lane	1.00		0.06	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	159	0	482	53	0	367	61	779	660	45	762	646
V/C Ratio(X)	0.82	0.00	0.81	0.82	0.00	0.86	0.81	0.76	0.04	0.84	0.52	0.04
Avail Cap(c_a), veh/h	510	0	551	510	0	546	292	949	804	292	949	804
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	0.0	34.0	50.6	0.0	38.9	50.2	22.3	14.4	50.9	19.5	15.0
Incr Delay (d2), s/veh	7.6	0.0	7.3	19.9	0.0	7.7	17.1	3.4	0.0	24.8	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	9.4	1.4	0.0	8.2	1.5	11.1	0.3	1.3	6.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.9	0.0	41.3	70.4	0.0	46.6	67.3	25.7	14.4	75.7	20.2	15.0
LnGrp LOS	D	A	D	E	A	D	E	C	B	E	C	B
Approach Vol, veh/h		520			358			669			461	
Approach Delay, s/veh		44.5			49.5			28.3			24.5	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	53.8	14.9	28.5	7.1	54.9	7.6	35.8
Change Period (Y+Rc), s	4.0	6.0	4.0	* 5.4	4.0	6.0	4.0	* 5.4
Max Green Setting (Gmax), s	20.0	60.0	35.0	* 35	20.0	60.0	35.0	* 35
Max Q Clear Time (g_c+I1), s	5.4	20.1	10.8	22.2	4.6	33.6	4.9	25.7
Green Ext Time (p_c), s	0.1	12.4	0.4	0.9	0.0	15.3	0.1	0.9

Intersection Summary	
HCM 6th Ctrl Delay	35.4
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	0	3	192	55	3
Future Vol, veh/h	1	0	3	192	55	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	2	2	7	7
Mvmt Flow	1	0	4	232	66	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	308	68	70	0	-	0
Stage 1	68	-	-	-	-	-
Stage 2	240	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	688	1001	1531	-	-	-
Stage 1	960	-	-	-	-	-
Stage 2	805	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	686	1001	1531	-	-	-
Mov Cap-2 Maneuver	686	-	-	-	-	-
Stage 1	957	-	-	-	-	-
Stage 2	805	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.3	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1531	-	686	-	-
HCM Lane V/C Ratio	0.002	-	0.002	-	-
HCM Control Delay (s)	7.4	0	10.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th Signalized Intersection Summary
1: Airport Road & Arndt Road

Existing (2023) - S.A. PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	632	59	6	479	109	57	43	33	175	57	28
Future Volume (veh/h)	9	632	59	6	479	109	57	43	33	175	57	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	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	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709
Adj Flow Rate, veh/h	10	729	68	7	553	126	66	50	38	202	66	32
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	57	1765	165	51	787	179	334	220	167	342	268	130
Arrive On Green	0.03	0.59	0.57	0.03	0.58	0.56	0.25	0.25	0.22	0.25	0.25	0.22
Sat Flow, veh/h	1628	3002	280	1628	1347	307	1287	895	681	1299	1087	527
Grp Volume(v), veh/h	10	394	403	7	0	679	66	0	88	202	0	98
Grp Sat Flow(s),veh/h/ln	1628	1624	1659	1628	0	1653	1287	0	1576	1299	0	1614
Q Serve(g_s), s	0.5	11.8	11.9	0.4	0.0	25.9	3.9	0.0	4.0	13.1	0.0	4.4
Cycle Q Clear(g_c), s	0.5	11.8	11.9	0.4	0.0	25.9	8.2	0.0	4.0	17.1	0.0	4.4
Prop In Lane	1.00		0.17	1.00		0.19	1.00		0.43	1.00		0.33
Lane Grp Cap(c), veh/h	57	954	975	51	0	966	334	0	388	342	0	397
V/C Ratio(X)	0.18	0.41	0.41	0.14	0.00	0.70	0.20	0.00	0.23	0.59	0.00	0.25
Avail Cap(c_a), veh/h	402	1130	1155	402	0	1151	480	0	566	489	0	580
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	41.7	10.0	10.1	42.0	0.0	13.2	30.3	0.0	27.2	33.7	0.0	27.2
Incr Delay (d2), s/veh	1.1	0.9	0.9	0.9	0.0	4.3	0.2	0.0	0.2	1.2	0.0	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	0.2	3.7	3.8	0.2	0.0	9.0	1.1	0.0	1.4	3.9	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.8	10.9	11.0	42.8	0.0	17.5	30.5	0.0	27.4	34.9	0.0	27.5
LnGrp LOS	D	B	B	D	A	B	C	A	C	C	A	C
Approach Vol, veh/h		807			686			154			300	
Approach Delay, s/veh		11.4			17.7			28.7			32.4	
Approach LOS		B			B			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.9	7.1	56.0		25.9	6.8	56.3				
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s		30.0	20.0	60.0		30.0	20.0	60.0				
Max Q Clear Time (g_c+I1), s		19.1	2.5	27.9		10.2	2.4	13.9				
Green Ext Time (p_c), s		0.8	0.0	22.1		0.5	0.0	28.0				

Intersection Summary	
HCM 6th Ctrl Delay	18.2
HCM 6th LOS	B

Intersection						
Int Delay, s/veh	2					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	25	25	5	62	151	14
Future Vol, veh/h	25	25	5	62	151	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	4	4	6	6	2	2
Mvmt Flow	35	35	7	87	211	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	322	221	231	0	-	0
Stage 1	221	-	-	-	-	-
Stage 2	101	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.16	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.254	-	-	-
Pot Cap-1 Maneuver	668	814	1314	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	918	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	664	814	1314	-	-	-
Mov Cap-2 Maneuver	664	-	-	-	-	-
Stage 1	806	-	-	-	-	-
Stage 2	918	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1314	-	731	-	-
HCM Lane V/C Ratio	0.005	-	0.096	-	-
HCM Control Delay (s)	7.8	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection						
Int Delay, s/veh	7.6					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		⅄	
Traffic Vol, veh/h	13	379	422	59	139	27
Future Vol, veh/h	13	379	422	59	139	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	7	7	5	5	2	2
Mvmt Flow	16	457	509	71	168	33

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	580	0	-	0	1034	545
Stage 1	-	-	-	-	545	-
Stage 2	-	-	-	-	489	-
Critical Hdwy	4.17	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.263	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	970	-	-	-	257	538
Stage 1	-	-	-	-	581	-
Stage 2	-	-	-	-	616	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	970	-	-	-	251	538
Mov Cap-2 Maneuver	-	-	-	-	251	-
Stage 1	-	-	-	-	568	-
Stage 2	-	-	-	-	616	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	46.6
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	970	-	-	-	275
HCM Lane V/C Ratio	0.016	-	-	-	0.729
HCM Control Delay (s)	8.8	0	-	-	46.6
HCM Lane LOS	A	A	-	-	E
HCM 95th %tile Q(veh)	0	-	-	-	5.2

HCM 6th Signalized Intersection Summary
4: OR 551 & Arndt Road

Existing (2023) - S.A. PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	90	16	73	78	406	3	326	39	581	555	44
Future Volume (veh/h)	31	90	16	73	78	406	3	326	39	581	555	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668
Adj Flow Rate, veh/h	34	99	18	81	86	0	3	360	43	642	613	49
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	99	201	33	175	141		17	684	580	802	1101	933
Arrive On Green	0.15	0.17	0.15	0.15	0.17	0.00	0.01	0.41	0.41	0.26	0.66	0.66
Sat Flow, veh/h	239	1155	189	609	806	1414	1589	1668	1414	3082	1668	1414
Grp Volume(v), veh/h	151	0	0	167	0	0	3	360	43	642	613	49
Grp Sat Flow(s),veh/h/ln	1583	0	0	1415	0	1414	1589	1668	1414	1541	1668	1414
Q Serve(g_s), s	0.0	0.0	0.0	2.0	0.0	0.0	0.1	12.5	1.4	15.0	15.3	0.9
Cycle Q Clear(g_c), s	6.8	0.0	0.0	8.8	0.0	0.0	0.1	12.5	1.4	15.0	15.3	0.9
Prop In Lane	0.23		0.12	0.49		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	292	0	0	279	0		17	684	580	802	1101	933
V/C Ratio(X)	0.52	0.00	0.00	0.60	0.00		0.18	0.53	0.07	0.80	0.56	0.05
Avail Cap(c_a), veh/h	678	0	0	639	0		319	1338	1134	1416	1338	1134
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.4	0.0	0.0	30.4	0.0	0.0	37.9	17.1	13.9	26.7	7.1	4.6
Incr Delay (d2), s/veh	1.1	0.0	0.0	2.0	0.0	0.0	3.8	0.9	0.1	1.4	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.0	3.0	0.0	0.0	0.1	4.1	0.4	5.0	3.4	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	0.0	0.0	32.4	0.0	0.0	41.7	18.0	13.9	28.1	7.7	4.7
LnGrp LOS	C	A	A	C	A		D	B	B	C	A	A
Approach Vol, veh/h		151			167			406			1304	
Approach Delay, s/veh		30.5			32.4			17.8			17.6	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	55.0		17.5	24.1	35.7		17.5				
Change Period (Y+Rc), s	4.5	6.0		6.0	4.5	6.0		6.0				
Max Green Setting (Gmax), s	15.0	60.0		31.0	35.0	60.0		31.0				
Max Q Clear Time (g_c+I1), s	2.1	17.3		10.8	17.0	14.5		8.8				
Green Ext Time (p_c), s	0.0	25.7		0.7	2.6	15.2		0.5				

Intersection Summary	
HCM 6th Ctrl Delay	19.8
HCM 6th LOS	B

Notes

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

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↱		↰	↑	↗
Traffic Vol, veh/h	6	1	42	14	20	10	28	367	4	7	616	30
Future Vol, veh/h	6	1	42	14	20	10	28	367	4	7	616	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	500	-	-	500	-	160
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	8	1	53	18	25	13	35	464	5	9	779	38

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1353	1336	779	1380	1372	467	817	0	0	469	0	0
Stage 1	797	797	-	537	537	-	-	-	-	-	-	-
Stage 2	556	539	-	843	835	-	-	-	-	-	-	-
Critical Hdwy	7.16	6.56	6.26	7.16	6.56	6.26	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.16	5.56	-	6.16	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.16	5.56	-	6.16	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.554	4.054	3.354	3.554	4.054	3.354	2.254	-	-	2.254	-	-
Pot Cap-1 Maneuver	124	151	390	119	143	588	794	-	-	1072	-	-
Stage 1	374	393	-	521	516	-	-	-	-	-	-	-
Stage 2	508	515	-	353	377	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	100	143	390	98	136	588	794	-	-	1072	-	-
Mov Cap-2 Maneuver	100	143	-	98	136	-	-	-	-	-	-	-
Stage 1	358	390	-	498	493	-	-	-	-	-	-	-
Stage 2	451	492	-	301	374	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.4	45.4	0.7	0.1
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	794	-	-	281	143	1072	-	-
HCM Lane V/C Ratio	0.045	-	-	0.221	0.389	0.008	-	-
HCM Control Delay (s)	9.7	-	-	21.4	45.4	8.4	-	-
HCM Lane LOS	A	-	-	C	E	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.8	1.7	0	-	-

HCM 6th Signalized Intersection Summary
6: OR 551 & Ehlen Road

Existing (2023) - S.A. PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	290	20	74	357	21	33	296	19	89	539	44
Future Volume (veh/h)	62	290	20	74	357	21	33	296	19	89	539	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		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	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668
Adj Flow Rate, veh/h	72	338	23	86	416	24	38	345	22	104	629	51
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	91	435	30	108	457	26	46	714	605	127	799	677
Arrive On Green	0.06	0.28	0.27	0.07	0.29	0.28	0.03	0.43	0.43	0.08	0.48	0.48
Sat Flow, veh/h	1589	1542	105	1589	1560	90	1589	1668	1414	1589	1668	1414
Grp Volume(v), veh/h	72	0	361	86	0	440	38	345	22	104	629	51
Grp Sat Flow(s),veh/h/ln	1589	0	1647	1589	0	1650	1589	1668	1414	1589	1668	1414
Q Serve(g_s), s	5.1	0.0	22.8	6.0	0.0	29.1	2.7	16.9	1.0	7.3	35.7	2.2
Cycle Q Clear(g_c), s	5.1	0.0	22.8	6.0	0.0	29.1	2.7	16.9	1.0	7.3	35.7	2.2
Prop In Lane	1.00		0.06	1.00		0.05	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	91	0	465	108	0	483	46	714	605	127	799	677
V/C Ratio(X)	0.79	0.00	0.78	0.79	0.00	0.91	0.82	0.48	0.04	0.82	0.79	0.08
Avail Cap(c_a), veh/h	492	0	530	492	0	531	281	915	775	281	915	775
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.6	0.0	37.4	51.9	0.0	38.6	54.6	23.3	18.8	51.2	24.7	15.9
Incr Delay (d2), s/veh	10.7	0.0	5.9	9.3	0.0	18.4	22.1	0.7	0.0	9.3	4.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	9.3	2.6	0.0	13.7	1.3	6.2	0.3	3.1	13.5	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.3	0.0	43.3	61.1	0.0	57.0	76.7	24.0	18.8	60.5	29.2	16.0
LnGrp LOS	E	A	D	E	A	E	E	C	B	E	C	B
Approach Vol, veh/h		433			526			405			784	
Approach Delay, s/veh		46.6			57.7			28.7			32.5	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	58.1	10.5	37.1	13.0	52.4	11.7	35.9
Change Period (Y+Rc), s	4.0	6.0	4.0	* 5.4	4.0	6.0	4.0	* 5.4
Max Green Setting (Gmax), s	20.0	60.0	35.0	* 35	20.0	60.0	35.0	* 35
Max Q Clear Time (g_c+I1), s	4.7	37.7	7.1	31.1	9.3	18.9	8.0	24.8
Green Ext Time (p_c), s	0.1	14.5	0.2	0.7	0.1	10.6	0.2	0.9

Intersection Summary	
HCM 6th Ctrl Delay	40.8
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	4	6	79	160	2
Future Vol, veh/h	5	4	6	79	160	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	8	6	9	119	240	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	379	242	243	0	-	0
Stage 1	242	-	-	-	-	-
Stage 2	137	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	621	794	1317	-	-	-
Stage 1	796	-	-	-	-	-
Stage 2	887	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	617	794	1317	-	-	-
Mov Cap-2 Maneuver	617	-	-	-	-	-
Stage 1	790	-	-	-	-	-
Stage 2	887	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1317	-	685	-	-
HCM Lane V/C Ratio	0.007	-	0.02	-	-
HCM Control Delay (s)	7.8	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

SECTION 6: HCM REPORTS - OPENING YEAR 2025 NO BUILD AM AND PM

HCM 6th Signalized Intersection Summary
1: Airport Road & Arndt Road

Opening Year (2025) AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	425	55	15	630	315	65	110	10	70	30	10
Future Volume (veh/h)	25	425	55	15	630	315	65	110	10	70	30	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1586	1586	1586	1641	1641	1641	1723	1723	1723	1709	1709	1709
Adj Flow Rate, veh/h	28	478	62	17	708	354	73	124	11	79	34	11
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	12	12	12	8	8	8	2	2	2	3	3	3
Cap, veh/h	122	1746	226	586	659	329	293	175	16	219	143	46
Arrive On Green	0.04	0.65	0.63	0.03	0.64	0.63	0.07	0.11	0.10	0.07	0.12	0.10
Sat Flow, veh/h	1511	2684	347	1563	1024	512	1641	1559	138	1628	1229	397
Grp Volume(v), veh/h	28	267	273	17	0	1062	73	0	135	79	0	45
Grp Sat Flow(s),veh/h/ln	1511	1507	1524	1563	0	1536	1641	0	1698	1628	0	1626
Q Serve(g_s), s	0.7	9.1	9.3	0.4	0.0	78.0	4.6	0.0	9.3	5.1	0.0	3.1
Cycle Q Clear(g_c), s	0.7	9.1	9.3	0.4	0.0	78.0	4.6	0.0	9.3	5.1	0.0	3.1
Prop In Lane	1.00		0.23	1.00		0.33	1.00		0.08	1.00		0.24
Lane Grp Cap(c), veh/h	122	980	991	586	0	988	293	0	190	219	0	189
V/C Ratio(X)	0.23	0.27	0.27	0.03	0.00	1.07	0.25	0.00	0.71	0.36	0.00	0.24
Avail Cap(c_a), veh/h	159	980	991	636	0	988	332	0	364	251	0	349
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	31.2	9.0	9.1	6.7	0.0	21.9	42.8	0.0	52.0	42.9	0.0	48.9
Incr Delay (d2), s/veh	0.7	0.5	0.5	0.0	0.0	51.0	0.3	0.0	3.6	0.7	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.8	2.9	0.1	0.0	37.6	1.8	0.0	4.0	2.0	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.9	9.5	9.6	6.7	0.0	72.9	43.1	0.0	55.6	43.7	0.0	49.4
LnGrp LOS	C	A	A	A	A	F	D	A	E	D	A	D
Approach Vol, veh/h		568			1079			208			124	
Approach Delay, s/veh		10.6			71.9			51.2			45.7	
Approach LOS		B			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	18.1	9.1	82.0	12.6	17.6	8.2	82.9
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	24.0	6.0	76.0	9.0	24.0	6.0	76.0
Max Q Clear Time (g_c+I1), s	6.6	5.1	2.7	80.0	7.1	11.3	2.4	11.3
Green Ext Time (p_c), s	0.0	0.1	0.0	0.0	0.0	0.3	0.0	20.9

