TRAFFIC IMPACT ANALYSIS

For

Hix Snedeker Companies, LLC
Proposed Circle K

Property Located at:

Parcel #34-3S-16-02465-010
4706 West US Highway 90
Lake City, Columbia County, FL

Prepared by:

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June 2, 2025

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TABLE OF CONTENTS

APPENDICES

INTRODUCTION

It is proposed to construct a Circle K fuel station and convenience store located within the southeast quadrant of the intersection of US Highway 90 and SW Pinemount Road/NW Turner Ave in Lake City, Columbia County, Florida (see Figure 1 in Appendix A). The site is designated as Parcel Number 34-3S-16-02465-010. The site is currently an undeveloped pad within The Shoppes at Heritage Oaks shopping center. It is proposed construct a fuel station with ten (10) vehicle fueling positions and 3,956 SF convenience store (The Project). It is proposed to construct one (1) right-in/right-out driveway along Pinemount Road. Additionally, one cross access point is proposed to the adjacent shopping center. Access to the adjacent shopping center is provided via one (1) right-in/right-out driveway along US Highway 90, two (2) full-movement driveways along SW Stonegate Terrace and two (2) full-movement driveways along SW Pinemount Road. A copy of the Site Plan is included in Appendix H.

Dynamic Traffic, LLC has been retained to prepare this study to assess the traffic impact associated with the construction of The Project on the adjacent roadway network. This study documents the methodology, analyses, findings and conclusions of our study and includes:

- A detailed inspection was conducted to obtain an inventory of existing roadway geometry, traffic control, and location and geometry of existing driveways and intersections.

- Existing traffic data was collected via turning movement counts (TMC) during the weekday morning and weekday afternoon peak periods at the following intersections:

    - US Highway 90 & SW Pinemount Road/NW Turner Avenue
    - US Highway 90 & Shopping Center Driveway
    - SW Pinemount Road & Northern Shopping Center Driveway

- Projections of traffic to be generated by the proposed development were prepared utilizing trip generation data as published by the Institute of Transportation Engineers. Site traffic was then assigned to the adjacent street system based upon the anticipated directional distribution.

- Capacity analyses were conducted for the Future No Build and Build conditions for the study intersections.

- The need for auxiliary lanes at the proposed site driveway along SW Pinemount Road was assessed using the methodology provided by NCHRP Report 457, HCS, and the latest version of the FDOT Design Standards.

EXISTING CONDITIONS

A review of the existing roadway conditions near the proposed site was conducted to provide the basis for assessing the traffic impact of the development.

Existing Roadway Conditions

The following are descriptions of the roadways in the study area:

US Highway 90 is an Urban Minor Arterial roadway under FDOT jurisdiction with a general east/west orientation. The roadway is designated as Access Classification 5 along the site frontage. The posted speed limit is 45 MPH along the site frontage. The roadway provides two vehicular travel lanes and one bike lane in each direction separated by an curbed median with directional median openings provided at key driveways and intersections. Curb and sidewalk are provided along both sides of the roadway. US Highway 90 provides a straight horizontal alignment along the site frontage and a relatively flat vertical alignment. The land uses along US Highway 441 in the vicinity of The Project are primarily commercial.

SW Pinemount Road is an Urban Major Collector roadway under Columbia County jurisdiction with a general north/south orientation. The posted speed limit is 40 MPH. The roadway provides one travel lane in the northbound direction and two travel lanes in the southbound direction along the site frontage before merging down to one lane to the south of the site. A center concrete median is provided along the shopping center frontage with median openings provided at key driveway intersections. Curb and sidewalk are provided along both sides of the roadway. SW Pinemount Road provides a straight horizontal alignment and a relatively flat vertical alignment. The land uses along SW Pinemount Road in the vicinity of The Project are mixed commercial and residential.

NW Turner Avenue is an Urban Local roadway under municipal jurisdiction with a general north/south orientation. The posted speed limit is 35 MPH. The roadway generally provides one travel lane in each direction with turn lanes and a center concrete median proximate to US Highway 90. Neither curb nor sidewalk are provided along either side of the roadway. NW Turner Avenue provides a relatively straight horizontal alignment and a slight crest vertical curve just north of US Highway 90. The land uses along NW Turner Avenue in the vicinity of The Project are mixed commercial and residential.

Existing Traffic Volumes

Manual turning movement (MTM) counts were conducted on Tuesday, April 22, 2025 from 7:00 to 9:00 AM and from 3:00 to 6:00 PM at the following intersections:

- US Highway 90 & SW Pinemount Road/NW Turner Avenue
- US Highway 90 & Shopping Center Driveway
- SW Pinemount Road & Northern Shopping Center Driveway

The 2024 Peak Season Factor Category Report for Columbia County was referenced to determine the peak season correction factor (PSCF) during the week of the MTM counts. The counts were conducted during Week 17, which spans from Monday, April 21, 2025 to Sunday, April 27, 2025. Week 17 falls within the “peak season” of traffic in Columbia County with a PSCF of 0.99. As such, no seasonal adjustment was applied to the existing traffic volumes. The Peak Season Factor Category Report for Columbia County is contained in Appendix B.

Figure 2, located in Appendix A, shows the existing peak hour traffic volumes at the study intersections. All traffic volume data is contained in Appendix B.

FUTURE CONDITIONS

Traffic volumes and operational analyses were developed for both the No Build and Build conditions. The No Build conditions provide a baseline for assessing the impact of the site development traffic on the roadway system. The process of developing the No Build and Build traffic volumes and the subsequent analyses is outlined below.

Background Growth

Regardless of whether the subject site is developed or not, traffic volumes on the surrounding roadways are expected to increase as a result of developments throughout the region. Growth rates were prepared using FDOT's Traffic Trends Analysis Tool, which are contained in Appendix F. US Highway 90 to the east of SW Pinemount Road/NW Turner Ave was found to have to a compound annual historic growth rate of 4.96%, US Highway 90 to the west of SW Pinemount Road/NW Turner Ave was found to have a compound annual historic growth rate of 4.48%, and SW Pinemount Road was found to have a compound annual historic growth rate of 5.27%. In an effort to remain conservative, the highest growth rate of 5.27% was utilized as the background traffic growth rate herein.

Area Developments

Through consultation with both the Lake City Growth Management Office and Columbia County Planning and Zoning Department, there are no other developments in the vicinity of the site that have been approved but not yet fully constructed that are identified as significant traffic generators. It was assumed that the background growth rate was adequate to account for the traffic associated with all developments not listed.

Future No Build traffic volumes were developed by applying the background growth rate of 5.27% for two (2) years to the study area roadways existing traffic volumes. Figure 3, in Appendix A, shows the No Build traffic volumes.

Traffic Generation

Trip generation projections for the proposed development were prepared utilizing the Institute of Transportation Engineers (ITE) publication *Trip Generation Manual, 11th Edition* utilizing Land Use Code (LUC) 945 - Convenience Store/Gas Station. The trip generation worksheets and applicable excerpts from the ITE *Trip Generation Manual* are included in Appendix D.

Passby Traffic

According to studies conducted by ITE, traffic associated with LUC 945 is not 100% newly generated. Rather, a portion of the traffic is diverted from the existing traffic stream on the adjacent roadway network. This is because the proposed convenience store/gas station is not exclusively a destination land use, instead patrons stop on their way to/from other locations such as home or work. ITE identifies a passby traffic percentage of 76% during the weekday morning peak hour and 75% during the weekday evening peak hour for LUC 945.

Table 1 below details the weekday morning and weekday evening traffic volumes associated with the subject project taking into account the passby credits. Note that these trip generation calculations are also highly conservative since they take no credit for the internal capture that is likely to occur between the proposed Circle K and the existing shopping center land uses due to shared customers.

Table 1
Trip Generation Considering Passby Traffic

Land Use	Trip Type	AM PSH			PM PSH		
		In	Out	Total	In	Out	Total
3,956 SF Convenience Store/Gas Station w/ 10 VFP	Total	112	112	224	108	108	216
	Passby	85	85	170	81	81	162
	New (Primary)	**27**	**27**	**54**	**27**	**27**	**54**

Once the magnitude of traffic to be generated by the site is known, it is necessary to assign that traffic to the adjacent street system. The distribution of new traffic to the surrounding roadways is based on the location of primary arterial roadways, major signalized intersections and existing traffic patterns. Figures 4-8, located in Appendix A, illustrate the Primary Traffic Trip Distribution, Primary Site Generated Volumes, Passby Traffic Trip Distribution, Passby Site Generated Volumes, and the Total Site Generated Volumes, respectively. Figure 9 illustrates the Traffic Diversions due to the closure of the median opening at the existing site driveway. The Removal of Existing Site Generated Trips, Total Site Generated Volumes and Traffic Diversions assigned to the study area network were added to the No Build traffic volumes to generate the Build traffic volumes, which are shown in Figure 10.

Future Capacity Analysis

The methodology utilized in the capacity analyses is described in the *Highway Capacity Manual*, published by the Transportation Research Board. In general, the term Level of Service (LOS) is used to provide a "qualitative" evaluation of capacity based upon certain "quantitative" calculations related to empirical values, such as traffic volume and intersection control.

At the signalized intersections, factors that affect the various approach capacities include width of approach, number of lanes, signal "green time", turning percentages, truck volumes, etc. However, delays cannot be related to capacity in a simple one-to-one fashion. For example, it is possible to have delays in the Level of Service "F" range without exceeding roadway capacity. Substantial delays can exist without exceeding capacity if one or more of the following conditions exist: long signal cycle lengths; a particular traffic movement experiences a long red time; or progressive movement for a particular lane group is poor. Table 2 describes the level of service ranges for signalized intersections.

An unsignalized (STOP sign controlled) driveway or side street along a through route is seldom critical from an overall capacity standpoint, however, it may be of great significance to the capacity of the minor cross-route, and it may influence the quality of traffic flow on both. When analyzing an unsignalized intersection, it is assumed that both the major street through and right turn movements are unimpeded and have the right-of-way over all side street traffic and left turns from the major street. All other turning movements in the intersection cross, merge with, or are otherwise impeded by major street movements. Traffic delays at unsignalized intersections are determined by sequentially processing these impeded movements. Table 3 describes the level of service ranges for unsignalized (stop controlled) intersections.

Table 2
Level of Service Criteria
for Signalized Intersections

Level of Service	Average Control Delay (seconds per vehicle)
A	0.0 to 10.0
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	greater than 80.0

Table 3
Level of Service Criteria
for Unsignalized Intersections

Level of Service	Average Control Delay (seconds per vehicle)
a	0.0 to 10.0
b	10.1 to 15.0
c	15.1 to 25.0
d	25.1 to 35.0
e	35.1 to 50.0
f	greater than 50.0

All capacity analyses were performed utilizing the Synchro software package (Version 12). Tables 4A and 4B summarizes the future levels of service (LOS), delays, and volume-to-capacity ratios (v/c). All capacity analysis calculation worksheets are contained in Appendix C.

