



SALEM PACTRUST DEVELOPMENT TRANSPORTATION IMPACT ANALYSIS

JANUARY 2022

PREPARED FOR:

PACTRUST



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INTRODUCTION

This study evaluates the transportation impacts associated with the proposed PacTrust industrial development located on the southern corner of the Aumsville Highway/ Truax Drive intersection in Salem, Oregon. The proposed development is located within the Mill Creek Corporate Center that was previously Master Planned by the State of Oregon and City of Salem.¹ The estimated year of completion for this project is 2023.

The purpose of this transportation impact analysis is to identify potential mitigation measures needed to offset impacts that the proposed development may have on the nearby transportation network. The impact analysis is focused on three study intersections and the three site driveways. The intersections are shown in Figure 1.

- Aumsville Highway/ Kuebler Boulevard/ Lancaster Drive/ Cordon Road
- Aumsville Highway/ Truax Drive
- Kuebler Boulevard/ Mill Creek Drive
- Truax Drive/ (3) Site Accesses

Table 1 lists important characteristics of the study area and proposed project.

TABLE 1: KEY STUDY AREA AND PROPOSED DEVELOPMENT CHARACTERISTICS

CHARACTERISTICS	INFORMATION
STUDY AREA	
NUMBER OF STUDY INTERSECTIONS	Six (including three site accesses)
ANALYSIS PERIOD	Weekday AM and PM Peak Hours (Peak hour is one hour between 7-9 AM and 4-6 PM)
PROJECT SITE	
EXISTING LAND USE	Vacant
PROPOSED DEVELOPMENT	472,125 square foot total of industrial buildings
PROPOSED PROJECT ACCESS(ES)	Three full driveways on Truax Drive

¹ Salem Region Employment Center, Proposed Master Plan and Development Strategy, State of Oregon and City of Salem, September 9, 2004.



FIGURE 1: STUDY AREA

EXISTING CONDITIONS

This chapter provides documentation of existing study area conditions, including the study area roadway network, pedestrian and bicycle facilities, and existing traffic volumes and operations.

STUDY AREA ROADWAY NETWORK

The project site is located in the southeast region of Salem, Oregon. Key roadways in the study area are summarized in Table 2 along with their existing roadway characteristics. The functional classifications of the roadways are found in the Salem Transportation System Plan.²

TABLE 2: STUDY AREA ROADWAY CHARACTERISTICS (WITHIN THE VICINITY OF THE PROJECT)

ROADWAY	FUNCTIONAL CLASSIFICATION	NO. OF LANES	POSTED SPEED	SIDEWALK	BIKE FACILITIES	ON-STREET PARKING
AUMSVILLE HIGHWAY	Minor Arterial	3	45 mph	Yes	Yes	None
KUEBLER BOULEVARD	Parkway	2	55 mph	None	Yes	None
LANCASTER DRIVE	Major Arterial	2	40 mph	Yes	Yes	None
CORDON ROAD	Parkway	2	55 mph	None	Yes	None
MILL CREEK DRIVE	Local	2	35 mph	Yes	Yes	None
TRUAX DRIVE	Local	2	None	Yes	Yes	None

PEDESTRIAN AND BICYCLE FACILITIES

Aumsville Highway has sidewalks between Kuebler Boulevard and the Oregon Department of Public Safety building, and Lancaster Drive has sidewalks between Kuebler Boulevard and Saddle Club Court. There are no pedestrian facilities on Kuebler Boulevard or Cordon Road near the project area. The internal local roads of Mill Creek Drive and Truax Drive have sidewalks with a landscape buffer. Bicycle lanes are present on all study roadways.

PUBLIC TRANSIT

Cherriots operates multiple fixed routes that serve Salem and Keizer. Route 11 (Lancaster/Verda) provides service between the Keizer Transit Center in Keizer and the Marion County Correctional Facility on Aumsville Highway. There are bus stops just northwest and southeast of the Aumsville Highway/ Truax Drive intersection. The route has headways of approximately 15 minutes between the hours of 6:00am and 9:00pm on weekdays and headways of approximately 30 minutes between the hours of 6:30am and 8:30pm on Saturdays.

² Salem Transportation System Plan, City of Salem, Amended January 2020.

SAFETY ANALYSIS

A safety analysis for the three public study intersections was conducted based on the most recent five years (2015 - 2019) of crash data available. There were 18 crashes at the Aumsville Highway/ Kuebler Boulevard/ Lancaster Drive/ Cordon Road intersection, two crashes at the Kuebler Boulevard/ Mill Creek Drive intersection, and no reported crashes at the Aumsville Highway/ Truax Drive intersection. No crashes involving pedestrians or bicyclists were reported at any of the intersections. There were also no reported crashes along Truax Drive near the proposed development's frontage due to the road being constructed in 2020.

TABLE 3: INTERSECTION CRASH DATA

INTERSECTION	FATAL	SERIOUS INJURY	MINOR INJURY	POSSIBLE INJURY	PROPERTY DAMAGE ONLY	TOTAL
AUMSVILLE HWY/ KUEBLER BLVD/ LANCASTER DR/ CORDON RD	1	1	3	7	6	18
KUEBLER BLVD/ MILL CREEK DR	0	0	1	1	0	2
AUMSVILLE HWY/ TRUAX DR	0	0	0	0	0	0

One fatal crash occurred at the Aumsville Highway/ Kuebler Boulevard/ Lancaster Drive/ Cordon Road intersection. It was a head-on crash involving a vehicle traveling northeast on Kuebler Boulevard that hit another vehicle head-on that was waiting to turn left off of Cordon Road onto Aumsville Highway. It was a dark and rainy evening. The primary contributing factor was a driver under the influence of drugs and alcohol.

One serious injury crash occurred at the Aumsville Highway/ Kuebler Boulevard/ Lancaster Drive/ Cordon Road intersection. It was an angle crash involving a vehicle traveling northeast on Kuebler Boulevard that disregarded the signal and hit a vehicle traveling southeast on Lancaster Drive. It was a dark and rainy evening. No contributing factors were reported that caused the driver to disregard the signal.

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, crash severity, and traffic volume for a 0.10 mile or variable length segment along the state highway over a rolling three-year window. A prioritized list of the top 15% of statewide SPIS sites is created for each region, and the top 5% are investigated by the five Region Traffic managers' offices.

The Aumsville Highway/ Kuebler Boulevard/ Lancaster Drive/ Cordon Road intersection was identified as a top 10% SPIS location per SPIS 2019. However, in 2019, safety improvements were constructed that included retroreflective backplates on the signal heads at the intersection. This safety improvement has likely reduced the occurrence of crashes at this intersection. There are no additional safety recommendations for this intersection.

EXISTING TRAFFIC VOLUMES

Weekday AM and PM peak hour turning movement counts (7:00-9:00 am and 4:00-6:00 pm) were collected at the three study intersections in December 2021. See the appendix for the volume data. Volumes for the site access driveways were determined based on volumes from the adjacent Aumsville Highway/ Truax Drive intersection. The 2021 existing traffic volumes are shown in Figure 2.

In July 2021, ODOT released their final COVID Monitoring Traffic Report, which indicated that statewide traffic levels were approximately back to “pre-COVID” levels (plus or minus 5%). Other local agencies in the area have anecdotally noted similar observations on the local street system as schools have returned to in-person learning this fall. Therefore, no COVID adjustment was applied to the traffic counts. Additionally, with the adjacent Amazon Distribution Center, the December counts are likely higher than other months due to the increase in holiday truck deliveries.

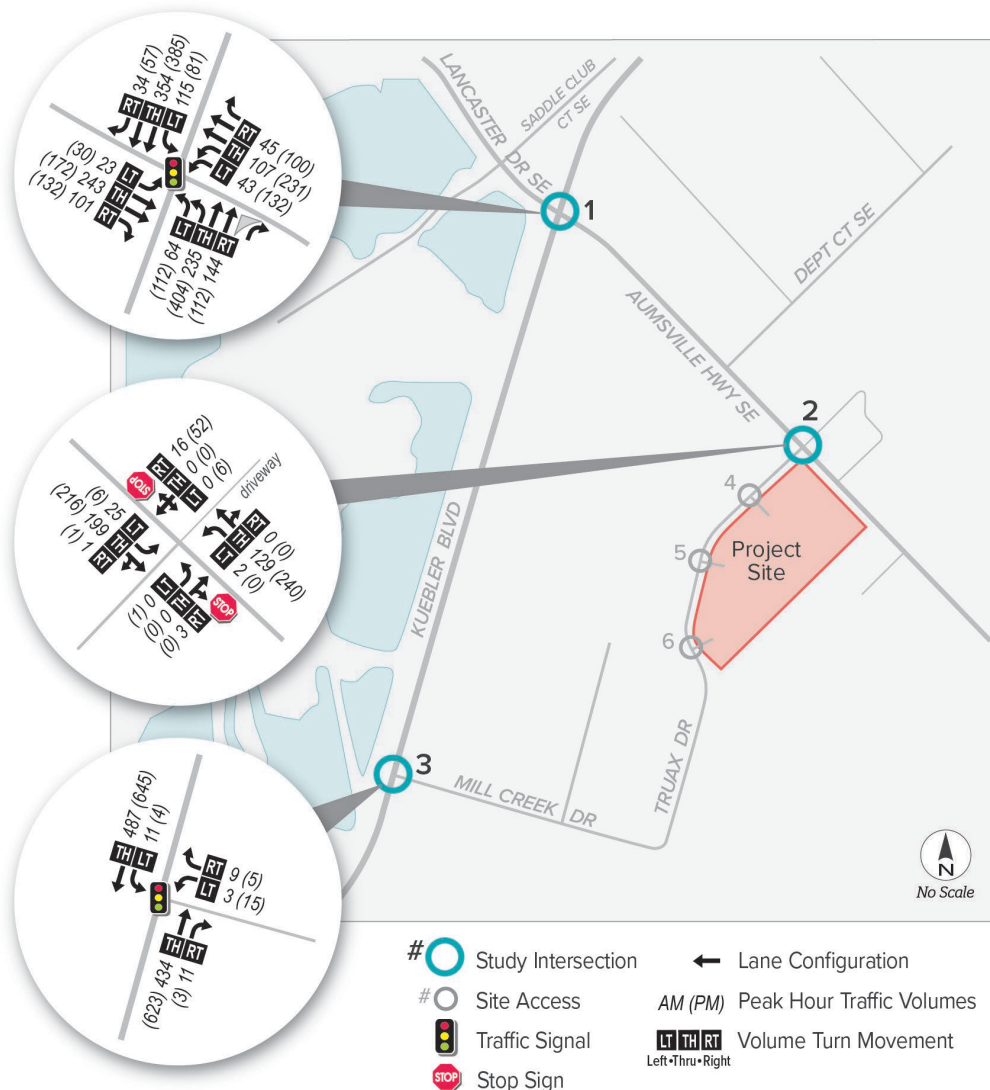


FIGURE 2: EXISTING AM AND PM PEAK HOUR VOLUMES (2021)

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 picture of intersection operations.

- **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 E are progressively worse operating conditions. LOS F represents conditions where average vehicle delay has become excessive and demand has exceeded capacity.
- **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 1.00, 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.

REQUIRED OPERATING STANDARDS

The study intersections are located within the City of Salem’s jurisdiction. Per the City of Salem Administrative Rules, the maximum operation standards during the morning and evening peak hours for intersections is LOS E and a v/c ratio of 0.90 for signalized intersections and LOS E for unsignalized intersections.³

EXISTING OPERATING CONDITIONS

Existing traffic operations at the study intersections were determined for the AM and PM peak hours based on the Highway Capacity Manual (HCM) 6th Edition methodology for signalized and unsignalized intersections.⁴ The results were then compared with the City of Salem’s minimum operating standards. Table 4 lists the estimated v/c ratio, delay, and LOS of each study intersection. The HCM reports are provided in the appendix.

³ Division 6, Public Works Design Standards, City of Salem Administrative Rules, January 2016.

⁴ Highway Capacity Manual, 6th Edition, Transportation Research Board, 2016.

TABLE 4: EXISTING INTERSECTION OPERATIONS (2021)

INTERSECTION	OPERATING STANDARD	AM PEAK HOUR			PM PEAK HOUR		
		V/C RATIO	DELAY (SECS)	LOS	V/C RATIO	DELAY (SECS)	LOS
SIGNALIZED							
AUMSVILLE HWY/ KUEBLER BLVD/ LANCASTER DR/ CORDON RD	LOS E v/c ≤ 0.90	0.30	14.8	B	0.34	15.4	B
KUEBLER BLVD/ MILL CREEK DR	LOS E v/c ≤ 0.90	0.36	3.9	A	0.43	4.5	A
UNSIGNALIZED							
AUMSVILLE HWY/ TRUAX DR	LOS E	0.01	9.4	A/A	0.01	14.7	A/B
TRUAX DR/ SITE ACCESS #1	LOS E	-	-	-	-	-	-
TRUAX DR/ SITE ACCESS #2	LOS E	-	-	-	-	-	-
TRUAX DR/ SITE ACCESS #3	LOS E	-	-	-	-	-	-
SIGNALIZED INTERSECTION: Delay = Average Intersection Delay (secs) v/c = Total Volume-to-Capacity Ratio LOS = Total Level of Service				TWO-WAY STOP CONTROLLED INTERSECTION: Delay = Critical Movement Approach Delay (secs) v/c = Associated Movement Volume-to-Capacity Ratio LOS = Level of Service (Major/Minor Road)			

As shown, the existing intersection operations for all study intersections meet the City's operating standards.

PROJECT IMPACTS

This section reviews the impacts that the proposed development may have on the transportation system within the study area. This analysis includes the trip generation, trip distribution, and future year traffic volumes and operating conditions for the study intersections under both Background and Build scenarios.

PROPOSED DEVELOPMENT

The proposed development consists of four industrial buildings used for primarily light industrial purposes with some warehousing. The buildings are an estimated 427,125 square feet total and are expected to be completed in 2023. There are three proposed site access driveways along Truax Drive.

ANALYSIS SCENARIOS

Future operating conditions were analyzed at the study intersections for the following future traffic scenarios. The comparison of the following scenarios enables the assessment of project impacts:

- 2023 Background – This scenario represents the expected future traffic conditions of the study area without the project trips from the proposed development but including any in-process trips from nearby approved developments that are not yet occupied.
- 2023 Build – This scenario represents the expected traffic conditions of the study area with the project trips for the proposed development, assuming it is built and fully occupied by 2023.

TRIP GENERATION

Trip generation is the method used to estimate the number of vehicles added to site roadways and the adjacent roadway network by a development during a specified period (i.e., such as the PM peak hour). ITE 11th Edition trip generation data was used to determine the trip generation of the new development.⁵

The ITE land use General Light Industrial (110) was used for all buildings. Table 5 provides the trip generation for the proposed development. As shown, the development is expected to generate approximately 306 total (268 in, 38 out) AM peak hour trips, 165 total (22 in, 143 out) PM peak hour trips, and 1,807 daily trips.

⁵ Trip Generation Manual, 11th Edition, Institute of Transportation Engineers, 2021.

TABLE 5: TRIP GENERATION

BUILDING NUMBER	LAND USE (ITE CODE)	SIZE ^A	AM PEAK TRIPS			PM PEAK TRIPS			DAILY TRIPS
			TOTAL	IN	OUT	TOTAL	IN	OUT	
BLDG. 221	GENERAL LIGHT INDUSTRIAL (110)	200 KSF	140	123	17	66	9	57	802
BLDG. 222	GENERAL LIGHT INDUSTRIAL (110)	72 KSF	53	46	7	32	4	28	321
BLDG. 223	GENERAL LIGHT INDUSTRIAL (110)	72 KSF	53	46	7	32	4	28	321
BLDG. 224	GENERAL LIGHT INDUSTRIAL (110)	83.125 KSF	60	53	7	35	5	30	363
TOTAL		427.125 KSF	306	268	38	165	22	143	1,807

^A KSF= 1,000 square feet.

TRIP DISTRIBUTION

Trip distribution provides an estimate of where project-related trips would be coming from and going to. It is given as percentages at key gateways to the study area and is used to route project trips through the study intersections.

Figure 3 on the following page shows the expected trip distribution and project trip routing for the additional traffic generated by the proposed development. The distribution shows 35% of trips traveling to/from Lancaster Drive in the northwest, 25% of trips traveling to/from Cordon Road in the northeast, 35% of trips traveling to/from Kuebler Boulevard in the southwest, and 5% of trips traveling to/from Aumsville Highway in the southeast. All trips along Kuebler Boulevard use the Mill Creek intersection to access Truax Drive. This trip distribution was estimated using the SKATS travel demand model and the existing traffic patterns in the area.⁶

⁶ 2043 SKATS Travel Demand Model, Select Zone Analysis, Zone 409.