Intersection Summary	
HCM 6th Ctrl Delay	50.5
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	10	25	195	45	20
Future Vol, veh/h	15	10	25	195	45	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	12	12	2	2	9	9
Mvmt Flow	17	11	29	224	52	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	346	64	75	0	-	0
Stage 1	64	-	-	-	-	-
Stage 2	282	-	-	-	-	-
Critical Hdwy	6.52	6.32	4.12	-	-	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.408	2.218	-	-	-
Pot Cap-1 Maneuver	631	973	1524	-	-	-
Stage 1	934	-	-	-	-	-
Stage 2	743	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	617	973	1524	-	-	-
Mov Cap-2 Maneuver	617	-	-	-	-	-
Stage 1	913	-	-	-	-	-
Stage 2	743	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1524	-	723	-	-
HCM Lane V/C Ratio	0.019	-	0.04	-	-
HCM Control Delay (s)	7.4	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		⅄	
Traffic Vol, veh/h	20	395	365	190	50	15
Future Vol, veh/h	20	395	365	190	50	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	9	9	9	9	9	9
Mvmt Flow	23	449	415	216	57	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	631	0	-	0	1018	523
Stage 1	-	-	-	-	523	-
Stage 2	-	-	-	-	495	-
Critical Hdwy	4.19	-	-	-	6.49	6.29
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	2.281	-	-	-	3.581	3.381
Pot Cap-1 Maneuver	919	-	-	-	255	540
Stage 1	-	-	-	-	581	-
Stage 2	-	-	-	-	598	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	919	-	-	-	247	540
Mov Cap-2 Maneuver	-	-	-	-	247	-
Stage 1	-	-	-	-	562	-
Stage 2	-	-	-	-	598	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	22.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	919	-	-	-	282
HCM Lane V/C Ratio	0.025	-	-	-	0.262
HCM Control Delay (s)	9	0	-	-	22.2
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	1

HCM 6th Signalized Intersection Summary
4: OR 551 & Arndt Road

Opening Year (2025) AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	80	10	50	65	605	20	610	60	365	385	20
Future Volume (veh/h)	45	80	10	50	65	605	20	610	60	365	385	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adj Flow Rate, veh/h	48	86	11	54	70	0	22	656	65	392	414	22
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	11	11	11	11	11	11	11	11	11	11	11	11
Cap, veh/h	103	137	16	120	121		43	901	763	498	1125	934
Arrive On Green	0.12	0.14	0.12	0.12	0.14	0.00	0.03	0.56	0.56	0.17	0.70	0.70
Sat Flow, veh/h	370	951	108	464	839	1356	1524	1600	1356	2956	1600	1328
Grp Volume(v), veh/h	145	0	0	124	0	0	22	656	65	392	414	22
Grp Sat Flow(s),veh/h/ln	1429	0	0	1303	0	1356	1524	1600	1356	1478	1600	1328
Q Serve(g_s), s	0.5	0.0	0.0	0.0	0.0	0.0	1.4	29.4	2.1	12.3	10.0	0.5
Cycle Q Clear(g_c), s	9.6	0.0	0.0	9.0	0.0	0.0	1.4	29.4	2.1	12.3	10.0	0.5
Prop In Lane	0.33		0.08	0.44		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	226	0	0	215	0		43	901	763	498	1125	934
V/C Ratio(X)	0.64	0.00	0.00	0.58	0.00		0.51	0.73	0.09	0.79	0.37	0.02
Avail Cap(c_a), veh/h	510	0	0	490	0		244	1025	869	1085	1125	934
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.8	0.0	0.0	39.5	0.0	0.0	46.3	15.7	9.7	38.5	5.7	4.3
Incr Delay (d2), s/veh	2.2	0.0	0.0	2.4	0.0	0.0	6.8	2.6	0.1	2.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	0.0	2.9	0.0	0.0	0.6	9.2	0.5	4.3	2.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.0	0.0	0.0	41.9	0.0	0.0	53.2	18.3	9.8	40.6	6.0	4.3
LnGrp LOS	D	A	A	D	A		D	B	A	D	A	A
Approach Vol, veh/h		145			124			743			828	
Approach Delay, s/veh		42.0			41.9			18.6			22.4	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	72.0		18.0	20.3	58.5		18.0				
Change Period (Y+Rc), s	4.5	6.0		6.0	4.5	6.0		6.0				
Max Green Setting (Gmax), s	15.0	60.0		31.0	35.0	60.0		31.0				
Max Q Clear Time (g_c+I1), s	3.4	12.0		11.0	14.3	31.4		11.6				
Green Ext Time (p_c), s	0.0	17.4		0.5	1.5	21.1		0.4				

Intersection Summary	
HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C

Notes

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

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑		↰	↑	↱
Traffic Vol, veh/h	20	5	35	5	5	10	40	665	30	20	410	10
Future Vol, veh/h	20	5	35	5	5	10	40	665	30	20	410	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	500	-	-	500	-	160
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	9	9	9	9	9	9	9	9	9	9	9	9
Mvmt Flow	23	6	40	6	6	11	45	756	34	23	466	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1384	1392	466	1404	1386	773	477	0	0	790	0	0
Stage 1	512	512	-	863	863	-	-	-	-	-	-	-
Stage 2	872	880	-	541	523	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.59	6.29	7.19	6.59	6.29	4.19	-	-	4.19	-	-
Critical Hdwy Stg 1	6.19	5.59	-	6.19	5.59	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.59	-	6.19	5.59	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4.081	3.381	3.581	4.081	3.381	2.281	-	-	2.281	-	-
Pot Cap-1 Maneuver	117	137	582	113	138	388	1050	-	-	800	-	-
Stage 1	532	525	-	340	362	-	-	-	-	-	-	-
Stage 2	336	356	-	513	519	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	104	127	582	96	128	388	1050	-	-	800	-	-
Mov Cap-2 Maneuver	104	127	-	96	128	-	-	-	-	-	-	-
Stage 1	509	510	-	325	346	-	-	-	-	-	-	-
Stage 2	307	341	-	459	504	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	30.9	29.3	0.5	0.4
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1050	-	-	206	171	800	-	-
HCM Lane V/C Ratio	0.043	-	-	0.331	0.133	0.028	-	-
HCM Control Delay (s)	8.6	-	-	30.9	29.3	9.6	-	-
HCM Lane LOS	A	-	-	D	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.4	0.4	0.1	-	-

HCM 6th Signalized Intersection Summary
6: OR 551 & Ehlen Road

Opening Year (2025) AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	355	25	45	270	35	50	570	30	40	380	30
Future Volume (veh/h)	130	355	25	45	270	35	50	570	30	40	380	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1614	1614	1614	1614	1614	1614	1614	1614	1614	1614	1614	1614
Adj Flow Rate, veh/h	141	386	27	49	293	38	54	620	33	43	413	33
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, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	169	460	32	61	334	43	67	771	653	52	755	640
Arrive On Green	0.11	0.31	0.30	0.04	0.24	0.23	0.04	0.48	0.48	0.03	0.47	0.47
Sat Flow, veh/h	1537	1490	104	1537	1399	181	1537	1614	1367	1537	1614	1367
Grp Volume(v), veh/h	141	0	413	49	0	331	54	620	33	43	413	33
Grp Sat Flow(s),veh/h/ln	1537	0	1595	1537	0	1581	1537	1614	1367	1537	1614	1367
Q Serve(g_s), s	10.3	0.0	27.7	3.6	0.0	23.1	4.0	37.3	1.5	3.2	20.9	1.5
Cycle Q Clear(g_c), s	10.3	0.0	27.7	3.6	0.0	23.1	4.0	37.3	1.5	3.2	20.9	1.5
Prop In Lane	1.00		0.07	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	169	0	493	61	0	378	67	771	653	52	755	640
V/C Ratio(X)	0.84	0.00	0.84	0.80	0.00	0.88	0.81	0.80	0.05	0.82	0.55	0.05
Avail Cap(c_a), veh/h	470	0	507	470	0	503	268	874	741	268	874	741
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.0	0.0	36.9	54.5	0.0	42.0	54.3	25.4	16.0	55.0	21.8	16.6
Incr Delay (d2), s/veh	7.9	0.0	11.3	16.5	0.0	11.9	15.4	5.4	0.0	20.5	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	0.0	11.6	1.6	0.0	9.9	1.8	13.8	0.4	1.5	7.3	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.9	0.0	48.2	71.0	0.0	53.9	69.7	30.8	16.0	75.5	22.6	16.6
LnGrp LOS	E	A	D	E	A	D	E	C	B	E	C	B
Approach Vol, veh/h		554			380			707			489	
Approach Delay, s/veh		50.7			56.1			33.0			26.9	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	57.6	16.6	31.3	7.9	58.7	8.5	39.4
Change Period (Y+Rc), s	4.0	6.0	4.0	* 5.4	4.0	6.0	4.0	* 5.4
Max Green Setting (Gmax), s	20.0	60.0	35.0	* 35	20.0	60.0	35.0	* 35
Max Q Clear Time (g_c+I1), s	6.0	22.9	12.3	25.1	5.2	39.3	5.6	29.7
Green Ext Time (p_c), s	0.1	12.6	0.4	0.9	0.0	13.4	0.1	0.7

Intersection Summary	
HCM 6th Ctrl Delay	40.3
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.3					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	0	5	205	60	5
Future Vol, veh/h	5	0	5	205	60	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	2	2	7	7
Mvmt Flow	6	0	6	236	69	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	320	72	75	0	-	0
Stage 1	72	-	-	-	-	-
Stage 2	248	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	678	996	1524	-	-	-
Stage 1	956	-	-	-	-	-
Stage 2	798	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	675	996	1524	-	-	-
Mov Cap-2 Maneuver	675	-	-	-	-	-
Stage 1	951	-	-	-	-	-
Stage 2	798	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1524	-	675	-	-
HCM Lane V/C Ratio	0.004	-	0.009	-	-
HCM Control Delay (s)	7.4	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th Signalized Intersection Summary
1: Airport Road & Arndt Road

Opening Year (2025) PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	695	65	10	525	115	60	45	35	185	60	30
Future Volume (veh/h)	10	695	65	10	525	115	60	45	35	185	60	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	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	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709
Adj Flow Rate, veh/h	11	764	71	11	577	126	66	49	38	203	66	33
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	356	1819	169	431	823	180	283	84	65	302	147	73
Arrive On Green	0.03	0.61	0.59	0.03	0.61	0.59	0.07	0.09	0.07	0.11	0.14	0.12
Sat Flow, veh/h	1628	3003	279	1628	1359	297	1628	886	687	1628	1075	537
Grp Volume(v), veh/h	11	413	422	11	0	703	66	0	87	203	0	99
Grp Sat Flow(s),veh/h/ln	1628	1624	1659	1628	0	1655	1628	0	1573	1628	0	1612
Q Serve(g_s), s	0.2	13.6	13.7	0.2	0.0	29.6	3.6	0.0	5.4	11.0	0.0	5.7
Cycle Q Clear(g_c), s	0.2	13.6	13.7	0.2	0.0	29.6	3.6	0.0	5.4	11.0	0.0	5.7
Prop In Lane	1.00		0.17	1.00		0.18	1.00		0.44	1.00		0.33
Lane Grp Cap(c), veh/h	356	983	1004	431	0	1002	283	0	149	302	0	220
V/C Ratio(X)	0.03	0.42	0.42	0.03	0.00	0.70	0.23	0.00	0.58	0.67	0.00	0.45
Avail Cap(c_a), veh/h	479	1204	1230	555	0	1227	351	0	404	302	0	414
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	11.1	10.6	10.7	7.6	0.0	13.8	37.1	0.0	44.3	35.3	0.0	40.5
Incr Delay (d2), s/veh	0.0	0.9	0.9	0.0	0.0	4.1	0.3	0.0	2.7	5.3	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.4	4.6	0.1	0.0	10.5	1.4	0.0	2.1	4.6	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.1	11.5	11.6	7.6	0.0	17.9	37.4	0.0	47.0	40.6	0.0	41.5
LnGrp LOS	B	B	B	A	A	B	D	A	D	D	A	D
Approach Vol, veh/h		846			714			153			302	
Approach Delay, s/veh		11.5			17.8			42.9			40.9	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	17.8	7.3	65.3	15.0	13.6	7.3	65.3
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	24.0	9.0	73.0	9.0	24.0	9.0	73.0
Max Q Clear Time (g_c+I1), s	5.6	7.7	2.2	31.6	13.0	7.4	2.2	15.7
Green Ext Time (p_c), s	0.0	0.2	0.0	27.7	0.0	0.2	0.0	33.7

Intersection Summary	
HCM 6th Ctrl Delay	20.5
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	30	10	65	160	15
Future Vol, veh/h	30	30	10	65	160	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	4	4	6	6	2	2
Mvmt Flow	40	40	13	87	213	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	336	223	233	0	-	0
Stage 1	223	-	-	-	-	-
Stage 2	113	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.16	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.254	-	-	-
Pot Cap-1 Maneuver	655	812	1311	-	-	-
Stage 1	809	-	-	-	-	-
Stage 2	907	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	648	812	1311	-	-	-
Mov Cap-2 Maneuver	648	-	-	-	-	-
Stage 1	801	-	-	-	-	-
Stage 2	907	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1311	-	721	-	-
HCM Lane V/C Ratio	0.01	-	0.111	-	-
HCM Control Delay (s)	7.8	0	10.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Intersection	
Int Delay, s/veh	9.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		⅄	
Traffic Vol, veh/h	15	415	465	65	150	30
Future Vol, veh/h	15	415	465	65	150	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	7	7	5	5	2	2
Mvmt Flow	17	477	534	75	172	34

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	609	0	-	0	1083	572
Stage 1	-	-	-	-	572	-
Stage 2	-	-	-	-	511	-
Critical Hdwy	4.17	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.263	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	946	-	-	-	240	520
Stage 1	-	-	-	-	565	-
Stage 2	-	-	-	-	602	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	946	-	-	-	234	520
Mov Cap-2 Maneuver	-	-	-	-	234	-
Stage 1	-	-	-	-	551	-
Stage 2	-	-	-	-	602	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	58.2
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	946	-	-	-	258
HCM Lane V/C Ratio	0.018	-	-	-	0.802
HCM Control Delay (s)	8.9	0	-	-	58.2
HCM Lane LOS	A	A	-	-	F
HCM 95th %tile Q(veh)	0.1	-	-	-	6.2