Table 4A
Future Levels of Service – Weekday Morning Peak Hour

Intersection	Direction/ Movement		No Build			Build		
			LOS	Delay	V/C	LOS	Delay	V/C
US Highway 90 & SW Pinemount Road/ NW Turner Avenue	EB	L	A	8.7	0.11	A	8.7	0.11
		TR	C	21.9	0.63	C	23.1	0.65
	WB	L	B	10.5	0.27	B	12.7	0.42
		T	B	16.2	0.35	B	15.5	0.31
		R	A	0.3	0.11	A	0.2	0.10
	NB	L	C	27.2	0.19	C	29.1	0.32
		T	D	42.9	0.32	D	44.6	0.36
		R	B	15.1	0.66	B	15.8	0.68
	SB	L	D	35.9	0.52	D	38.5	0.57
		T	D	38.5	0.07	D	38.9	0.08
		R	A	0.6	0.12	A	0.7	0.12
	Overall		**B**	**19.6**	**-**	**C**	**20.5**	**-**
US Highway 90 & Shopping Center Driveway	NB	R	b	13.4	0.031	c	15.1	0.182
SW Pinemount Road & Northern Shopping Center Drive	WB	LR	b	11.7	0.115	b	13.1	0.156
	SB	L	a	8.2	0.030	a	8.3	0.076
SW Pinemount Road & Proposed Site Driveway	WB	R	-	-	-	b	11.0	0.083

a - Unsignalized Intersection Level of Service
A - Signalized Intersection Level of Service

Table 4B
Future Levels of Service – Weekday Evening Peak Hour

Intersection	Direction/ Movement		No Build			Build		
			LOS	Delay	V/C	LOS	Delay	V/C
US Highway 90 & SW Pinemount Road/ NW Turner Avenue	EB	L	B	12.1	0.08	B	12.9	0.09
		TR	C	25.5	0.42	C	28.4	0.44
	WB	L	B	16.4	0.59	B	18.8	0.66
		T	B	18.4	0.36	B	18.5	0.35
		R	A	1.4	0.14	A	1.4	0.14
	NB	L	D	48.3	0.36	D	49.1	0.42
		T	E	76.6	0.39	E	77.0	0.41
		R	A	3.8	0.39	A	3.7	0.39
	SB	L	E	58.2	0.67	E	60.3	0.69
		T	E	57.2	0.19	E	59.6	0.24
		R	A	0.5	0.09	A	0.7	0.11
	Overall		**C**	**24.5**	**-**	**C**	**26.4**	**-**
US Highway 90 & Shopping Center Driveway	NB	R	b	12.3	0.053	b	13.5	0.177
SW Pinemount Road & Northern Shopping Center Drive	WB	LR	b	12.6	0.269	b	14.5	0.327
	SB	L	a	7.7	0.058	a	7.8	0.092
SW Pinemount Road & Proposed Site Driveway	WB	R	-	-	-	c	21.8	0.443

a - Unsignalized Intersection Level of Service
A - Signalized Intersection Level of Service

US Highway 90 & SW Pinemount Road/NW Turner Avenue

SW Pinemount Road and NW Turner Avenue intersect US Highway 90 to form a four-leg intersection controlled by a traffic signal. The signal timing directive was obtained from FDOT which indicates that a four-phase 150 background cycle length is utilized during the weekday evening peak hour and a four-phase free cycle is utilized at all other times. The traffic signal timing directive is included in Appendix G.

The eastbound approach of US Highway 90 provides one left turn lane and two through lanes, while the westbound approach provides one left turn lane, two through lanes, and one right turn lane. The northbound approach of SW Pinemount Road provides one left turn lane, one through lane, and one channelized right turn lane operating under yield control. The southbound approach of NW Turner Avenue provides one left turn lane, one through lane, and one channelized right turn lane operating under yield control.

With the addition of site generated traffic, the intersection is anticipated to operate at overall intersection level of service “C” during the analyzed peak hours. Additionally, each movement is anticipated to continue to operate at No Build levels of service “E” or better. See Tables 4A and 4B for the individual movement levels of service and delays.

US Highway 90 & Shopping Center Driveway

The shopping center driveway intersects US Highway 90 to form an unsignalized T-intersection with the northbound approach of the shopping center driveway operating under stop control. The eastbound approach of US Highway 441 provides one through lane and one shared through/right turn lane. The northbound approach of the shopping center driveway provides one dedicated right turn lane. The westbound approach of US Highway 90 is separated by a curbed median and does not influence the operation of the intersection.

With the addition of site generated traffic, the individual intersection movements are anticipated to operate at levels of service “C” or better during the studied peak hours. See Tables 4A and 4B for the individual movement levels of service and delays.

SW Pinemount Road & Northern Shopping Center Driveway

The northern shopping center driveway, also known as SW Heritage Oaks Circle, intersects SW Pinemount Road to form an unsignalized T-intersection with the westbound approach of the shopping center driveway operating under stop control. The northbound approach of SW Pinemount Road provides one shared through/right turn lane while the southbound approach provides one left turn lane and two through lanes. The westbound approach of the shopping center driveway provides one shared left turn/right turn lane. It is noted that several southbound vehicles were observed to perform U-turns at this intersection. As HCM capacity analysis methodology cannot analyze U-turn movements, the U-turns were assumed to be left turns for the analyses contained in this report.

With the addition of site generated traffic, the individual intersection movements are anticipated to continue to operate at No Build levels of service “B” or better during the studied peak hours. See Tables 4A and 4B for the individual movement levels of service and delays.

SW Pinemount Road & Proposed Site Driveway

The site driveway is proposed to intersect SW Pinemount Road to form an unsignalized T-intersection with the westbound approach of the site driveway to operate under stop control. The northbound approach of SW Pinemount is proposed to provide one shared through/right turn lane. The westbound approach of the site driveway is proposed to provide one dedicated right turn lane. The southbound approach of SW Pinemount Road is proposed to be separated by a curbed median and would not influence the intersection.

As designed, the driveway is anticipated to operate at levels of service "C" or better during the studied peak hours. See Tables 4A and 4B for the individual movement levels of service and delays.

Queue Analysis

Queue length conditions at the study intersections were analyzed under the No Build and Build conditions. The 95th percentile queues for each study peak hour are summarized in Table 5 below.

Table 5
Future Queue Analysis

Intersection	Direction/ Movement		Storage Length	AM PSH		PM PSH	
				No Build	Build	No Build	Build
US Highway 90 & SW Pinemount Road/ NW Turner Avenue	EB	L	235'	25'	25'	28'	28'
		TR	-	231'	234'	323'	353'
	WB	L	390'	37'	52'	166'	195'
		T	-	136'	128'	266'	257'
		R	-	0'	0'	17'	17'
	NB	L	240'	64'	92'	90'	127'
		T	-	71'	74'	83'	88'
		R	150'	61'	62'	0'	0'
	SB	L	200'	132'	135'	245'	247'
		T	-	32'	33'	87'	87'
		R	60'	0'	0'	0'	0'
US Highway 90 & Shopping Center Driveway	NB	R	-	3'	18'	5'	15'
SW Pinemount Road & Northern Shopping Center Driveway	WB	LR	-	10'	15'	28'	35'
	SB	L	185'	3'	5'	5'	8'
SW Pinemount Road & Proposed Site Driveway	WB	R	-	-	8'	-	55'

US Highway 90 & SW Pinemount Road/NW Turner Avenue

With the addition of site generated traffic, there is anticipated to be a maximum increase in the 95th percentile queues of approximately one (1) vehicle for any movements on the eastbound, westbound, or southbound approaches to the intersection. The northbound approach experiences a maximum increase in 95th percentile queues of approximately two (2) vehicles or less since it is anticipated to be utilized by exiting site traffic to reach the traffic signal. The egress side of the proposed Pinemount Road driveway is located approximately 200' from the northbound stop bar approaching the intersection. As such, even under 95th percentile conditions in the critical peak hour, the northbound queue of 127' or less does not extend past and block the driveway. It is not anticipated that the increase in queues will have a detrimental impact on the operation of the intersection. See Table 5 for the individual movement 95th percentile queues.

US Highway 90 & Shopping Center Driveway

With the addition of site generated traffic, there is anticipated to be an increase of less than one (1) vehicle in the 95th percentile queues for any movements at the intersection. It is not anticipated that the increase in queues will have a detrimental impact on the operation of the intersection. See Table 5 for the individual movement 95th percentile queues.

SW Pinemount Road & Northern Shopping Center Driveway

With the addition of site generated traffic, there is anticipated to be an increase of less than one (1) vehicle in the 95th percentile queues for any movements at the intersection. It is not anticipated that the increase in queues will have a detrimental impact on the operation of the intersection. See Table 5 for the individual movement 95th percentile queues.

SW Pinemount Road & Proposed Site Driveway

As designed, the site driveway is anticipated to operate with a 95th percentile queue length of approximately two (2) vehicles. The driveway is proposed to provide a throat length of at least 100 feet prior to the first on-site intersection. Therefore, it is not anticipated that this queue will impact on-site circulation. See Table 5 for the individual movement 95th percentile queues.

Turn Lane Warrant Analysis

The proposed intersection of the site driveway with SW Pinemount Road was reviewed to determine if a right turn lane into the site will be warranted with the construction of The Project. The turn lane warrants are detailed in NHCRP Report 457, which includes traffic-volume-based guidelines for where turn lanes should be provided. The Build Traffic Volumes were compared to the NCHRP warrants and it was determined that the right turn warrants were not met during either peak hour. As such, no right turn lane is proposed. The warrant analyses are located in Appendix E.

FINDINGS & CONCLUSIONS

Findings

Based upon the detailed analyses as documented herein, the following findings are noted:

- The proposed Circle K fuel station and convenience store is anticipated to generate 27 entering trips and 27 exiting trips during the weekday morning peak hour and 27 entering trips and 27 exiting trips during the weekday evening peak hour that are "new" to the adjacent roadway network.

- Access to the site is proposed to be provided via one (1) right-in/right-out driveway along Pinemount Road. Additionally, one cross access point is proposed to the adjacent shopping center. Access to the adjacent shopping center is provided via one (1) right-in/right-out driveway along US Highway 90, two (2) full-movement driveways along SW Stonegate Terrace and two (2) full-movement driveways along SW Pinemount Road..

- With the addition of site generated traffic, the intersection of US Highway 90 & SW Pinemount Road/NW Turner Avenue is anticipated to operate at level of service "C" during the studied peak hours.

- With the addition of site generated traffic, the individual intersection movements of US Highway 90 and the shopping center driveway are anticipated to operate at levels of service "C" or better during the studied peak hours.

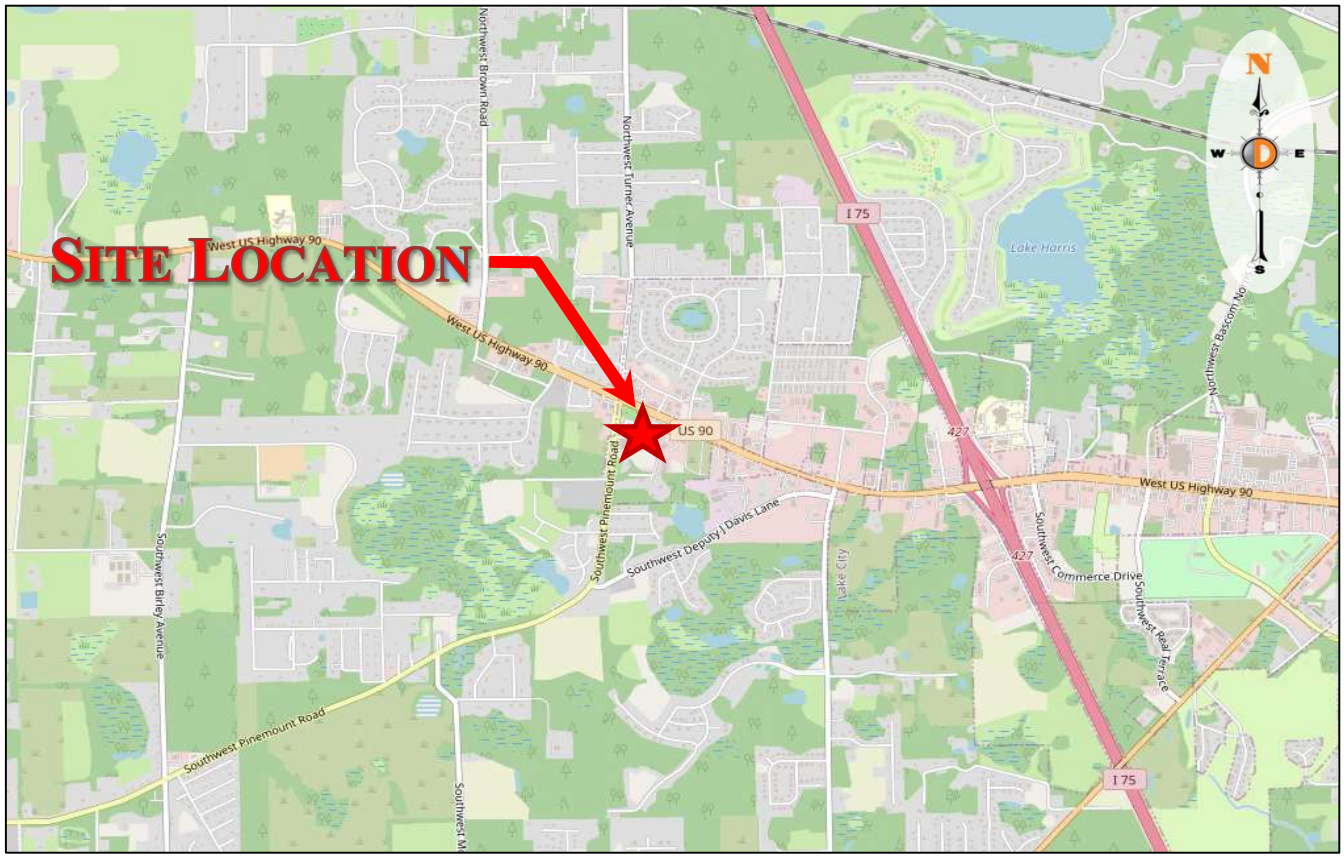
- With the addition of site generated traffic, the individual intersection movements of SW Pinemount Road and the northern shopping center driveway are anticipated to continue to operate at No Build levels of service "B" or better during the studied peak hours.