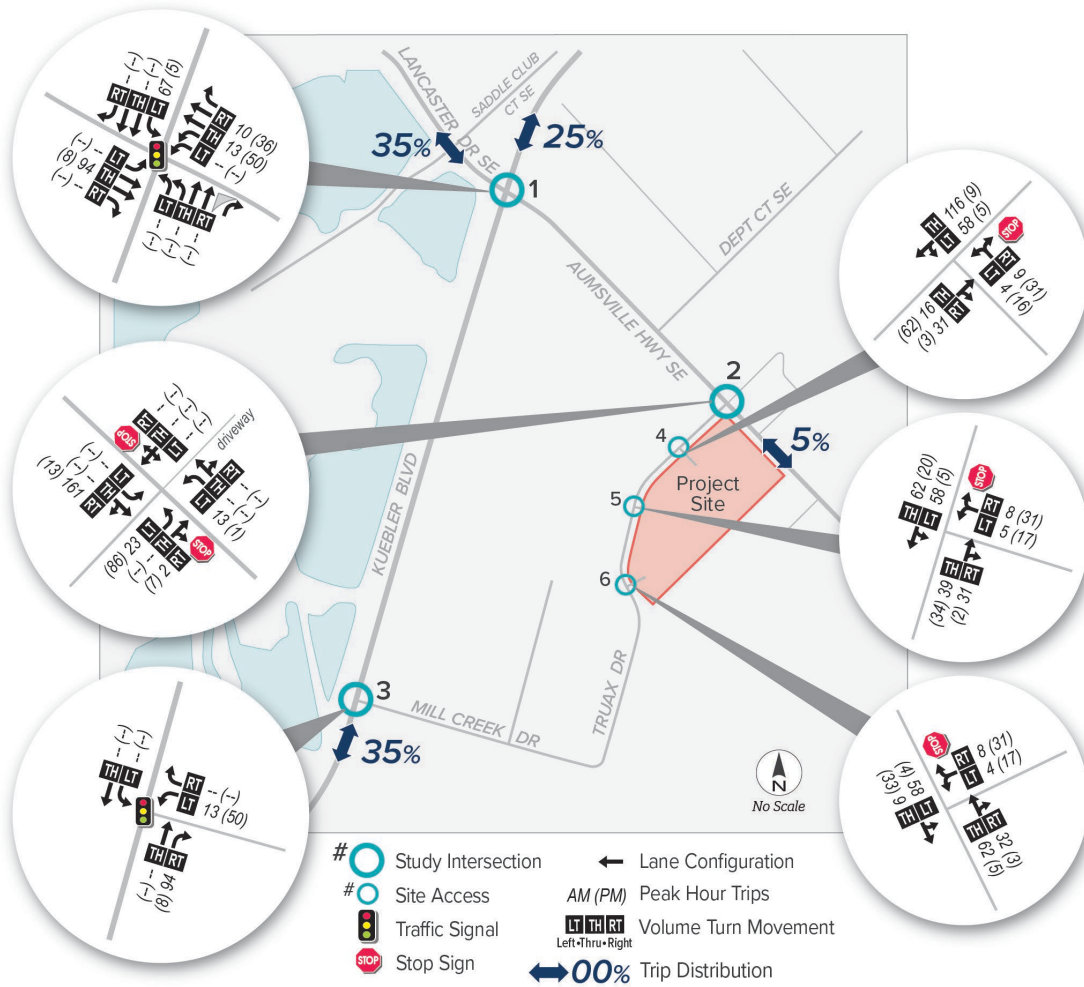


FIGURE 3: TRIP DISTRIBUTION AND PROJECT TRIPS

The AM and PM peak hour traffic volumes for the two future analysis scenarios are shown in Figure 4 and Figure 5. The Future 2023 Background scenario volumes were created by growing the Existing 2021 volumes with a conservative 2% linear growth rate over the two years to assumed buildout and then adding the in-process development trips from the Saddle Club Street commercial development.⁷ These in-process trips are shown in the appendix. The Future 2024 Build scenario volumes were created by adding the project generation trips to the Future 2024 Background scenario volumes.



⁷ Salem Saddle Club Street Development, DKS Associates, January 2021.

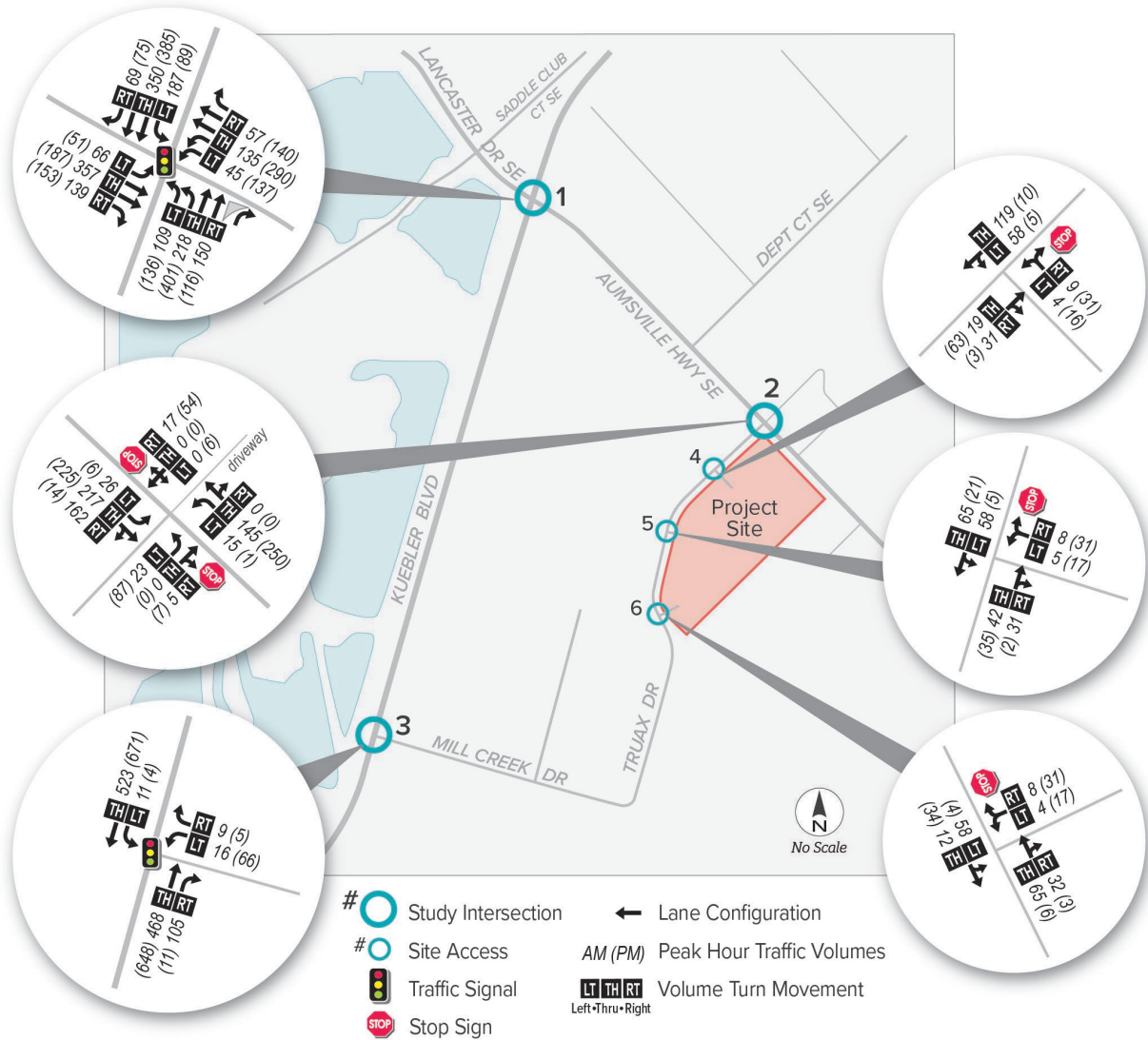


FIGURE 5: FUTURE BUILD AM AND PM PEAK HOUR VOLUMES (2023)

FUTURE INTERSECTION OPERATIONS

Future traffic operations at the study intersections were determined for the AM and PM peak hours based on the Highway Capacity Manual (HCM) 6th Edition methodology for signalized and unsignalized intersections.⁸ The results were then compared with the City of Salem's minimum operating standards. Table 6 and Table 7 list the estimated v/c ratio, delay, and LOS of each study intersection. The HCM reports are provided in the appendix.

TABLE 6: FUTURE INTERSECTION OPERATIONS (2023) – AM PEAK

INTERSECTION	OPERATING STANDARD	BACKGROUND			BUILD		
		V/C RATIO	DELAY (SECS)	LOS	V/C RATIO	DELAY (SECS)	LOS
SIGNALIZED							
AUMSVILLE HWY/ KUEBLER BLVD/ LANCASTER DR/ CORDON RD	LOS E v/c ≤ 0.90	0.30	15.7	B	0.39	16.8	B
KUEBLER BLVD/ MILL CREEK DR	LOS E v/c ≤ 0.90	0.39	4.1	A	0.40	4.9	A
UNSIGNALIZED							
AUMSVILLE HWY/ TRUAX DR	LOS E	0.01	9.5	A/A	0.06	14.6	A/B
TRUAX DR/ SITE ACCESS #1	LOS E	-	-	-	0.02	9.2	A/A
TRUAX DR/ SITE ACCESS #2	LOS E	-	-	-	0.02	9.3	A/A
TRUAX DR/ SITE ACCESS #3	LOS E	-	-	-	0.02	9.2	A/A

SIGNALIZED INTERSECTION:

Delay = Average Intersection Delay (secs)
v/c = Total Volume-to-Capacity Ratio
LOS = Total Level of Service

TWO-WAY STOP CONTROLLED INTERSECTION:

Delay = Critical Movement Approach Delay (secs)
v/c = Associated Movement Volume-to-Capacity Ratio
LOS = Level of Service (Major/Minor Road)

⁸ Highway Capacity Manual, 6th Edition, Transportation Research Board, 2016.

TABLE 7: FUTURE INTERSECTION OPERATIONS (2023) – PM PEAK

INTERSECTION	OPERATING STANDARD	BACKGROUND			BUILD		
		V/C RATIO	DELAY (SECS)	LOS	V/C RATIO	DELAY (SECS)	LOS
SIGNALIZED							
AUMSVILLE HWY/ KUEBLER BLVD/ LANCASTER DR/ CORDON RD	LOS E v/c ≤ 0.90	0.35	15.8	B	0.38	15.9	B
KUEBLER BLVD/ MILL CREEK DR	LOS E v/c ≤ 0.90	0.45	4.8	A	0.48	7.3	A
UNSIGNALIZED							
AUMSVILLE HWY/ TRUAX DR	LOS E	0.01	15.2	A/C	0.31	19.8	A/C
TRUAX DR/ SITE ACCESS #1	LOS E	-	-	-	0.06	9.0	A/A
TRUAX DR/ SITE ACCESS #2	LOS E	-	-	-	0.05	8.9	A/A
TRUAX DR/ SITE ACCESS #3	LOS E	-	-	-	0.05	8.7	A/A
SIGNALIZED INTERSECTION: Delay = Average Intersection Delay (secs) v/c = Total Volume-to-Capacity Ratio LOS = Total Level of Service			TWO-WAY STOP CONTROLLED INTERSECTION: Delay = Critical Movement Approach Delay (secs) v/c = Associated Movement Volume-to-Capacity Ratio LOS = Level of Service (Major/Minor Road)				

As shown, all study intersections meet the City's operating standards for all future scenarios.

SITE PLAN EVALUATION

This section reviews the on-site circulation, access spacing, sight distance recommendations, and parking for the proposed development based on the provided site plan and the City of Salem's Revised Code.⁹ The proposed development will have four industrial buildings with three access points along Truax Drive. The site plan can be found in the appendix.

ACCESS POINTS & INTERNAL CIRCULATION

The site plan proposed three site driveways on Truax Drive. The northern and southern driveway have existing curb cuts today.

The site plan appears to show sufficient width of the drive aisles for the two-way traffic and sufficient intersection radii for passenger cars and trucks to make safe turning maneuvers. Crosswalks across all three site driveways are shown that connect the sidewalks on Truax Drive to the building entrances. And a pedestrian access is shown on Aumsville Highway approximately 400 feet south of the Truax Drive intersection.

ACCESS SPACING

All proposed access points are required to meet the City's required spacing between intersections and driveways. According to the City's code¹⁰, driveway approaches providing direct access to a local street shall be no less than 200 feet from the nearest minor or major arterial intersection, measured from centerline to centerline. Based on measurements on Truax Drive, all three proposed driveways meet the City's access spacing standard.

INTERSECTION SIGHT DISTANCE AT PROPOSED ACCESS POINTS

There are three proposed full-access driveways to the project site on Truax Drive. Based on the American Association of State Highway and Transportation Officials (AASHTO) *Policy on Geometric Design of Highways and Streets*, the necessary intersection sight distance (ISD) for left-turning passenger cars to make a safe turn is 335 feet and 420 feet is needed for trucks (based on a design speed of 30 mph).¹¹ Preliminary sight distance was evaluated along the property frontage on Truax Drive during a field visit.¹² See the appendix for figures showing the intersection sight distance triangles at the three driveways.

The northern, middle, and southern driveways all meet the passenger car (335 feet) and truck (420 feet) ISD looking left and right from the driveways. However, the sight distance triangle for

⁹ <https://www.cityofsalem.net/salem-revised-code>

¹⁰ Title X, Chapter 804.030(c), Salem Revised Code.

¹¹ Chapter 9.3, A Policy on Geometric Design of Highways and Streets, 7th Edition, AASHTO, 2018.

¹² Field visit conducted by DKS and Westech on December 17, 2021.

the middle and southern driveways will require coordination with the signage and landscaping to assure the necessary sight distance can be achieved.

As shown on the intersection sight distance figure in the appendix, the sight distance triangle looking to the left from the southern driveway includes a portion of the property on the west side of Truax Drive (opposite of the proposed development). However, this property is designated wetlands and therefore, no sight distance obstructions are expected to be placed on that property.

Because the sight distance measurements reported in this study are preliminary at all of the driveways, prior to occupancy, sight distance at all of the proposed access points will need to be verified, documented, and stamped by a registered professional Civil or Traffic Engineer licensed in the State of Oregon to assure that buildings, signs, electrical cabinets, light poles, or landscaping does not restrict sight distance.

PROJECT SUMMARY

A summary of the proposed industrial development in Salem, Oregon and its anticipated impacts are as follows:

TRIP GENERATION

- The development is estimated to generate 306 total (268 in, 38 out) AM peak hour trips, 165 total (22 in, 143 out) PM peak hour trips, and 1,807 daily trips.

INTERSECTION OPERATIONS

- All study intersections meet operating standards under Existing 2021, Future 2023 Background, and Future 2023 Build conditions. No capacity or other roadway improvements or mitigations are recommended.

SITE EVALUATION

- The site plan appears to show sufficient width of the drive aisles and internal intersections for safe vehicle maneuvers.
- Based on the proposed site plan, all three proposed driveways meet the City's access spacing standard.
- The northern, middle, and southern driveways all meet the passenger car and truck ISD looking left and right from the driveways. However, the sight distance triangle for the middle and southern driveways will require coordination with the signage and landscaping to assure the necessary sight distance can be achieved.
- At all of the proposed driveways, prior to occupancy, sight distance will need to be verified, documented, and stamped by a registered professional Civil or Traffic Engineer licensed in the State of Oregon to assure that buildings, signs, or landscaping does not restrict sight distance

APPENDIX

APPENDIX A: TRAFFIC DATA

ALL TRAFFIC DATA SERVICES

(303) 216-2439

www.alltrafficdata.net

Location: 1 Kuebler Blvd & Aumsville Hwy SE AM

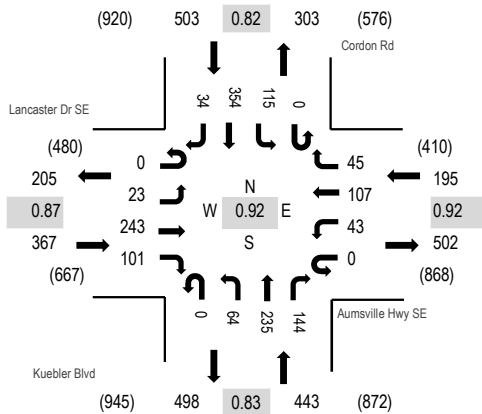
Date: Tuesday, December 14, 2021

Peak Hour: 07:05 AM - 08:05 AM

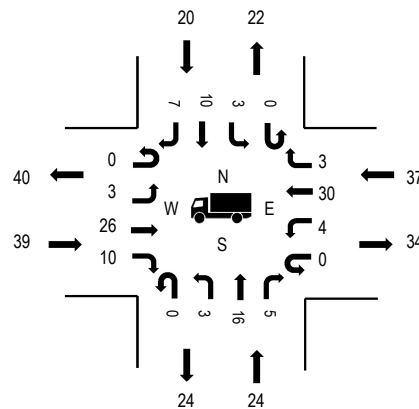
Peak 15-Minutes: 07:20 AM - 07:35 AM

Peak Hour

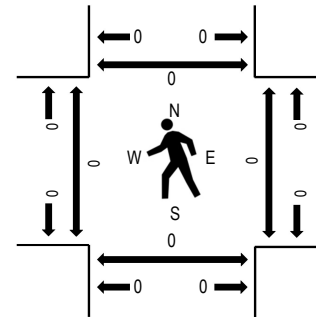
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	10.6%	0.87
WB	19.0%	0.92
NB	5.4%	0.83
SB	4.0%	0.82
All	8.0%	0.92

Traffic Counts - Motorized Vehicles

Interval Start Time	Lancaster Dr SE				Aumsville Hwy SE				Kuebler Blvd				Cordon Rd				Total	Rolling Hour
	Eastbound				Westbound				Northbound				Southbound					
	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	18	7	0	3	5	8	0	8	14	14	0	10	27	2	117	1,494
7:05 AM	0	1	20	5	0	3	5	7	0	2	21	15	0	13	23	2	117	1,508
7:10 AM	0	6	29	5	0	0	5	4	0	9	14	10	0	3	31	0	116	1,490
7:15 AM	0	0	20	8	0	3	9	4	0	4	18	8	0	18	35	4	131	1,470
7:20 AM	0	4	23	2	0	3	9	4	0	4	29	12	0	13	39	4	146	1,451
7:25 AM	0	1	21	12	0	3	10	2	0	2	11	18	0	11	29	1	121	1,412
7:30 AM	0	1	31	7	0	4	11	8	0	5	13	18	0	11	26	6	141	1,413
7:35 AM	0	1	15	16	0	3	15	5	0	3	14	9	0	4	25	1	111	1,385
7:40 AM	0	3	14	9	0	5	7	2	0	6	26	13	0	11	42	2	140	1,384
7:45 AM	0	5	21	12	0	6	9	1	0	3	11	12	0	7	31	2	120	1,377
7:50 AM	0	0	19	9	0	3	8	3	0	7	28	14	0	8	29	1	129	1,375
7:55 AM	0	1	11	7	0	3	9	1	0	7	27	8	0	4	22	5	105	1,369
8:00 AM	0	0	19	9	0	7	10	4	0	12	23	7	0	12	22	6	131	1,375
8:05 AM	0	3	13	6	0	2	14	3	0	7	18	5	0	1	26	1	99	
8:10 AM	0	1	16	5	0	4	12	3	0	6	21	3	0	5	18	2	96	
8:15 AM	0	0	17	6	0	4	14	1	0	7	17	9	0	5	23	9	112	
8:20 AM	0	2	12	9	0	5	14	3	0	7	12	9	0	1	27	6	107	
8:25 AM	0	0	18	9	0	2	13	2	0	11	19	16	0	7	21	4	122	
8:30 AM	0	1	13	9	0	5	15	1	0	8	20	8	0	9	19	5	113	
8:35 AM	0	2	20	8	0	2	10	3	0	5	15	9	0	4	25	7	110	
8:40 AM	0	0	15	11	0	5	5	0	0	14	19	17	0	9	34	4	133	
8:45 AM	0	1	23	7	0	8	8	8	0	6	17	3	0	6	28	3	118	
8:50 AM	0	2	12	8	0	5	8	7	0	12	20	11	0	5	31	2	123	
8:55 AM	0	1	11	13	0	2	7	4	0	11	24	7	0	5	23	3	111	
Count Total	0	37	431	199	0	90	232	88	0	166	451	255	0	182	656	82	2,869	
Peak Hour	0	23	243	101	0	43	107	45	0	64	235	144	0	115	354	34	1,508	