HCM 6th Signalized Intersection Summary
4: OR 551 & Arndt Road

Opening Year (2025) PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	100	20	80	90	445	5	360	45	635	610	50
Future Volume (veh/h)	35	100	20	80	90	445	5	360	45	635	610	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668
Adj Flow Rate, veh/h	37	105	21	84	95	0	5	379	47	668	642	53
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	96	205	37	167	147		20	682	578	814	1101	933
Arrive On Green	0.16	0.18	0.16	0.16	0.18	0.00	0.01	0.41	0.41	0.26	0.66	0.66
Sat Flow, veh/h	237	1111	199	566	793	1414	1589	1668	1414	3082	1668	1414
Grp Volume(v), veh/h	163	0	0	179	0	0	5	379	47	668	642	53
Grp Sat Flow(s),veh/h/ln	1548	0	0	1359	0	1414	1589	1668	1414	1541	1668	1414
Q Serve(g_s), s	0.0	0.0	0.0	2.7	0.0	0.0	0.3	14.6	1.7	17.1	17.9	1.1
Cycle Q Clear(g_c), s	8.1	0.0	0.0	10.8	0.0	0.0	0.3	14.6	1.7	17.1	17.9	1.1
Prop In Lane	0.23		0.13	0.47		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	302	0	0	282	0		20	682	578	814	1101	933
V/C Ratio(X)	0.54	0.00	0.00	0.64	0.00		0.25	0.56	0.08	0.82	0.58	0.06
Avail Cap(c_a), veh/h	617	0	0	577	0		292	1228	1041	1299	1228	1041
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.5	0.0	0.0	32.8	0.0	0.0	41.2	19.1	15.2	29.1	7.9	5.1
Incr Delay (d2), s/veh	1.1	0.0	0.0	2.4	0.0	0.0	4.8	1.0	0.1	1.8	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	0.0	3.6	0.0	0.0	0.1	5.0	0.5	5.8	4.4	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.7	0.0	0.0	35.2	0.0	0.0	46.0	20.1	15.3	30.9	8.7	5.1
LnGrp LOS	C	A	A	D	A		D	C	B	C	A	A
Approach Vol, veh/h		163			179			431			1363	
Approach Delay, s/veh		32.7			35.2			19.9			19.4	
Approach LOS		C			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.1	59.6		19.6	26.2	38.4		19.6				
Change Period (Y+Rc), s	4.5	6.0		6.0	4.5	6.0		6.0				
Max Green Setting (Gmax), s	15.0	60.0		31.0	35.0	60.0		31.0				
Max Q Clear Time (g_c+I1), s	2.3	19.9		12.8	19.1	16.6		10.1				
Green Ext Time (p_c), s	0.0	25.9		0.7	2.6	15.8		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		21.9	
HCM 6th LOS		C	

Notes

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

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↑			↑	
Traffic Vol, veh/h	10	5	45	15	25	15	30	395	5	10	680	35
Future Vol, veh/h	10	5	45	15	25	15	30	395	5	10	680	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	500	-	-	500	-	160
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	12	6	54	18	30	18	36	476	6	12	819	42

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1418	1397	819	1445	1436	479	861	0	0	482	0	0
Stage 1	843	843	-	551	551	-	-	-	-	-	-	-
Stage 2	575	554	-	894	885	-	-	-	-	-	-	-
Critical Hdwy	7.16	6.56	6.26	7.16	6.56	6.26	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.16	5.56	-	6.16	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.16	5.56	-	6.16	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.554	4.054	3.354	3.554	4.054	3.354	2.254	-	-	2.254	-	-
Pot Cap-1 Maneuver	112	138	369	107	131	579	764	-	-	1060	-	-
Stage 1	353	374	-	512	509	-	-	-	-	-	-	-
Stage 2	496	507	-	330	358	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	84	130	369	84	124	579	764	-	-	1060	-	-
Mov Cap-2 Maneuver	84	130	-	84	124	-	-	-	-	-	-	-
Stage 1	336	370	-	488	485	-	-	-	-	-	-	-
Stage 2	429	483	-	274	354	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	30	55	0.7	0.1
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	764	-	-	215	135	1060	-	-
HCM Lane V/C Ratio	0.047	-	-	0.336	0.491	0.011	-	-
HCM Control Delay (s)	9.9	-	-	30	55	8.4	-	-
HCM Lane LOS	A	-	-	D	F	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.4	2.3	0	-	-

HCM 6th Signalized Intersection Summary
6: OR 551 & Ehlen Road

Opening Year (2025) PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	320	25	85	390	25	40	335	25	100	590	50
Future Volume (veh/h)	70	320	25	85	390	25	40	335	25	100	590	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		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	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668
Adj Flow Rate, veh/h	78	356	28	94	433	28	44	372	28	111	656	56
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	98	439	35	117	464	30	55	705	597	134	787	667
Arrive On Green	0.06	0.29	0.28	0.07	0.30	0.29	0.03	0.42	0.42	0.08	0.47	0.47
Sat Flow, veh/h	1589	1524	120	1589	1547	100	1589	1668	1414	1589	1668	1414
Grp Volume(v), veh/h	78	0	384	94	0	461	44	372	28	111	656	56
Grp Sat Flow(s),veh/h/ln	1589	0	1643	1589	0	1648	1589	1668	1414	1589	1668	1414
Q Serve(g_s), s	5.9	0.0	26.4	7.1	0.0	33.0	3.3	20.1	1.4	8.4	41.5	2.6
Cycle Q Clear(g_c), s	5.9	0.0	26.4	7.1	0.0	33.0	3.3	20.1	1.4	8.4	41.5	2.6
Prop In Lane	1.00		0.07	1.00		0.06	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	98	0	473	117	0	494	55	705	597	134	787	667
V/C Ratio(X)	0.79	0.00	0.81	0.80	0.00	0.93	0.80	0.53	0.05	0.83	0.83	0.08
Avail Cap(c_a), veh/h	458	0	493	458	0	494	262	852	722	262	852	722
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.2	0.0	40.2	55.3	0.0	41.3	58.2	26.1	20.7	54.7	27.9	17.6
Incr Delay (d2), s/veh	10.2	0.0	9.3	9.1	0.0	24.7	18.1	0.9	0.0	9.4	7.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	11.3	3.1	0.0	16.2	1.6	7.6	0.4	3.6	16.5	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.4	0.0	49.5	64.4	0.0	66.1	76.3	26.9	20.7	64.2	35.0	17.7
LnGrp LOS	E	A	D	E	A	E	E	C	C	E	C	B
Approach Vol, veh/h		462			555			444			823	
Approach Delay, s/veh		52.3			65.8			31.4			37.7	
Approach LOS		D			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	61.3	11.5	40.4	14.2	55.3	13.0	38.9
Change Period (Y+Rc), s	4.0	6.0	4.0	* 5.4	4.0	6.0	4.0	* 5.4
Max Green Setting (Gmax), s	20.0	60.0	35.0	* 35	20.0	60.0	35.0	* 35
Max Q Clear Time (g_c+I1), s	5.3	43.5	7.9	35.0	10.4	22.1	9.1	28.4
Green Ext Time (p_c), s	0.1	11.8	0.2	0.0	0.1	11.3	0.3	0.8

Intersection Summary	
HCM 6th Ctrl Delay	46.3
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	5	10	85	170	5
Future Vol, veh/h	5	5	10	85	170	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	7	7	14	121	243	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	396	247	250	0	-	0
Stage 1	247	-	-	-	-	-
Stage 2	149	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	607	789	1310	-	-	-
Stage 1	792	-	-	-	-	-
Stage 2	876	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	600	789	1310	-	-	-
Mov Cap-2 Maneuver	600	-	-	-	-	-
Stage 1	783	-	-	-	-	-
Stage 2	876	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1310	-	682	-	-
HCM Lane V/C Ratio	0.011	-	0.021	-	-
HCM Control Delay (s)	7.8	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

SECTION 7: HCM REPORTS - OPENING YEAR 2025 BUILD AM AND PM

HCM 6th Signalized Intersection Summary
1: Airport Road & Arndt Road

Opening Year (2025) + Project AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	425	108	45	630	315	73	111	14	70	38	10
Future Volume (veh/h)	25	425	108	45	630	315	73	111	14	70	38	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1586	1586	1586	1641	1641	1641	1723	1723	1723	1709	1709	1709
Adj Flow Rate, veh/h	28	478	121	51	708	354	82	125	16	79	43	11
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	12	12	12	8	8	8	2	2	2	3	3	3
Cap, veh/h	122	1507	379	557	656	328	291	173	22	218	149	38
Arrive On Green	0.04	0.63	0.62	0.05	0.64	0.62	0.07	0.12	0.10	0.07	0.11	0.10
Sat Flow, veh/h	1511	2385	600	1563	1024	512	1641	1497	192	1628	1305	334
Grp Volume(v), veh/h	28	301	298	51	0	1062	82	0	141	79	0	54
Grp Sat Flow(s),veh/h/ln	1511	1507	1478	1563	0	1536	1641	0	1688	1628	0	1639
Q Serve(g_s), s	0.8	11.2	11.5	1.3	0.0	78.0	5.2	0.0	9.8	5.1	0.0	3.7
Cycle Q Clear(g_c), s	0.8	11.2	11.5	1.3	0.0	78.0	5.2	0.0	9.8	5.1	0.0	3.7
Prop In Lane	1.00		0.41	1.00		0.33	1.00		0.11	1.00		0.20
Lane Grp Cap(c), veh/h	122	952	934	557	0	984	291	0	196	218	0	187
V/C Ratio(X)	0.23	0.32	0.32	0.09	0.00	1.08	0.28	0.00	0.72	0.36	0.00	0.29
Avail Cap(c_a), veh/h	158	965	947	581	0	984	321	0	360	250	0	350
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	30.9	10.3	10.6	6.9	0.0	22.2	42.5	0.0	52.0	42.9	0.0	49.6
Incr Delay (d2), s/veh	0.7	0.6	0.6	0.1	0.0	52.7	0.4	0.0	3.7	0.8	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.5	3.6	0.4	0.0	38.2	2.1	0.0	4.2	2.0	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.6	10.9	11.2	7.0	0.0	75.0	42.9	0.0	55.7	43.7	0.0	50.2
LnGrp LOS	C	B	B	A	A	F	D	A	E	D	A	D
Approach Vol, veh/h		627			1113			223			133	
Approach Delay, s/veh		12.0			71.8			51.0			46.3	
Approach LOS		B			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	17.9	9.1	82.0	12.6	18.1	10.1	81.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	24.0	6.0	76.0	9.0	24.0	6.0	76.0
Max Q Clear Time (g_c+I1), s	7.2	5.7	2.8	80.0	7.1	11.8	3.3	13.5
Green Ext Time (p_c), s	0.0	0.1	0.0	0.0	0.0	0.3	0.0	23.7

Intersection Summary	
HCM 6th Ctrl Delay	50.1
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	10	25	249	52	21
Future Vol, veh/h	22	10	25	249	52	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	12	12	2	2	9	9
Mvmt Flow	25	11	29	286	60	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	416	72	84	0	-	0
Stage 1	72	-	-	-	-	-
Stage 2	344	-	-	-	-	-
Critical Hdwy	6.52	6.32	4.12	-	-	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.408	2.218	-	-	-
Pot Cap-1 Maneuver	574	963	1513	-	-	-
Stage 1	926	-	-	-	-	-
Stage 2	696	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	561	963	1513	-	-	-
Mov Cap-2 Maneuver	561	-	-	-	-	-
Stage 1	905	-	-	-	-	-
Stage 2	696	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.9	0.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1513	-	645	-	-
HCM Lane V/C Ratio	0.019	-	0.057	-	-
HCM Control Delay (s)	7.4	0	10.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		↰↱	
Traffic Vol, veh/h	51	395	365	213	53	19
Future Vol, veh/h	51	395	365	213	53	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	9	9	9	9	9	9
Mvmt Flow	58	449	415	242	60	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	657	0	-	0	1101	536
Stage 1	-	-	-	-	536	-
Stage 2	-	-	-	-	565	-
Critical Hdwy	4.19	-	-	-	6.49	6.29
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	2.281	-	-	-	3.581	3.381
Pot Cap-1 Maneuver	898	-	-	-	227	531
Stage 1	-	-	-	-	573	-
Stage 2	-	-	-	-	555	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	898	-	-	-	207	531
Mov Cap-2 Maneuver	-	-	-	-	207	-
Stage 1	-	-	-	-	524	-
Stage 2	-	-	-	-	555	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	26.6
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	898	-	-	-	247
HCM Lane V/C Ratio	0.065	-	-	-	0.331
HCM Control Delay (s)	9.3	0	-	-	26.6
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	0.2	-	-	-	1.4

HCM 6th Signalized Intersection Summary
4: OR 551 & Arndt Road

Opening Year (2025) + Project AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	88	10	50	66	612	20	610	60	410	385	20
Future Volume (veh/h)	45	88	10	50	66	612	20	610	60	410	385	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adj Flow Rate, veh/h	48	95	11	54	71	0	22	656	65	441	414	22
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	11	11	11	11	11	11	11	11	11	11	11	11
Cap, veh/h	98	146	15	117	123		42	876	743	545	1127	935
Arrive On Green	0.13	0.15	0.13	0.13	0.15	0.00	0.03	0.55	0.55	0.18	0.70	0.70
Sat Flow, veh/h	345	979	102	441	823	1356	1524	1600	1356	2956	1600	1328
Grp Volume(v), veh/h	154	0	0	125	0	0	22	656	65	441	414	22
Grp Sat Flow(s),veh/h/ln	1426	0	0	1264	0	1356	1524	1600	1356	1478	1600	1328
Q Serve(g_s), s	0.8	0.0	0.0	0.0	0.0	0.0	1.4	31.8	2.3	14.5	10.4	0.5
Cycle Q Clear(g_c), s	10.7	0.0	0.0	9.8	0.0	0.0	1.4	31.8	2.3	14.5	10.4	0.5
Prop In Lane	0.31		0.07	0.43		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	231	0	0	215	0		42	876	743	545	1127	935
V/C Ratio(X)	0.67	0.00	0.00	0.58	0.00		0.52	0.75	0.09	0.81	0.37	0.02
Avail Cap(c_a), veh/h	487	0	0	462	0		233	980	831	1037	1127	935
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.4	0.0	0.0	40.9	0.0	0.0	48.5	17.5	10.9	39.6	6.0	4.5
Incr Delay (d2), s/veh	2.4	0.0	0.0	2.5	0.0	0.0	7.2	3.2	0.1	2.2	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.0	0.0	3.1	0.0	0.0	0.6	10.5	0.6	5.1	2.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.8	0.0	0.0	43.4	0.0	0.0	55.7	20.8	10.9	41.7	6.3	4.5
LnGrp LOS	D	A	A	D	A		E	C	B	D	A	A
Approach Vol, veh/h		154			125			743			877	
Approach Delay, s/veh		43.8			43.4			20.9			24.1	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	75.3		19.1	22.7	59.4		19.1				
Change Period (Y+Rc), s	4.5	6.0		6.0	4.5	6.0		6.0				
Max Green Setting (Gmax), s	15.0	60.0		31.0	35.0	60.0		31.0				
Max Q Clear Time (g_c+I1), s	3.4	12.4		11.8	16.5	33.8		12.7				
Green Ext Time (p_c), s	0.0	17.3		0.5	1.7	19.6		0.4				

Intersection Summary		
HCM 6th Ctrl Delay	25.7	
HCM 6th LOS	C	

Notes

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

Intersection												
Int Delay, s/veh	2.4											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↕		↰	↑	↱
Traffic Vol, veh/h	20	5	35	6	5	10	40	665	37	20	410	10
Future Vol, veh/h	20	5	35	6	5	10	40	665	37	20	410	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	500	-	-	500	-	160
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	9	9	9	9	9	9	9	9	9	9	9	9
Mvmt Flow	23	6	40	7	6	11	45	756	42	23	466	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1388	1400	466	1408	1390	777	477	0	0	798	0	0
Stage 1	512	512	-	867	867	-	-	-	-	-	-	-
Stage 2	876	888	-	541	523	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.59	6.29	7.19	6.59	6.29	4.19	-	-	4.19	-	-
Critical Hdwy Stg 1	6.19	5.59	-	6.19	5.59	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.59	-	6.19	5.59	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4.081	3.381	3.581	4.081	3.381	2.281	-	-	2.281	-	-
Pot Cap-1 Maneuver	116	136	582	112	138	386	1050	-	-	794	-	-
Stage 1	532	525	-	338	361	-	-	-	-	-	-	-
Stage 2	334	352	-	513	519	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	103	126	582	95	128	386	1050	-	-	794	-	-
Mov Cap-2 Maneuver	103	126	-	95	128	-	-	-	-	-	-	-
Stage 1	509	510	-	323	345	-	-	-	-	-	-	-
Stage 2	305	337	-	459	504	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	31.3	30.7	0.5	0.4
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1050	-	-	204	164	794	-	-
HCM Lane V/C Ratio	0.043	-	-	0.334	0.146	0.029	-	-
HCM Control Delay (s)	8.6	-	-	31.3	30.7	9.7	-	-
HCM Lane LOS	A	-	-	D	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.4	0.5	0.1	-	-