- As designed, the intersection of SW Pinemount Road and the site driveway is anticipated to operate at levels of service "C" or better.

Conclusions

Based upon our Traffic Impact Analysis as detailed in the body of this report, it is the professional opinion of Dynamic Traffic, LLC that the adjacent street system of Lake City, Columbia County, and FDOT are not anticipated to experience any significant degradation in operating conditions with the construction of The Project. The site driveway is located to provide safe and efficient access to the adjacent roadway system.

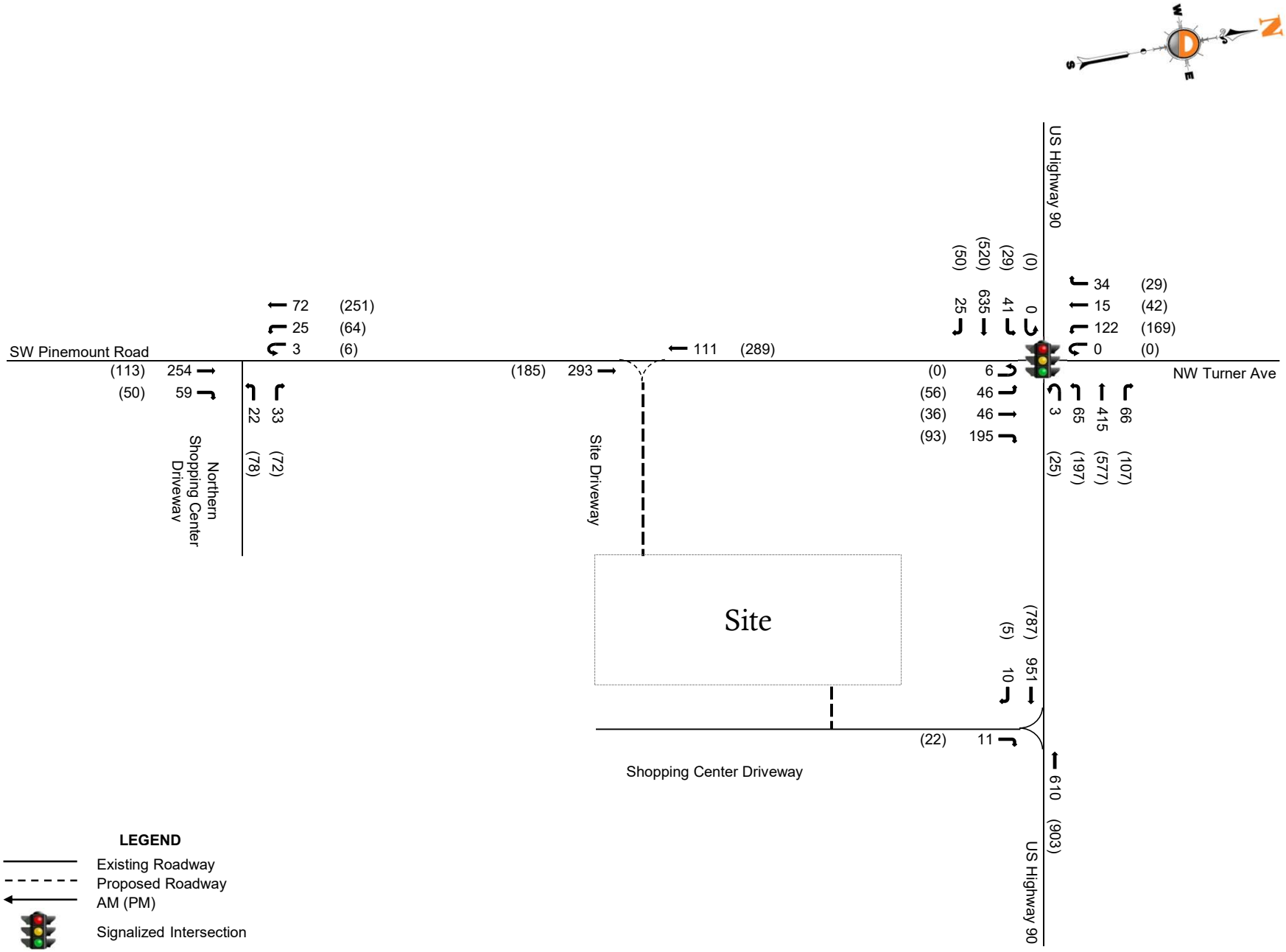
Appendix A
Traffic Volume Figures



Proposed Circle K
Traffic Impact Analysis
2451 25-00048

Figure 1

Site Location Map



Proposed Circle K
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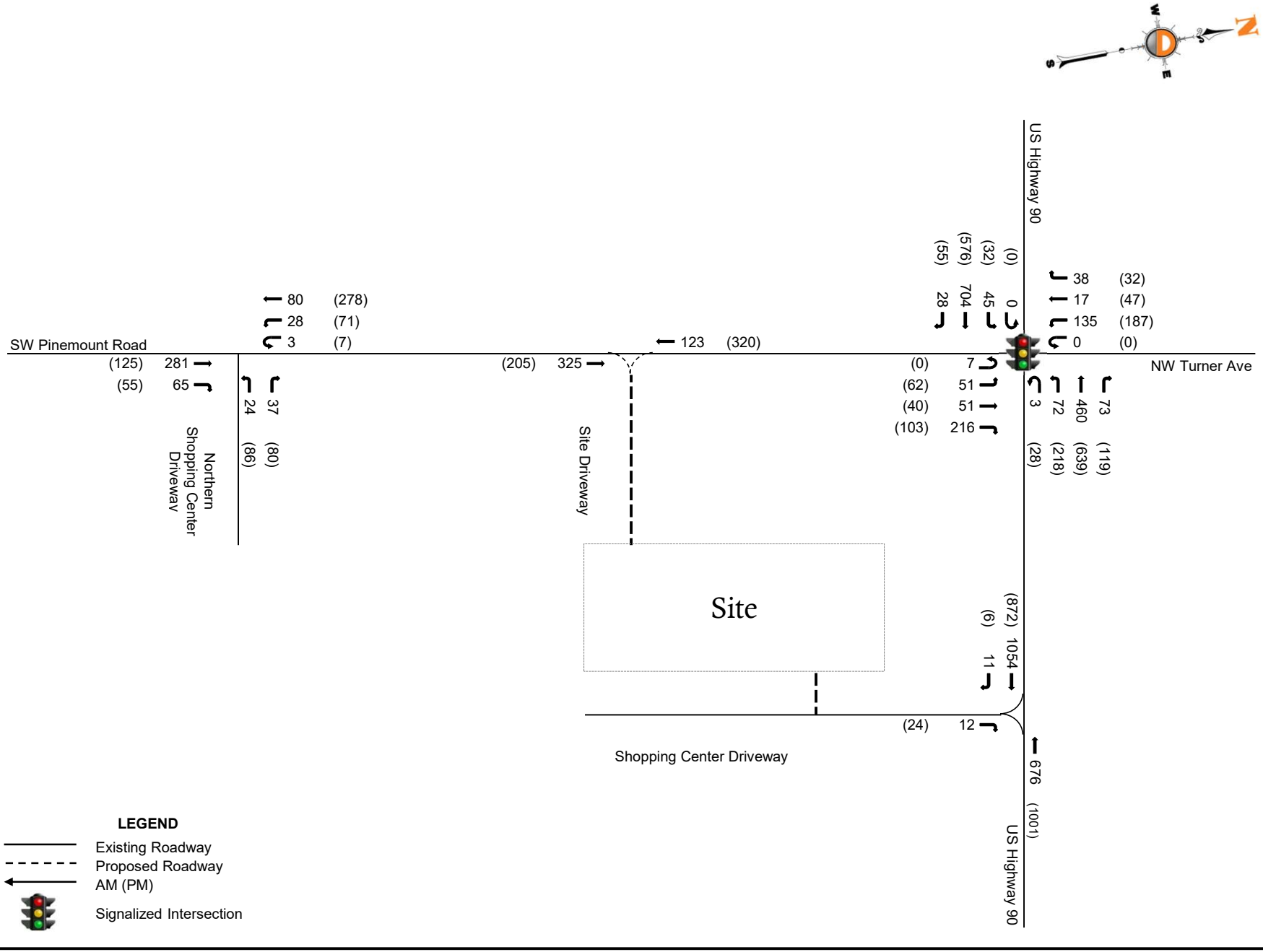
2451 25-00048

Figure 2

Existing Traffic Volumes



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2451 25-00048

Figure 3

No Build Traffic Volumes

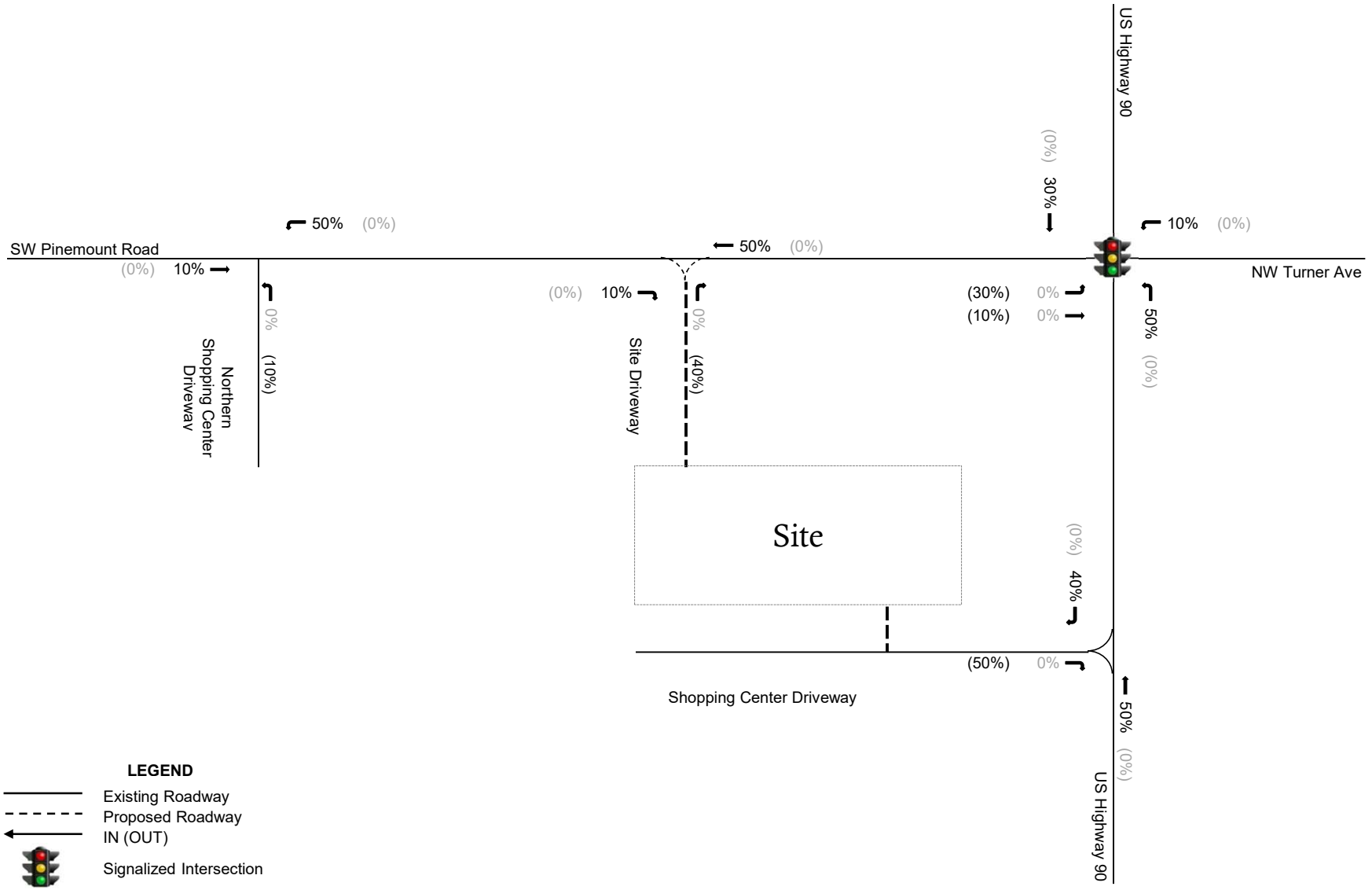

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Figure 4

Percent Distribution (Primary Trips)