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	4	0	1	1	6	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	3	3	2	3	11	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	4	1	0	0	5	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	2	1	2	4	9	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	4	2	0	2	8	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	0	3	6	1	10	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	0	0	5	3	8	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	6	1	3	1	11	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	0	0	4	1	5	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	8	2	4	1	15	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	4	8	2	1	15	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	3	0	4	3	10	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0
8:00 AM	5	3	5	0	13	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	1	2	6	2	11	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0
8:10 AM	2	2	4	3	11	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0
8:15 AM	0	3	8	7	18	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	0	1	6	1	8	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	4	2	4	4	14	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	3	2	5	3	13	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	2	5	4	6	17	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	7	5	5	4	21	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	2	5	5	3	15	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
8:50 AM	1	4	4	0	9	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	4	4	4	2	14	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	69	59	93	56	277	Count Total	0	0	0	0	0	Count Total	0	0	0	0	0
Peak Hour	39	24	37	20	120	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0



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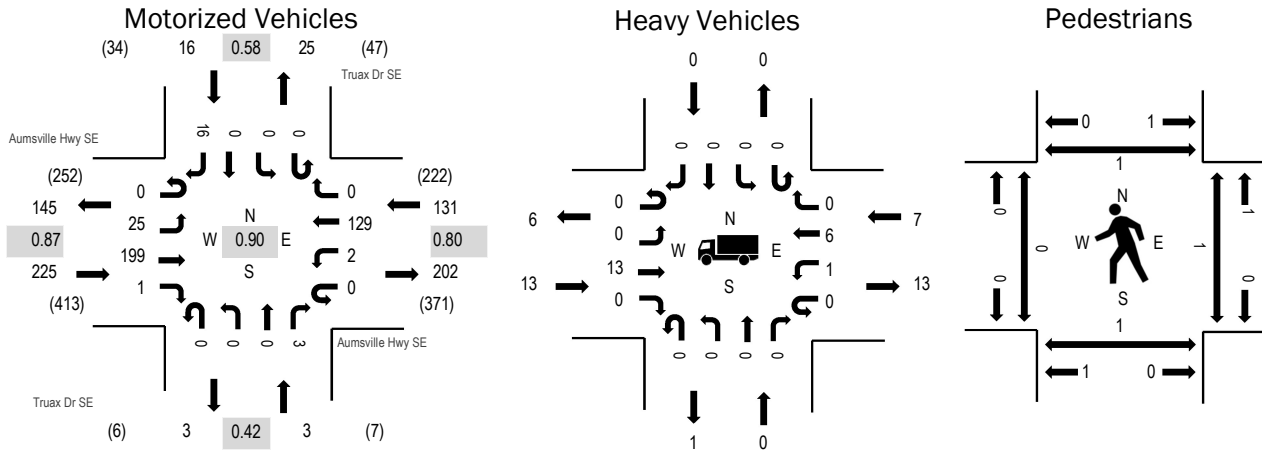
Location: 2 Truax Dr SE & Aumsville Hwy SE AM

Date: Tuesday, December 14, 2021

Peak Hour: 07:30 AM - 08:30 AM

Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	5.8%	0.87
WB	5.3%	0.80
NB	0.0%	0.42
SB	0.0%	0.58
All	5.3%	0.90

Traffic Counts - Motorized Vehicles

Interval Start Time	Aumsville Hwy SE Eastbound				Aumsville Hwy SE Westbound				Truax Dr SE Northbound				Truax Dr SE 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	0	12	1	0	0	6	0	0	0	1	0	0	0	0	0	20	323
7:05 AM	0	1	15	0	0	0	4	0	0	0	0	1	0	0	0	0	21	333
7:10 AM	0	0	12	0	0	0	5	0	0	0	0	0	0	0	0	1	18	344
7:15 AM	0	1	16	0	0	0	9	1	0	0	0	0	0	0	1	0	28	356
7:20 AM	0	0	10	0	0	0	9	0	0	1	0	1	0	0	0	2	23	355
7:25 AM	0	0	15	0	0	0	5	0	0	0	0	0	0	0	0	0	20	356
7:30 AM	0	1	21	0	0	2	14	0	0	0	0	0	0	0	0	0	38	375
7:35 AM	0	3	11	1	0	0	13	0	0	0	0	0	0	0	0	1	29	367
7:40 AM	0	1	24	0	0	0	12	0	0	0	0	0	0	0	0	0	37	356
7:45 AM	0	2	19	0	0	0	8	0	0	0	0	0	0	0	0	1	30	353
7:50 AM	0	3	16	0	0	0	5	0	0	0	0	0	0	0	0	0	24	354
7:55 AM	0	2	19	0	0	0	14	0	0	0	0	0	0	0	0	0	35	360
8:00 AM	0	2	16	0	0	0	10	0	0	0	0	1	0	0	0	1	30	353
8:05 AM	0	1	16	0	0	0	11	0	0	0	0	2	0	0	0	2	32	
8:10 AM	0	1	12	0	0	0	14	0	0	0	0	0	0	0	0	3	30	
8:15 AM	0	2	17	0	0	0	6	0	0	0	0	0	0	0	0	2	27	
8:20 AM	0	3	12	0	0	0	8	0	0	0	0	0	0	0	0	1	24	
8:25 AM	0	4	16	0	0	0	14	0	0	0	0	0	0	0	0	5	39	
8:30 AM	0	5	15	0	0	0	5	0	0	0	0	0	0	0	0	5	30	
8:35 AM	0	2	8	0	0	0	6	0	0	0	0	0	0	1	0	1	18	
8:40 AM	0	5	15	1	0	0	12	0	0	0	0	0	0	0	0	1	34	
8:45 AM	0	1	19	0	0	0	9	0	0	0	0	0	0	0	0	2	31	
8:50 AM	0	3	14	0	0	0	9	0	0	0	0	0	0	0	0	4	30	
8:55 AM	0	2	15	0	0	0	11	0	0	0	0	0	0	0	0	0	28	
Count Total	0	45	365	3	0	2	219	1	0	1	1	5	0	1	1	32	676	
Peak Hour	0	25	199	1	0	2	129	0	0	0	0	3	0	0	0	16	375	

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	0	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	1	0	0	0	1	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	1	0	0	0	1	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	0	1	2	0	3	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	0	0	2	0	2	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	1	0	1	0	2	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	3	0	1	0	4	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	3	0	1	0	4	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	1	0	0	0	1	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	1	0	2	0	3	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0	8:00 AM	0	1	0	0	1
8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0
8:10 AM	1	0	1	0	2	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0	8:15 AM	0	0	1	1	2
8:20 AM	1	0	0	0	1	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	2	0	1	0	3	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	1	0	1	0	2	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	1	0	1	0	2	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	2	0	1	0	3	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	1	0	2	1	4	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
8:50 AM	2	0	0	0	2	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	2	0	2	0	4	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	24	1	18	1	44	Count Total	0	0	0	0	0	Count Total	0	1	1	1	3
Peak Hour	13	0	7	0	20	Peak Hour	0	0	0	0	0	Peak Hour	0	1	1	1	3

Location: 3 Kuebler Blvd & Mill Creek Dr SE AM

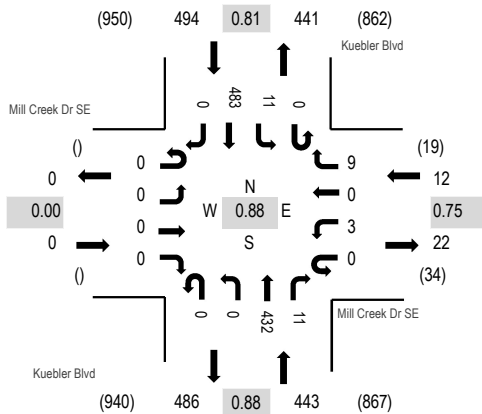
Date: Tuesday, December 14, 2021

Peak Hour: 07:15 AM - 08:15 AM

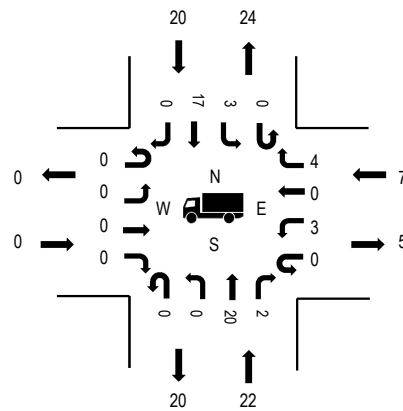
Peak 15-Minutes: 07:40 AM - 07:55 AM

Peak Hour

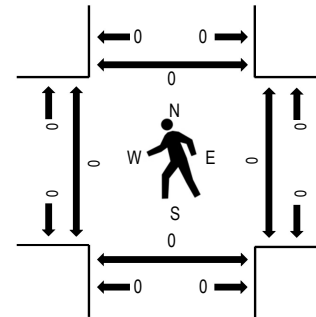
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.00
WB	58.3%	0.75
NB	5.0%	0.88
SB	4.0%	0.81
All	5.2%	0.88

Traffic Counts - Motorized Vehicles

Interval Start Time	Mill Creek Dr SE Eastbound				Mill Creek Dr SE Westbound				Kuebler Blvd Northbound				Kuebler Blvd 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	0	0	0	0	1	0	0	0	0	33	1	0	1	32	0	68	939
7:05 AM	0	0	0	0	0	0	0	0	0	0	34	1	0	0	36	0	71	941
7:10 AM	0	0	0	0	0	0	0	0	0	0	30	0	0	0	30	0	60	931
7:15 AM	0	0	0	0	0	1	0	0	0	0	31	1	0	0	42	0	75	949
7:20 AM	0	0	0	0	0	0	0	3	0	0	39	1	0	3	49	0	95	935
7:25 AM	0	0	0	0	0	0	0	0	0	0	32	1	0	0	40	0	73	913
7:30 AM	0	0	0	0	0	1	0	0	0	0	32	0	0	0	40	0	73	916
7:35 AM	0	0	0	0	0	0	0	1	0	0	42	0	0	0	26	0	69	908
7:40 AM	0	0	0	0	0	0	0	0	0	0	32	0	0	3	66	0	101	916
7:45 AM	0	0	0	0	0	0	0	1	0	0	38	1	0	2	37	0	79	904
7:50 AM	0	0	0	0	0	0	0	1	0	0	43	0	0	1	44	0	89	901
7:55 AM	0	0	0	0	0	0	0	0	0	0	42	1	0	1	42	0	86	903
8:00 AM	0	0	0	0	0	1	0	1	0	0	38	2	0	0	28	0	70	897
8:05 AM	0	0	0	0	0	0	0	1	0	0	24	2	0	1	33	0	61	
8:10 AM	0	0	0	0	0	0	0	1	0	0	39	2	0	0	36	0	78	
8:15 AM	0	0	0	0	0	0	0	0	0	0	20	1	0	0	40	0	61	
8:20 AM	0	0	0	0	0	0	0	0	0	0	38	1	0	1	33	0	73	
8:25 AM	0	0	0	0	0	0	0	1	0	0	39	0	0	1	35	0	76	
8:30 AM	0	0	0	0	0	0	0	0	0	0	34	1	0	0	30	0	65	
8:35 AM	0	0	0	0	0	1	0	1	0	0	33	1	0	0	41	0	77	
8:40 AM	0	0	0	0	0	1	0	0	0	0	42	0	0	1	45	0	89	
8:45 AM	0	0	0	0	0	1	0	0	0	0	31	0	0	0	44	0	76	
8:50 AM	0	0	0	0	0	0	0	0	0	0	43	0	0	1	47	0	91	
8:55 AM	0	0	0	0	0	0	0	1	0	0	41	0	0	1	37	0	80	
Count Total	0	0	0	0	0	7	0	12	0	0	850	17	0	17	933	0	1,836	
Peak Hour	0	0	0	0	0	3	0	9	0	0	432	11	0	11	483	0	949	

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	2	0	3	5	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	0	5	0	1	6	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	0	0	0	2	2	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	0	0	1	0	1	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	0	1	1	1	3	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	0	4	0	1	5	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	0	0	1	2	3	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	0	0	1	0	1	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	0	1	0	5	6	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	0	6	1	4	11	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	0	3	0	2	5	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	0	2	0	1	3	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0
8:00 AM	0	2	1	1	4	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	0	2	0	1	3	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0
8:10 AM	0	1	1	2	4	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0
8:15 AM	0	3	0	2	5	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	0	3	0	0	3	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	0	1	1	5	7	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	0	4	0	3	7	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	0	5	0	6	11	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	0	4	0	6	10	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	0	5	0	2	7	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
8:50 AM	0	4	0	2	6	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	0	4	0	4	8	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	0	62	8	56	126	Count Total	0	0	0	0	0	Count Total	0	0	0	0	0
Peak Hour	0	22	7	20	49	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0



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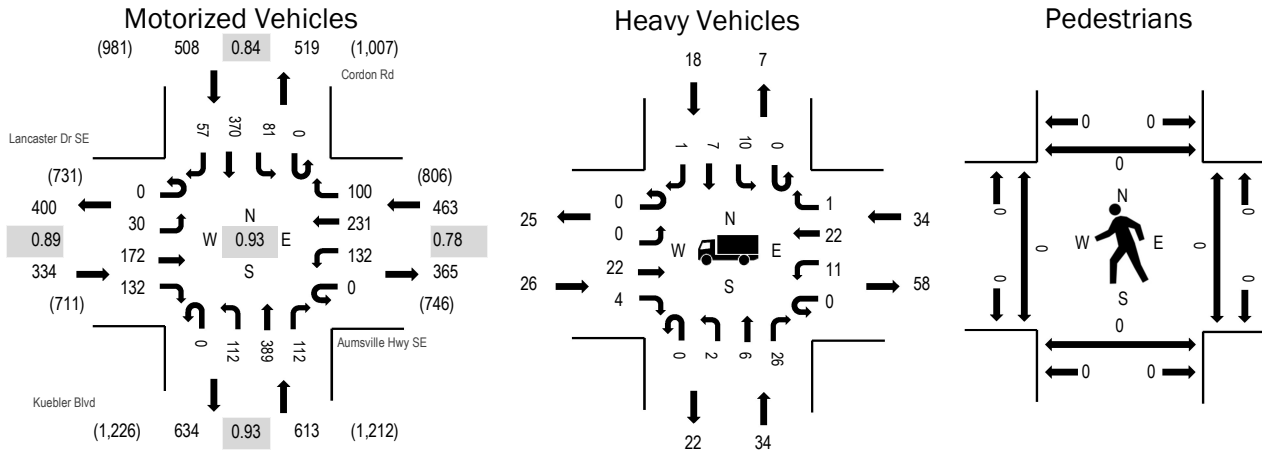
Location: 1 Kuebler Blvd & Aumsville Hwy SE PM

Date: Thursday, December 9, 2021

Peak Hour: 04:55 PM - 05:55 PM

Peak 15-Minutes: 05:05 PM - 05:20 PM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	7.8%	0.89
WB	7.3%	0.78
NB	5.5%	0.93
SB	3.5%	0.84
All	5.8%	0.93

Traffic Counts - Motorized Vehicles

Interval Start Time	Lancaster Dr SE Eastbound				Aumsville Hwy SE Westbound				Kuebler Blvd Northbound				Cordon Rd 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	23	12	0	10	7	6	0	11	32	7	0	10	39	5	165	1,826
4:05 PM	0	3	10	14	0	9	16	6	0	10	35	12	0	2	31	1	149	1,807
4:10 PM	0	4	20	9	0	13	23	7	0	11	38	11	0	3	25	4	168	1,841
4:15 PM	0	1	10	16	0	8	11	9	0	9	29	5	0	4	22	7	131	1,836
4:20 PM	0	4	21	14	0	6	15	8	0	4	26	14	0	5	39	1	157	1,873
4:25 PM	0	2	18	11	0	6	12	3	0	7	41	9	0	8	36	1	154	1,865
4:30 PM	0	6	13	15	0	3	17	4	0	9	26	7	0	7	22	7	136	1,863
4:35 PM	0	3	17	5	0	11	17	2	0	12	43	9	0	9	30	3	161	1,870
4:40 PM	0	3	17	14	0	7	14	5	0	7	38	7	0	4	30	4	150	1,886
4:45 PM	0	2	17	12	0	5	17	8	0	4	24	9	0	8	29	3	138	1,906
4:50 PM	0	0	16	13	0	10	17	6	0	10	34	13	0	5	28	8	160	1,914
4:55 PM	0	4	7	13	0	9	14	5	0	10	41	10	0	7	33	4	157	1,918
5:00 PM	0	2	7	10	0	20	27	11	0	8	17	11	0	4	26	3	146	1,884
5:05 PM	0	3	9	13	0	18	30	14	0	15	36	3	0	8	24	10	183	
5:10 PM	0	2	11	11	0	9	13	6	0	3	40	8	0	10	46	4	163	
5:15 PM	0	3	6	13	0	11	17	6	0	9	40	11	0	9	36	7	168	
5:20 PM	0	4	14	12	0	10	20	4	0	8	28	10	0	7	25	7	149	
5:25 PM	0	0	28	8	0	4	14	3	0	10	38	5	0	7	31	4	152	
5:30 PM	0	2	17	15	0	12	25	1	0	10	19	7	0	4	28	3	143	
5:35 PM	0	3	14	13	0	4	20	12	0	9	42	14	0	5	38	3	177	
5:40 PM	0	2	23	13	0	16	26	10	0	11	29	6	0	6	24	4	170	
5:45 PM	0	4	13	6	0	8	12	12	0	11	31	13	0	5	29	2	146	
5:50 PM	0	1	23	5	0	11	13	16	0	8	28	14	0	9	30	6	164	
5:55 PM	0	2	16	11	0	6	15	4	0	8	21	7	0	8	21	4	123	
Count Total	0	63	370	278	0	226	412	168	0	214	776	222	0	154	722	105	3,710	
Peak Hour	0	30	172	132	0	132	231	100	0	112	389	112	0	81	370	57	1,918	