HCM 6th Signalized Intersection Summary
6: OR 551 & Ehlen Road

Opening Year (2025) + Project AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	378	25	46	273	35	50	577	38	40	381	30
Future Volume (veh/h)	130	378	25	46	273	35	50	577	38	40	381	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1614	1614	1614	1614	1614	1614	1614	1614	1614	1614	1614	1614
Adj Flow Rate, veh/h	141	411	27	50	297	38	54	627	41	43	414	33
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, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	168	464	30	62	337	43	67	771	653	52	756	640
Arrive On Green	0.11	0.31	0.30	0.04	0.24	0.23	0.04	0.48	0.48	0.03	0.47	0.47
Sat Flow, veh/h	1537	1497	98	1537	1402	179	1537	1614	1367	1537	1614	1367
Grp Volume(v), veh/h	141	0	438	50	0	335	54	627	41	43	414	33
Grp Sat Flow(s),veh/h/ln	1537	0	1596	1537	0	1581	1537	1614	1367	1537	1614	1367
Q Serve(g_s), s	10.4	0.0	30.3	3.7	0.0	23.7	4.0	38.5	1.9	3.2	21.3	1.5
Cycle Q Clear(g_c), s	10.4	0.0	30.3	3.7	0.0	23.7	4.0	38.5	1.9	3.2	21.3	1.5
Prop In Lane	1.00		0.06	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	168	0	494	62	0	381	67	771	653	52	756	640
V/C Ratio(X)	0.84	0.00	0.89	0.80	0.00	0.88	0.81	0.81	0.06	0.82	0.55	0.05
Avail Cap(c_a), veh/h	464	0	501	464	0	496	265	862	731	265	862	731
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.7	0.0	38.1	55.2	0.0	42.5	55.0	25.9	16.3	55.7	22.1	16.8
Incr Delay (d2), s/veh	8.0	0.0	16.9	16.0	0.0	12.8	15.4	5.9	0.1	20.4	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	13.3	1.7	0.0	10.2	1.8	14.4	0.6	1.5	7.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.7	0.0	55.0	71.2	0.0	55.3	70.4	31.8	16.4	76.1	22.9	16.8
LnGrp LOS	E	A	E	E	A	E	E	C	B	E	C	B
Approach Vol, veh/h		579			385			722			490	
Approach Delay, s/veh		55.9			57.4			33.8			27.2	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	58.3	16.7	31.9	7.9	59.4	8.7	39.9
Change Period (Y+Rc), s	4.0	6.0	4.0	* 5.4	4.0	6.0	4.0	* 5.4
Max Green Setting (Gmax), s	20.0	60.0	35.0	* 35	20.0	60.0	35.0	* 35
Max Q Clear Time (g_c+I1), s	6.0	23.3	12.4	25.7	5.2	40.5	5.7	32.3
Green Ext Time (p_c), s	0.1	12.6	0.4	0.8	0.0	12.9	0.1	0.5

Intersection Summary	
HCM 6th Ctrl Delay	42.4
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	4	36	211	106	50
Future Vol, veh/h	12	4	36	211	106	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	2	2	7	7
Mvmt Flow	14	5	41	243	122	57

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	476	151	179	0	-	0
Stage 1	151	-	-	-	-	-
Stage 2	325	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	551	901	1397	-	-	-
Stage 1	882	-	-	-	-	-
Stage 2	737	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	532	901	1397	-	-	-
Mov Cap-2 Maneuver	532	-	-	-	-	-
Stage 1	852	-	-	-	-	-
Stage 2	737	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.3	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1397	-	593	-	-
HCM Lane V/C Ratio	0.03	-	0.031	-	-
HCM Control Delay (s)	7.7	0	11.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	1	7	217	61	10
Future Vol, veh/h	2	1	7	217	61	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	7	7
Mvmt Flow	2	1	8	249	70	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	341	76	81	0	-	0
Stage 1	76	-	-	-	-	-
Stage 2	265	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	655	985	1517	-	-	-
Stage 1	947	-	-	-	-	-
Stage 2	779	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	651	985	1517	-	-	-
Mov Cap-2 Maneuver	651	-	-	-	-	-
Stage 1	941	-	-	-	-	-
Stage 2	779	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1517	-	734	-	-
HCM Lane V/C Ratio	0.005	-	0.005	-	-
HCM Control Delay (s)	7.4	0	9.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	6.4					

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	5	0	76	10	0	11
Future Vol, veh/h	5	0	76	10	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	0	87	11	0	13

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	6	0	191	6
Stage 1	-	-	-	-	6	-
Stage 2	-	-	-	-	185	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1615	-	798	1077
Stage 1	-	-	-	-	1017	-
Stage 2	-	-	-	-	847	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1615	-	755	1077
Mov Cap-2 Maneuver	-	-	-	-	755	-
Stage 1	-	-	-	-	1017	-
Stage 2	-	-	-	-	801	-

Approach	EB	WB	NB
HCM Control Delay, s	0	6.5	8.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1077	-	-	1615	-
HCM Lane V/C Ratio	0.012	-	-	0.054	-
HCM Control Delay (s)	8.4	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0.2	-

Intersection	
Int Delay, s/veh	6.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	10	0	14	15	0	72
Future Vol, veh/h	10	0	14	15	0	72
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	14	0	20	21	0	103

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	14	0	75	14
Stage 1	-	-	-	-	14	-
Stage 2	-	-	-	-	61	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1598	-	926	1063
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	959	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1598	-	914	1063
Mov Cap-2 Maneuver	-	-	-	-	914	-
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	947	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.5	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1063	-	-	1598	-
HCM Lane V/C Ratio	0.097	-	-	0.013	-
HCM Control Delay (s)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

HCM 6th Signalized Intersection Summary
1: Airport Road & Arndt Road

Opening Year (2025) + Project PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	695	75	16	525	115	109	52	64	185	62	30
Future Volume (veh/h)	10	695	75	16	525	115	109	52	64	185	62	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	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	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709
Adj Flow Rate, veh/h	11	764	82	18	577	126	120	57	70	203	68	33
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	339	1747	187	418	811	177	311	83	102	285	135	66
Arrive On Green	0.03	0.59	0.57	0.04	0.60	0.58	0.10	0.12	0.10	0.10	0.12	0.11
Sat Flow, veh/h	1628	2958	317	1628	1359	297	1628	692	850	1628	1087	527
Grp Volume(v), veh/h	11	419	427	18	0	703	120	0	127	203	0	101
Grp Sat Flow(s),veh/h/ln	1628	1624	1652	1628	0	1655	1628	0	1542	1628	0	1614
Q Serve(g_s), s	0.3	15.3	15.4	0.4	0.0	32.0	6.7	0.0	8.5	11.0	0.0	6.3
Cycle Q Clear(g_c), s	0.3	15.3	15.4	0.4	0.0	32.0	6.7	0.0	8.5	11.0	0.0	6.3
Prop In Lane	1.00		0.19	1.00		0.18	1.00		0.55	1.00		0.33
Lane Grp Cap(c), veh/h	339	959	976	418	0	988	311	0	184	285	0	201
V/C Ratio(X)	0.03	0.44	0.44	0.04	0.00	0.71	0.39	0.00	0.69	0.71	0.00	0.50
Avail Cap(c_a), veh/h	409	1182	1202	477	0	1205	319	0	374	285	0	392
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	12.4	12.1	12.2	8.6	0.0	15.3	35.6	0.0	45.8	38.0	0.0	44.1
Incr Delay (d2), s/veh	0.0	1.0	1.0	0.0	0.0	4.3	0.6	0.0	3.4	7.7	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	0.1	5.1	5.3	0.1	0.0	11.6	2.6	0.0	3.3	5.1	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.4	13.1	13.2	8.6	0.0	19.6	36.2	0.0	49.2	45.7	0.0	45.5
LnGrp LOS	B	B	B	A	A	B	D	A	D	D	A	D
Approach Vol, veh/h		857			721			247			304	
Approach Delay, s/veh		13.2			19.4			42.9			45.7	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.4	17.4	7.4	68.0	15.0	16.8	8.1	67.3
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	24.0	6.0	76.0	9.0	24.0	6.0	76.0
Max Q Clear Time (g_c+I1), s	8.7	8.3	2.3	34.0	13.0	10.5	2.4	17.4
Green Ext Time (p_c), s	0.0	0.2	0.0	27.9	0.0	0.3	0.0	34.7

Intersection Summary	
HCM 6th Ctrl Delay	23.4
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	31	30	10	75	211	22
Future Vol, veh/h	31	30	10	75	211	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	4	4	6	6	2	2
Mvmt Flow	41	40	13	100	281	29

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	422	296	310	0	-	0
Stage 1	296	-	-	-	-	-
Stage 2	126	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.16	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.254	-	-	-
Pot Cap-1 Maneuver	585	739	1228	-	-	-
Stage 1	750	-	-	-	-	-
Stage 2	895	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	579	739	1228	-	-	-
Mov Cap-2 Maneuver	579	-	-	-	-	-
Stage 1	742	-	-	-	-	-
Stage 2	895	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.4	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1228	-	648	-	-
HCM Lane V/C Ratio	0.011	-	0.126	-	-
HCM Control Delay (s)	8	0	11.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Intersection	
Int Delay, s/veh	18.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		⋎	
Traffic Vol, veh/h	21	415	465	69	172	59
Future Vol, veh/h	21	415	465	69	172	59
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	7	7	5	5	2	2
Mvmt Flow	24	477	534	79	198	68

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	613	0	-	0	1099	574
Stage 1	-	-	-	-	574	-
Stage 2	-	-	-	-	525	-
Critical Hdwy	4.17	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.263	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	942	-	-	-	235	518
Stage 1	-	-	-	-	563	-
Stage 2	-	-	-	-	593	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	942	-	-	-	227	518
Mov Cap-2 Maneuver	-	-	-	-	227	-
Stage 1	-	-	-	-	543	-
Stage 2	-	-	-	-	593	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	97.3
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	942	-	-	-	265
HCM Lane V/C Ratio	0.026	-	-	-	1.002
HCM Control Delay (s)	8.9	0	-	-	97.3
HCM Lane LOS	A	A	-	-	F
HCM 95th %tile Q(veh)	0.1	-	-	-	10

HCM 6th Signalized Intersection Summary
4: OR 551 & Arndt Road

Opening Year (2025) + Project PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	102	20	80	97	487	5	360	45	643	610	50
Future Volume (veh/h)	35	102	20	80	97	487	5	360	45	643	610	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668
Adj Flow Rate, veh/h	37	107	21	84	102	0	5	379	47	677	642	53
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	95	210	37	164	154		20	676	572	820	1099	931
Arrive On Green	0.17	0.19	0.17	0.17	0.19	0.00	0.01	0.40	0.40	0.27	0.66	0.66
Sat Flow, veh/h	232	1113	196	545	818	1414	1589	1668	1414	3082	1668	1414
Grp Volume(v), veh/h	165	0	0	186	0	0	5	379	47	677	642	53
Grp Sat Flow(s),veh/h/ln	1540	0	0	1363	0	1414	1589	1668	1414	1541	1668	1414
Q Serve(g_s), s	0.0	0.0	0.0	3.1	0.0	0.0	0.3	15.0	1.8	17.7	18.3	1.1
Cycle Q Clear(g_c), s	8.4	0.0	0.0	11.4	0.0	0.0	0.3	15.0	1.8	17.7	18.3	1.1
Prop In Lane	0.22		0.13	0.45		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	306	0	0	287	0		20	676	572	820	1099	931
V/C Ratio(X)	0.54	0.00	0.00	0.65	0.00		0.25	0.56	0.08	0.83	0.58	0.06
Avail Cap(c_a), veh/h	605	0	0	568	0		287	1207	1023	1277	1207	1023
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	0.0	0.0	33.2	0.0	0.0	41.9	19.6	15.7	29.6	8.1	5.2
Incr Delay (d2), s/veh	1.1	0.0	0.0	2.5	0.0	0.0	4.9	1.0	0.1	2.1	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	0.0	3.8	0.0	0.0	0.1	5.2	0.5	6.1	4.5	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.9	0.0	0.0	35.7	0.0	0.0	46.8	20.7	15.8	31.7	8.9	5.2
LnGrp LOS	C	A	A	D	A		D	C	B	C	A	A
Approach Vol, veh/h		165			186			431			1372	
Approach Delay, s/veh		32.9			35.7			20.4			20.0	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.1	60.4		20.2	26.8	38.7		20.2				
Change Period (Y+Rc), s	4.5	6.0		6.0	4.5	6.0		6.0				
Max Green Setting (Gmax), s	15.0	60.0		31.0	35.0	60.0		31.0				
Max Q Clear Time (g_c+I1), s	2.3	20.3		13.4	19.7	17.0		10.4				
Green Ext Time (p_c), s	0.0	25.7		0.8	2.6	15.7		0.5				

Intersection Summary			
HCM 6th Ctrl Delay	22.4		
HCM 6th LOS	C		

Notes

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

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↱		↰	↑	↱
Traffic Vol, veh/h	10	5	45	22	25	15	30	395	6	10	680	35
Future Vol, veh/h	10	5	45	22	25	15	30	395	6	10	680	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	500	-	-	500	-	160
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	12	6	54	27	30	18	36	476	7	12	819	42

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1419	1398	819	1446	1437	480	861	0	0	483	0	0
Stage 1	843	843	-	552	552	-	-	-	-	-	-	-
Stage 2	576	555	-	894	885	-	-	-	-	-	-	-
Critical Hdwy	7.16	6.56	6.26	7.16	6.56	6.26	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.16	5.56	-	6.16	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.16	5.56	-	6.16	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.554	4.054	3.354	3.554	4.054	3.354	2.254	-	-	2.254	-	-
Pot Cap-1 Maneuver	112	138	369	107	131	578	764	-	-	1059	-	-
Stage 1	353	374	-	511	508	-	-	-	-	-	-	-
Stage 2	496	507	-	330	358	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	84	130	369	84	124	578	764	-	-	1059	-	-
Mov Cap-2 Maneuver	84	130	-	84	124	-	-	-	-	-	-	-
Stage 1	336	370	-	487	484	-	-	-	-	-	-	-
Stage 2	429	483	-	274	354	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	30	67.5	0.7	0.1
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	764	-	-	215	127	1059	-	-
HCM Lane V/C Ratio	0.047	-	-	0.336	0.588	0.011	-	-
HCM Control Delay (s)	9.9	-	-	30	67.5	8.4	-	-
HCM Lane LOS	A	-	-	D	F	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.4	3	0	-	-

HCM 6th Signalized Intersection Summary
6: OR 551 & Ehlen Road

Opening Year (2025) + Project PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	324	25	92	412	25	40	336	27	100	597	50
Future Volume (veh/h)	70	324	25	92	412	25	40	336	27	100	597	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		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	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668
Adj Flow Rate, veh/h	78	360	28	102	458	28	44	373	30	111	663	56
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	98	429	33	126	464	28	55	707	599	134	790	670
Arrive On Green	0.06	0.28	0.27	0.08	0.30	0.29	0.03	0.42	0.42	0.08	0.47	0.47
Sat Flow, veh/h	1589	1525	119	1589	1554	95	1589	1668	1414	1589	1668	1414
Grp Volume(v), veh/h	78	0	388	102	0	486	44	373	30	111	663	56
Grp Sat Flow(s),veh/h/ln	1589	0	1644	1589	0	1649	1589	1668	1414	1589	1668	1414
Q Serve(g_s), s	5.9	0.0	27.1	7.7	0.0	35.7	3.4	20.2	1.5	8.4	42.3	2.6
Cycle Q Clear(g_c), s	5.9	0.0	27.1	7.7	0.0	35.7	3.4	20.2	1.5	8.4	42.3	2.6
Prop In Lane	1.00		0.07	1.00		0.06	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	98	0	462	126	0	493	55	707	599	134	790	670
V/C Ratio(X)	0.79	0.00	0.84	0.81	0.00	0.99	0.80	0.53	0.05	0.83	0.84	0.08
Avail Cap(c_a), veh/h	457	0	491	457	0	493	261	849	720	261	849	720
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.4	0.0	41.2	55.2	0.0	42.5	58.4	26.0	20.6	54.9	28.0	17.6
Incr Delay (d2), s/veh	10.2	0.0	11.4	8.7	0.0	36.9	18.1	0.9	0.0	9.4	7.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	11.8	3.3	0.0	19.0	1.6	7.6	0.5	3.6	16.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.6	0.0	52.6	63.9	0.0	79.4	76.5	26.9	20.7	64.4	35.5	17.6
LnGrp LOS	E	A	D	E	A	E	E	C	C	E	D	B
Approach Vol, veh/h		466			588			447			830	
Approach Delay, s/veh		55.0			76.7			31.4			38.2	
Approach LOS		D			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	61.7	11.5	40.4	14.2	55.6	13.7	38.2
Change Period (Y+Rc), s	4.0	6.0	4.0	* 5.4	4.0	6.0	4.0	* 5.4
Max Green Setting (Gmax), s	20.0	60.0	35.0	* 35	20.0	60.0	35.0	* 35
Max Q Clear Time (g_c+I1), s	5.4	44.3	7.9	37.7	10.4	22.2	9.7	29.1
Green Ext Time (p_c), s	0.1	11.4	0.2	0.0	0.1	11.3	0.3	0.7