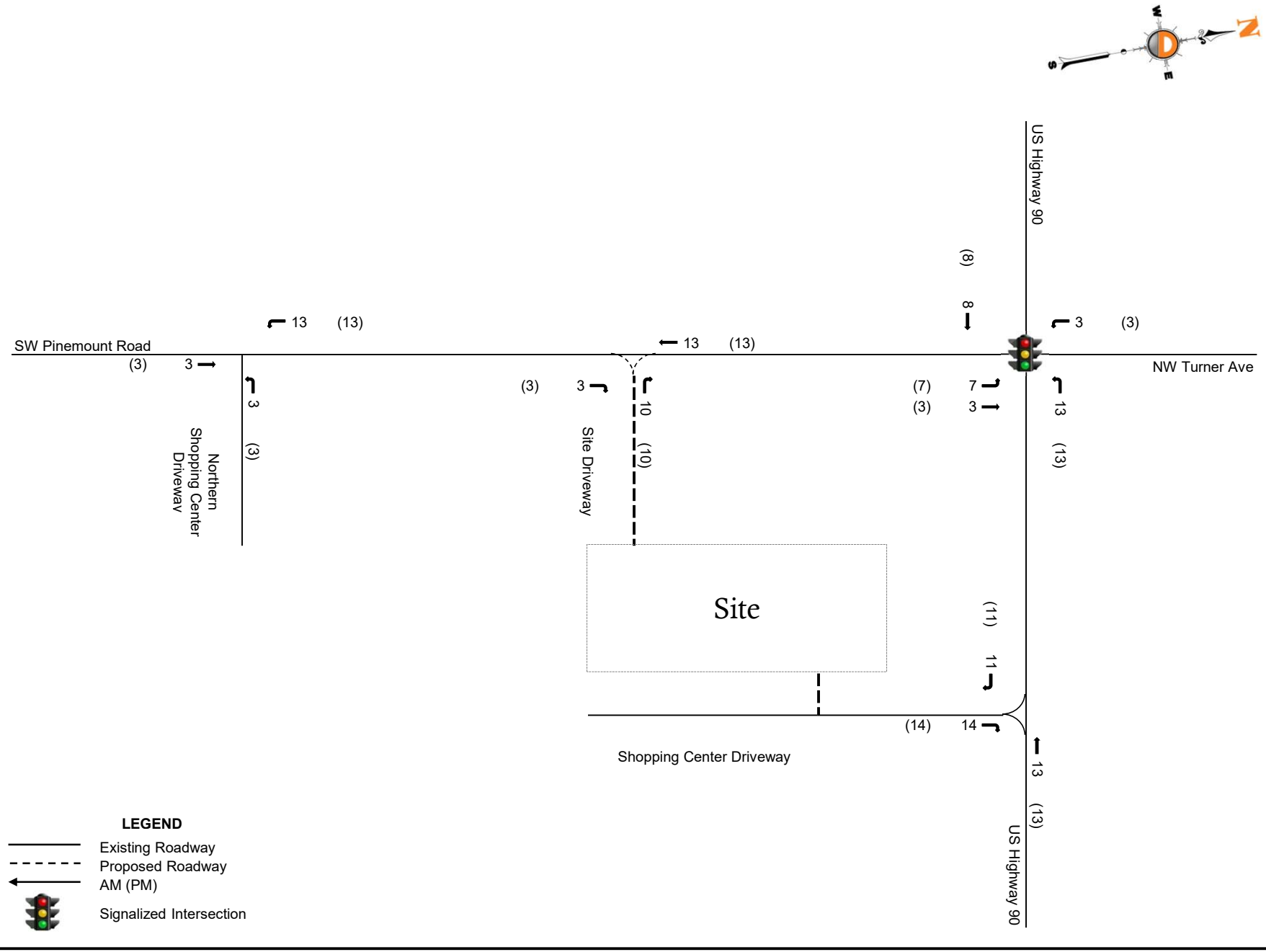

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Figure 5

Primary Site Generated Trips

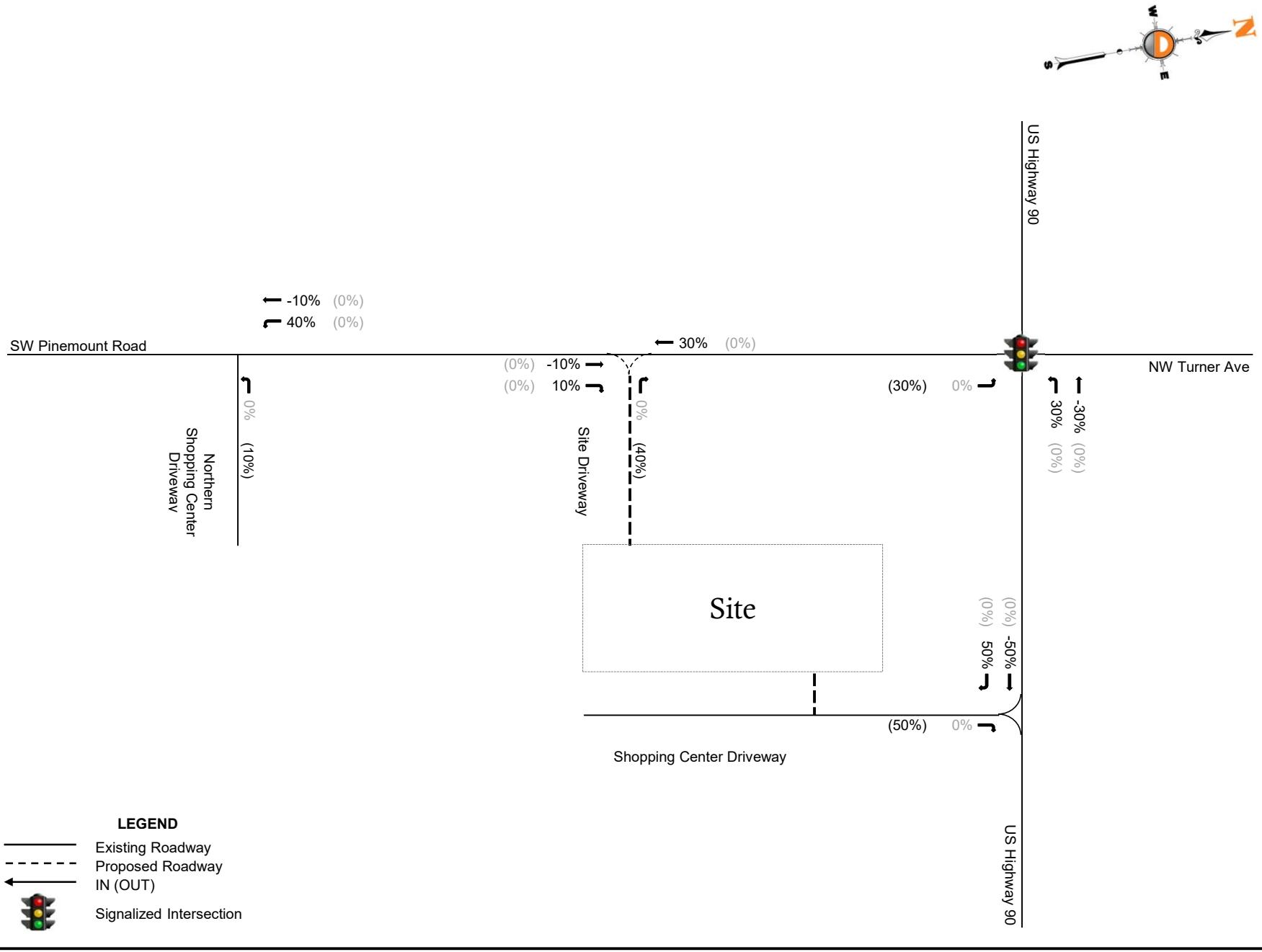

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Figure 6

Percent Distribution (Passby Trips)