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	4	2	4	2	12	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	2	4	9	0	15	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	3	6	1	1	11	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	3	3	3	1	10	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	9	5	4	3	21	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	3	7	1	1	12	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	3	3	1	1	8	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	4	4	4	2	14	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	6	5	1	1	13	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	0	1	1	1	3	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	3	3	3	1	10	4:50 PM	0	0	0	0	0	4:50 PM	1	0	0	0	1
4:55 PM	1	2	0	1	4	4:55 PM	0	0	0	0	0	4:55 PM	0	1	0	0	1
5:00 PM	3	8	3	0	14	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	2	4	0	3	9	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	2	1	2	2	7	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	1	0	8	2	11	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	2	6	9	1	18	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	3	2	2	1	8	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	1	3	3	2	9	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	4	1	3	2	10	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	3	1	1	2	7	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	2	3	1	0	6	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	2	3	2	2	9	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	2	0	1	1	4	5:55 PM	0	2	0	0	2	5:55 PM	0	0	0	0	0
Count Total	68	77	67	33	245	Count Total	0	2	0	0	2	Count Total	1	1	0	0	2
Peak Hour	26	34	34	18	112	Peak Hour	0	0	0	0	0	Peak Hour	0	1	0	0	1



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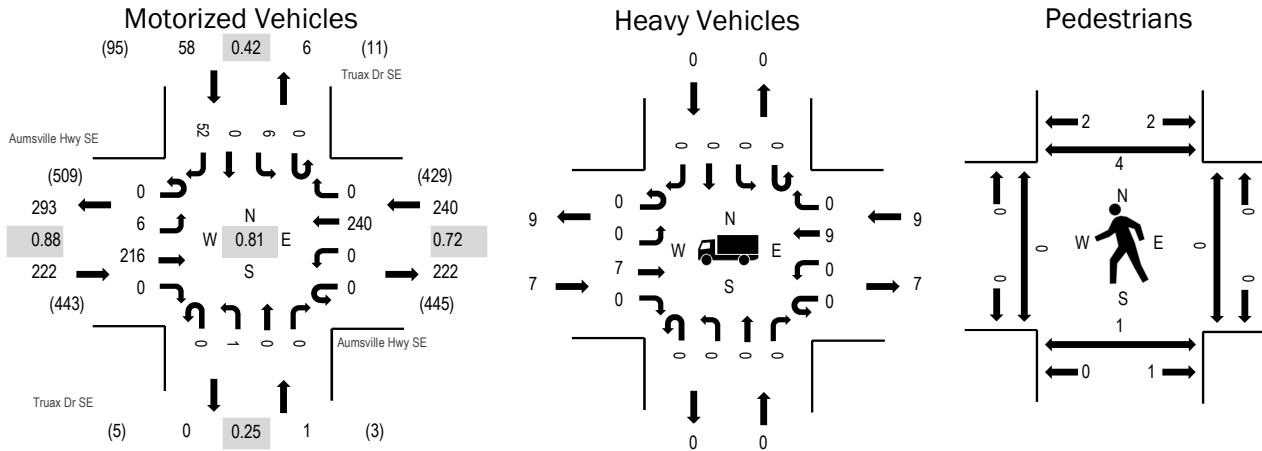
Location: 2 Truax Dr SE & Aumsville Hwy SE PM

Date: Thursday, December 9, 2021

Peak Hour: 04:20 PM - 05:20 PM

Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	3.2%	0.88
WB	3.8%	0.72
NB	0.0%	0.25
SB	0.0%	0.42
All	3.1%	0.81

Traffic Counts - Motorized Vehicles

Interval Start Time	Aumsville Hwy SE Eastbound				Aumsville Hwy SE Westbound				Truax Dr SE Northbound				Truax Dr SE 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	0	23	0	0	0	12	0	0	0	0	0	0	0	0	5	40	482
4:05 PM	0	3	17	0	0	0	19	0	0	0	0	0	0	2	0	4	45	500
4:10 PM	0	2	15	0	0	0	18	0	0	0	0	0	0	1	1	5	42	512
4:15 PM	0	0	20	1	0	0	14	0	0	0	0	0	0	1	0	2	38	515
4:20 PM	0	2	23	0	0	0	15	0	0	0	0	0	0	0	0	1	41	521
4:25 PM	0	0	21	0	0	0	12	0	0	0	0	0	0	0	0	2	35	518
4:30 PM	0	0	22	0	0	0	16	0	0	0	0	0	0	1	0	0	39	519
4:35 PM	0	0	23	0	0	0	15	0	0	1	0	0	0	0	0	2	41	511
4:40 PM	0	1	16	0	0	0	18	0	0	0	0	0	0	0	0	4	39	500
4:45 PM	0	2	17	0	0	0	16	0	0	0	0	0	0	0	0	3	38	502
4:50 PM	0	1	19	0	0	0	17	0	0	0	0	0	0	0	0	5	42	503
4:55 PM	0	0	12	0	0	0	27	0	0	0	0	0	0	0	0	3	42	498
5:00 PM	0	0	12	0	0	0	30	0	0	0	0	0	0	2	0	14	58	488
5:05 PM	0	0	15	0	0	0	27	0	0	0	0	0	0	1	0	14	57	
5:10 PM	0	0	17	0	0	0	22	0	0	0	0	0	0	2	0	4	45	
5:15 PM	0	0	19	0	0	0	25	0	0	0	0	0	0	0	0	0	44	
5:20 PM	0	0	18	0	0	0	16	0	0	0	0	0	0	0	0	4	38	
5:25 PM	0	0	20	0	0	1	12	0	0	0	0	1	0	0	0	2	36	
5:30 PM	0	0	16	1	0	0	13	0	0	0	0	0	0	0	0	1	31	
5:35 PM	0	0	15	0	0	0	12	0	0	0	0	1	0	0	0	2	30	
5:40 PM	0	0	22	0	0	0	18	0	0	0	0	0	0	0	0	1	41	
5:45 PM	0	0	15	0	0	1	21	0	0	0	0	0	0	1	0	1	39	
5:50 PM	0	0	19	0	0	0	16	0	0	0	0	0	0	1	0	1	37	
5:55 PM	0	0	14	0	0	0	16	0	0	0	0	0	0	1	0	1	32	
Count Total	0	11	430	2	0	2	427	0	0	1	0	2	0	13	1	81	970	
Peak Hour	0	6	216	0	0	0	240	0	0	1	0	0	0	6	0	52	521	

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	0	1	0	1	4:00 PM	0	0	0	0	0	4:00 PM	3	0	0	0	3
4:05 PM	1	0	1	0	2	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	1	0	2	0	3	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	2	0	1	0	3	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	1	0	1	0	2	4:30 PM	0	0	0	0	0	4:30 PM	0	1	0	0	1
4:35 PM	0	0	1	0	1	4:35 PM	0	0	1	0	1	4:35 PM	0	0	0	2	2
4:40 PM	1	0	0	0	1	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	1	1
4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	2	0	1	0	3	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	1	1
4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	1	0	1	0	2	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	0	0	1	0	1	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	0	3	0	3	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	0	0	3	0	3	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	1	0	0	0	1	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	0	1	0	1	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	1	0	0	0	1	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	1	0	0	0	1	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	0	1	0	1	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	12	0	18	0	30	Count Total	0	0	1	0	1	Count Total	3	1	0	4	8
Peak Hour	7	0	9	0	16	Peak Hour	0	0	1	0	1	Peak Hour	0	1	0	4	5



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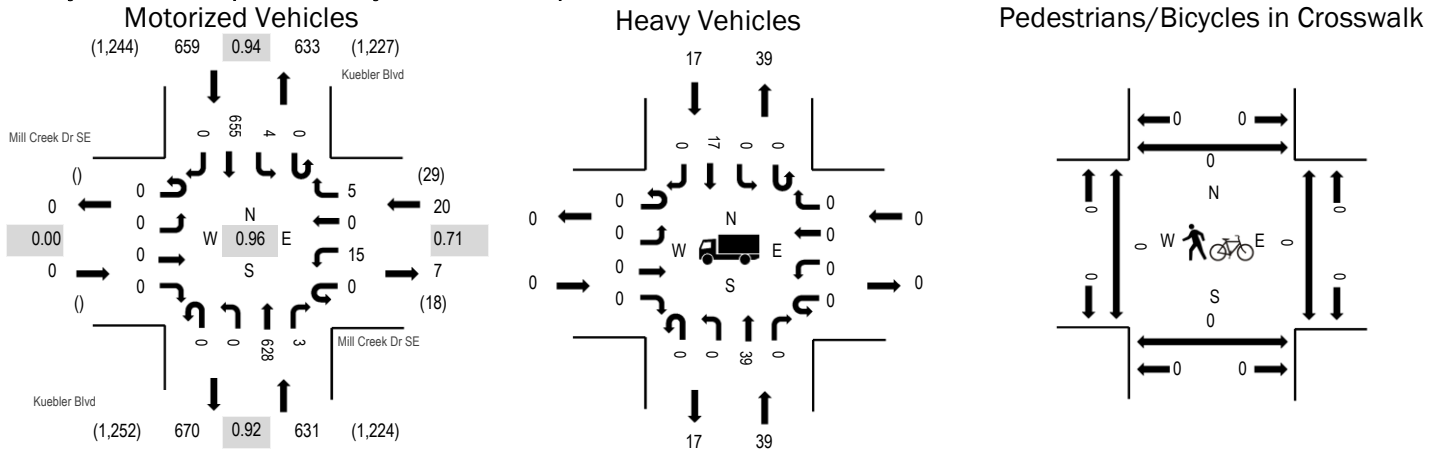
Location: 3 Kuebler Blvd & Mill Creek Dr SE PM

Date: Tuesday, December 14, 2021

Study Peak Hour: 04:25 PM - 05:25 PM

Peak 15-Minutes in Study Peak Hour: 04:40 PM - 04:55 PM

Study Peak Hour (for all study intersections)



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.00
WB	0.0%	0.71
NB	6.2%	0.92
SB	2.6%	0.94
All	4.3%	0.96

Traffic Counts - Motorized Vehicles

Interval Start Time	Mill Creek Dr SE Eastbound				Mill Creek Dr SE Westbound				Kuebler Blvd Northbound				Kuebler Blvd 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	0	0	0	0	1	0	1	0	0	55	1	0	0	46	0	104	1,275
4:05 PM	0	0	0	0	0	0	0	1	0	0	46	1	0	1	54	0	103	1,267
4:10 PM	0	0	0	0	0	0	0	0	0	0	49	0	0	2	53	0	104	1,286
4:15 PM	0	0	0	0	0	0	0	1	0	0	54	1	0	1	41	0	98	1,297
4:20 PM	0	0	0	0	0	0	0	0	0	0	46	0	0	3	57	0	106	1,298
4:25 PM	0	0	0	0	0	1	0	1	0	0	44	0	0	1	56	0	103	1,310
4:30 PM	0	0	0	0	0	1	0	2	0	0	55	0	0	0	49	0	107	1,296
4:35 PM	0	0	0	0	0	0	0	0	0	0	46	0	0	2	60	0	108	1,275
4:40 PM	0	0	0	0	0	2	0	0	0	0	53	1	0	0	56	0	112	1,275
4:45 PM	0	0	0	0	0	0	0	0	0	0	61	0	0	0	57	0	118	1,275
4:50 PM	0	0	0	0	0	4	0	0	0	0	51	0	0	0	55	0	110	1,253
4:55 PM	0	0	0	0	0	1	0	1	0	0	45	0	0	0	55	0	102	1,241
5:00 PM	0	0	0	0	0	1	0	0	0	0	47	1	0	0	47	0	96	1,222
5:05 PM	0	0	0	0	0	0	0	0	0	0	54	1	0	0	67	0	122	
5:10 PM	0	0	0	0	0	2	0	1	0	0	58	0	0	1	53	0	115	
5:15 PM	0	0	0	0	0	3	0	0	0	0	54	0	0	0	42	0	99	
5:20 PM	0	0	0	0	0	0	0	0	0	0	60	0	0	0	58	0	118	
5:25 PM	0	0	0	0	0	0	0	0	0	0	40	0	0	0	49	0	89	
5:30 PM	0	0	0	0	0	0	0	0	0	0	47	0	0	0	39	0	86	
5:35 PM	0	0	0	0	0	3	0	0	0	0	52	0	0	0	53	0	108	
5:40 PM	0	0	0	0	0	0	0	1	0	0	52	0	0	0	59	0	112	
5:45 PM	0	0	0	0	0	1	0	0	0	0	45	0	0	1	49	0	96	
5:50 PM	0	0	0	0	0	0	0	0	0	0	56	0	0	0	42	0	98	
5:55 PM	0	0	0	0	0	0	0	0	0	0	48	0	0	0	35	0	83	
Count Total	0	0	0	0	0	20	0	9	0	0	1,218	6	0	12	1,232	0	2,497	
Peak Hour	0	0	0	0	0	15	0	5	0	0	628	3	0	4	655	0	1,310	

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	1	4	10	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	4	0	2	6	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	0	0	0	3	3	4:10 PM	0	1	0	0	1	4:10 PM	0	0	0	0	0
4:15 PM	0	4	0	4	8	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	0	3	0	1	4	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	0	1	0	0	1	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	0	7	0	4	11	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	0	3	0	2	5	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	0	2	0	1	3	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	0	4	0	2	6	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	4	0	1	5	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	5	0	2	7	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	0	4	0	1	5	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	0	2	0	2	4	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	0	2	0	0	2	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	4	0	1	5	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	0	0	1	1	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	1	0	2	3	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	0	1	0	2	3	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	0	1	0	4	5	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	0	0	0	2	2	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	1	0	0	1	5:50 PM	0	1	0	0	1	5:50 PM	0	0	0	0	0
5:55 PM	0	2	0	0	2	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	0	61	1	42	104	Count Total	0	2	0	0	2	Count Total	0	0	0	0	0
Peak Hour	0	39	0	17	56	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0

APPENDIX B: HCM REPORTS - EXISTING

HCM 6th Signalized Intersection Summary

Salem PacTrust Development TIA

1: Kuebler Blvd/Cordon Rd & Lancaster Dr/Aumsville Hwy

Existing 2021 - AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	243	101	43	107	45	64	235	144	115	354	34
Future Volume (veh/h)	23	243	101	43	107	45	64	235	144	115	354	34
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	1707	1737	1752	1767	1485	1796	1826	1796	1856	1856	1856	1589
Adj Flow Rate, veh/h	25	264	22	47	116	12	70	255	0	125	385	10
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, %	13	11	10	9	28	7	5	7	3	3	3	21
Cap, veh/h	30	494	283	100	458	384	137	859		159	1060	430
Arrive On Green	0.02	0.15	0.15	0.03	0.16	0.16	0.04	0.25	0.00	0.09	0.30	0.30
Sat Flow, veh/h	1626	3300	1485	3264	2822	1522	3374	3413	1572	1767	3526	1346
Grp Volume(v), veh/h	25	264	22	47	116	12	70	255	0	125	385	10
Grp Sat Flow(s),veh/h/ln	1626	1650	1485	1632	1411	1522	1687	1706	1572	1767	1763	1346
Q Serve(g_s), s	0.6	2.9	0.5	0.6	1.4	0.2	0.8	2.4	0.0	2.8	3.4	0.2
Cycle Q Clear(g_c), s	0.6	2.9	0.5	0.6	1.4	0.2	0.8	2.4	0.0	2.8	3.4	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	30	494	283	100	458	384	137	859		159	1060	430
V/C Ratio(X)	0.84	0.53	0.08	0.47	0.25	0.03	0.51	0.30		0.79	0.36	0.02
Avail Cap(c_a), veh/h	327	2741	1293	657	2343	1401	679	2577		445	2839	1109
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.4	15.6	13.2	18.9	14.5	11.2	18.7	12.0	0.0	17.7	10.9	9.3
Incr Delay (d2), s/veh	20.4	0.3	0.0	1.3	0.1	0.0	1.1	0.1	0.0	3.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.9	0.1	0.2	0.3	0.1	0.3	0.6	0.0	1.0	0.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.9	15.9	13.3	20.2	14.7	11.2	19.8	12.1	0.0	21.0	11.0	9.3
LnGrp LOS	D	B	B	C	B	B	B	B		C	B	A
Approach Vol, veh/h	311			175			325			A520		
Approach Delay, s/veh	17.7			15.9			13.7			13.4		
Approach LOS	B			B			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.6	18.0	4.7	11.4	7.6	16.0	5.2	11.0				
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	4.0	6.0	4.0	5.0				
Max Green Setting (Gmax), s	8.0	32.0	8.0	33.0	10.0	30.0	8.0	33.0				
Max Q Clear Time (g_c+I1), s	2.8	5.4	2.6	3.4	4.8	4.4	2.6	4.9				
Green Ext Time (p_c), s	0.0	0.4	0.0	0.2	0.0	0.3	0.0	0.4				