Intersection Summary	
HCM 6th Ctrl Delay	49.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	48	34	15	127	179	14
Future Vol, veh/h	48	34	15	127	179	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	69	49	21	181	256	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	489	266	276	0	-	0
Stage 1	266	-	-	-	-	-
Stage 2	223	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	536	770	1281	-	-	-
Stage 1	776	-	-	-	-	-
Stage 2	812	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	526	770	1281	-	-	-
Mov Cap-2 Maneuver	526	-	-	-	-	-
Stage 1	762	-	-	-	-	-
Stage 2	812	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.4	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1281	-	606	-	-
HCM Lane V/C Ratio	0.017	-	0.193	-	-
HCM Control Delay (s)	7.9	0	12.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	6	2	97	181	2
Future Vol, veh/h	9	6	2	97	181	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	13	9	3	139	259	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	406	261	262	0	-	0
Stage 1	261	-	-	-	-	-
Stage 2	145	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	599	775	1296	-	-	-
Stage 1	780	-	-	-	-	-
Stage 2	880	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	597	775	1296	-	-	-
Mov Cap-2 Maneuver	597	-	-	-	-	-
Stage 1	778	-	-	-	-	-
Stage 2	880	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.7	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1296	-	657	-	-
HCM Lane V/C Ratio	0.002	-	0.033	-	-
HCM Control Delay (s)	7.8	0	10.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	3.5					

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	10	0	4	15	0	15
Future Vol, veh/h	10	0	4	15	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	14	0	6	21	0	21

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	14	0	47	14
Stage 1	-	-	-	-	14	-
Stage 2	-	-	-	-	33	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1598	-	960	1063
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	987	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1598	-	956	1063
Mov Cap-2 Maneuver	-	-	-	-	956	-
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	983	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1063	-	-	1598	-
HCM Lane V/C Ratio	0.02	-	-	0.004	-
HCM Control Delay (s)	8.5	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

SECTION 8: HCM REPORTS - SHORT-TERM 2030 NO BUILD AM AND PM

HCM 6th Signalized Intersection Summary
1: Airport Road & Arndt Road

Short-Term (2030) AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	470	55	15	700	315	65	110	10	70	30	10
Future Volume (veh/h)	25	470	55	15	700	315	65	110	10	70	30	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1586	1586	1586	1641	1641	1641	1723	1723	1723	1709	1709	1709
Adj Flow Rate, veh/h	28	528	62	17	787	354	73	124	11	79	34	11
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	12	12	12	8	8	8	2	2	2	3	3	3
Cap, veh/h	122	1768	207	558	685	308	293	175	16	219	143	46
Arrive On Green	0.04	0.65	0.63	0.03	0.64	0.63	0.07	0.11	0.10	0.07	0.12	0.10
Sat Flow, veh/h	1511	2718	318	1563	1064	479	1641	1559	138	1628	1229	397
Grp Volume(v), veh/h	28	292	298	17	0	1141	73	0	135	79	0	45
Grp Sat Flow(s),veh/h/ln	1511	1507	1529	1563	0	1542	1641	0	1698	1628	0	1626
Q Serve(g_s), s	0.7	10.2	10.3	0.4	0.0	78.0	4.6	0.0	9.3	5.1	0.0	3.1
Cycle Q Clear(g_c), s	0.7	10.2	10.3	0.4	0.0	78.0	4.6	0.0	9.3	5.1	0.0	3.1
Prop In Lane	1.00		0.21	1.00		0.31	1.00		0.08	1.00		0.24
Lane Grp Cap(c), veh/h	122	980	995	558	0	992	293	0	190	219	0	189
V/C Ratio(X)	0.23	0.30	0.30	0.03	0.00	1.15	0.25	0.00	0.71	0.36	0.00	0.24
Avail Cap(c_a), veh/h	159	980	995	608	0	992	332	0	364	251	0	349
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	31.2	9.2	9.3	6.7	0.0	21.9	42.8	0.0	52.0	42.9	0.0	48.9
Incr Delay (d2), s/veh	0.7	0.5	0.5	0.0	0.0	79.2	0.3	0.0	3.6	0.7	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.1	3.2	0.1	0.0	45.6	1.8	0.0	4.0	2.0	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.9	9.7	9.8	6.8	0.0	101.1	43.1	0.0	55.6	43.7	0.0	49.4
LnGrp LOS	C	A	A	A	A	F	D	A	E	D	A	D
Approach Vol, veh/h		618			1158			208			124	
Approach Delay, s/veh		10.8			99.7			51.2			45.7	
Approach LOS		B			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	18.1	9.1	82.0	12.6	17.6	8.2	82.9
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	24.0	6.0	76.0	9.0	24.0	6.0	76.0
Max Q Clear Time (g_c+I1), s	6.6	5.1	2.7	80.0	7.1	11.3	2.4	12.3
Green Ext Time (p_c), s	0.0	0.1	0.0	0.0	0.0	0.3	0.0	23.2

Intersection Summary	
HCM 6th Ctrl Delay	65.7
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	10	25	195	45	20
Future Vol, veh/h	15	10	25	195	45	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	12	12	2	2	9	9
Mvmt Flow	17	11	29	224	52	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	346	64	75	0	-	0
Stage 1	64	-	-	-	-	-
Stage 2	282	-	-	-	-	-
Critical Hdwy	6.52	6.32	4.12	-	-	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.408	2.218	-	-	-
Pot Cap-1 Maneuver	631	973	1524	-	-	-
Stage 1	934	-	-	-	-	-
Stage 2	743	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	617	973	1524	-	-	-
Mov Cap-2 Maneuver	617	-	-	-	-	-
Stage 1	913	-	-	-	-	-
Stage 2	743	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1524	-	723	-	-
HCM Lane V/C Ratio	0.019	-	0.04	-	-
HCM Control Delay (s)	7.4	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰↑	↑↱		⅄	
Traffic Vol, veh/h	20	435	400	190	50	15
Future Vol, veh/h	20	435	400	190	50	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	9	9	9	9	9	9
Mvmt Flow	23	494	455	216	57	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	671	0	-	0	1103	563
Stage 1	-	-	-	-	563	-
Stage 2	-	-	-	-	540	-
Critical Hdwy	4.19	-	-	-	6.49	6.29
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	2.281	-	-	-	3.581	3.381
Pot Cap-1 Maneuver	887	-	-	-	227	513
Stage 1	-	-	-	-	556	-
Stage 2	-	-	-	-	570	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	887	-	-	-	219	513
Mov Cap-2 Maneuver	-	-	-	-	219	-
Stage 1	-	-	-	-	536	-
Stage 2	-	-	-	-	570	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	25.1
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	887	-	-	-	252
HCM Lane V/C Ratio	0.026	-	-	-	0.293
HCM Control Delay (s)	9.2	0	-	-	25.1
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	1.2

HCM 6th Signalized Intersection Summary
4: OR 551 & Arndt Road

Short-Term (2030) AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	85	10	55	70	665	20	670	65	400	420	25
Future Volume (veh/h)	50	85	10	55	70	665	20	670	65	400	420	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adj Flow Rate, veh/h	54	91	11	59	75	0	22	720	70	430	452	27
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	11	11	11	11	11	11	11	11	11	11	11	11
Cap, veh/h	103	138	15	118	120		41	885	750	528	1128	936
Arrive On Green	0.14	0.16	0.14	0.14	0.16	0.00	0.03	0.55	0.55	0.18	0.70	0.70
Sat Flow, veh/h	373	889	96	444	774	1356	1524	1600	1356	2956	1600	1328
Grp Volume(v), veh/h	156	0	0	134	0	0	22	720	70	430	452	27
Grp Sat Flow(s),veh/h/ln	1357	0	0	1219	0	1356	1524	1600	1356	1478	1600	1328
Q Serve(g_s), s	0.4	0.0	0.0	0.0	0.0	0.0	1.5	38.8	2.6	14.9	12.3	0.7
Cycle Q Clear(g_c), s	12.0	0.0	0.0	11.7	0.0	0.0	1.5	38.8	2.6	14.9	12.3	0.7
Prop In Lane	0.35		0.07	0.44		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	230	0	0	215	0		41	885	750	528	1128	936
V/C Ratio(X)	0.68	0.00	0.00	0.62	0.00		0.53	0.81	0.09	0.81	0.40	0.03
Avail Cap(c_a), veh/h	453	0	0	432	0		222	934	791	988	1128	936
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.2	0.0	0.0	42.9	0.0	0.0	51.0	19.3	11.2	41.9	6.5	4.7
Incr Delay (d2), s/veh	2.6	0.0	0.0	3.0	0.0	0.0	7.6	5.7	0.1	2.3	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	0.0	3.5	0.0	0.0	0.6	13.4	0.7	5.3	3.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.8	0.0	0.0	45.9	0.0	0.0	58.6	24.9	11.3	44.3	6.8	4.7
LnGrp LOS	D	A	A	D	A		E	C	B	D	A	A
Approach Vol, veh/h		156			134			812			909	
Approach Delay, s/veh		45.8			45.9			24.7			24.4	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	78.9		20.5	23.0	62.8		20.5				
Change Period (Y+Rc), s	4.5	6.0		6.0	4.5	6.0		6.0				
Max Green Setting (Gmax), s	15.0	60.0		31.0	35.0	60.0		31.0				
Max Q Clear Time (g_c+I1), s	3.5	14.3		13.7	16.9	40.8		14.0				
Green Ext Time (p_c), s	0.0	18.9		0.5	1.6	15.9		0.4				

Intersection Summary	
HCM 6th Ctrl Delay	27.6
HCM 6th LOS	C

Notes

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

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↑			↑	
Traffic Vol, veh/h	20	5	35	5	5	10	40	735	30	20	450	10
Future Vol, veh/h	20	5	35	5	5	10	40	735	30	20	450	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	500	-	-	500	-	160
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	9	9	9	9	9	9	9	9	9	9	9	9
Mvmt Flow	23	6	40	6	6	11	45	835	34	23	511	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1508	1516	511	1528	1510	852	522	0	0	869	0	0
Stage 1	557	557	-	942	942	-	-	-	-	-	-	-
Stage 2	951	959	-	586	568	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.59	6.29	7.19	6.59	6.29	4.19	-	-	4.19	-	-
Critical Hdwy Stg 1	6.19	5.59	-	6.19	5.59	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.59	-	6.19	5.59	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4.081	3.381	3.581	4.081	3.381	2.281	-	-	2.281	-	-
Pot Cap-1 Maneuver	96	115	549	92	116	349	1010	-	-	746	-	-
Stage 1	502	501	-	307	332	-	-	-	-	-	-	-
Stage 2	303	326	-	484	495	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	84	106	549	77	107	349	1010	-	-	746	-	-
Mov Cap-2 Maneuver	84	106	-	77	107	-	-	-	-	-	-	-
Stage 1	479	485	-	293	317	-	-	-	-	-	-	-
Stage 2	275	311	-	430	480	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	39	34.9	0.4	0.4
HCM LOS	E	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1010	-	-	172	143	746	-	-
HCM Lane V/C Ratio	0.045	-	-	0.396	0.159	0.03	-	-
HCM Control Delay (s)	8.7	-	-	39	34.9	10	-	-
HCM Lane LOS	A	-	-	E	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.7	0.5	0.1	-	-

HCM 6th Signalized Intersection Summary
6: OR 551 & Ehlen Road

Short-Term (2030) AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	385	25	50	295	40	55	625	30	40	420	30
Future Volume (veh/h)	140	385	25	50	295	40	55	625	30	40	420	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1614	1614	1614	1614	1614	1614	1614	1614	1614	1614	1614	1614
Adj Flow Rate, veh/h	152	418	27	54	321	43	60	679	33	43	457	33
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, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	178	489	32	68	354	47	75	759	643	53	736	624
Arrive On Green	0.12	0.33	0.32	0.04	0.25	0.24	0.05	0.47	0.47	0.03	0.46	0.46
Sat Flow, veh/h	1537	1499	97	1537	1393	187	1537	1614	1367	1537	1614	1367
Grp Volume(v), veh/h	152	0	445	54	0	364	60	679	33	43	457	33
Grp Sat Flow(s),veh/h/ln	1537	0	1596	1537	0	1580	1537	1614	1367	1537	1614	1367
Q Serve(g_s), s	12.4	0.0	33.3	4.4	0.0	28.5	4.9	49.1	1.7	3.6	27.4	1.7
Cycle Q Clear(g_c), s	12.4	0.0	33.3	4.4	0.0	28.5	4.9	49.1	1.7	3.6	27.4	1.7
Prop In Lane	1.00		0.06	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	178	0	520	68	0	402	75	759	643	53	736	624
V/C Ratio(X)	0.86	0.00	0.86	0.80	0.00	0.91	0.81	0.89	0.05	0.82	0.62	0.05
Avail Cap(c_a), veh/h	421	0	520	421	0	450	241	783	664	241	783	664
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.4	0.0	40.3	60.5	0.0	46.2	60.2	30.9	18.3	61.3	26.3	19.3
Incr Delay (d2), s/veh	8.5	0.0	12.9	14.6	0.0	19.8	13.8	12.9	0.0	19.8	1.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	0.0	14.2	2.0	0.0	13.1	2.1	20.1	0.5	1.6	10.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.0	0.0	53.2	75.1	0.0	66.0	74.0	43.8	18.4	81.1	28.0	19.4
LnGrp LOS	E	A	D	E	A	E	E	D	B	F	C	B
Approach Vol, veh/h		597			418			772			533	
Approach Delay, s/veh		55.9			67.2			45.1			31.8	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	62.3	18.8	36.5	8.4	64.1	9.6	45.6
Change Period (Y+Rc), s	4.0	6.0	4.0	* 5.4	4.0	6.0	4.0	* 5.4
Max Green Setting (Gmax), s	20.0	60.0	35.0	* 35	20.0	60.0	35.0	* 35
Max Q Clear Time (g_c+I1), s	6.9	29.4	14.4	30.5	5.6	51.1	6.4	35.3
Green Ext Time (p_c), s	0.1	12.8	0.4	0.6	0.0	7.0	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	48.8
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.3					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	0	5	205	60	5
Future Vol, veh/h	5	0	5	205	60	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	2	2	7	7
Mvmt Flow	6	0	6	236	69	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	320	72	75	0	-	0
Stage 1	72	-	-	-	-	-
Stage 2	248	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	678	996	1524	-	-	-
Stage 1	956	-	-	-	-	-
Stage 2	798	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	675	996	1524	-	-	-
Mov Cap-2 Maneuver	675	-	-	-	-	-
Stage 1	951	-	-	-	-	-
Stage 2	798	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1524	-	675	-	-
HCM Lane V/C Ratio	0.004	-	0.009	-	-
HCM Control Delay (s)	7.4	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th Signalized Intersection Summary
1: Airport Road & Arndt Road

Short-Term (2030) PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	770	65	10	585	115	60	45	35	185	60	30
Future Volume (veh/h)	10	770	65	10	585	115	60	45	35	185	60	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	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	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709
Adj Flow Rate, veh/h	11	846	71	11	643	126	66	49	38	203	66	33
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	328	1901	160	409	870	170	264	82	63	282	138	69
Arrive On Green	0.03	0.63	0.61	0.03	0.63	0.61	0.07	0.09	0.07	0.10	0.13	0.11
Sat Flow, veh/h	1628	3032	254	1628	1388	272	1628	886	687	1628	1075	537
Grp Volume(v), veh/h	11	453	464	11	0	769	66	0	87	203	0	99
Grp Sat Flow(s),veh/h/ln	1628	1624	1663	1628	0	1660	1628	0	1573	1628	0	1612
Q Serve(g_s), s	0.3	15.6	15.7	0.3	0.0	35.0	3.9	0.0	5.8	11.0	0.0	6.2
Cycle Q Clear(g_c), s	0.3	15.6	15.7	0.3	0.0	35.0	3.9	0.0	5.8	11.0	0.0	6.2
Prop In Lane	1.00		0.15	1.00		0.16	1.00		0.44	1.00		0.33
Lane Grp Cap(c), veh/h	328	1018	1043	409	0	1040	264	0	145	282	0	207
V/C Ratio(X)	0.03	0.45	0.45	0.03	0.00	0.74	0.25	0.00	0.60	0.72	0.00	0.48
Avail Cap(c_a), veh/h	398	1171	1199	478	0	1197	324	0	378	282	0	388
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	12.1	10.4	10.5	7.5	0.0	14.2	40.0	0.0	47.6	39.4	0.0	44.1
Incr Delay (d2), s/veh	0.0	1.0	1.0	0.0	0.0	4.7	0.4	0.0	2.9	8.1	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	0.1	5.1	5.3	0.1	0.0	12.4	1.5	0.0	2.3	5.2	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.1	11.4	11.5	7.5	0.0	18.9	40.4	0.0	50.6	47.5	0.0	45.4
LnGrp LOS	B	B	B	A	A	B	D	A	D	D	A	D
Approach Vol, veh/h		928			780			153			302	
Approach Delay, s/veh		11.5			18.7			46.2			46.8	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.1	17.9	7.4	71.8	15.0	14.0	7.4	71.8
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	24.0	6.0	76.0	9.0	24.0	6.0	76.0
Max Q Clear Time (g_c+I1), s	5.9	8.2	2.3	37.0	13.0	7.8	2.3	17.7
Green Ext Time (p_c), s	0.0	0.2	0.0	28.8	0.0	0.2	0.0	37.8