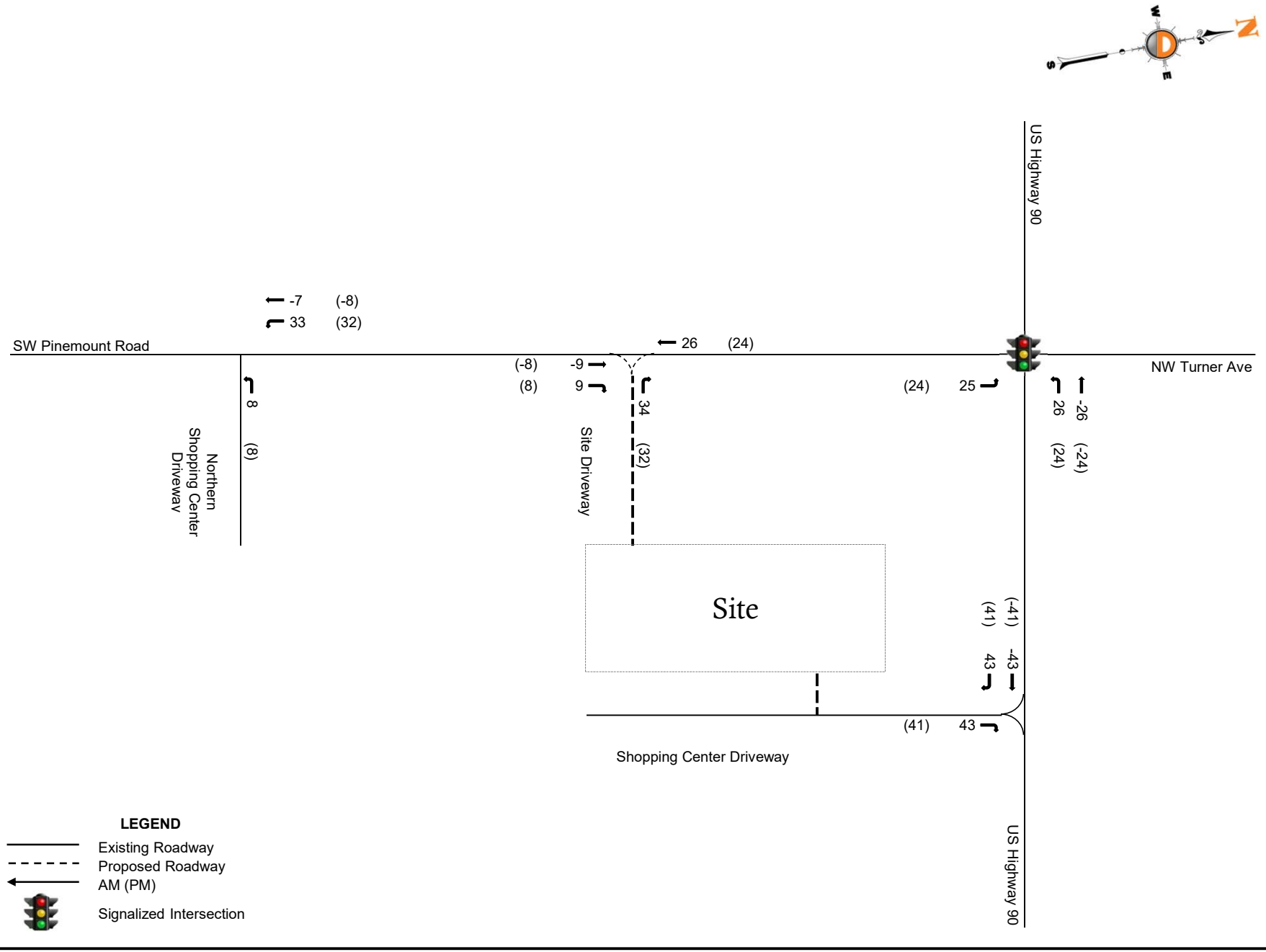

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Figure 7

Passby Site Generated Trips

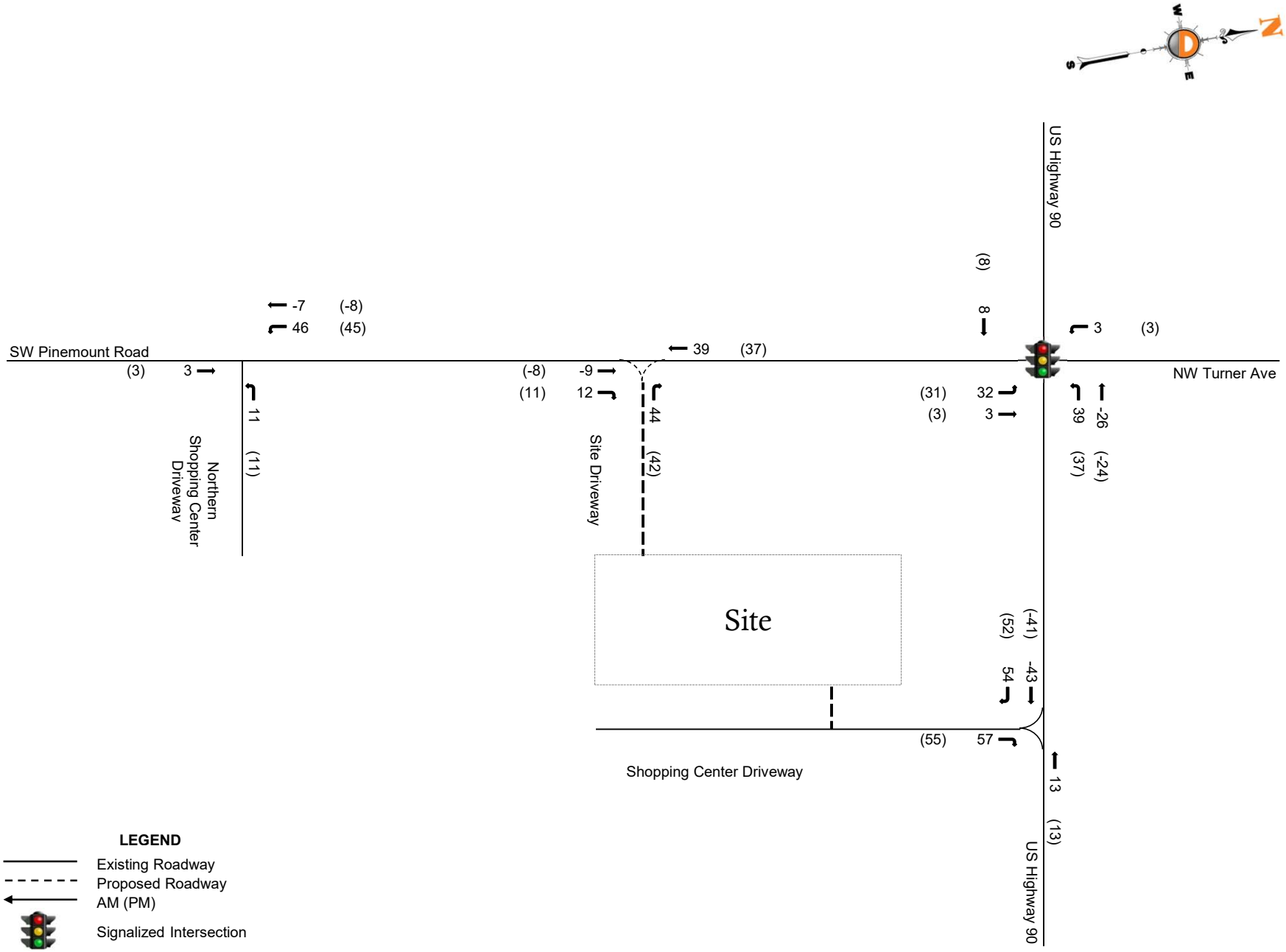

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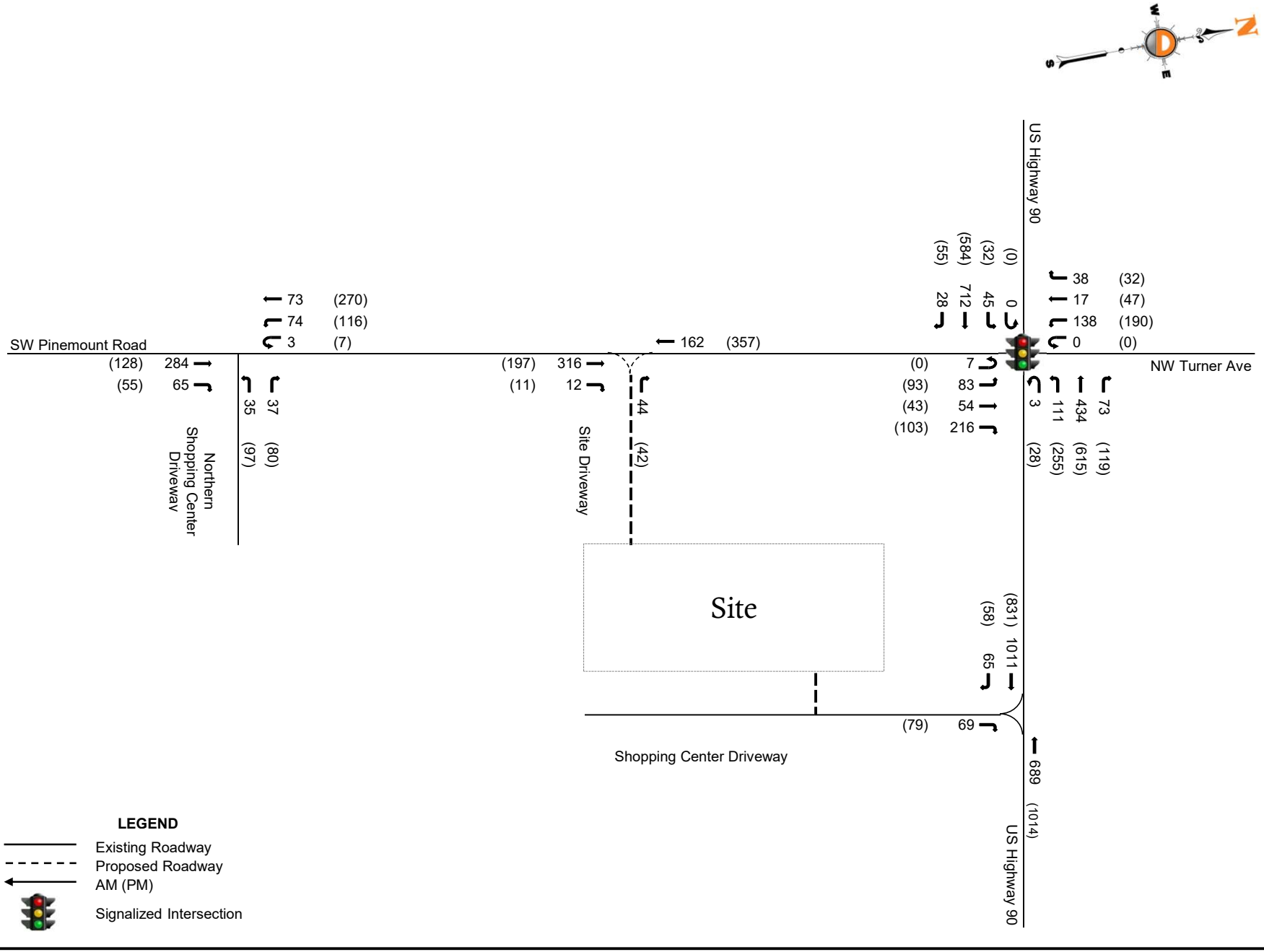
Figure 8

Total Site Generated Trips



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2451 25-00048

Figure 9

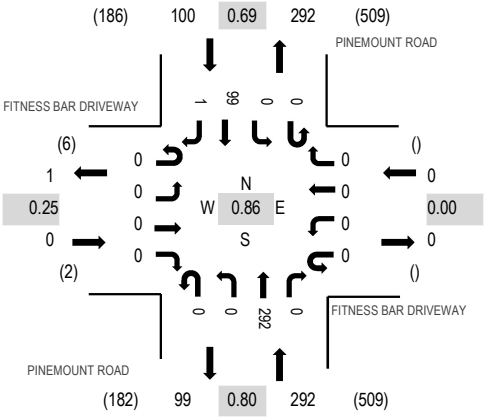
Build Traffic Volumes

Appendix B
Traffic Counts

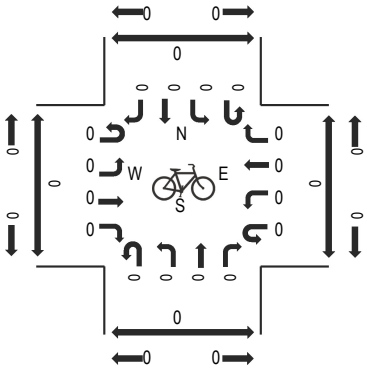
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 PINEMOUNT ROAD & FITNESS BAR DRIVEWAY AM
Date: Tuesday, April 22, 2025
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

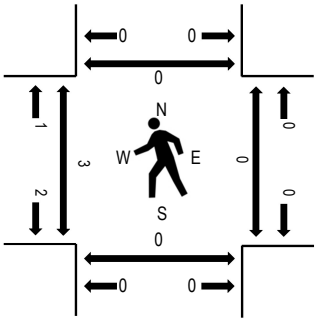
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	FITNESS BAR DRIVEWAY Eastbound				FITNESS BAR DRIVEWAY Westbound				PINEMOUNT ROAD Northbound				PINEMOUNT ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	1	0	0	0	0	0	0	0	0	52	0	0	0	11	1	65	363	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	1	63	0	0	0	17	1	82	386	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	91	0	0	0	22	1	114	392	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	77	0	0	0	25	0	102	346	1	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	61	0	0	0	27	0	88	334	1	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	63	0	0	0	25	0	88		1	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	1	50	0	0	0	17	0	68		1	0	0	0
8:45 AM	0	1	0	0	0	0	0	0	0	0	50	0	0	0	38	1	90		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2
Lights	0	0	0	0	0	0	0	0	0	0	289	0	0	0	95	1	385
Mediums	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	5
Total	0	0	0	0	0	0	0	0	0	0	292	0	0	0	99	1	392

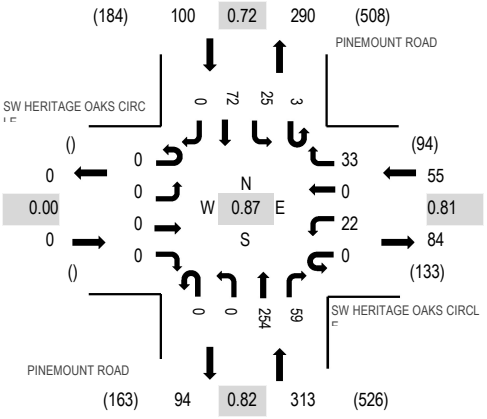
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		0.0%				0.0%				1.0%				4.0%			1.8%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	4.0%	0.0%	1.8%
Peak Hour Factor		0.25				0.00				0.80				0.69			0.86
Peak Hour Factor	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.80	0.00	0.00	0.00	0.70	0.75	0.86

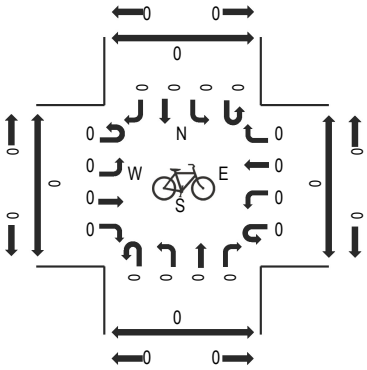
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 PINEMOUNT ROAD & SW HERITAGE OAKS CIRCLE AM
Date: Tuesday, April 22, 2025
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

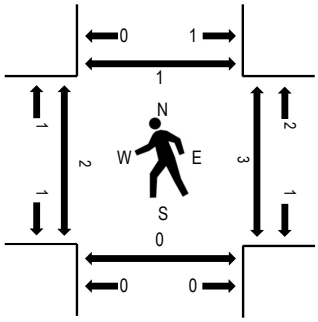
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	SW HERITAGE OAKS CIRCLE Eastbound				SW HERITAGE OAKS CIRCLE Westbound				PINEMOUNT ROAD Northbound				PINEMOUNT ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	0	0	0	0	7	0	0	45	3	0	6	6	0	67	411	0	0	0	0
7:15 AM	0	0	0	0	0	3	0	4	0	0	62	6	0	1	16	0	92	451	0	0	0	0
7:30 AM	0	0	0	0	0	6	0	11	0	0	78	18	1	7	14	0	135	468	0	0	0	0
7:45 AM	0	0	0	0	0	4	0	9	0	0	66	15	0	8	15	0	117	414	1	3	0	0
8:00 AM	0	0	0	0	0	6	0	6	0	0	55	11	0	6	23	0	107	393	1	0	0	0
8:15 AM	0	0	0	0	0	6	0	7	0	0	55	15	2	4	20	0	109		0	0	0	1
8:30 AM	0	0	0	0	0	3	0	13	0	0	38	10	0	5	12	0	81		0	0	0	0
8:45 AM	0	0	0	0	0	3	0	6	0	0	41	8	2	10	26	0	96		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2
Lights	0	0	0	0	0	22	0	33	0	0	251	59	3	25	68	0	461
Mediums	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	5
Total	0	0	0	0	0	22	0	33	0	0	254	59	3	25	72	0	468