Intersection Summary

HCM 6th Ctrl Delay 14.8

HCM 6th LOS B

Notes

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

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	199	1	2	129	0	0	0	3	0	0	16
Future Vol, veh/h	25	199	1	2	129	0	0	0	3	0	0	16
Conflicting Peds, #/hr	1	0	1	1	0	1	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	190	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	7	0	50	5	0	0	0	0	0	0	0
Mvmt Flow	28	221	1	2	143	0	0	0	3	0	0	18
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	144	0	0	223	0	0	435	427	224	428	427	144
Stage 1	-	-	-	-	-	-	279	279	-	148	148	-
Stage 2	-	-	-	-	-	-	156	148	-	280	279	-
Critical Hdwy	4.1	-	-	4.6	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.65	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1451	-	-	1108	-	-	535	523	820	541	523	909
Stage 1	-	-	-	-	-	-	732	683	-	859	779	-
Stage 2	-	-	-	-	-	-	851	779	-	731	683	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1450	-	-	1107	-	-	516	511	818	529	511	908
Mov Cap-2 Maneuver	-	-	-	-	-	-	516	511	-	529	511	-
Stage 1	-	-	-	-	-	-	717	669	-	842	777	-
Stage 2	-	-	-	-	-	-	833	777	-	713	669	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.8			0.1			9.4			9		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1 NBLn2		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	- 818 1450		-	-	-	1107	-	-	908			
HCM Lane V/C Ratio	- 0.004 0.019		-	-	-	0.002	-	-	0.02			
HCM Control Delay (s)	0 9.4 7.5		-	-	-	8.3	-	-	9			
HCM Lane LOS	A A A		-	-	-	A	-	-	A			
HCM 95th %tile Q(veh)	- 0 0.1		-	-	-	0	-	-	0.1			

HCM 6th Signalized Intersection Summary 3: Kuebler Blvd & Mill Creek Dr

Salem PacTrust Development TIA
Existing 2021 - AM Peak

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	3	9	434	11	11	487
Future Volume (veh/h)	3	9	434	11	11	487
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	907	1248	1826	1633	1500	1841
Adj Flow Rate, veh/h	3	0	493	6	12	553
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	67	44	5	18	27	4
Cap, veh/h	6	37	1157	877	569	1392
Arrive On Green	0.01	0.00	0.63	0.63	0.03	0.76
Sat Flow, veh/h	864	1058	1826	1384	1428	1841
Grp Volume(v), veh/h	3	0	493	6	12	553
Grp Sat Flow(s),veh/h/ln	864	1058	1826	1384	1428	1841
Q Serve(g_s), s	0.1	0.0	5.7	0.1	0.1	4.4
Cycle Q Clear(g_c), s	0.1	0.0	5.7	0.1	0.1	4.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	6	37	1157	877	569	1392
V/C Ratio(X)	0.47	0.00	0.43	0.01	0.02	0.40
Avail Cap(c_a), veh/h	368	479	1157	877	833	1392
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.9	0.0	3.9	2.8	2.5	1.8
Incr Delay (d2), s/veh	45.7	0.0	1.1	0.0	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.6	0.0	0.0	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	66.6	0.0	5.0	2.9	2.5	2.6
LnGrp LOS	E	A	A	A	A	A
Approach Vol, veh/h	3		499			565
Approach Delay, s/veh	66.6		5.0			2.6
Approach LOS	E		A			A
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	38.0		4.3		5.2	32.8
Change Period (Y+Rc), s	6.0		4.0		4.0	6.0
Max Green Setting (Gmax), s	32.0		18.0		9.0	19.0
Max Q Clear Time (g_c+I1), s	6.4		2.1		2.1	7.7
Green Ext Time (p_c), s	3.1		0.0		0.0	2.0
Intersection Summary						
HCM 6th Ctrl Delay			3.9			
HCM 6th LOS			A			

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	3	0	0	3
Future Vol, veh/h	0	0	3	0	0	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	90	90	90	90	90	90
Heavy Vehicles, %	0	0	10	0	0	10
Mvmt Flow	0	0	3	0	0	3
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	6	3	0	0	3	0
Stage 1	3	-	-	-	-	-
Stage 2	3	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	1021	1087	-	-	1632	-
Stage 1	1025	-	-	-	-	-
Stage 2	1025	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1021	1087	-	-	1632	-
Mov Cap-2 Maneuver	1021	-	-	-	-	-
Stage 1	1025	-	-	-	-	-
Stage 2	1025	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	0	0	0			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	-	1632	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	3	0	0	3
Future Vol, veh/h	0	0	3	0	0	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	90	90	90	90	90	90
Heavy Vehicles, %	0	0	10	0	0	10
Mvmt Flow	0	0	3	0	0	3
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	6	3	0	0	3	0
Stage 1	3	-	-	-	-	-
Stage 2	3	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	1021	1087	-	-	1632	-
Stage 1	1025	-	-	-	-	-
Stage 2	1025	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1021	1087	-	-	1632	-
Mov Cap-2 Maneuver	1021	-	-	-	-	-
Stage 1	1025	-	-	-	-	-
Stage 2	1025	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	0	0	0			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	-	1632	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	3	0	0	3
Future Vol, veh/h	0	0	3	0	0	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	90	90	90	90	90	90
Heavy Vehicles, %	0	0	10	0	0	10
Mvmt Flow	0	0	3	0	0	3
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	6	3	0	0	3	0
Stage 1	3	-	-	-	-	-
Stage 2	3	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	1021	1087	-	-	1632	-
Stage 1	1025	-	-	-	-	-
Stage 2	1025	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1021	1087	-	-	1632	-
Mov Cap-2 Maneuver	1021	-	-	-	-	-
Stage 1	1025	-	-	-	-	-
Stage 2	1025	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	0		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt		NBT	NBRWBLn1	SBL	SBT	
Capacity (veh/h)		-	-	-	1632	-
HCM Lane V/C Ratio		-	-	-	-	-
HCM Control Delay (s)		-	-	0	0	-
HCM Lane LOS		-	-	A	A	-
HCM 95th %tile Q(veh)		-	-	-	0	-

ID	Software/Method	Intersection	Control Type	LOS	Delay	V/C Ratio
1	Synchro HCM 6th Signal	Kuebler Blvd/Cordon Rd & Lancaster	Signal	B	15	0.30
3	Synchro HCM 6th Signal	Kuebler Blvd & Mill Creek Dr	Signal	A	4	0.36

HCM 6th Signalized Intersection Summary

Salem PacTrust Development TIA

1: Kuebler Blvd/Cordon Rd & Lancaster Dr/Aumsville Hwy

Existing 2021 - PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	172	132	132	231	100	112	404	112	81	385	57
Future Volume (veh/h)	30	172	132	132	231	100	112	404	112	81	385	57
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	1900	1707	1856	1781	1752	1885	1870	1870	1559	1722	1870	1870
Adj Flow Rate, veh/h	32	185	29	142	248	26	120	434	0	87	414	16
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, %	0	13	3	8	10	1	2	2	23	12	2	2
Cap, veh/h	41	479	329	240	660	419	214	877		104	884	430
Arrive On Green	0.02	0.15	0.15	0.07	0.20	0.20	0.06	0.25	0.00	0.06	0.25	0.25
Sat Flow, veh/h	1810	3244	1572	3291	3328	1598	3456	3554	1321	1640	3554	1585
Grp Volume(v), veh/h	32	185	29	142	248	26	120	434	0	87	414	16
Grp Sat Flow(s),veh/h/ln	1810	1622	1572	1646	1664	1598	1728	1777	1321	1640	1777	1585
Q Serve(g_s), s	0.7	2.1	0.6	1.7	2.6	0.5	1.4	4.2	0.0	2.1	4.0	0.3
Cycle Q Clear(g_c), s	0.7	2.1	0.6	1.7	2.6	0.5	1.4	4.2	0.0	2.1	4.0	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	41	479	329	240	660	419	214	877		104	884	430
V/C Ratio(X)	0.79	0.39	0.09	0.59	0.38	0.06	0.56	0.49		0.83	0.47	0.04
Avail Cap(c_a), veh/h	357	2642	1378	650	2710	1403	682	2543		445	2806	1287
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.7	15.6	12.9	18.2	14.1	11.2	18.5	13.1	0.0	18.8	12.9	10.9
Incr Delay (d2), s/veh	11.9	0.2	0.0	0.9	0.1	0.0	0.9	0.2	0.0	6.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.6	0.2	0.5	0.7	0.1	0.4	1.1	0.0	0.8	1.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.6	15.8	12.9	19.1	14.2	11.2	19.3	13.3	0.0	25.1	13.1	10.9
LnGrp LOS	C	B	B	B	B	B	B	B		C	B	B
Approach Vol, veh/h	246				416				554			
Approach Delay, s/veh	17.5				15.7				14.6			
Approach LOS	B				B				B			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.5	16.1	4.9	13.0	6.6	16.0	7.0	11.0				
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	4.0	6.0	4.0	5.0				
Max Green Setting (Gmax), s	8.0	32.0	8.0	33.0	11.0	29.0	8.0	33.0				
Max Q Clear Time (g_c+I1), s	3.4	6.0	2.7	4.6	4.1	6.2	3.7	4.1				
Green Ext Time (p_c), s	0.0	0.5	0.0	0.3	0.0	0.5	0.0	0.3				

Intersection Summary

HCM 6th Ctrl Delay 15.4

HCM 6th LOS B

Notes

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

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	216	1	0	240	0	1	0	0	6	0	52
Future Vol, veh/h	6	216	1	0	240	0	1	0	0	6	0	52
Conflicting Peds, #/hr	4	0	1	1	0	4	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	190	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	0	3	0	0	4	0	0	0	0	0	0	0
Mvmt Flow	7	267	1	0	296	0	1	0	0	7	0	64

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	300	0	0	269	0	0	611	583	269	582	583	300
Stage 1	-	-	-	-	-	-	283	283	-	300	300	-
Stage 2	-	-	-	-	-	-	328	300	-	282	283	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1273	-	-	1306	-	-	409	427	775	427	427	744
Stage 1	-	-	-	-	-	-	728	681	-	713	669	-
Stage 2	-	-	-	-	-	-	689	669	-	729	681	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1268	-	-	1305	-	-	372	422	774	424	422	741
Mov Cap-2 Maneuver	-	-	-	-	-	-	372	422	-	424	422	-
Stage 1	-	-	-	-	-	-	724	676	-	707	666	-
Stage 2	-	-	-	-	-	-	629	666	-	725	676	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	14.7	10.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	372	-	1268	-	-	1305	-	-	688
HCM Lane V/C Ratio	0.003	-	0.006	-	-	-	-	-	0.104
HCM Control Delay (s)	14.7	0	7.9	-	-	0	-	-	10.8
HCM Lane LOS	B	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	-	0	-	-	0	-	-	0.3

HCM 6th Signalized Intersection Summary 3: Kuebler Blvd & Mill Creek Dr

Salem PacTrust Development TIA
Existing 2021 - PM Peak

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	15	5	623	3	4	645
Future Volume (veh/h)	15	5	623	3	4	645
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1811	1900	1900	1856
Adj Flow Rate, veh/h	16	0	649	2	4	672
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	6	0	0	3
Cap, veh/h	64	73	1259	1119	567	1445
Arrive On Green	0.04	0.00	0.70	0.70	0.01	0.78
Sat Flow, veh/h	1810	1610	1811	1610	1810	1856
Grp Volume(v), veh/h	16	0	649	2	4	672
Grp Sat Flow(s),veh/h/ln	1810	1610	1811	1610	1810	1856
Q Serve(g_s), s	0.5	0.0	9.2	0.0	0.0	6.8
Cycle Q Clear(g_c), s	0.5	0.0	9.2	0.0	0.0	6.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	64	73	1259	1119	567	1445
V/C Ratio(X)	0.25	0.00	0.52	0.00	0.01	0.46
Avail Cap(c_a), veh/h	604	553	1259	1119	852	1445
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	0.0	3.9	2.5	3.0	2.1
Incr Delay (d2), s/veh	2.0	0.0	1.5	0.0	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	1.1	0.0	0.0	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.3	0.0	5.4	2.5	3.0	3.1
LnGrp LOS	C	A	A	A	A	A
Approach Vol, veh/h	16		651			676
Approach Delay, s/veh	27.3		5.4			3.1
Approach LOS	C		A			A
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	48.0		5.9		4.5	43.5
Change Period (Y+Rc), s	6.0		4.0		4.0	6.0
Max Green Setting (Gmax), s	42.0		18.0		9.0	29.0
Max Q Clear Time (g_c+l1), s	8.8		2.5		2.0	11.2
Green Ext Time (p_c), s	4.2		0.0		0.0	3.5
Intersection Summary						
HCM 6th Ctrl Delay			4.5			
HCM 6th LOS			A			

HCM 6th TWSC
4: Truax Dr & Site Access #1

Salem PacTrust Development TIA
Existing 2021 - PM Peak

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	1	0	0	1
Future Vol, veh/h	0	0	1	0	0	1
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	90	90	90	90	90	90
Heavy Vehicles, %	0	0	10	0	0	10
Mvmt Flow	0	0	1	0	0	1
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	2	1	0	0	1	0
Stage 1	1	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	1026	1090	-	-	1635	-
Stage 1	1028	-	-	-	-	-
Stage 2	1028	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1026	1090	-	-	1635	-
Mov Cap-2 Maneuver	1026	-	-	-	-	-
Stage 1	1028	-	-	-	-	-
Stage 2	1028	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	-	1635	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	1	0	0	1
Future Vol, veh/h	0	0	1	0	0	1
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	90	90	90	90	90	90
Heavy Vehicles, %	0	0	10	0	0	10
Mvmt Flow	0	0	1	0	0	1

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	2	1	0
Stage 1	1	-	-
Stage 2	1	-	-
Critical Hdwy	6.4	6.2	-
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	1026	1090	-
Stage 1	1028	-	-
Stage 2	1028	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1026	1090	-
Mov Cap-2 Maneuver	1026	-	-
Stage 1	1028	-	-
Stage 2	1028	-	-

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

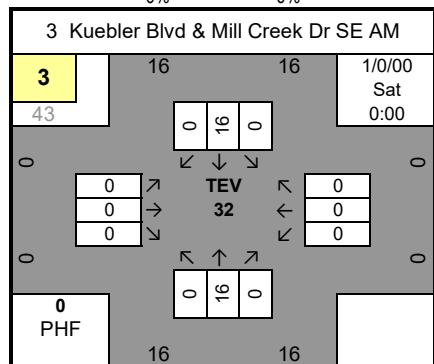
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1635
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	1	0	0	1
Future Vol, veh/h	0	0	1	0	0	1
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	90	90	90	90	90	90
Heavy Vehicles, %	0	0	10	0	0	10
Mvmt Flow	0	0	1	0	0	1
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2	1	0	0	1	0
Stage 1	1	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	1026	1090	-	-	1635	-
Stage 1	1028	-	-	-	-	-
Stage 2	1028	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1026	1090	-	-	1635	-
Mov Cap-2 Maneuver	1026	-	-	-	-	-
Stage 1	1028	-	-	-	-	-
Stage 2	1028	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	0		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt		NBT	NBRWBLn1	SBL	SBT	
Capacity (veh/h)		-	-	-	1635	-
HCM Lane V/C Ratio		-	-	-	-	-
HCM Control Delay (s)		-	-	0	0	-
HCM Lane LOS		-	-	A	A	-
HCM 95th %tile Q(veh)		-	-	-	0	-

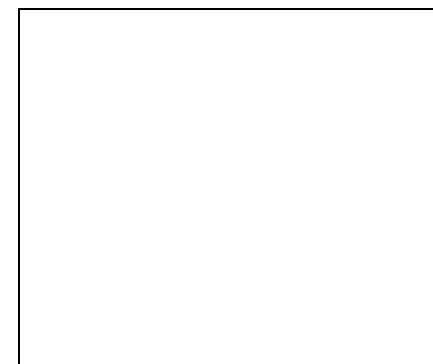
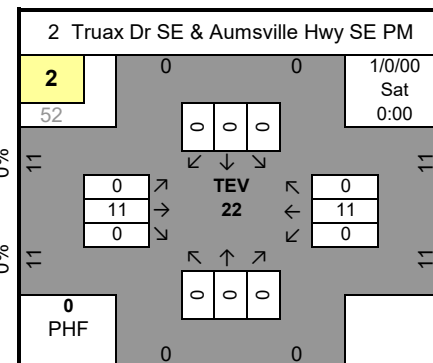
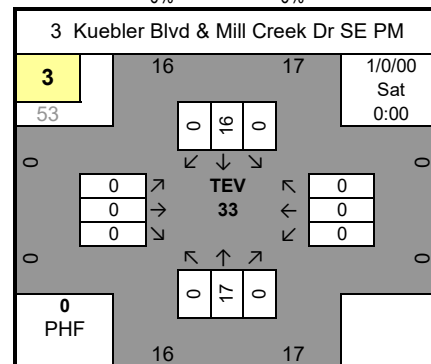
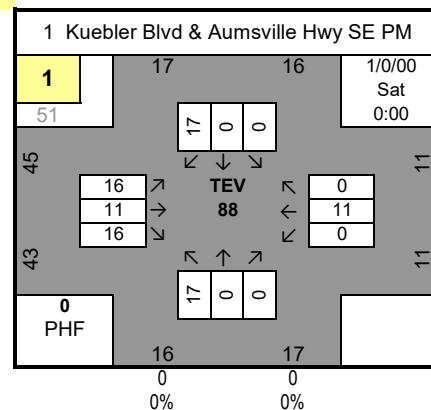
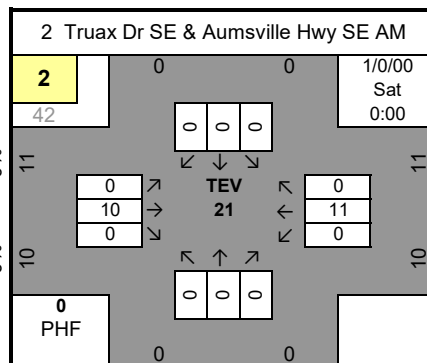
ID	Software/Method	Intersection	Control Type	LOS	Delay	V/C Ratio
1	Synchro HCM 6th Signal	Kuebler Blvd/Cordon Rd & Lancaster	Signal	B	15	0.34
3	Synchro HCM 6th Signal	Kuebler Blvd & Mill Creek Dr	Signal	A	5	0.43