Intersection Summary	
HCM 6th Ctrl Delay	21.5
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	30	10	65	160	15
Future Vol, veh/h	30	30	10	65	160	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	4	4	6	6	2	2
Mvmt Flow	40	40	13	87	213	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	336	223	233	0	-	0
Stage 1	223	-	-	-	-	-
Stage 2	113	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.16	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.254	-	-	-
Pot Cap-1 Maneuver	655	812	1311	-	-	-
Stage 1	809	-	-	-	-	-
Stage 2	907	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	648	812	1311	-	-	-
Mov Cap-2 Maneuver	648	-	-	-	-	-
Stage 1	801	-	-	-	-	-
Stage 2	907	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1311	-	721	-	-
HCM Lane V/C Ratio	0.01	-	0.111	-	-
HCM Control Delay (s)	7.8	0	10.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Intersection	
Int Delay, s/veh	12.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		⅄	
Traffic Vol, veh/h	15	455	510	65	150	30
Future Vol, veh/h	15	455	510	65	150	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	7	7	5	5	2	2
Mvmt Flow	17	523	586	75	172	34

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	661	0	-	0	1181	624
Stage 1	-	-	-	-	624	-
Stage 2	-	-	-	-	557	-
Critical Hdwy	4.17	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.263	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	904	-	-	-	210	485
Stage 1	-	-	-	-	534	-
Stage 2	-	-	-	-	574	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	904	-	-	-	204	485
Mov Cap-2 Maneuver	-	-	-	-	204	-
Stage 1	-	-	-	-	520	-
Stage 2	-	-	-	-	574	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	85.1
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	904	-	-	-	226
HCM Lane V/C Ratio	0.019	-	-	-	0.915
HCM Control Delay (s)	9.1	0	-	-	85.1
HCM Lane LOS	A	A	-	-	F
HCM 95th %tile Q(veh)	0.1	-	-	-	7.7

HCM 6th Signalized Intersection Summary
4: OR 551 & Arndt Road

Short-Term (2030) PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	110	20	90	95	490	5	395	50	700	665	55
Future Volume (veh/h)	40	110	20	90	95	490	5	395	50	700	665	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668
Adj Flow Rate, veh/h	42	116	21	95	100	0	5	416	53	737	700	58
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	94	218	36	166	139		18	669	567	851	1111	941
Arrive On Green	0.18	0.20	0.18	0.18	0.20	0.00	0.01	0.40	0.40	0.28	0.67	0.67
Sat Flow, veh/h	243	1072	175	553	683	1414	1589	1668	1414	3082	1668	1414
Grp Volume(v), veh/h	179	0	0	195	0	0	5	416	53	737	700	58
Grp Sat Flow(s),veh/h/ln	1490	0	0	1236	0	1414	1589	1668	1414	1541	1668	1414
Q Serve(g_s), s	0.0	0.0	0.0	4.9	0.0	0.0	0.3	20.1	2.4	22.9	24.4	1.4
Cycle Q Clear(g_c), s	10.9	0.0	0.0	15.8	0.0	0.0	0.3	20.1	2.4	22.9	24.4	1.4
Prop In Lane	0.23		0.12	0.49		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	318	0	0	280	0		18	669	567	851	1111	941
V/C Ratio(X)	0.56	0.00	0.00	0.70	0.00		0.28	0.62	0.09	0.87	0.63	0.06
Avail Cap(c_a), veh/h	506	0	0	455	0		244	1026	870	1085	1111	941
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	0.0	0.0	39.0	0.0	0.0	49.4	24.1	18.8	34.7	9.7	5.9
Incr Delay (d2), s/veh	1.2	0.0	0.0	3.1	0.0	0.0	5.9	1.4	0.1	5.8	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	0.0	4.8	0.0	0.0	0.1	7.3	0.7	8.6	6.9	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.6	0.0	0.0	42.1	0.0	0.0	55.3	25.4	18.9	40.5	11.0	5.9
LnGrp LOS	D	A	A	D	A		E	C	B	D	B	A
Approach Vol, veh/h		179			195			474			1495	
Approach Delay, s/veh		37.6			42.1			25.0			25.3	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.2	71.1		24.5	31.8	44.4		24.5				
Change Period (Y+Rc), s	4.5	6.0		6.0	4.5	6.0		6.0				
Max Green Setting (Gmax), s	15.0	60.0		31.0	35.0	60.0		31.0				
Max Q Clear Time (g_c+I1), s	2.3	26.4		17.8	24.9	22.1		12.9				
Green Ext Time (p_c), s	0.0	24.6		0.7	2.4	16.4		0.5				

Intersection Summary	
HCM 6th Ctrl Delay	27.6
HCM 6th LOS	C

Notes

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

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↰	↱		↰	↑	↱
Traffic Vol, veh/h	10	5	50	15	25	15	30	430	5	10	750	35
Future Vol, veh/h	10	5	50	15	25	15	30	430	5	10	750	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	500	-	-	500	-	160
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	12	6	60	18	30	18	36	518	6	12	904	42

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1545	1524	904	1575	1563	521	946	0	0	524	0	0
Stage 1	928	928	-	593	593	-	-	-	-	-	-	-
Stage 2	617	596	-	982	970	-	-	-	-	-	-	-
Critical Hdwy	7.16	6.56	6.26	7.16	6.56	6.26	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.16	5.56	-	6.16	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.16	5.56	-	6.16	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.554	4.054	3.354	3.554	4.054	3.354	2.254	-	-	2.254	-	-
Pot Cap-1 Maneuver	91	116	330	87	109	548	709	-	-	1023	-	-
Stage 1	316	341	-	485	487	-	-	-	-	-	-	-
Stage 2	471	486	-	295	326	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	65	109	330	65	102	548	709	-	-	1023	-	-
Mov Cap-2 Maneuver	65	109	-	65	102	-	-	-	-	-	-	-
Stage 1	300	337	-	460	462	-	-	-	-	-	-	-
Stage 2	404	461	-	234	322	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	38	79.5	0.7	0.1
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	709	-	-	185	109	1023	-	-
HCM Lane V/C Ratio	0.051	-	-	0.423	0.608	0.012	-	-
HCM Control Delay (s)	10.3	-	-	38	79.5	8.6	-	-
HCM Lane LOS	B	-	-	E	F	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.9	3	0	-	-

HCM 6th Signalized Intersection Summary
6: OR 551 & Ehlen Road

Short-Term (2030) PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	350	25	90	430	30	40	360	25	110	650	55
Future Volume (veh/h)	75	350	25	90	430	30	40	360	25	110	650	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		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	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668
Adj Flow Rate, veh/h	83	389	28	100	478	33	44	400	28	122	722	61
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	104	426	31	124	447	31	55	710	602	145	805	682
Arrive On Green	0.07	0.28	0.27	0.08	0.29	0.28	0.03	0.43	0.43	0.09	0.48	0.48
Sat Flow, veh/h	1589	1535	110	1589	1540	106	1589	1668	1414	1589	1668	1414
Grp Volume(v), veh/h	83	0	417	100	0	511	44	400	28	122	722	61
Grp Sat Flow(s),veh/h/ln	1589	0	1645	1589	0	1646	1589	1668	1414	1589	1668	1414
Q Serve(g_s), s	6.5	0.0	30.7	7.8	0.0	36.4	3.4	22.7	1.5	9.5	49.5	2.9
Cycle Q Clear(g_c), s	6.5	0.0	30.7	7.8	0.0	36.4	3.4	22.7	1.5	9.5	49.5	2.9
Prop In Lane	1.00		0.07	1.00		0.06	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	104	0	457	124	0	478	55	710	602	145	805	682
V/C Ratio(X)	0.80	0.00	0.91	0.81	0.00	1.07	0.80	0.56	0.05	0.84	0.90	0.09
Avail Cap(c_a), veh/h	443	0	478	443	0	478	253	825	699	253	825	699
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.8	0.0	43.8	56.9	0.0	44.5	60.1	27.2	21.1	56.1	29.6	17.6
Incr Delay (d2), s/veh	10.0	0.0	21.0	9.0	0.0	61.0	17.9	1.0	0.0	9.4	12.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	14.5	3.4	0.0	22.4	1.6	8.6	0.5	4.0	20.7	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.8	0.0	64.9	65.9	0.0	105.5	78.1	28.2	21.1	65.5	42.3	17.6
LnGrp LOS	E	A	E	E	A	F	E	C	C	E	D	B
Approach Vol, veh/h		500			611			472			905	
Approach Delay, s/veh		65.3			99.0			32.4			43.8	
Approach LOS		E			F			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	64.5	12.2	40.4	15.4	57.4	13.8	38.8
Change Period (Y+Rc), s	4.0	6.0	4.0	* 5.4	4.0	6.0	4.0	* 5.4
Max Green Setting (Gmax), s	20.0	60.0	35.0	* 35	20.0	60.0	35.0	* 35
Max Q Clear Time (g_c+I1), s	5.4	51.5	8.5	38.4	11.5	24.7	9.8	32.7
Green Ext Time (p_c), s	0.1	6.9	0.2	0.0	0.1	11.8	0.3	0.4

Intersection Summary	
HCM 6th Ctrl Delay	59.5
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	5	10	85	170	5
Future Vol, veh/h	5	5	10	85	170	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	7	7	14	121	243	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	396	247	250	0	-	0
Stage 1	247	-	-	-	-	-
Stage 2	149	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	607	789	1310	-	-	-
Stage 1	792	-	-	-	-	-
Stage 2	876	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	600	789	1310	-	-	-
Mov Cap-2 Maneuver	600	-	-	-	-	-
Stage 1	783	-	-	-	-	-
Stage 2	876	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1310	-	682	-	-
HCM Lane V/C Ratio	0.011	-	0.021	-	-
HCM Control Delay (s)	7.8	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

SECTION 9: HCM REPORTS - SHORT-TERM 2030 BUILD AM AND PM

HCM 6th Signalized Intersection Summary
1: Airport Road & Arndt Road

Short-Term (2030) + Project AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	470	108	45	700	315	73	111	14	70	38	10
Future Volume (veh/h)	25	470	108	45	700	315	73	111	14	70	38	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1586	1586	1586	1641	1641	1641	1723	1723	1723	1709	1709	1709
Adj Flow Rate, veh/h	28	528	121	51	787	354	82	125	16	79	43	11
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	12	12	12	8	8	8	2	2	2	3	3	3
Cap, veh/h	122	1540	351	531	681	307	291	173	22	218	149	38
Arrive On Green	0.04	0.63	0.62	0.05	0.64	0.62	0.07	0.12	0.10	0.07	0.11	0.10
Sat Flow, veh/h	1511	2437	556	1563	1064	479	1641	1497	192	1628	1305	334
Grp Volume(v), veh/h	28	326	323	51	0	1141	82	0	141	79	0	54
Grp Sat Flow(s),veh/h/ln	1511	1507	1486	1563	0	1542	1641	0	1688	1628	0	1639
Q Serve(g_s), s	0.8	12.4	12.6	1.3	0.0	78.0	5.2	0.0	9.8	5.1	0.0	3.7
Cycle Q Clear(g_c), s	0.8	12.4	12.6	1.3	0.0	78.0	5.2	0.0	9.8	5.1	0.0	3.7
Prop In Lane	1.00		0.37	1.00		0.31	1.00		0.11	1.00		0.20
Lane Grp Cap(c), veh/h	122	952	939	531	0	988	291	0	196	218	0	187
V/C Ratio(X)	0.23	0.34	0.34	0.10	0.00	1.15	0.28	0.00	0.72	0.36	0.00	0.29
Avail Cap(c_a), veh/h	158	965	952	555	0	988	321	0	360	250	0	350
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	30.9	10.5	10.8	7.1	0.0	22.2	42.5	0.0	52.0	42.9	0.0	49.6
Incr Delay (d2), s/veh	0.7	0.7	0.7	0.1	0.0	81.3	0.4	0.0	3.7	0.8	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.9	3.9	0.4	0.0	46.2	2.1	0.0	4.2	2.0	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.6	11.2	11.5	7.1	0.0	103.5	42.9	0.0	55.7	43.7	0.0	50.2
LnGrp LOS	C	B	B	A	A	F	D	A	E	D	A	D
Approach Vol, veh/h		677			1192			223			133	
Approach Delay, s/veh		12.2			99.4			51.0			46.3	
Approach LOS		B			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	17.9	9.1	82.0	12.6	18.1	10.1	81.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	24.0	6.0	76.0	9.0	24.0	6.0	76.0
Max Q Clear Time (g_c+I1), s	7.2	5.7	2.8	80.0	7.1	11.8	3.3	14.6
Green Ext Time (p_c), s	0.0	0.1	0.0	0.0	0.0	0.3	0.0	26.0

Intersection Summary	
HCM 6th Ctrl Delay	64.8
HCM 6th LOS	E

Intersection						
Int Delay, s/veh	1.4					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	10	25	249	52	21
Future Vol, veh/h	22	10	25	249	52	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	12	12	2	2	9	9
Mvmt Flow	25	11	29	286	60	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	416	72	84	0	-	0
Stage 1	72	-	-	-	-	-
Stage 2	344	-	-	-	-	-
Critical Hdwy	6.52	6.32	4.12	-	-	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.408	2.218	-	-	-
Pot Cap-1 Maneuver	574	963	1513	-	-	-
Stage 1	926	-	-	-	-	-
Stage 2	696	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	561	963	1513	-	-	-
Mov Cap-2 Maneuver	561	-	-	-	-	-
Stage 1	905	-	-	-	-	-
Stage 2	696	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.9	0.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1513	-	645	-	-
HCM Lane V/C Ratio	0.019	-	0.057	-	-
HCM Control Delay (s)	7.4	0	10.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↑		↰	
Traffic Vol, veh/h	51	435	400	213	53	19
Future Vol, veh/h	51	435	400	213	53	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	9	9	9	9	9	9
Mvmt Flow	58	494	455	242	60	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	697	0	-	0	1186	576
Stage 1	-	-	-	-	576	-
Stage 2	-	-	-	-	610	-
Critical Hdwy	4.19	-	-	-	6.49	6.29
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	2.281	-	-	-	3.581	3.381
Pot Cap-1 Maneuver	867	-	-	-	202	504
Stage 1	-	-	-	-	549	-
Stage 2	-	-	-	-	529	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	867	-	-	-	183	504
Mov Cap-2 Maneuver	-	-	-	-	183	-
Stage 1	-	-	-	-	498	-
Stage 2	-	-	-	-	529	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	30.7
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	867	-	-	-	220
HCM Lane V/C Ratio	0.067	-	-	-	0.372
HCM Control Delay (s)	9.4	0	-	-	30.7
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	0.2	-	-	-	1.6