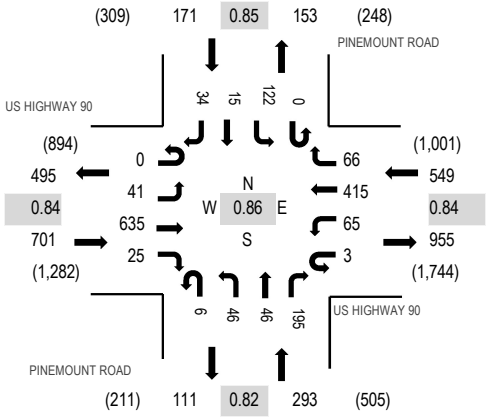
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		0.0%				0.0%				1.0%				4.0%			1.5%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	5.6%	0.0%	1.5%
Peak Hour Factor		0.00				0.81				0.82				0.72			0.87
Peak Hour Factor	0.00	0.00	0.00	0.00	0.00	0.92	0.00	0.67	0.00	0.00	0.84	0.82	0.50	0.63	0.78	0.00	0.87

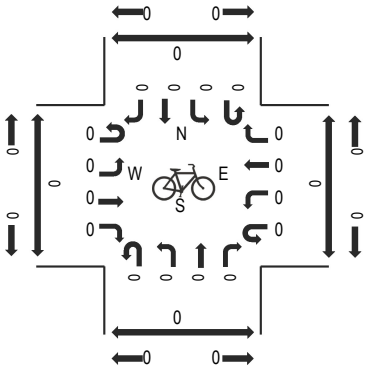
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 3 PINEMOUNT ROAD & US HIGHWAY 90 AM
Date: Tuesday, April 22, 2025
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

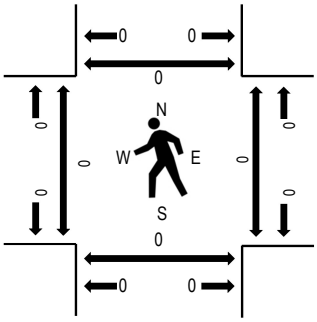
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	US HIGHWAY 90 Eastbound				US HIGHWAY 90 Westbound				PINEMOUNT ROAD Northbound				PINEMOUNT ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	1	2	122	2	0	4	88	6	0	9	2	39	0	38	4	12	329	1,673	0	0	0	1
7:15 AM	0	9	187	7	0	14	106	8	1	9	10	47	0	32	1	8	439	1,714	0	0	0	0
7:30 AM	0	9	191	8	1	14	127	21	0	16	9	64	0	24	7	9	500	1,616	0	0	0	0
7:45 AM	0	14	128	5	0	16	97	20	4	10	20	42	0	35	4	10	405	1,471	0	0	0	0
8:00 AM	0	9	129	5	2	21	85	17	1	11	7	42	0	31	3	7	370	1,424	0	0	0	0
8:15 AM	0	7	118	4	2	22	91	10	0	8	7	45	0	18	4	5	341		0	0	0	0
8:30 AM	0	6	164	4	1	14	77	15	0	12	8	31	0	19	3	1	355		1	0	0	0
8:45 AM	0	7	131	13	2	21	82	17	0	10	8	33	0	26	5	3	358		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	6	0	0	0	3	0	0	0	0	2	0	0	0	0	11
Lights	0	41	624	22	3	63	409	66	6	46	46	190	0	121	15	34	1,686
Mediums	0	0	5	3	0	2	3	0	0	0	0	3	0	1	0	0	17
Total	0	41	635	25	3	65	415	66	6	46	46	195	0	122	15	34	1,714

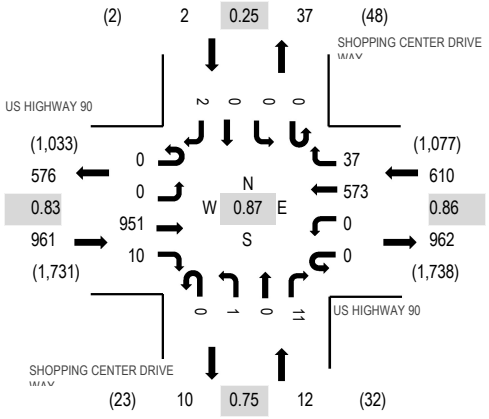
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		2.0%				1.5%				1.7%				0.6%			1.6%
Heavy Vehicle %	0.0%	0.0%	1.7%	12.0%	0.0%	3.1%	1.4%	0.0%	0.0%	0.0%	0.0%	2.6%	0.0%	0.8%	0.0%	0.0%	1.6%
Peak Hour Factor		0.84				0.84				0.82				0.85			0.86
Peak Hour Factor	0.25	0.73	0.83	0.50	0.88	0.89	0.82	0.81	0.38	0.72	0.58	0.76	0.00	0.85	0.64	0.81	0.86

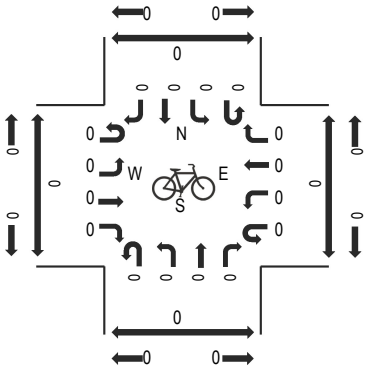
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 4 SHOPPING CENTER DRIVEWAY & US HIGHWAY 90 AM
Date: Tuesday, April 22, 2025
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

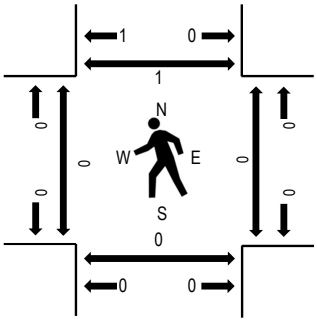
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	US HIGHWAY 90 Eastbound				US HIGHWAY 90 Westbound				SHOPPING CENTER DRIVEWAY Northbound				SHOPPING CENTER DRIVEWAY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	189	2	0	0	95	0	0	0	0	4	0	0	0	0	290	1,542	0	0	0	1
7:15 AM	0	0	244	3	0	0	138	5	0	0	0	2	0	0	0	0	392	1,585	0	0	0	0
7:30 AM	0	0	290	0	0	0	152	6	0	0	0	3	0	0	0	2	453	1,517	0	0	0	0
7:45 AM	0	0	225	3	0	0	157	20	0	0	0	2	0	0	0	0	407	1,369	0	0	0	0
8:00 AM	0	0	192	4	0	0	126	6	0	1	0	4	0	0	0	0	333	1,300	0	0	0	1
8:15 AM	0	0	185	2	0	0	126	6	0	1	0	4	0	0	0	0	324		0	0	0	1
8:30 AM	0	0	179	7	1	0	112	2	0	0	0	4	0	0	0	0	305		0	0	0	0
8:45 AM	0	0	204	2	0	0	123	2	0	0	1	6	0	0	0	0	338		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	9	0	0	0	3	0	0	0	0	0	0	0	0	0	12
Lights	0	0	934	10	0	0	564	37	0	1	0	11	0	0	0	2	1,559
Mediums	0	0	8	0	0	0	6	0	0	0	0	0	0	0	0	0	14
Total	0	0	951	10	0	0	573	37	0	1	0	11	0	0	0	2	1,585

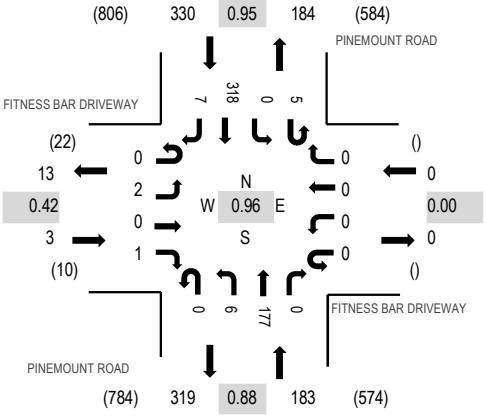
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %			1.8%				1.5%				0.0%				0.0%		1.6%
Heavy Vehicle %	0.0%	0.0%	1.8%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%
Peak Hour Factor			0.83				0.86				0.75				0.25		0.87
Peak Hour Factor	0.00	0.00	0.82	0.57	0.25	0.00	0.91	0.48	0.00	0.50	0.25	0.75	0.00	0.00	0.00	0.25	0.87

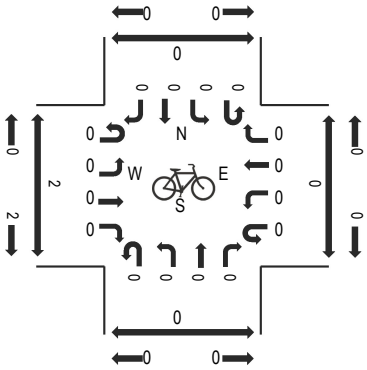
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 PINEMOUNT ROAD & FITNESS BAR DRIVEWAY PM
Date: Tuesday, April 22, 2025
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

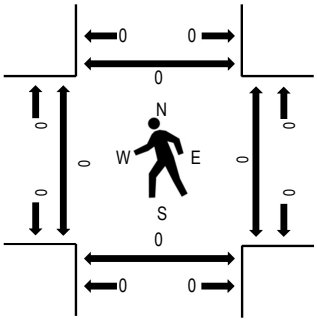
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	FITNESS BAR DRIVEWAY Eastbound				FITNESS BAR DRIVEWAY Westbound				PINEMOUNT ROAD Northbound				PINEMOUNT ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
3:00 PM	0	0	0	1	0	0	0	0	0	0	47	0	0	0	44	0	92	422	1	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	58	0	0	0	54	1	113	457	0	0	0	0
3:30 PM	0	2	0	0	0	0	0	0	0	0	43	0	1	0	44	0	90	453	0	0	0	0
3:45 PM	0	1	0	0	0	0	0	0	0	1	51	0	0	0	71	3	127	493	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	51	0	0	0	76	0	127	487	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	48	0	2	0	58	1	109	490	0	0	0	0
4:30 PM	0	1	0	0	0	0	0	0	0	0	42	0	1	0	84	2	130	516	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	48	0	2	0	71	0	121	504	0	0	0	0
5:00 PM	0	0	0	1	0	0	0	0	0	3	39	0	2	0	82	3	130	481	0	0	0	0
5:15 PM	0	1	0	0	0	0	0	0	0	3	48	0	0	0	81	2	135		0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	54	0	2	0	59	3	118		0	0	0	0
5:45 PM	0	2	0	1	0	0	0	0	0	0	38	0	0	0	57	0	98		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	4
Lights	0	2	0	1	0	0	0	0	0	6	173	0	5	0	314	7	508
Mediums	0	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	4
Total	0	2	0	1	0	0	0	0	0	6	177	0	5	0	318	7	516

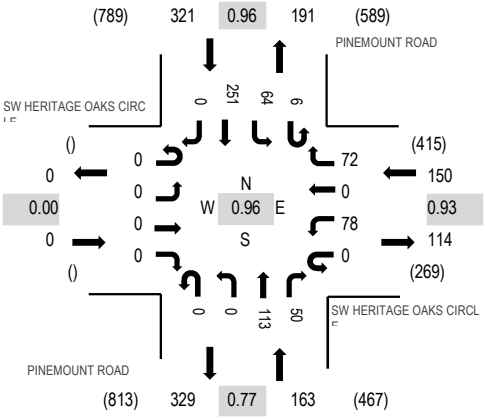
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		0.0%				0.0%				2.2%				1.2%			1.6%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	0.0%	0.0%	0.0%	1.3%	0.0%	1.6%
Peak Hour Factor		0.42				0.00				0.88				0.95			0.96
Peak Hour Factor	0.00	0.38	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.50	0.88	0.00	0.88	0.00	0.95	0.67	0.96

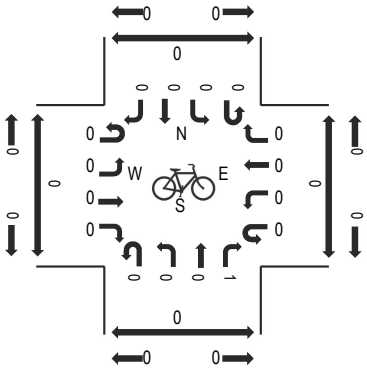
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 PINEMOUNT ROAD & SW HERITAGE OAKS CIRCLE PM
Date: Tuesday, April 22, 2025
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