APPENDIX C: IN-PROCESS TRIPS

40

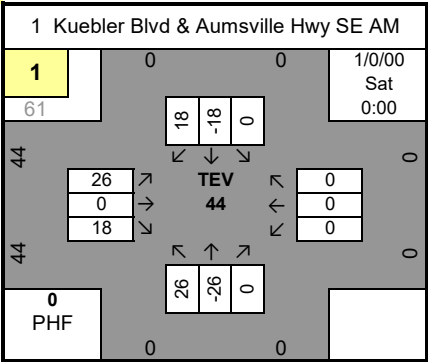


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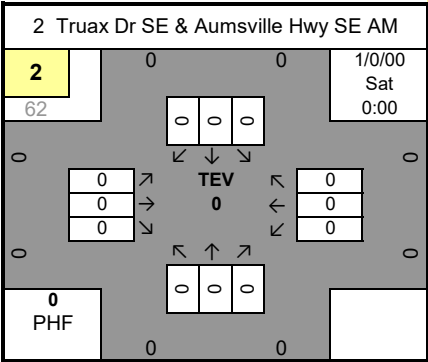
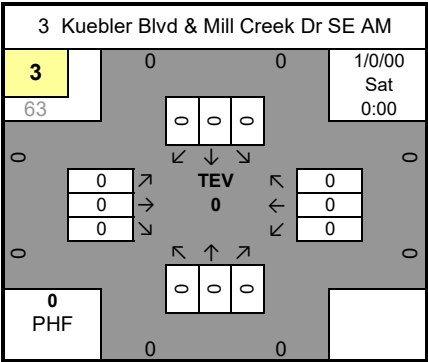


In-Process Trips - AM - Pass-By

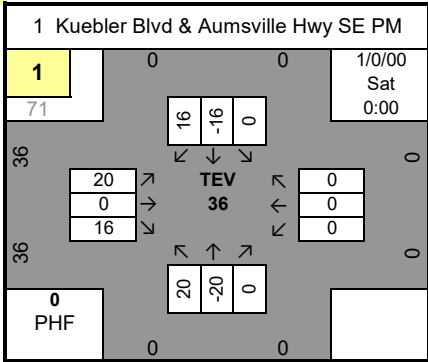
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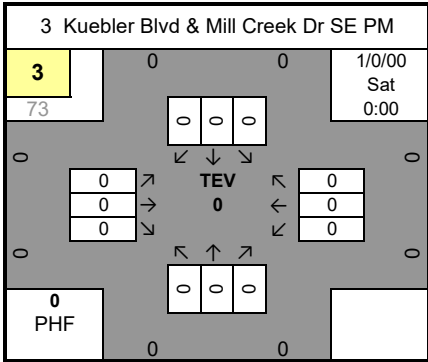
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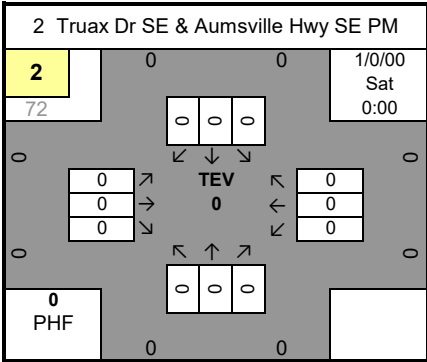
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In-Process Trips - PM - Pass-By



APPENDIX D: HCM REPORTS – FUTURE BACKGROUND

HCM 6th Signalized Intersection Summary

1: Kuebler Blvd/Cordon Rd & Lancaster Dr/Aumsville Hwy

Salem PacTrust Development TIA

Future 2023 Background - AM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	66	263	139	45	122	47	109	218	150	120	350	69	
Future Volume (veh/h)	66	263	139	45	122	47	109	218	150	120	350	69	
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	1707	1737	1752	1767	1485	1796	1826	1796	1856	1856	1856	1589	
Adj Flow Rate, veh/h	72	286	39	49	133	11	118	237	0	130	380	23	
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, %	13	11	10	9	28	7	5	7	3	3	3	21	
Cap, veh/h	84	550	339	102	412	365	207	834		165	974	442	
Arrive On Green	0.05	0.17	0.17	0.03	0.15	0.15	0.06	0.24	0.00	0.09	0.28	0.28	
Sat Flow, veh/h	1626	3300	1485	3264	2822	1522	3374	3413	1572	1767	3526	1346	
Grp Volume(v), veh/h	72	286	39	49	133	11	118	237	0	130	380	23	
Grp Sat Flow(s),veh/h/ln	1626	1650	1485	1632	1411	1522	1687	1706	1572	1767	1763	1346	
Q Serve(g_s), s	1.8	3.2	0.9	0.6	1.7	0.2	1.4	2.3	0.0	2.9	3.6	0.5	
Cycle Q Clear(g_c), s	1.8	3.2	0.9	0.6	1.7	0.2	1.4	2.3	0.0	2.9	3.6	0.5	
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	84	550	339	102	412	365	207	834		165	974	442	
V/C Ratio(X)	0.85	0.52	0.12	0.48	0.32	0.03	0.57	0.28		0.79	0.39	0.05	
Avail Cap(c_a), veh/h	318	2660	1288	638	2274	1369	659	2501		432	2756	1122	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	19.3	15.6	12.5	19.5	15.7	11.9	18.7	12.6	0.0	18.2	12.0	9.4	
Incr Delay (d2), s/veh	8.7	0.3	0.1	1.3	0.2	0.0	0.9	0.1	0.0	3.1	0.1	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.8	1.0	0.2	0.2	0.4	0.1	0.4	0.6	0.0	1.0	0.9	0.1	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	28.0	15.8	12.6	20.8	15.8	11.9	19.6	12.6	0.0	21.3	12.1	9.4	
LnGrp LOS	C	B	B	C	B	B	B	B		C	B	A	
Approach Vol, veh/h	397			193			355			A			533
Approach Delay, s/veh	17.7			16.9			14.9			14.2			
Approach LOS	B			B			B			B			
Timer - Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	6.5	17.3	6.1	11.0	7.8	16.0	5.3	11.8					
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	4.0	6.0	4.0	5.0					
Max Green Setting (Gmax), s	8.0	32.0	8.0	33.0	10.0	30.0	8.0	33.0					
Max Q Clear Time (g_c+I1), s	3.4	5.6	3.8	3.7	4.9	4.3	2.6	5.2					
Green Ext Time (p_c), s	0.0	0.4	0.0	0.2	0.0	0.3	0.0	0.4					

Intersection Summary

HCM 6th Ctrl Delay 15.7

HCM 6th LOS B

Notes

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

HCM 6th TWSC
2: Truax Dr & Aumsville Hwy

Salem PacTrust Development TIA
Future 2023 Background - AM Peak

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	217	1	2	145	0	0	0	3	0	0	17
Future Vol, veh/h	26	217	1	2	145	0	0	0	3	0	0	17
Conflicting Peds, #/hr	1	0	1	1	0	1	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	190	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	7	0	50	5	0	0	0	0	0	0	0
Mvmt Flow	29	241	1	2	161	0	0	0	3	0	0	19

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	162	0	0	243	0	0	476	467	244	468	467	162
Stage 1	-	-	-	-	-	-	301	301	-	166	166	-
Stage 2	-	-	-	-	-	-	175	166	-	302	301	-
Critical Hdwy	4.1	-	-	4.6	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.65	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1429	-	-	1088	-	-	503	496	800	509	496	888
Stage 1	-	-	-	-	-	-	712	669	-	841	765	-
Stage 2	-	-	-	-	-	-	832	765	-	712	669	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1428	-	-	1087	-	-	483	484	798	497	484	887
Mov Cap-2 Maneuver	-	-	-	-	-	-	483	484	-	497	484	-
Stage 1	-	-	-	-	-	-	697	655	-	823	763	-
Stage 2	-	-	-	-	-	-	813	763	-	694	655	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.8			0.1			9.5			9.1		
HCM LOS							A			A		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	798	1428	-	-	1087	-	-	887
HCM Lane V/C Ratio	-	0.004	0.02	-	-	0.002	-	-	0.021
HCM Control Delay (s)	0	9.5	7.6	-	-	8.3	-	-	9.1
HCM Lane LOS	A	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	0.1	-	-	0	-	-	0.1

HCM 6th Signalized Intersection Summary

3: Kuebler Blvd & Mill Creek Dr

Salem PacTrust Development TIA
Future 2023 Background - AM Peak

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	3	9	468	11	11	523
Future Volume (veh/h)	3	9	468	11	11	523
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	907	1248	1826	1633	1500	1841
Adj Flow Rate, veh/h	3	0	532	7	12	594
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	67	44	5	18	27	4
Cap, veh/h	6	37	1157	877	546	1392
Arrive On Green	0.01	0.00	0.63	0.63	0.03	0.76
Sat Flow, veh/h	864	1058	1826	1384	1428	1841
Grp Volume(v), veh/h	3	0	532	7	12	594
Grp Sat Flow(s),veh/h/ln	864	1058	1826	1384	1428	1841
Q Serve(g_s), s	0.1	0.0	6.4	0.1	0.1	4.9
Cycle Q Clear(g_c), s	0.1	0.0	6.4	0.1	0.1	4.9
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	6	37	1157	877	546	1392
V/C Ratio(X)	0.47	0.00	0.46	0.01	0.02	0.43
Avail Cap(c_a), veh/h	368	479	1157	877	810	1392
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.9	0.0	4.0	2.9	2.6	1.9
Incr Delay (d2), s/veh	45.7	0.0	1.3	0.0	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.6	0.0	0.0	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	66.6	0.0	5.3	2.9	2.7	2.8
LnGrp LOS	E	A	A	A	A	A
Approach Vol, veh/h	3		539			606
Approach Delay, s/veh	66.6		5.3			2.8
Approach LOS	E		A			A
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	38.0		4.3		5.2	32.8
Change Period (Y+Rc), s	6.0		4.0		4.0	6.0
Max Green Setting (Gmax), s	32.0		18.0		9.0	19.0
Max Q Clear Time (g_c+l1), s	6.9		2.1		2.1	8.4
Green Ext Time (p_c), s	3.4		0.0		0.0	2.2
Intersection Summary						
HCM 6th Ctrl Delay			4.1			
HCM 6th LOS			A			

HCM 6th TWSC
4: Truax Dr & Site Access #1

Salem PacTrust Development TIA
Future 2023 Background - AM Peak

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	3	0	0	3
Future Vol, veh/h	0	0	3	0	0	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	90	90	90	90	90	90
Heavy Vehicles, %	0	0	10	0	0	10
Mvmt Flow	0	0	3	0	0	3
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	6	3	0	0	3	0
Stage 1	3	-	-	-	-	-
Stage 2	3	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	1021	1087	-	-	1632	-
Stage 1	1025	-	-	-	-	-
Stage 2	1025	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1021	1087	-	-	1632	-
Mov Cap-2 Maneuver	1021	-	-	-	-	-
Stage 1	1025	-	-	-	-	-
Stage 2	1025	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	-	1632	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

HCM 6th TWSC
5: Truax Dr & Site Access #2

Salem PacTrust Development TIA
Future 2023 Background - AM Peak

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	3	0	0	3
Future Vol, veh/h	0	0	3	0	0	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	90	90	90	90	90	90
Heavy Vehicles, %	0	0	10	0	0	10
Mvmt Flow	0	0	3	0	0	3
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	6	3	0	0	3	0
Stage 1	3	-	-	-	-	-
Stage 2	3	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	1021	1087	-	-	1632	-
Stage 1	1025	-	-	-	-	-
Stage 2	1025	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1021	1087	-	-	1632	-
Mov Cap-2 Maneuver	1021	-	-	-	-	-
Stage 1	1025	-	-	-	-	-
Stage 2	1025	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	0	0	0			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	-	1632	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	3	0	0	3
Future Vol, veh/h	0	0	3	0	0	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	90	90	90	90	90	90
Heavy Vehicles, %	0	0	10	0	0	10
Mvmt Flow	0	0	3	0	0	3
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	6	3	0	0	3	0
Stage 1	3	-	-	-	-	-
Stage 2	3	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	1021	1087	-	-	1632	-
Stage 1	1025	-	-	-	-	-
Stage 2	1025	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1021	1087	-	-	1632	-
Mov Cap-2 Maneuver	1021	-	-	-	-	-
Stage 1	1025	-	-	-	-	-
Stage 2	1025	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	-	1632	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

ID	Software/Method	Intersection	Control Type	LOS	Delay	V/C Ratio
1	Synchro HCM 6th Signal	Kuebler Blvd/Cordon Rd & Lancaster	Signal	B	16	0.30
3	Synchro HCM 6th Signal	Kuebler Blvd & Mill Creek Dr	Signal	A	4	0.39

HCM 6th Signalized Intersection Summary

1: Kuebler Blvd/Cordon Rd & Lancaster Dr/Aumsville Hwy

Salem PacTrust Development TIA

Future 2023 Background - PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	179	153	137	240	104	136	401	116	84	385	75
Future Volume (veh/h)	51	179	153	137	240	104	136	401	116	84	385	75
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	1900	1707	1856	1781	1752	1885	1870	1870	1559	1722	1870	1870
Adj Flow Rate, veh/h	55	192	33	147	258	24	146	431	0	90	414	24
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	13	3	8	10	1	2	2	23	12	2	2
Cap, veh/h	67	473	344	247	613	400	252	889		109	865	444
Arrive On Green	0.04	0.15	0.15	0.08	0.18	0.18	0.07	0.25	0.00	0.07	0.24	0.24
Sat Flow, veh/h	1810	3244	1572	3291	3328	1598	3456	3554	1321	1640	3554	1585
Grp Volume(v), veh/h	55	192	33	147	258	24	146	431	0	90	414	24
Grp Sat Flow(s),veh/h/ln	1810	1622	1572	1646	1664	1598	1728	1777	1321	1640	1777	1585
Q Serve(g_s), s	1.2	2.2	0.7	1.8	2.8	0.5	1.7	4.3	0.0	2.2	4.1	0.5
Cycle Q Clear(g_c), s	1.2	2.2	0.7	1.8	2.8	0.5	1.7	4.3	0.0	2.2	4.1	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	67	473	344	247	613	400	252	889		109	865	444
V/C Ratio(X)	0.83	0.41	0.10	0.59	0.42	0.06	0.58	0.48		0.83	0.48	0.05
Avail Cap(c_a), veh/h	352	2527	1340	721	2674	1389	673	2509		439	2769	1293
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.6	15.9	12.8	18.4	14.8	11.7	18.4	13.1	0.0	18.9	13.3	10.8
Incr Delay (d2), s/veh	9.2	0.2	0.0	0.8	0.2	0.0	0.8	0.2	0.0	6.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.7	0.2	0.6	0.8	0.1	0.5	1.1	0.0	0.8	1.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.8	16.1	12.8	19.2	15.0	11.7	19.2	13.3	0.0	24.9	13.5	10.8
LnGrp LOS	C	B	B	B	B	B	B	B		C	B	B
Approach Vol, veh/h	280				429				577			
Approach Delay, s/veh	18.2				16.3				14.8			
Approach LOS	B				B				B			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	16.0	5.5	12.6	6.7	16.3	7.1	11.0				
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	4.0	6.0	4.0	5.0				
Max Green Setting (Gmax), s	8.0	32.0	8.0	33.0	11.0	29.0	9.0	32.0				
Max Q Clear Time (g_c+I1), s	3.7	6.1	3.2	4.8	4.2	6.3	3.8	4.2				
Green Ext Time (p_c), s	0.0	0.5	0.0	0.3	0.0	0.5	0.0	0.3				

Intersection Summary

HCM 6th Ctrl Delay 15.8

HCM 6th LOS B

Notes

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

HCM 6th TWSC
2: Truax Dr & Aumsville Hwy

Salem PacTrust Development TIA
Future 2023 Background - PM Peak

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	225	1	0	250	0	1	0	0	6	0	54
Future Vol, veh/h	6	225	1	0	250	0	1	0	0	6	0	54
Conflicting Peds, #/hr	4	0	1	1	0	4	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	190	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	0	3	0	0	4	0	0	0	0	0	0	0
Mvmt Flow	7	278	1	0	309	0	1	0	0	7	0	67
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	313	0	0	280	0	0	637	607	280	606	607	313
Stage 1	-	-	-	-	-	-	294	294	-	313	313	-
Stage 2	-	-	-	-	-	-	343	313	-	293	294	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1259	-	-	1294	-	-	393	414	764	412	414	732
Stage 1	-	-	-	-	-	-	719	673	-	702	661	-
Stage 2	-	-	-	-	-	-	676	661	-	719	673	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1254	-	-	1293	-	-	355	409	763	409	409	729
Mov Cap-2 Maneuver	-	-	-	-	-	-	355	409	-	409	409	-
Stage 1	-	-	-	-	-	-	714	668	-	696	658	-
Stage 2	-	-	-	-	-	-	614	658	-	715	668	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0			15.2			11		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	355		-	1254	-	-	1293	-	-	676		
HCM Lane V/C Ratio	0.003		-	0.006	-	-	-	-	-	0.11		
HCM Control Delay (s)	15.2		0	7.9	-	-	0	-	-	11		
HCM Lane LOS	C		A	A	-	-	A	-	-	B		
HCM 95th %tile Q(veh)	0		-	0	-	-	0	-	-	0.4		

HCM 6th Signalized Intersection Summary 3: Kuebler Blvd & Mill Creek Dr

Salem PacTrust Development TIA
Future 2023 Background - PM Peak

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	16	5	648	3	4	671
Future Volume (veh/h)	16	5	648	3	4	671
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1811	1900	1900	1856
Adj Flow Rate, veh/h	17	0	675	2	4	699
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	6	0	0	3
Cap, veh/h	68	76	1256	1117	547	1442
Arrive On Green	0.04	0.00	0.69	0.69	0.01	0.78
Sat Flow, veh/h	1810	1610	1811	1610	1810	1856
Grp Volume(v), veh/h	17	0	675	2	4	699
Grp Sat Flow(s),veh/h/ln	1810	1610	1811	1610	1810	1856
Q Serve(g_s), s	0.5	0.0	9.8	0.0	0.0	7.3
Cycle Q Clear(g_c), s	0.5	0.0	9.8	0.0	0.0	7.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	68	76	1256	1117	547	1442
V/C Ratio(X)	0.25	0.00	0.54	0.00	0.01	0.48
Avail Cap(c_a), veh/h	603	552	1256	1117	831	1442
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	0.0	4.0	2.5	3.1	2.1
Incr Delay (d2), s/veh	1.9	0.0	1.7	0.0	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	1.2	0.0	0.0	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.2	0.0	5.7	2.5	3.1	3.3
LnGrp LOS	C	A	A	A	A	A
Approach Vol, veh/h	17		677			703
Approach Delay, s/veh	27.2		5.7			3.3
Approach LOS	C		A			A
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	48.0		6.0		4.5	43.5
Change Period (Y+Rc), s	6.0		4.0		4.0	6.0
Max Green Setting (Gmax), s	42.0		18.0		9.0	29.0
Max Q Clear Time (g_c+l1), s	9.3		2.5		2.0	11.8
Green Ext Time (p_c), s	4.5		0.0		0.0	3.6
Intersection Summary						
HCM 6th Ctrl Delay			4.8			
HCM 6th LOS			A			