HCM 6th Signalized Intersection Summary
4: OR 551 & Arndt Road

Short-Term (2030) + Project AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	93	10	55	71	672	20	670	65	445	420	25
Future Volume (veh/h)	50	93	10	55	71	672	20	670	65	445	420	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adj Flow Rate, veh/h	54	100	11	59	76	0	22	720	70	478	452	27
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	11	11	11	11	11	11	11	11	11	11	11	11
Cap, veh/h	99	147	14	115	121		41	860	729	573	1127	936
Arrive On Green	0.14	0.16	0.14	0.14	0.16	0.00	0.03	0.54	0.54	0.19	0.70	0.70
Sat Flow, veh/h	351	915	90	424	757	1356	1524	1600	1356	2956	1600	1328
Grp Volume(v), veh/h	165	0	0	135	0	0	22	720	70	478	452	27
Grp Sat Flow(s),veh/h/ln	1356	0	0	1182	0	1356	1524	1600	1356	1478	1600	1328
Q Serve(g_s), s	0.7	0.0	0.0	0.0	0.0	0.0	1.6	41.9	2.8	17.2	12.9	0.7
Cycle Q Clear(g_c), s	13.3	0.0	0.0	12.6	0.0	0.0	1.6	41.9	2.8	17.2	12.9	0.7
Prop In Lane	0.33		0.07	0.44		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	236	0	0	215	0		41	860	729	573	1127	936
V/C Ratio(X)	0.70	0.00	0.00	0.63	0.00		0.54	0.84	0.10	0.83	0.40	0.03
Avail Cap(c_a), veh/h	434	0	0	406	0		213	896	759	947	1127	936
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	0.0	0.0	44.4	0.0	0.0	53.2	21.5	12.5	42.9	6.7	4.9
Incr Delay (d2), s/veh	2.8	0.0	0.0	3.0	0.0	0.0	8.0	7.2	0.1	2.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	0.0	3.7	0.0	0.0	0.7	15.1	0.8	6.1	3.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.6	0.0	0.0	47.4	0.0	0.0	61.3	28.7	12.6	45.5	7.1	4.9
LnGrp LOS	D	A	A	D	A		E	C	B	D	A	A
Approach Vol, veh/h		165			135			812			957	
Approach Delay, s/veh		47.6			47.4			28.2			26.2	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.0	82.0		21.8	25.5	63.5		21.8				
Change Period (Y+Rc), s	4.5	6.0		6.0	4.5	6.0		6.0				
Max Green Setting (Gmax), s	15.0	60.0		31.0	35.0	60.0		31.0				
Max Q Clear Time (g_c+I1), s	3.6	14.9		14.6	19.2	43.9		15.3				
Green Ext Time (p_c), s	0.0	18.8		0.5	1.8	13.6		0.4				

Intersection Summary	
HCM 6th Ctrl Delay	30.1
HCM 6th LOS	C

Notes

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

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↰	↱		↰	↑	↱
Traffic Vol, veh/h	20	5	35	6	5	10	40	735	37	20	450	10
Future Vol, veh/h	20	5	35	6	5	10	40	735	37	20	450	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	500	-	-	500	-	160
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	9	9	9	9	9	9	9	9	9	9	9	9
Mvmt Flow	23	6	40	7	6	11	45	835	42	23	511	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1512	1524	511	1532	1514	856	522	0	0	877	0	0
Stage 1	557	557	-	946	946	-	-	-	-	-	-	-
Stage 2	955	967	-	586	568	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.59	6.29	7.19	6.59	6.29	4.19	-	-	4.19	-	-
Critical Hdwy Stg 1	6.19	5.59	-	6.19	5.59	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.59	-	6.19	5.59	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4.081	3.381	3.581	4.081	3.381	2.281	-	-	2.281	-	-
Pot Cap-1 Maneuver	95	114	549	92	115	347	1010	-	-	741	-	-
Stage 1	502	501	-	305	331	-	-	-	-	-	-	-
Stage 2	301	324	-	484	495	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	83	105	549	77	106	347	1010	-	-	741	-	-
Mov Cap-2 Maneuver	83	105	-	77	106	-	-	-	-	-	-	-
Stage 1	479	485	-	291	316	-	-	-	-	-	-	-
Stage 2	273	309	-	430	480	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	39.7	37	0.4	0.4
HCM LOS	E	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1010	-	-	170	136	741	-	-
HCM Lane V/C Ratio	0.045	-	-	0.401	0.175	0.031	-	-
HCM Control Delay (s)	8.7	-	-	39.7	37	10	-	-
HCM Lane LOS	A	-	-	E	E	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.8	0.6	0.1	-	-

HCM 6th Signalized Intersection Summary
6: OR 551 & Ehlen Road

Short-Term (2030) + Project AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	408	25	51	298	40	55	632	38	40	421	30
Future Volume (veh/h)	140	408	25	51	298	40	55	632	38	40	421	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1614	1614	1614	1614	1614	1614	1614	1614	1614	1614	1614	1614
Adj Flow Rate, veh/h	152	443	27	55	324	43	60	687	41	43	458	33
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, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	177	491	30	69	357	47	75	759	643	53	736	624
Arrive On Green	0.12	0.33	0.32	0.04	0.26	0.24	0.05	0.47	0.47	0.03	0.46	0.46
Sat Flow, veh/h	1537	1505	92	1537	1395	185	1537	1614	1367	1537	1614	1367
Grp Volume(v), veh/h	152	0	470	55	0	367	60	687	41	43	458	33
Grp Sat Flow(s),veh/h/ln	1537	0	1597	1537	0	1580	1537	1614	1367	1537	1614	1367
Q Serve(g_s), s	12.5	0.0	36.2	4.6	0.0	29.0	5.0	50.6	2.1	3.6	27.8	1.7
Cycle Q Clear(g_c), s	12.5	0.0	36.2	4.6	0.0	29.0	5.0	50.6	2.1	3.6	27.8	1.7
Prop In Lane	1.00		0.06	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	177	0	521	69	0	404	75	759	643	53	736	624
V/C Ratio(X)	0.86	0.00	0.90	0.80	0.00	0.91	0.81	0.91	0.06	0.82	0.62	0.05
Avail Cap(c_a), veh/h	418	0	521	418	0	447	239	777	659	239	777	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.9	0.0	41.4	60.9	0.0	46.5	60.6	31.5	18.6	61.8	26.6	19.5
Incr Delay (d2), s/veh	8.6	0.0	18.6	14.4	0.0	20.6	13.8	14.3	0.1	19.8	1.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.0	16.1	2.0	0.0	13.3	2.2	20.9	0.6	1.6	10.2	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.5	0.0	60.0	75.3	0.0	67.1	74.5	45.7	18.7	81.5	28.3	19.6
LnGrp LOS	E	A	E	E	A	E	E	D	B	F	C	B
Approach Vol, veh/h		622			422			788			534	
Approach Delay, s/veh		61.1			68.1			46.5			32.1	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	62.7	18.9	36.9	8.4	64.5	9.8	46.0
Change Period (Y+Rc), s	4.0	6.0	4.0	* 5.4	4.0	6.0	4.0	* 5.4
Max Green Setting (Gmax), s	20.0	60.0	35.0	* 35	20.0	60.0	35.0	* 35
Max Q Clear Time (g_c+I1), s	7.0	29.8	14.5	31.0	5.6	52.6	6.6	38.2
Green Ext Time (p_c), s	0.1	12.8	0.4	0.5	0.0	6.0	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	50.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	4	36	211	106	50
Future Vol, veh/h	12	4	36	211	106	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	2	2	7	7
Mvmt Flow	14	5	41	243	122	57

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	476	151	179	0	-	0
Stage 1	151	-	-	-	-	-
Stage 2	325	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	551	901	1397	-	-	-
Stage 1	882	-	-	-	-	-
Stage 2	737	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	532	901	1397	-	-	-
Mov Cap-2 Maneuver	532	-	-	-	-	-
Stage 1	852	-	-	-	-	-
Stage 2	737	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.3	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1397	-	593	-	-
HCM Lane V/C Ratio	0.03	-	0.031	-	-
HCM Control Delay (s)	7.7	0	11.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	1	7	217	61	10
Future Vol, veh/h	2	1	7	217	61	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	7	7
Mvmt Flow	2	1	8	249	70	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	341	76	81	0	-	0
Stage 1	76	-	-	-	-	-
Stage 2	265	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	655	985	1517	-	-	-
Stage 1	947	-	-	-	-	-
Stage 2	779	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	651	985	1517	-	-	-
Mov Cap-2 Maneuver	651	-	-	-	-	-
Stage 1	941	-	-	-	-	-
Stage 2	779	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1517	-	734	-	-
HCM Lane V/C Ratio	0.005	-	0.005	-	-
HCM Control Delay (s)	7.4	0	9.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	6.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	5	0	76	10	0	11
Future Vol, veh/h	5	0	76	10	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	0	87	11	0	13

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	6	0	191	6
Stage 1	-	-	-	-	6	-
Stage 2	-	-	-	-	185	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1615	-	798	1077
Stage 1	-	-	-	-	1017	-
Stage 2	-	-	-	-	847	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1615	-	755	1077
Mov Cap-2 Maneuver	-	-	-	-	755	-
Stage 1	-	-	-	-	1017	-
Stage 2	-	-	-	-	801	-

Approach	EB	WB	NB
HCM Control Delay, s	0	6.5	8.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1077	-	-	1615	-
HCM Lane V/C Ratio	0.012	-	-	0.054	-
HCM Control Delay (s)	8.4	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0.2	-

HCM 6th Signalized Intersection Summary
1: Airport Road & Arndt Road

Short-Term (2030) + Project PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	770	75	16	585	115	109	52	64	185	62	30
Future Volume (veh/h)	10	770	75	16	585	115	109	52	64	185	62	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	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	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709
Adj Flow Rate, veh/h	11	846	82	18	643	126	120	57	70	203	68	33
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	305	1812	176	393	850	166	298	81	100	271	129	63
Arrive On Green	0.03	0.61	0.59	0.04	0.61	0.59	0.10	0.12	0.10	0.10	0.12	0.10
Sat Flow, veh/h	1628	2991	290	1628	1388	272	1628	692	850	1628	1087	527
Grp Volume(v), veh/h	11	459	469	18	0	769	120	0	127	203	0	101
Grp Sat Flow(s),veh/h/ln	1628	1624	1657	1628	0	1660	1628	0	1542	1628	0	1614
Q Serve(g_s), s	0.3	17.5	17.6	0.5	0.0	37.9	7.1	0.0	9.0	11.0	0.0	6.6
Cycle Q Clear(g_c), s	0.3	17.5	17.6	0.5	0.0	37.9	7.1	0.0	9.0	11.0	0.0	6.6
Prop In Lane	1.00		0.17	1.00		0.16	1.00		0.55	1.00		0.33
Lane Grp Cap(c), veh/h	305	984	1004	393	0	1016	298	0	181	271	0	192
V/C Ratio(X)	0.04	0.47	0.47	0.05	0.00	0.76	0.40	0.00	0.70	0.75	0.00	0.53
Avail Cap(c_a), veh/h	371	1124	1147	448	0	1149	300	0	356	271	0	372
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	13.7	12.2	12.3	8.7	0.0	15.9	37.8	0.0	48.4	41.2	0.0	47.0
Incr Delay (d2), s/veh	0.0	1.1	1.1	0.0	0.0	5.3	0.7	0.0	3.6	10.6	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	5.9	6.1	0.1	0.0	13.9	2.7	0.0	3.5	5.6	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.8	13.3	13.4	8.7	0.0	21.2	38.5	0.0	52.0	51.8	0.0	48.6
LnGrp LOS	B	B	B	A	A	C	D	A	D	D	A	D
Approach Vol, veh/h		939			787			247			304	
Approach Delay, s/veh		13.4			20.9			45.4			50.7	
Approach LOS		B			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.8	17.4	7.5	73.0	15.0	17.3	8.2	72.3
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	24.0	6.0	76.0	9.0	24.0	6.0	76.0
Max Q Clear Time (g_c+I1), s	9.1	8.6	2.3	39.9	13.0	11.0	2.5	19.6
Green Ext Time (p_c), s	0.0	0.2	0.0	27.1	0.0	0.3	0.0	37.4

Intersection Summary	
HCM 6th Ctrl Delay	24.4
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	31	30	10	75	211	22
Future Vol, veh/h	31	30	10	75	211	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	4	4	6	6	2	2
Mvmt Flow	41	40	13	100	281	29

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	422	296	310	0	-	0
Stage 1	296	-	-	-	-	-
Stage 2	126	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.16	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.254	-	-	-
Pot Cap-1 Maneuver	585	739	1228	-	-	-
Stage 1	750	-	-	-	-	-
Stage 2	895	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	579	739	1228	-	-	-
Mov Cap-2 Maneuver	579	-	-	-	-	-
Stage 1	742	-	-	-	-	-
Stage 2	895	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.4	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1228	-	648	-	-
HCM Lane V/C Ratio	0.011	-	0.126	-	-
HCM Control Delay (s)	8	0	11.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Intersection	
Int Delay, s/veh	26.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		⋎	
Traffic Vol, veh/h	21	455	510	69	172	59
Future Vol, veh/h	21	455	510	69	172	59
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	7	7	5	5	2	2
Mvmt Flow	24	523	586	79	198	68

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	665	0	-	0	1197	626
Stage 1	-	-	-	-	626	-
Stage 2	-	-	-	-	571	-
Critical Hdwy	4.17	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.263	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	901	-	-	-	205	484
Stage 1	-	-	-	-	533	-
Stage 2	-	-	-	-	565	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	901	-	-	-	~ 197	484
Mov Cap-2 Maneuver	-	-	-	-	~ 197	-
Stage 1	-	-	-	-	513	-
Stage 2	-	-	-	-	565	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	148.1
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	901	-	-	-	232
HCM Lane V/C Ratio	0.027	-	-	-	1.144
HCM Control Delay (s)	9.1	0	-	-	148.1
HCM Lane LOS	A	A	-	-	F
HCM 95th %tile Q(veh)	0.1	-	-	-	12.3

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

HCM 6th Signalized Intersection Summary
4: OR 551 & Arndt Road

Short-Term (2030) + Project PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	112	20	90	102	532	5	395	50	708	665	55
Future Volume (veh/h)	40	112	20	90	102	532	5	395	50	708	665	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668
Adj Flow Rate, veh/h	42	118	21	95	107	0	5	416	53	745	700	58
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	93	222	36	163	147		18	663	562	855	1107	938
Arrive On Green	0.19	0.21	0.19	0.19	0.21	0.00	0.01	0.40	0.40	0.28	0.66	0.66
Sat Flow, veh/h	238	1070	172	535	706	1414	1589	1668	1414	3082	1668	1414
Grp Volume(v), veh/h	181	0	0	202	0	0	5	416	53	745	700	58
Grp Sat Flow(s),veh/h/ln	1480	0	0	1241	0	1414	1589	1668	1414	1541	1668	1414
Q Serve(g_s), s	0.0	0.0	0.0	5.4	0.0	0.0	0.3	20.5	2.4	23.6	24.9	1.5
Cycle Q Clear(g_c), s	11.3	0.0	0.0	16.6	0.0	0.0	0.3	20.5	2.4	23.6	24.9	1.5
Prop In Lane	0.23		0.12	0.47		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	322	0	0	285	0		18	663	562	855	1107	938
V/C Ratio(X)	0.56	0.00	0.00	0.71	0.00		0.28	0.63	0.09	0.87	0.63	0.06
Avail Cap(c_a), veh/h	495	0	0	447	0		240	1008	854	1067	1107	938
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.8	0.0	0.0	39.5	0.0	0.0	50.3	24.8	19.3	35.3	10.0	6.0
Incr Delay (d2), s/veh	1.1	0.0	0.0	3.2	0.0	0.0	6.0	1.4	0.1	6.3	1.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	0.0	0.0	5.1	0.0	0.0	0.2	7.5	0.7	8.9	7.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.9	0.0	0.0	42.7	0.0	0.0	56.3	26.2	19.4	41.6	11.3	6.1
LnGrp LOS	D	A	A	D	A		E	C	B	D	B	A
Approach Vol, veh/h		181			202			474			1503	
Approach Delay, s/veh		37.9			42.7			25.7			26.2	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.2	72.1		25.3	32.5	44.8		25.3				
Change Period (Y+Rc), s	4.5	6.0		6.0	4.5	6.0		6.0				
Max Green Setting (Gmax), s	15.0	60.0		31.0	35.0	60.0		31.0				
Max Q Clear Time (g_c+I1), s	2.3	26.9		18.6	25.6	22.5		13.3				
Green Ext Time (p_c), s	0.0	24.3		0.7	2.3	16.3		0.5				

Intersection Summary	
HCM 6th Ctrl Delay	28.4
HCM 6th LOS	C

Notes

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

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑		↰	↑	↱
Traffic Vol, veh/h	10	5	50	22	25	15	30	430	6	10	750	35
Future Vol, veh/h	10	5	50	22	25	15	30	430	6	10	750	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	500	-	-	500	-	160
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	6	6	6	6	6	6	6	6	6	6	6	6
Mvmt Flow	12	6	60	27	30	18	36	518	7	12	904	42

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1546	1525	904	1576	1564	522	946	0	0	525	0	0
Stage 1	928	928	-	594	594	-	-	-	-	-	-	-
Stage 2	618	597	-	982	970	-	-	-	-	-	-	-
Critical Hdwy	7.16	6.56	6.26	7.16	6.56	6.26	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.16	5.56	-	6.16	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.16	5.56	-	6.16	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.554	4.054	3.354	3.554	4.054	3.354	2.254	-	-	2.254	-	-
Pot Cap-1 Maneuver	91	115	330	87	109	547	709	-	-	1022	-	-
Stage 1	316	341	-	485	487	-	-	-	-	-	-	-
Stage 2	470	485	-	295	326	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	65	108	330	65	102	547	709	-	-	1022	-	-
Mov Cap-2 Maneuver	65	108	-	65	102	-	-	-	-	-	-	-
Stage 1	300	337	-	460	462	-	-	-	-	-	-	-
Stage 2	403	460	-	234	322	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	38	105.7	0.7	0.1
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	709	-	-	185	101	1022	-	-
HCM Lane V/C Ratio	0.051	-	-	0.423	0.74	0.012	-	-
HCM Control Delay (s)	10.3	-	-	38	105.7	8.6	-	-
HCM Lane LOS	B	-	-	E	F	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.9	3.9	0	-	-