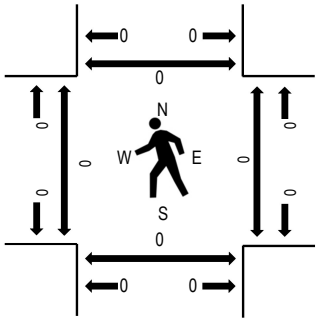
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	SW HERITAGE OAKS CIRCLE Eastbound				SW HERITAGE OAKS CIRCLE Westbound				PINEMOUNT ROAD Northbound				PINEMOUNT ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
3:00 PM	0	0	0	0	0	15	0	13	0	0	34	9	1	11	33	0	116	486	0	0	0	0
3:15 PM	0	0	0	0	0	13	0	17	0	0	42	7	2	9	41	0	131	528	0	0	0	0
3:30 PM	0	0	0	0	0	13	0	17	0	0	23	5	3	7	36	0	104	527	0	0	0	0
3:45 PM	0	0	0	0	0	8	0	23	0	0	29	6	2	15	52	0	135	581	0	0	0	0
4:00 PM	0	0	0	0	0	21	0	20	0	0	30	9	3	9	66	0	158	611	0	0	0	0
4:15 PM	0	0	0	0	0	19	0	19	0	0	27	8	1	16	40	0	130	611	0	0	0	0
4:30 PM	0	0	0	0	0	20	0	16	0	0	23	15	4	18	62	0	158	634	0	0	0	0
4:45 PM	0	0	0	0	0	18	0	19	0	0	32	22	1	17	56	0	165	609	0	0	0	0
5:00 PM	0	0	0	0	0	23	0	18	0	0	26	7	1	12	71	0	158	574	0	0	0	0
5:15 PM	0	0	0	0	0	17	0	19	0	0	32	6	0	17	62	0	153		0	0	0	0
5:30 PM	0	0	0	0	0	12	0	20	0	0	34	6	0	13	48	0	133		0	1	0	0
5:45 PM	0	0	0	0	0	22	0	13	0	0	25	10	0	15	45	0	130		0	0	0	1

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	4
Lights	0	0	0	0	0	78	0	72	0	0	108	50	6	64	245	0	623
Mediums	0	0	0	0	0	0	0	0	0	0	4	0	0	0	3	0	7
Total	0	0	0	0	0	78	0	72	0	0	113	50	6	64	251	0	634

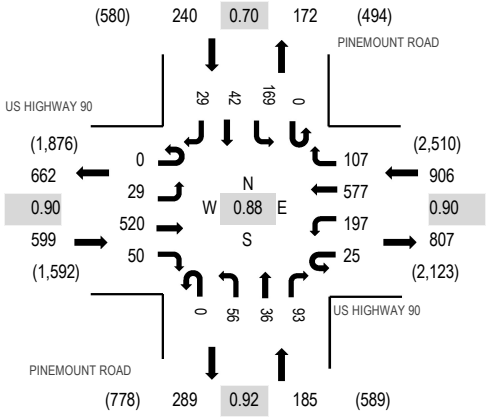
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %			0.0%				0.0%				3.1%				1.9%		1.7%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.4%	0.0%	0.0%	0.0%	2.4%	0.0%	1.7%
Peak Hour Factor			0.00				0.93				0.77				0.96		0.96
Peak Hour Factor	0.00	0.00	0.00	0.00	0.00	0.87	0.00	0.86	0.00	0.00	0.76	0.61	0.63	0.89	0.88	0.00	0.96

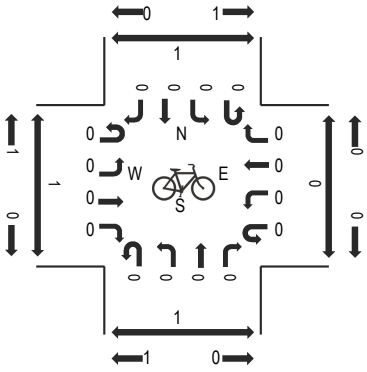
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 3 PINEMOUNT ROAD & US HIGHWAY 90 PM
Date: Tuesday, April 22, 2025
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

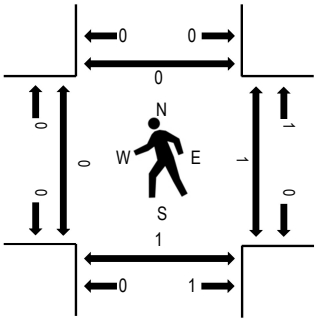
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	US HIGHWAY 90 Eastbound				US HIGHWAY 90 Westbound				PINEMOUNT ROAD Northbound				PINEMOUNT ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
3:00 PM	2	3	127	5	4	34	118	21	0	14	7	29	0	31	3	1	399	1,694	0	0	0	0
3:15 PM	1	6	116	4	6	37	165	19	1	13	18	25	0	31	6	7	455	1,744	2	0	0	2
3:30 PM	0	10	126	6	6	41	114	22	0	16	8	26	0	18	6	7	406	1,755	0	0	0	0
3:45 PM	0	9	102	9	5	55	138	23	1	15	11	22	0	29	10	5	434	1,798	0	0	0	0
4:00 PM	1	7	96	12	2	51	136	32	0	20	10	24	0	39	12	7	449	1,832	0	0	0	0
4:15 PM	0	7	132	11	3	43	148	28	0	19	6	24	0	33	7	5	466	1,930	0	0	0	0
4:30 PM	0	6	118	16	4	59	135	25	0	14	11	19	0	30	6	6	449	1,912	0	1	1	0
4:45 PM	0	7	130	6	3	40	143	24	0	16	8	26	0	40	17	8	468	1,863	0	0	0	0
5:00 PM	0	9	140	17	15	55	151	30	0	7	11	24	0	66	12	10	547	1,745	0	0	0	0
5:15 PM	0	5	118	13	1	53	131	24	0	18	8	24	0	21	16	16	448		0	0	0	0
5:30 PM	1	6	97	11	2	36	128	23	0	12	17	26	0	26	8	7	400		0	0	0	0
5:45 PM	0	2	90	8	3	43	105	26	0	11	5	23	0	21	8	5	350		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	0	0	0	4	0	0	0	0	1	0	0	0	0	7
Lights	0	29	512	50	25	197	570	107	0	54	36	88	0	169	41	29	1,907
Mediums	0	0	6	0	0	0	3	0	0	2	0	4	0	0	1	0	16
Total	0	29	520	50	25	197	577	107	0	56	36	93	0	169	42	29	1,930

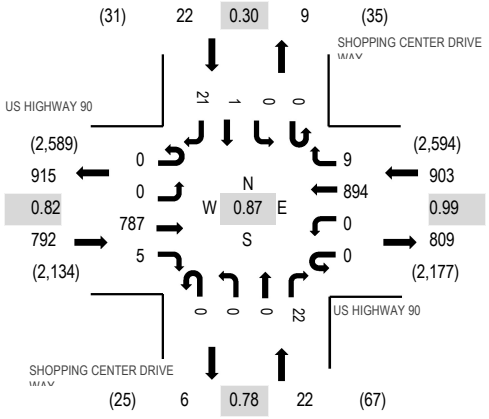
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		1.3%				0.8%				3.8%				0.4%			1.2%
Heavy Vehicle %	0.0%	0.0%	1.5%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	3.6%	0.0%	5.4%	0.0%	0.0%	2.4%	0.0%	1.2%
Peak Hour Factor		0.90				0.90				0.92				0.70			0.88
Peak Hour Factor	0.38	0.83	0.93	0.76	0.42	0.88	0.96	0.85	0.50	0.88	0.65	0.88	0.00	0.64	0.78	0.64	0.88

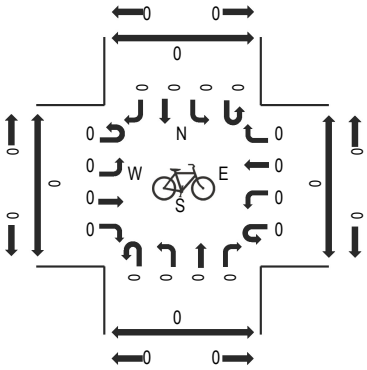
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 4 SHOPPING CENTER DRIVEWAY & US HIGHWAY 90 PM
Date: Tuesday, April 22, 2025
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

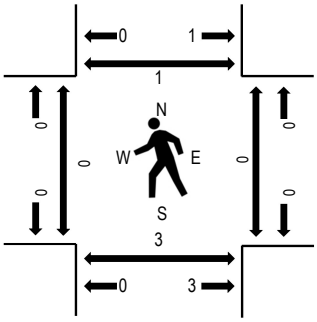
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	US HIGHWAY 90 Eastbound				US HIGHWAY 90 Westbound				SHOPPING CENTER DRIVEWAY Northbound				SHOPPING CENTER DRIVEWAY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
3:00 PM	0	0	187	3	0	0	177	2	0	0	0	5	0	0	0	0	374	1,581	0	0	0	0
3:15 PM	0	0	183	5	0	0	219	5	0	0	0	4	0	0	0	0	416	1,605	0	0	0	0
3:30 PM	0	0	165	3	0	0	204	4	0	0	0	7	0	0	0	2	385	1,605	0	0	2	0
3:45 PM	0	0	164	2	0	0	228	4	0	0	0	4	0	0	0	4	406	1,617	0	0	0	2
4:00 PM	0	0	158	2	0	0	230	3	0	0	0	5	0	0	0	0	398	1,640	0	0	0	0
4:15 PM	0	0	188	2	0	0	218	3	0	0	0	5	0	0	0	0	416	1,739	0	0	0	0
4:30 PM	0	0	167	1	0	0	224	0	0	0	0	5	0	0	0	0	397	1,727	0	0	1	1
4:45 PM	0	0	192	1	0	0	224	3	0	0	0	7	0	0	0	2	429	1,687	0	0	2	0
5:00 PM	0	0	240	1	0	0	228	3	0	0	0	5	0	0	1	19	497	1,605	0	0	0	0
5:15 PM	0	0	168	1	0	0	228	1	0	0	0	6	0	0	0	0	404		0	0	0	0
5:30 PM	0	0	150	3	0	0	194	2	0	0	0	6	0	0	0	2	357		0	0	0	0
5:45 PM	0	0	148	0	0	0	185	5	0	0	0	8	0	0	0	1	347		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	3	0	0	0	5	0	0	0	0	0	0	0	0	0	8
Lights	0	0	774	5	0	0	884	9	0	0	0	22	0	0	1	21	1,716
Mediums	0	0	10	0	0	0	5	0	0	0	0	0	0	0	0	0	15
Total	0	0	787	5	0	0	894	9	0	0	0	22	0	0	1	21	1,739

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %			1.6%				1.1%				0.0%				0.0%		1.3%
Heavy Vehicle %	0.0%	0.0%	1.7%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%
Peak Hour Factor			0.82				0.99				0.78				0.30		0.87
Peak Hour Factor	0.00	0.00	0.82	0.65	0.00	0.00	0.99	0.80	0.00	0.00	0.00	0.78	0.00	0.00	0.25	0.30	0.87

2024 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 2900 COLUMBIA COUNTYWIDE