HCM 6th TWSC
4: Truax Dr & Site Access #1

Salem PacTrust Development TIA
Future 2023 Background - PM Peak

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	1	0	0	1
Future Vol, veh/h	0	0	1	0	0	1
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	90	90	90	90	90	90
Heavy Vehicles, %	0	0	10	0	0	10
Mvmt Flow	0	0	1	0	0	1
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	2	1	0	0	1	0
Stage 1	1	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	1026	1090	-	-	1635	-
Stage 1	1028	-	-	-	-	-
Stage 2	1028	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1026	1090	-	-	1635	-
Mov Cap-2 Maneuver	1026	-	-	-	-	-
Stage 1	1028	-	-	-	-	-
Stage 2	1028	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	-	1635	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

HCM 6th TWSC
5: Truax Dr & Site Access #2

Salem PacTrust Development TIA
Future 2023 Background - PM Peak

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	1	0	0	1
Future Vol, veh/h	0	0	1	0	0	1
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	90	90	90	90	90	90
Heavy Vehicles, %	0	0	10	0	0	10
Mvmt Flow	0	0	1	0	0	1
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	2	1	0	0	1	0
Stage 1	1	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	1026	1090	-	-	1635	-
Stage 1	1028	-	-	-	-	-
Stage 2	1028	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1026	1090	-	-	1635	-
Mov Cap-2 Maneuver	1026	-	-	-	-	-
Stage 1	1028	-	-	-	-	-
Stage 2	1028	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	-	1635	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	1	0	0	1
Future Vol, veh/h	0	0	1	0	0	1
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	90	90	90	90	90	90
Heavy Vehicles, %	0	0	10	0	0	10
Mvmt Flow	0	0	1	0	0	1
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	2	1	0	0	1	0
Stage 1	1	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	1026	1090	-	-	1635	-
Stage 1	1028	-	-	-	-	-
Stage 2	1028	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1026	1090	-	-	1635	-
Mov Cap-2 Maneuver	1026	-	-	-	-	-
Stage 1	1028	-	-	-	-	-
Stage 2	1028	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	0	0	0			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	-	1635	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

ID	Software/Method	Intersection	Control Type	LOS	Delay	V/C Ratio
1	Synchro HCM 6th Signal	Kuebler Blvd/Cordon Rd & Lancaster	Signal	B	16	0.35
3	Synchro HCM 6th Signal	Kuebler Blvd & Mill Creek Dr	Signal	A	5	0.45

APPENDIX E: HCM REPORTS – FUTURE BUILD

HCM 6th Signalized Intersection Summary

Salem PacTrust Development TIA

1: Kuebler Blvd/Cordon Rd & Lancaster Dr/Aumsville Hwy

Future 2023 Build - AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	357	139	45	135	57	109	218	150	187	350	69
Future Volume (veh/h)	66	357	139	45	135	57	109	218	150	187	350	69
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	1707	1737	1752	1767	1485	1796	1826	1796	1856	1856	1856	1752
Adj Flow Rate, veh/h	72	388	35	49	147	20	118	237	0	203	380	26
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, %	13	11	10	9	28	7	5	7	3	3	3	10
Cap, veh/h	85	558	341	100	416	443	205	772		254	1091	537
Arrive On Green	0.05	0.17	0.17	0.03	0.15	0.15	0.06	0.23	0.00	0.14	0.31	0.31
Sat Flow, veh/h	1626	3300	1485	3264	2822	1522	3374	3413	1572	1767	3526	1485
Grp Volume(v), veh/h	72	388	35	49	147	20	118	237	0	203	380	26
Grp Sat Flow(s),veh/h/ln	1626	1650	1485	1632	1411	1522	1687	1706	1572	1767	1763	1485
Q Serve(g_s), s	1.9	4.9	0.8	0.7	2.1	0.4	1.5	2.6	0.0	4.9	3.7	0.5
Cycle Q Clear(g_c), s	1.9	4.9	0.8	0.7	2.1	0.4	1.5	2.6	0.0	4.9	3.7	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	85	558	341	100	416	443	205	772		254	1091	537
V/C Ratio(X)	0.85	0.70	0.10	0.49	0.35	0.05	0.57	0.31		0.80	0.35	0.05
Avail Cap(c_a), veh/h	294	2465	1199	591	2108	1356	611	2240		440	2554	1153
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.8	17.3	13.4	21.1	16.9	11.2	20.2	14.2	0.0	18.3	11.8	9.2
Incr Delay (d2), s/veh	8.3	0.6	0.0	1.4	0.2	0.0	0.9	0.1	0.0	2.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.6	0.2	0.2	0.5	0.1	0.5	0.7	0.0	1.6	1.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.0	17.9	13.5	22.4	17.1	11.3	21.1	14.3	0.0	20.5	11.9	9.2
LnGrp LOS	C	B	B	C	B	B	C	B		C	B	A
Approach Vol, veh/h	495			216			355			A		
Approach Delay, s/veh	19.2			17.8			16.6			14.6		
Approach LOS	B			B			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.7	19.7	6.3	11.5	10.4	16.0	5.4	12.5				
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	4.0	6.0	4.0	5.0				
Max Green Setting (Gmax), s	8.0	32.0	8.0	33.0	11.0	29.0	8.0	33.0				
Max Q Clear Time (g_c+I1), s	3.5	5.7	3.9	4.1	6.9	4.6	2.7	6.9				
Green Ext Time (p_c), s	0.0	0.4	0.0	0.2	0.0	0.3	0.0	0.6				

Intersection Summary

HCM 6th Ctrl Delay 16.8

HCM 6th LOS B

Notes

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

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	217	162	15	145	0	23	0	5	0	0	17
Future Vol, veh/h	26	217	162	15	145	0	23	0	5	0	0	17
Conflicting Peds, #/hr	1	0	1	1	0	1	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	190	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	7	0	5	5	0	0	0	0	0	0	0
Mvmt Flow	29	241	180	17	161	0	26	0	6	0	0	19
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	162	0	0	422	0	0	595	586	333	589	676	162
Stage 1	-	-	-	-	-	-	390	390	-	196	196	-
Stage 2	-	-	-	-	-	-	205	196	-	393	480	-
Critical Hdwy	4.1	-	-	4.15	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.245	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1429	-	-	1121	-	-	419	425	713	423	378	888
Stage 1	-	-	-	-	-	-	638	611	-	810	742	-
Stage 2	-	-	-	-	-	-	802	742	-	636	558	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1428	-	-	1120	-	-	399	409	712	408	364	887
Mov Cap-2 Maneuver	-	-	-	-	-	-	399	409	-	408	364	-
Stage 1	-	-	-	-	-	-	625	598	-	793	730	-
Stage 2	-	-	-	-	-	-	773	730	-	618	546	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.8			13.8			9.1		
HCM LOS							B			A		
Minor Lane/Major Mvmt	NBLn1		NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1		
Capacity (veh/h)	399		712	1428	-	-	1120	-	-	-	887	
HCM Lane V/C Ratio	0.064		0.008	0.02	-	-	0.015	-	-	-	0.021	
HCM Control Delay (s)	14.6		10.1	7.6	-	-	8.3	-	-	-	9.1	
HCM Lane LOS	B		B	A	-	-	A	-	-	-	A	
HCM 95th %tile Q(veh)	0.2		0	0.1	-	-	0	-	-	-	0.1	

HCM 6th Signalized Intersection Summary

3: Kuebler Blvd & Mill Creek Dr

Salem PacTrust Development TIA
Future 2023 Build - AM Peak

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	16	9	468	105	11	523
Future Volume (veh/h)	16	9	468	105	11	523
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1826	1248	1826	1633	1500	1841
Adj Flow Rate, veh/h	18	0	532	78	12	594
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	5	44	5	18	27	4
Cap, veh/h	70	72	1117	847	499	1346
Arrive On Green	0.04	0.00	0.61	0.61	0.03	0.73
Sat Flow, veh/h	1739	1058	1826	1384	1428	1841
Grp Volume(v), veh/h	18	0	532	78	12	594
Grp Sat Flow(s),veh/h/ln	1739	1058	1826	1384	1428	1841
Q Serve(g_s), s	0.4	0.0	7.0	1.0	0.1	5.6
Cycle Q Clear(g_c), s	0.4	0.0	7.0	1.0	0.1	5.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	70	72	1117	847	499	1346
V/C Ratio(X)	0.26	0.00	0.48	0.09	0.02	0.44
Avail Cap(c_a), veh/h	715	464	1117	847	752	1346
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.4	0.0	4.7	3.5	3.1	2.3
Incr Delay (d2), s/veh	1.9	0.0	1.5	0.2	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	1.0	0.1	0.0	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.3	0.0	6.1	3.7	3.1	3.4
LnGrp LOS	C	A	A	A	A	A
Approach Vol, veh/h	18		610			606
Approach Delay, s/veh	22.3		5.8			3.4
Approach LOS	C		A			A
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	38.0		5.8		5.2	32.8
Change Period (Y+Rc), s	6.0		4.0		4.0	6.0
Max Green Setting (Gmax), s	32.0		18.0		9.0	19.0
Max Q Clear Time (g_c+l1), s	7.6		2.4		2.1	9.0
Green Ext Time (p_c), s	3.4		0.0		0.0	2.3
Intersection Summary						
HCM 6th Ctrl Delay			4.9			
HCM 6th LOS			A			

Intersection						
Int Delay, s/veh	2.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	9	19	31	58	119
Future Vol, veh/h	4	9	19	31	58	119
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	90	90	90	90	90	90
Heavy Vehicles, %	5	5	10	5	5	10
Mvmt Flow	4	10	21	34	64	132
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	298	38	0	0	55	0
Stage 1	38	-	-	-	-	-
Stage 2	260	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245	-
Pot Cap-1 Maneuver	687	1025	-	-	1531	-
Stage 1	977	-	-	-	-	-
Stage 2	777	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	656	1025	-	-	1531	-
Mov Cap-2 Maneuver	656	-	-	-	-	-
Stage 1	977	-	-	-	-	-
Stage 2	742	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.2	0		2.4		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	874	1531	-	
HCM Lane V/C Ratio	-	-	0.017	0.042	-	
HCM Control Delay (s)	-	-	9.2	7.5	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-	

Intersection						
Int Delay, s/veh	2.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	8	42	31	58	65
Future Vol, veh/h	5	8	42	31	58	65
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	90	90	90	90	90	90
Heavy Vehicles, %	5	5	10	5	5	10
Mvmt Flow	6	9	47	34	64	72
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	264	64	0	0	81	0
Stage 1	64	-	-	-	-	-
Stage 2	200	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245	-
Pot Cap-1 Maneuver	719	992	-	-	1498	-
Stage 1	951	-	-	-	-	-
Stage 2	827	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	687	992	-	-	1498	-
Mov Cap-2 Maneuver	687	-	-	-	-	-
Stage 1	951	-	-	-	-	-
Stage 2	790	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.3	0		3.5		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	847	1498	-	
HCM Lane V/C Ratio	-	-	0.017	0.043	-	
HCM Control Delay (s)	-	-	9.3	7.5	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-	

Intersection						
Int Delay, s/veh	3.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	8	65	32	58	12
Future Vol, veh/h	4	8	65	32	58	12
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	90	90	90	90	90	90
Heavy Vehicles, %	5	5	10	5	5	10
Mvmt Flow	4	9	72	36	64	13
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	231	90	0	0	108	0
Stage 1	90	-	-	-	-	-
Stage 2	141	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245	-
Pot Cap-1 Maneuver	751	960	-	-	1464	-
Stage 1	926	-	-	-	-	-
Stage 2	879	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	718	960	-	-	1464	-
Mov Cap-2 Maneuver	718	-	-	-	-	-
Stage 1	926	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.2	0		6.3		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-		863	1464	-
HCM Lane V/C Ratio	-	-		0.015	0.044	-
HCM Control Delay (s)	-	-		9.2	7.6	0
HCM Lane LOS	-	-		A	A	A
HCM 95th %tile Q(veh)	-	-		0	0.1	-

ID	Software/Method	Intersection	Control Type	LOS	Delay	V/C Ratio
1	Synchro HCM 6th Signal	Kuebler Blvd/Cordon Rd & Lancaster	Signal	B	17	0.39
3	Synchro HCM 6th Signal	Kuebler Blvd & Mill Creek Dr	Signal	A	5	0.40

HCM 6th Signalized Intersection Summary

Salem PacTrust Development TIA

1: Kuebler Blvd/Cordon Rd & Lancaster Dr/Aumsville Hwy

Future 2023 Build - PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	187	153	137	290	140	136	401	116	89	385	75
Future Volume (veh/h)	51	187	153	137	290	140	136	401	116	89	385	75
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	1900	1707	1856	1781	1752	1885	1870	1870	1559	1722	1870	1870
Adj Flow Rate, veh/h	55	201	36	147	312	38	146	431	0	96	414	23
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, %	0	13	3	8	10	1	2	2	23	12	2	2
Cap, veh/h	67	474	344	247	613	408	252	872		116	865	444
Arrive On Green	0.04	0.15	0.15	0.08	0.18	0.18	0.07	0.25	0.00	0.07	0.24	0.24
Sat Flow, veh/h	1810	3244	1572	3291	3328	1598	3456	3554	1321	1640	3554	1585
Grp Volume(v), veh/h	55	201	36	147	312	38	146	431	0	96	414	23
Grp Sat Flow(s),veh/h/ln	1810	1622	1572	1646	1664	1598	1728	1777	1321	1640	1777	1585
Q Serve(g_s), s	1.2	2.3	0.8	1.8	3.5	0.7	1.7	4.3	0.0	2.4	4.1	0.4
Cycle Q Clear(g_c), s	1.2	2.3	0.8	1.8	3.5	0.7	1.7	4.3	0.0	2.4	4.1	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	67	474	344	247	613	408	252	872		116	865	444
V/C Ratio(X)	0.83	0.42	0.10	0.59	0.51	0.09	0.58	0.49		0.82	0.48	0.05
Avail Cap(c_a), veh/h	352	2527	1340	721	2674	1397	673	2682		359	2768	1293
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.7	16.0	12.8	18.4	15.1	11.7	18.4	13.3	0.0	18.8	13.3	10.8
Incr Delay (d2), s/veh	9.2	0.2	0.0	0.8	0.2	0.0	0.8	0.2	0.0	5.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.7	0.2	0.6	1.0	0.2	0.5	1.1	0.0	0.8	1.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.8	16.2	12.9	19.2	15.3	11.7	19.2	13.5	0.0	24.3	13.5	10.8
LnGrp LOS	C	B	B	B	B	B	B	B		C	B	B
Approach Vol, veh/h	292				497				577			
Approach Delay, s/veh	18.2				16.2				14.9			
Approach LOS	B				B				B			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	16.0	5.5	12.6	6.9	16.1	7.1	11.0				
Change Period (Y+Rc), s	4.0	6.0	4.0	5.0	4.0	6.0	4.0	5.0				
Max Green Setting (Gmax), s	8.0	32.0	8.0	33.0	9.0	31.0	9.0	32.0				
Max Q Clear Time (g_c+I1), s	3.7	6.1	3.2	5.5	4.4	6.3	3.8	4.3				
Green Ext Time (p_c), s	0.0	0.5	0.0	0.4	0.0	0.5	0.0	0.3				

Intersection Summary

HCM 6th Ctrl Delay 15.9

HCM 6th LOS B

Notes

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

Intersection												
Int Delay, s/veh	3.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	225	14	1	250	0	87	0	7	6	0	54
Future Vol, veh/h	6	225	14	1	250	0	87	0	7	6	0	54
Conflicting Peds, #/hr	4	0	1	1	0	4	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	190	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	0	3	0	0	4	0	0	0	0	0	0	0
Mvmt Flow	7	278	17	1	309	0	107	0	9	7	0	67
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	313	0	0	296	0	0	647	617	288	620	625	313
Stage 1	-	-	-	-	-	-	302	302	-	315	315	-
Stage 2	-	-	-	-	-	-	345	315	-	305	310	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1259	-	-	1277	-	-	387	408	756	403	404	732
Stage 1	-	-	-	-	-	-	712	668	-	700	659	-
Stage 2	-	-	-	-	-	-	675	659	-	709	663	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1254	-	-	1276	-	-	349	403	755	395	399	729
Mov Cap-2 Maneuver	-	-	-	-	-	-	349	403	-	395	399	-
Stage 1	-	-	-	-	-	-	707	663	-	694	656	-
Stage 2	-	-	-	-	-	-	613	656	-	697	658	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0			19.1			11		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1		NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1		
Capacity (veh/h)	349		755	1254	-	-	1276	-	-	672		
HCM Lane V/C Ratio	0.308		0.011	0.006	-	-	0.001	-	-	0.11		
HCM Control Delay (s)	19.8		9.8	7.9	-	-	7.8	-	-	11		
HCM Lane LOS	C		A	A	-	-	A	-	-	B		
HCM 95th %tile Q(veh)	1.3		0	0	-	-	0	-	-	0.4		