HCM 6th Signalized Intersection Summary
6: OR 551 & Ehlen Road

Short-Term (2030) + Project PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	354	25	97	452	30	40	361	27	110	657	55
Future Volume (veh/h)	75	354	25	97	452	30	40	361	27	110	657	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		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	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668	1668
Adj Flow Rate, veh/h	83	393	28	108	502	33	44	401	30	122	730	61
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	104	426	30	132	456	30	55	705	598	145	800	678
Arrive On Green	0.07	0.28	0.27	0.08	0.30	0.28	0.03	0.42	0.42	0.09	0.48	0.48
Sat Flow, veh/h	1589	1536	109	1589	1546	102	1589	1668	1414	1589	1668	1414
Grp Volume(v), veh/h	83	0	421	108	0	535	44	401	30	122	730	61
Grp Sat Flow(s),veh/h/ln	1589	0	1646	1589	0	1647	1589	1668	1414	1589	1668	1414
Q Serve(g_s), s	6.6	0.0	31.6	8.5	0.0	37.5	3.5	23.2	1.6	9.6	51.5	3.0
Cycle Q Clear(g_c), s	6.6	0.0	31.6	8.5	0.0	37.5	3.5	23.2	1.6	9.6	51.5	3.0
Prop In Lane	1.00		0.07	1.00		0.06	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	104	0	456	132	0	486	55	705	598	145	800	678
V/C Ratio(X)	0.80	0.00	0.92	0.82	0.00	1.10	0.80	0.57	0.05	0.84	0.91	0.09
Avail Cap(c_a), veh/h	437	0	471	437	0	486	250	813	689	250	813	689
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.6	0.0	44.7	57.3	0.0	44.9	61.0	27.9	21.6	56.9	30.7	18.0
Incr Delay (d2), s/veh	10.0	0.0	23.3	8.8	0.0	71.1	17.9	1.0	0.0	9.5	14.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	15.1	3.7	0.0	24.3	1.6	8.9	0.5	4.1	22.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.6	0.0	68.0	66.1	0.0	116.0	78.9	28.9	21.7	66.4	45.4	18.1
LnGrp LOS	E	A	E	E	A	F	E	C	C	E	D	B
Approach Vol, veh/h		504			643			475			913	
Approach Delay, s/veh		68.1			107.6			33.1			46.4	
Approach LOS		E			F			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	65.0	12.3	41.5	15.6	57.8	14.6	39.3
Change Period (Y+Rc), s	4.0	6.0	4.0	* 5.4	4.0	6.0	4.0	* 5.4
Max Green Setting (Gmax), s	20.0	60.0	35.0	* 35	20.0	60.0	35.0	* 35
Max Q Clear Time (g_c+I1), s	5.5	53.5	8.6	39.5	11.6	25.2	10.5	33.6
Green Ext Time (p_c), s	0.1	5.4	0.2	0.0	0.1	11.8	0.3	0.2

Intersection Summary	
HCM 6th Ctrl Delay	63.7
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	2.7					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	48	34	15	127	179	14
Future Vol, veh/h	48	34	15	127	179	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	69	49	21	181	256	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	489	266	276	0	-	0
Stage 1	266	-	-	-	-	-
Stage 2	223	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	536	770	1281	-	-	-
Stage 1	776	-	-	-	-	-
Stage 2	812	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	526	770	1281	-	-	-
Mov Cap-2 Maneuver	526	-	-	-	-	-
Stage 1	762	-	-	-	-	-
Stage 2	812	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.4	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1281	-	606	-	-
HCM Lane V/C Ratio	0.017	-	0.193	-	-
HCM Control Delay (s)	7.9	0	12.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	6	2	97	181	2
Future Vol, veh/h	9	6	2	97	181	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	13	9	3	139	259	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	406	261	262	0	-	0
Stage 1	261	-	-	-	-	-
Stage 2	145	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	599	775	1296	-	-	-
Stage 1	780	-	-	-	-	-
Stage 2	880	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	597	775	1296	-	-	-
Mov Cap-2 Maneuver	597	-	-	-	-	-
Stage 1	778	-	-	-	-	-
Stage 2	880	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.7	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1296	-	657	-	-
HCM Lane V/C Ratio	0.002	-	0.033	-	-
HCM Control Delay (s)	7.8	0	10.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	6.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	⋎	
Traffic Vol, veh/h	10	0	14	15	0	72
Future Vol, veh/h	10	0	14	15	0	72
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	14	0	20	21	0	103

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	14	0	75	14
Stage 1	-	-	-	-	14	-
Stage 2	-	-	-	-	61	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1598	-	926	1063
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	959	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1598	-	914	1063
Mov Cap-2 Maneuver	-	-	-	-	914	-
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	947	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.5	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1063	-	-	1598	-
HCM Lane V/C Ratio	0.097	-	-	0.013	-
HCM Control Delay (s)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

SECTION 10: TURN LANE WARRANTS

Left Turn Lane Warrant Analysis

Project: North Marion County Vertiport Development
Scenario(s): Short-Term 2030 Build

AM Project Driveways on Airport Road

Intersection	Approach (NB,SB, EB,WB)	Number of Advancing Lanes	Number of Opposing Lanes	Volume Advancing (Va)	LT Vol	LT %	Volume Opposing (Vo)	Warrant Factor	5% Warrant Va	Va Warrant Threshold	HRB Warrant Met?	ODOT Volume	ODOT LT Threshold	ODOT Criteria Met?	Max. Est. Queue	Storage Length (ft)
PM Project Driveway - Airport	NB	1	1	224	7	3%	71	1.25	521	653	No	295	24	No	1	
AM Project Driveway - Stenbock	NB	1	1	219	12	5%	85	0.96	513	491	No	304	24	No	1	

PM Project Driveways on Airport Road

Intersection	Approach (NB,SB, EB,WB)	Number of Advancing Lanes	Number of Opposing Lanes	Volume Advancing (Va)	LT Vol	LT %	Volume Opposing (Vo)	Warrant Factor	5% Warrant Va	Va Warrant Threshold	HRB Warrant Met?	ODOT Volume	ODOT LT Threshold	ODOT Criteria Met?	Max. Est. Queue	Storage Length (ft)
PM Project Driveway - Airport	NB	1	1	102	2	2%	183	1.57	464	730	No	285	25	No	-1	
PM Project Driveway - Stenbock	NB	1	1	106	12	11%	179	0.69	467	321	No	285	25	No	2	

*The "Consider" note applies when there are high through volumes but less than 10 left turning vehicles.

ODOT LEFT TURN CRITERIA IS BASED ON THE 8-13-03 LEFT TURN CRITERIA
MAX QUEUE AND STORAGE ESTIMATES BASED ON GARD METHOD

Right-Turn Lane Warrant Analysis

Project: North Marion County Vertiport Development
Scenario(s): Short-Term 2030 Build

Intersection	Approach (NB,SB, EB,WB)	2-lane or Multi-lane Highway	Volume Advancing (Va)	RT Vol	ODOT RT Lane Warrant	[illegible]	NCHRP RT Volume	Taper Warrant	RT Lane Warrant	NCHRP Taper?	NCHRP RT Lane?
AM Project Driveway - South	SB	2-lane	71	10	103	No	10	63	111	No	No
AM Project Driveway - North	SB	2-lane	85	15	101	No	15	62	109	No	No
PM Project Driveway - North	SB	2-lane	183	2	88	No	2	52	96	No	No
PM Project Driveway - South	SB	2-lane	179	7	89	No	7	53	97	No	No

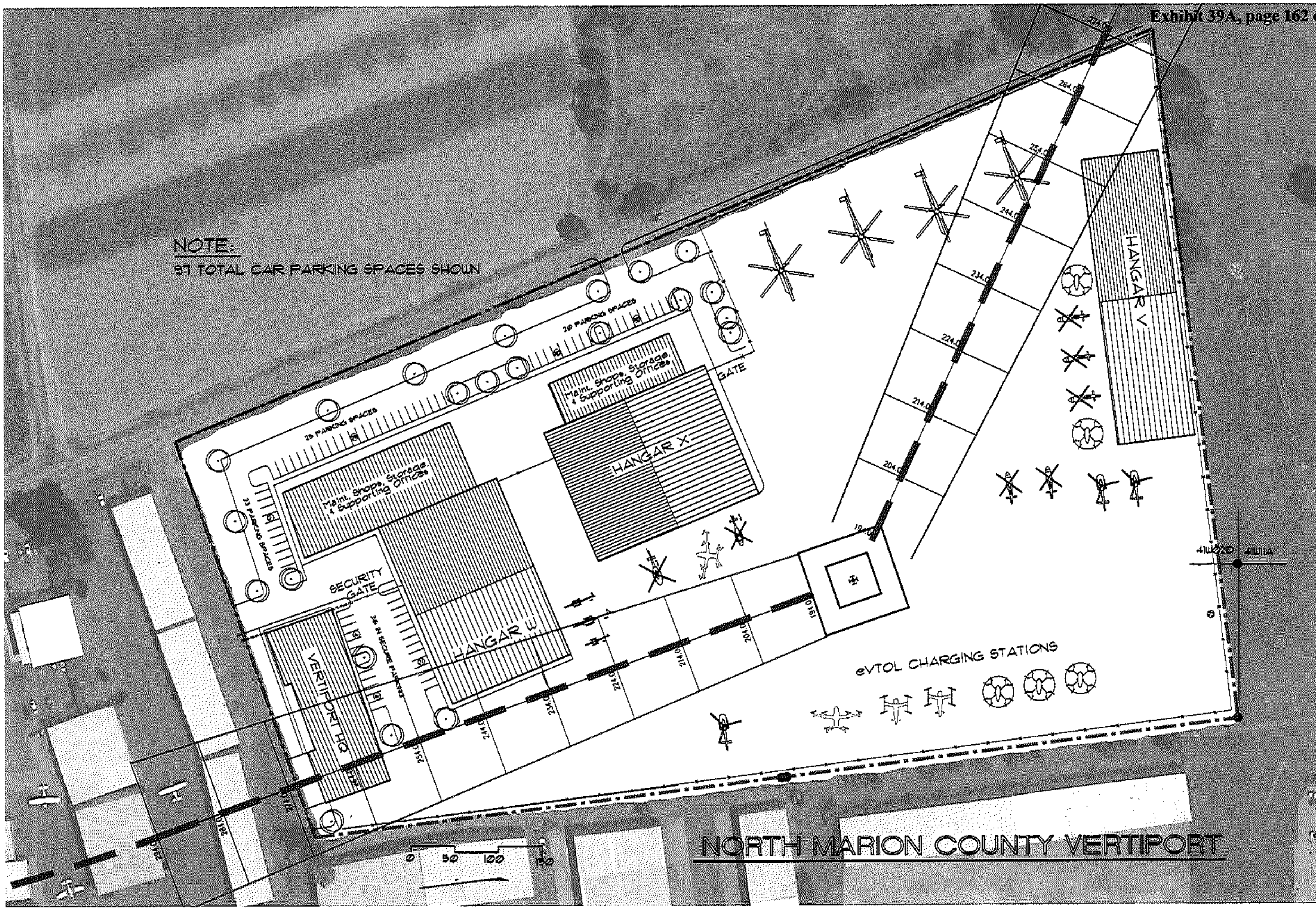
SECTION 11: PROPORTIONATE SHARE PERCENTAGE CALCULATIONS

Proportionate Share Percentage Calculations

AM Peak Hour			
Intersection	2030 Build Volumes	Project Trips	Proportionate Share Percentage
Airport Rd /Ehlen Rd	1,124	14	1.2%
PM Peak Hour			
Intersection	2030 Build Volumes	Project Trips	Proportionate Share Percentage
Airport Rd /Ehlen Rd	1,239	14	1.1%

Intersection	Average Proportionate Share Percentage	Cost	Proportionate Share Cost
Airport Rd /Ehlen Rd	1.2%	$ 2,000,000	$ 24,000

SECTION 12: SITE PLAN



FAEGRE
ARCHITECT
13200 FIELDING RD.
LAKE OSWEGO
OREGON
97034

REGISTERED ARCHITECT
STATE OF OREGON

NORTH MARION COUNTY VERTIPORT

SITE
PLAN

AIRPORT ROAD – AURORA, OREGON

SITE PLAN

REVISIONS

PAGE:
L1.0

North Marion County Vertiport/Heliport
2/15/2024

NMCVH Buildings					Parking Spaces by Marion Countyu Rural Zoning Code 17.118.050 (see Note 1)			Parking Spaces based on Building Footprint & Adjacent Airport Comparable (see Note 2)		
Name	Floor	Uses	Area sf		Occupiable Area	Req'd Area per Parking Space	Req'd Spaces (rounded up)	Footprint Area	Req'd Area per Parking Space	Req'd Spaces (rounded up)
Vertiport HQ	Ground, Second	Offices	15,658		15,658	300	52	7,829	1,441	6
	Ground, Second	Industrial Shops	15,658		15,658	5000	3	7,829	1,441	6
Subtotal				31,316						
Hangar W	Ground	Hangar	32,000		32,000	5000	7	32,000	1,441	23
	Mezzanine	Storage	10,560		10,560	5000	3			
Hangar W Office/Shops	Ground	Industrial Shops	16,800		16,800	5000	4	16,800	1,441	12
	Second	Industrial Shops	16,800		16,800	5000	4			
Subtotal				76,160						
Hangar X	Ground	Hangar	32,000		32,000	5000	7	32,000	1,441	23
	Mezzanine	Storage	10,560		10,560	5000	3			
Hangar X Office/Shops	Ground	Industrial Shops	7,500		7,500	5000	2	7,500	1,441	6
	Second	Industrial Shops	7,500		7,500	5000	2			
Subtotal				57,560						
Hangar V	Ground	Hangar	29,260		29,260	5000	6	29,260	1,441	21
	Mezzanine	Storage	9,656		9,656	5000	2			
Subtotal				38,916						
				=======			=======			=======
Total Gross Building Area				203,952		Total Spaces Req'd	95		Total Spaces Req'd	97
						# parking spaces provided on site plan	97			

Notes

1. Parking Analysis based on Marion County Rural Zoning Parking Requirements in 17.118.050 which requires one space per 300 sf primary use plus one space per 5,000 sf of storage, warehouse, or industrial.

2. Study of the adjacent South End Corporate Airport, Van's Aircraft, and Atlantic Aviation as a 34 acre whole and comparing the total square feet of building footprints with the total provided provided existing parking, results in an overall parking of 1 space per 1,441 square feet of building footprint (see Existing SECAP Excel Sheet dated 2024-2-9) . Note that this includes excess parking for Life Flight ambulances that are not in regular use as well as cars parked long term while occupant is away for several days traveling by aircraft.

EXISTING SECAP, VAN'S AND ATLANTIC PARKING SUMMARY (34 ACRE AREA)
2/9/2024

SECAP	# PARKING SPACES	BUILDING FOOTPRINT	SF/SPACE
YELLOWGATE LANE (ROAD)	0		
REDGATE (ROAD)	24		
BRAVO	6	6,117	
CHARLIE	0	10,224	
DELTA	0	18,017	
ECHO	2	13,376	
FOXTROT	0	21,438	
GOLF (FUTURE 46,046)	0	46,046	
HOTEL	63	29,826	
INDIA	10	27,381	
JULIET	44	34,408	
KILO	22	49,552	
LIMA N	0	42,912	
LIMA S	0	42,912	
MIKE	3	43,023	
NOVEMBER	4	21,720	
OSCAR	12	9,594	
PAPA	32	22,582	
ROMEO	55	27,417	
TOTAL	**277**	**466,545**	**1,684**

H.D	# PARKING SPACES	BUILDING FOOTPRINT	SF/SPACE
H.D. AVIATION #1 (VAN'S)	65	56,476	
H.D. #3 (FUTURE 37,060)	33	37,060	
TOTAL	**98**	**93,536**	**954**

LYNX JET CENTER	# PARKING SPACES	BUILDING FOOTPRINT	SF/SPACE
LYNX JET CENTER	17	4,712	
TOTAL	**17**	**4,712**	**277**

GRAND TOTAL	**392**	**564,793**	**1,441**