HCM 6th Signalized Intersection Summary

3: Kuebler Blvd & Mill Creek Dr

Salem PacTrust Development TIA
Future 2023 Build - PM Peak

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	66	5	648	11	4	671
Future Volume (veh/h)	66	5	648	11	4	671
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1811	1900	1900	1856
Adj Flow Rate, veh/h	69	1	675	8	4	699
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	6	0	0	3
Cap, veh/h	190	184	1167	1038	475	1342
Arrive On Green	0.10	0.10	0.64	0.64	0.01	0.72
Sat Flow, veh/h	1810	1610	1811	1610	1810	1856
Grp Volume(v), veh/h	69	1	675	8	4	699
Grp Sat Flow(s),veh/h/ln	1810	1610	1811	1610	1810	1856
Q Serve(g_s), s	2.1	0.0	12.3	0.1	0.0	9.7
Cycle Q Clear(g_c), s	2.1	0.0	12.3	0.1	0.0	9.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	190	184	1167	1038	475	1342
V/C Ratio(X)	0.36	0.01	0.58	0.01	0.01	0.52
Avail Cap(c_a), veh/h	561	515	1167	1038	738	1342
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	22.8	5.9	3.7	4.6	3.6
Incr Delay (d2), s/veh	1.2	0.0	2.1	0.0	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	2.6	0.0	0.0	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.4	22.8	7.9	3.7	4.6	5.0
LnGrp LOS	C	C	A	A	A	A
Approach Vol, veh/h	70		683			703
Approach Delay, s/veh	25.3		7.9			5.0
Approach LOS	C		A			A
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	48.0		10.1		4.6	43.4
Change Period (Y+Rc), s	6.0		4.0		4.0	6.0
Max Green Setting (Gmax), s	42.0		18.0		9.0	29.0
Max Q Clear Time (g_c+I1), s	11.7		4.1		2.0	14.3
Green Ext Time (p_c), s	4.4		0.1		0.0	3.4
Intersection Summary						
HCM 6th Ctrl Delay			7.3			
HCM 6th LOS			A			

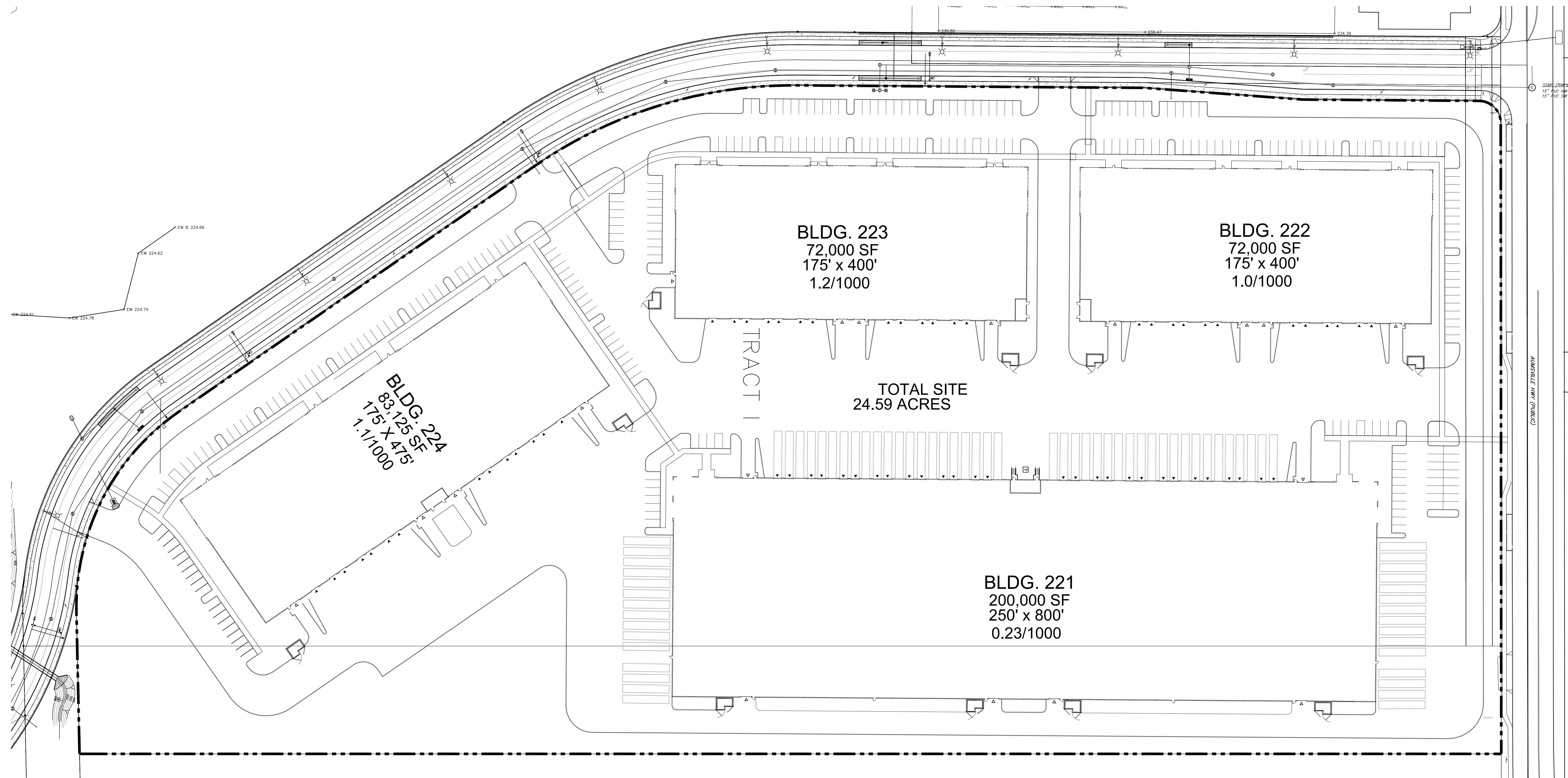
Intersection						
Int Delay, s/veh	3.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	31	63	3	5	10
Future Vol, veh/h	16	31	63	3	5	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	10	5	5	10
Mvmt Flow	18	34	70	3	6	11
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	95	72	0	0	73	0
Stage 1	72	-	-	-	-	-
Stage 2	23	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245	-
Pot Cap-1 Maneuver	897	982	-	-	1508	-
Stage 1	943	-	-	-	-	-
Stage 2	992	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	893	982	-	-	1508	-
Mov Cap-2 Maneuver	893	-	-	-	-	-
Stage 1	943	-	-	-	-	-
Stage 2	988	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9	0		2.5		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-		950	1508	
HCM Lane V/C Ratio	-	-		0.055	0.004	
HCM Control Delay (s)	-	-		9	7.4	
HCM Lane LOS	-	-		A	A	
HCM 95th %tile Q(veh)	-	-		0.2	0	

Intersection						
Int Delay, s/veh	4.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	31	35	2	5	21
Future Vol, veh/h	17	31	35	2	5	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	90	90	90	90	90	90
Heavy Vehicles, %	5	5	10	5	5	10
Mvmt Flow	19	34	39	2	6	23
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	75	40	0	0	41	0
Stage 1	40	-	-	-	-	-
Stage 2	35	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245	-
Pot Cap-1 Maneuver	921	1023	-	-	1549	-
Stage 1	975	-	-	-	-	-
Stage 2	980	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	917	1023	-	-	1549	-
Mov Cap-2 Maneuver	917	-	-	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	976	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.9	0		1.4		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	983	1549	-	
HCM Lane V/C Ratio	-	-	0.054	0.004	-	
HCM Control Delay (s)	-	-	8.9	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0.2	0	-	

Intersection						
Int Delay, s/veh	4.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	31	6	3	4	34
Future Vol, veh/h	17	31	6	3	4	34
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	90	90	90	90	90	90
Heavy Vehicles, %	5	5	10	5	5	10
Mvmt Flow	19	34	7	3	4	38
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	55	9	0	0	10	0
Stage 1	9	-	-	-	-	-
Stage 2	46	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245	-
Pot Cap-1 Maneuver	945	1064	-	-	1590	-
Stage 1	1006	-	-	-	-	-
Stage 2	969	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	942	1064	-	-	1590	-
Mov Cap-2 Maneuver	942	-	-	-	-	-
Stage 1	1006	-	-	-	-	-
Stage 2	966	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.7	0		0.8		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	1017	1590	-	
HCM Lane V/C Ratio	-	-	0.052	0.003	-	
HCM Control Delay (s)	-	-	8.7	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0.2	0	-	

ID	Software/Method	Intersection	Control Type	LOS	Delay	V/C Ratio
1	Synchro HCM 6th Signal	Kuebler Blvd/Cordon Rd & Lancaster	Signal	B	16	0.38
3	Synchro HCM 6th Signal	Kuebler Blvd & Mill Creek Dr	Signal	A	7	0.48

APPENDIX F: SITE PLAN

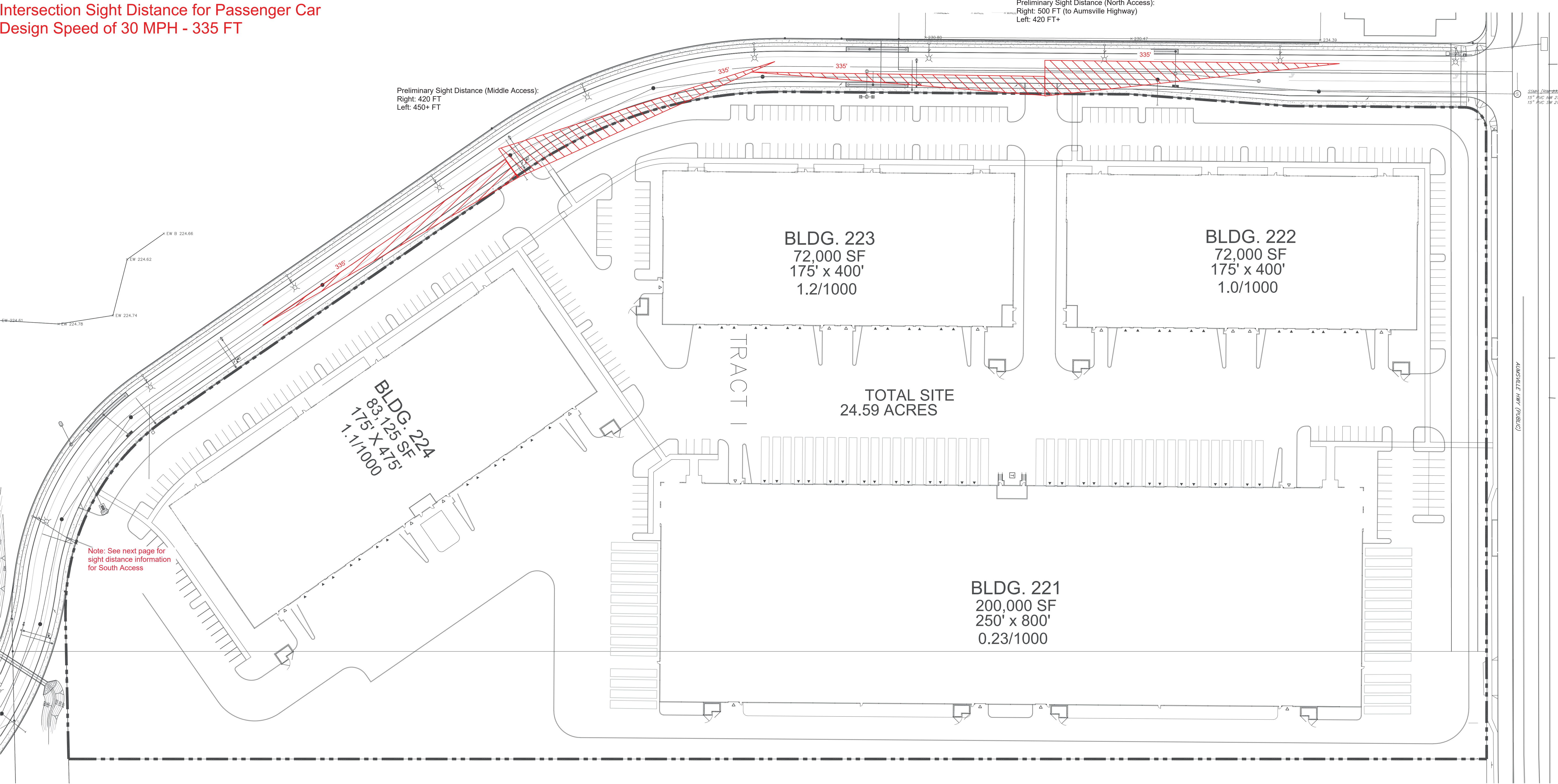


ENLARGED SITE PLAN
SCALE: 1" = 50'-0"

TOTAL SITE AREA:	1,070,926 SF (24.59 Acres)
TOTAL LANDSCAPE AREA:	219,803 SF
PERCENTAGE OF SITE:	20.5%
TOTAL HARDSCAPE AREA:	
SIDEWALK:	21,048 SF
PERCENTAGE OF SITE:	1.97%
PAVING:	404,445 SF
PERCENTAGE OF SITE:	37.77%
TOTAL BUILDING AREA:	422,750 SF
PERCENTAGE OF SITE:	39.5%

APPENDIX G: INTERSECTION SIGHT DISTANCE TRIANGLES

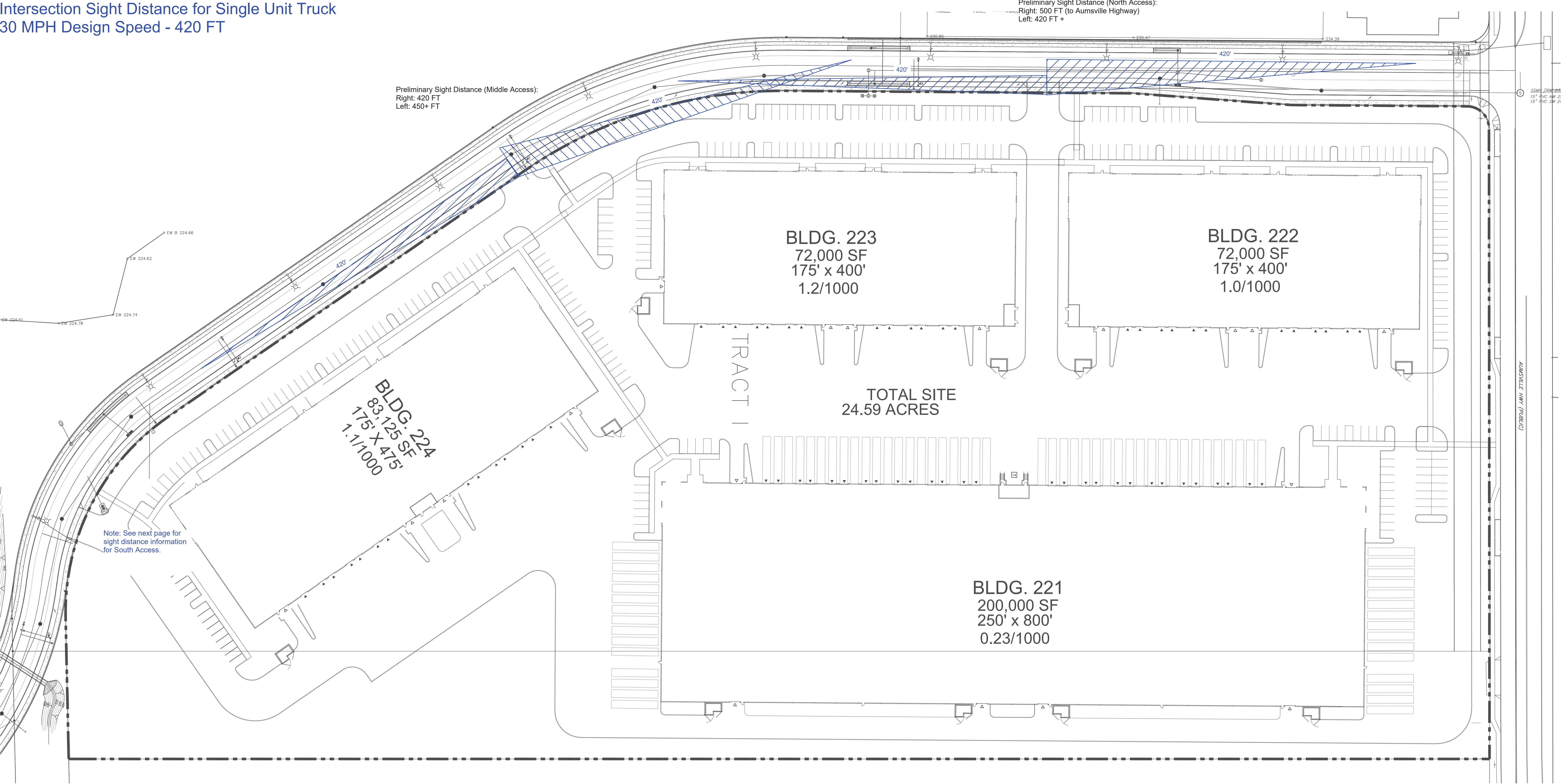
Intersection Sight Distance for Passenger Car
Design Speed of 30 MPH - 335 FT



ENLARGED SITE PLAN
SCALE: 1" = 50'-0"

TOTAL SITE AREA:	1,070,926 SF (24.59 Acres)
TOTAL LANDSCAPE AREA:	219,803 SF
PERCENTAGE OF SITE:	20.5%
TOTAL HARDSCAPE AREA:	
SIDEWALK:	21,048 SF
PERCENTAGE OF SITE:	1.97%
PAVING:	404,445 SF
PERCENTAGE OF SITE:	37.77%
TOTAL BUILDING AREA:	422,750 SF
PERCENTAGE OF SITE:	39.5%

Intersection Sight Distance for Single Unit Truck
30 MPH Design Speed - 420 FT



ENLARGED SITE PLAN
SCALE: 1" = 50'-0"

TOTAL SITE AREA:	1,070,926 SF (24.59 Acres)
TOTAL LANDSCAPE AREA:	219,803 SF
PERCENTAGE OF SITE:	20.5%
TOTAL HARDSCAPE AREA:	
SIDEWALK:	21,048 SF
PERCENTAGE OF SITE:	1.97%
PAVING:	404,445 SF
PERCENTAGE OF SITE:	37.77%
TOTAL BUILDING AREA:	422,750 SF
PERCENTAGE OF SITE:	39.5%

ISD for Passenger Car @ 30 MPH - 335 FT

ISD for Single Unit Truck @ 30 MPH - 420 FT

Preliminary Sight Distance (South Access):
Right: 420 FT +
Left: 420 FT

NEW PROPERTY LINE

PHASE LINE

BLDG. 224
(FUTURE PHASE)

PHASE LINE &
NEW PROPERTY LINE