MOCF: 0.98

WEEK	DATES	SF	PSCF
1	01/01/2024 - 01/06/2024	1.02	1.04
2	01/07/2024 - 01/13/2024	1.06	1.08
3	01/14/2024 - 01/20/2024	1.09	1.11
4	01/21/2024 - 01/27/2024	1.07	1.09
5	01/28/2024 - 02/03/2024	1.05	1.07
6	02/04/2024 - 02/10/2024	1.03	1.05
7	02/11/2024 - 02/17/2024	1.01	1.03
8	02/18/2024 - 02/24/2024	1.01	1.03
9	02/25/2024 - 03/02/2024	1.00	1.02
10	03/03/2024 - 03/09/2024	0.99	1.01
11	03/10/2024 - 03/16/2024	0.99	1.01
*12	03/17/2024 - 03/23/2024	0.99	1.01
*13	03/24/2024 - 03/30/2024	0.98	1.00
*14	03/31/2024 - 04/06/2024	0.98	1.00
*15	04/07/2024 - 04/13/2024	0.98	1.00
*16	04/14/2024 - 04/20/2024	0.98	1.00
*17	04/21/2024 - 04/27/2024	0.97	0.99
*18	04/28/2024 - 05/04/2024	0.97	0.99
*19	05/05/2024 - 05/11/2024	0.97	0.99
*20	05/12/2024 - 05/18/2024	0.97	0.99
*21	05/19/2024 - 05/25/2024	0.98	1.00
*22	05/26/2024 - 06/01/2024	0.98	1.00
*23	06/02/2024 - 06/08/2024	0.99	1.01
*24	06/09/2024 - 06/15/2024	0.99	1.01
25	06/16/2024 - 06/22/2024	1.00	1.02
26	06/23/2024 - 06/29/2024	1.01	1.03
27	06/30/2024 - 07/06/2024	1.02	1.04
28	07/07/2024 - 07/13/2024	1.02	1.04
29	07/14/2024 - 07/20/2024	1.03	1.05
30	07/21/2024 - 07/27/2024	1.03	1.05
31	07/28/2024 - 08/03/2024	1.03	1.05
32	08/04/2024 - 08/10/2024	1.03	1.05
33	08/11/2024 - 08/17/2024	1.02	1.04
34	08/18/2024 - 08/24/2024	1.02	1.04
35	08/25/2024 - 08/31/2024	1.03	1.05
36	09/01/2024 - 09/07/2024	1.03	1.05
37	09/08/2024 - 09/14/2024	1.03	1.05
38	09/15/2024 - 09/21/2024	1.03	1.05
39	09/22/2024 - 09/28/2024	1.01	1.03
40	09/29/2024 - 10/05/2024	0.99	1.01
41	10/06/2024 - 10/12/2024	0.97	0.99
42	10/13/2024 - 10/19/2024	0.95	0.97
43	10/20/2024 - 10/26/2024	0.96	0.98
44	10/27/2024 - 11/02/2024	0.96	0.98
45	11/03/2024 - 11/09/2024	0.97	0.99
46	11/10/2024 - 11/16/2024	0.98	1.00
47	11/17/2024 - 11/23/2024	0.99	1.01
48	11/24/2024 - 11/30/2024	1.00	1.02
49	12/01/2024 - 12/07/2024	1.01	1.03
50	12/08/2024 - 12/14/2024	1.01	1.03
51	12/15/2024 - 12/21/2024	1.02	1.04
52	12/22/2024 - 12/28/2024	1.06	1.08
53	12/29/2024 - 12/31/2024	1.09	1.11

* PEAK SEASON

2024 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 2910 COLUMBIA I10

MOCF: 0.95

WEEK	DATES	SF	PSCF
1	01/01/2024 - 01/06/2024	0.91	0.96
2	01/07/2024 - 01/13/2024	1.05	1.11
3	01/14/2024 - 01/20/2024	1.18	1.24
4	01/21/2024 - 01/27/2024	1.16	1.22
5	01/28/2024 - 02/03/2024	1.15	1.21
6	02/04/2024 - 02/10/2024	1.13	1.19
7	02/11/2024 - 02/17/2024	1.11	1.17
8	02/18/2024 - 02/24/2024	1.08	1.14
9	02/25/2024 - 03/02/2024	1.05	1.11
10	03/03/2024 - 03/09/2024	1.02	1.07
11	03/10/2024 - 03/16/2024	0.99	1.04
12	03/17/2024 - 03/23/2024	1.00	1.05
13	03/24/2024 - 03/30/2024	1.00	1.05
14	03/31/2024 - 04/06/2024	1.01	1.06
15	04/07/2024 - 04/13/2024	1.01	1.06
16	04/14/2024 - 04/20/2024	1.02	1.07
17	04/21/2024 - 04/27/2024	1.01	1.06
*18	04/28/2024 - 05/04/2024	1.00	1.05
*19	05/05/2024 - 05/11/2024	0.99	1.04
*20	05/12/2024 - 05/18/2024	0.98	1.03
*21	05/19/2024 - 05/25/2024	0.97	1.02
*22	05/26/2024 - 06/01/2024	0.96	1.01
*23	06/02/2024 - 06/08/2024	0.94	0.99
*24	06/09/2024 - 06/15/2024	0.93	0.98
*25	06/16/2024 - 06/22/2024	0.93	0.98
*26	06/23/2024 - 06/29/2024	0.93	0.98
*27	06/30/2024 - 07/06/2024	0.93	0.98
*28	07/07/2024 - 07/13/2024	0.93	0.98
*29	07/14/2024 - 07/20/2024	0.94	0.99
*30	07/21/2024 - 07/27/2024	0.97	1.02
31	07/28/2024 - 08/03/2024	1.01	1.06
32	08/04/2024 - 08/10/2024	1.05	1.11
33	08/11/2024 - 08/17/2024	1.09	1.15
34	08/18/2024 - 08/24/2024	1.10	1.16
35	08/25/2024 - 08/31/2024	1.11	1.17
36	09/01/2024 - 09/07/2024	1.11	1.17
37	09/08/2024 - 09/14/2024	1.12	1.18
38	09/15/2024 - 09/21/2024	1.13	1.19
39	09/22/2024 - 09/28/2024	1.09	1.15
40	09/29/2024 - 10/05/2024	1.06	1.12
41	10/06/2024 - 10/12/2024	1.02	1.07
42	10/13/2024 - 10/19/2024	0.99	1.04
43	10/20/2024 - 10/26/2024	0.97	1.02
44	10/27/2024 - 11/02/2024	0.96	1.01
45	11/03/2024 - 11/09/2024	0.95	1.00
46	11/10/2024 - 11/16/2024	0.94	0.99
47	11/17/2024 - 11/23/2024	0.93	0.98
48	11/24/2024 - 11/30/2024	0.93	0.98
49	12/01/2024 - 12/07/2024	0.92	0.97
50	12/08/2024 - 12/14/2024	0.92	0.97
51	12/15/2024 - 12/21/2024	0.91	0.96
52	12/22/2024 - 12/28/2024	1.05	1.11
53	12/29/2024 - 12/31/2024	1.18	1.24

* PEAK SEASON

2024 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 2975 COLUMBIA I75

MOCF: 0.95

WEEK	DATES	SF	PSCF
1	01/01/2024 - 01/06/2024	0.90	0.95
2	01/07/2024 - 01/13/2024	1.00	1.05
3	01/14/2024 - 01/20/2024	1.11	1.17
4	01/21/2024 - 01/27/2024	1.10	1.16
5	01/28/2024 - 02/03/2024	1.10	1.16
6	02/04/2024 - 02/10/2024	1.10	1.16
7	02/11/2024 - 02/17/2024	1.10	1.16
8	02/18/2024 - 02/24/2024	1.06	1.12
9	02/25/2024 - 03/02/2024	1.02	1.07
10	03/03/2024 - 03/09/2024	0.98	1.03
11	03/10/2024 - 03/16/2024	0.94	0.99
12	03/17/2024 - 03/23/2024	0.96	1.01
13	03/24/2024 - 03/30/2024	0.98	1.03
14	03/31/2024 - 04/06/2024	0.99	1.04
15	04/07/2024 - 04/13/2024	1.01	1.06
16	04/14/2024 - 04/20/2024	1.02	1.07
17	04/21/2024 - 04/27/2024	1.02	1.07
18	04/28/2024 - 05/04/2024	1.02	1.07
19	05/05/2024 - 05/11/2024	1.02	1.07
20	05/12/2024 - 05/18/2024	1.01	1.06
21	05/19/2024 - 05/25/2024	0.99	1.04
22	05/26/2024 - 06/01/2024	0.98	1.03
23	06/02/2024 - 06/08/2024	0.96	1.01
24	06/09/2024 - 06/15/2024	0.94	0.99
25	06/16/2024 - 06/22/2024	0.94	0.99
26	06/23/2024 - 06/29/2024	0.94	0.99
27	06/30/2024 - 07/06/2024	0.94	0.99
28	07/07/2024 - 07/13/2024	0.94	0.99
29	07/14/2024 - 07/20/2024	0.94	0.99
30	07/21/2024 - 07/27/2024	0.99	1.04
31	07/28/2024 - 08/03/2024	1.04	1.09
32	08/04/2024 - 08/10/2024	1.08	1.14
33	08/11/2024 - 08/17/2024	1.13	1.19
34	08/18/2024 - 08/24/2024	1.14	1.20
35	08/25/2024 - 08/31/2024	1.14	1.20
36	09/01/2024 - 09/07/2024	1.14	1.20
37	09/08/2024 - 09/14/2024	1.15	1.21
38	09/15/2024 - 09/21/2024	1.15	1.21
39	09/22/2024 - 09/28/2024	1.10	1.16
*40	09/29/2024 - 10/05/2024	1.05	1.11
*41	10/06/2024 - 10/12/2024	1.00	1.05
*42	10/13/2024 - 10/19/2024	0.95	1.00
*43	10/20/2024 - 10/26/2024	0.95	1.00
*44	10/27/2024 - 11/02/2024	0.95	1.00
*45	11/03/2024 - 11/09/2024	0.95	1.00
*46	11/10/2024 - 11/16/2024	0.94	0.99
*47	11/17/2024 - 11/23/2024	0.93	0.98
*48	11/24/2024 - 11/30/2024	0.93	0.98
*49	12/01/2024 - 12/07/2024	0.92	0.97
*50	12/08/2024 - 12/14/2024	0.91	0.96
*51	12/15/2024 - 12/21/2024	0.90	0.95
*52	12/22/2024 - 12/28/2024	1.00	1.05
53	12/29/2024 - 12/31/2024	1.11	1.17

* PEAK SEASON

Appendix C
Capacity Analysis

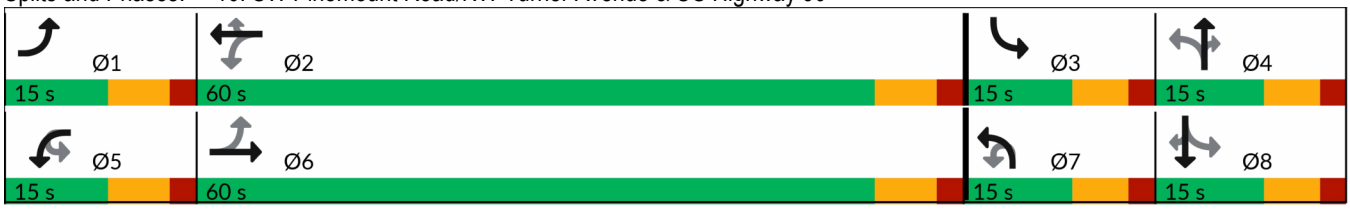
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	45	704	28	3	72	460	73	7	51	51	216	135
Future Volume (vph)	45	704	28	3	72	460	73	7	51	51	216	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	11	11	12	11	11	11	9
Storage Length (ft)	235		0		390		240		0		150	200
Storage Lanes	1		0		1		1		1		1	1
Taper Length (ft)	105				85				25			35
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994					0.850				0.850	
Flt Protected	0.950				0.950				0.950			0.950
Satd. Flow (prot)	1745	3388	0	0	1696	3455	1561	0	1745	1837	1516	1608
Flt Permitted	0.446				0.213				0.711			0.719
Satd. Flow (perm)	819	3388	0	0	380	3455	1561	0	1306	1837	1516	1217
Right Turn on Red			Yes				Yes				Yes	
Satd. Flow (RTOR)		6					172				251	
Link Speed (mph)		45				45				40		
Link Distance (ft)		1590				538				296		
Travel Time (s)		24.1				8.2				5.0		
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	2%	12%	0%	3%	1%	0%	0%	0%	0%	3%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	52	852	0	0	87	535	85	0	67	59	251	157
Turn Type	pm+pt	NA		custom	pm+pt	NA	Perm	custom	pm+pt	NA	Perm	pm+pt
Protected Phases	1	6			5	2			7	4		3
Permitted Phases	6			5	2		2	7	4		4	8
Detector Phase	1	6		5	5	2	2	7	7	4	4	3
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	5.0	15.0	15.0	5.0	5.0	7.0	7.0	5.0
Minimum Split (s)	11.8	33.8		11.8	11.8	31.8	31.8	11.4	11.4	43.4	43.4	11.4
Total Split (s)	15.0	60.0		15.0	15.0	60.0	60.0	15.0	15.0	15.0	15.0	15.0
Total Split (%)	14.3%	57.1%		14.3%	14.3%	57.1%	57.1%	14.3%	14.3%	14.3%	14.3%	14.3%
Maximum Green (s)	8.2	53.2		8.2	8.2	53.2	53.2	8.6	8.6	8.6	8.6	8.6
Yellow Time (s)	4.8	4.8		4.8	4.8	4.8	4.8	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8			6.8	6.8	6.8		6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag		Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	6.0		3.0	3.0	6.0	6.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Min		None	None	Min	Min	None	None	None	None	None
Walk Time (s)		7.0				7.0	7.0			7.0	7.0	
Flash Don't Walk (s)		20.0				18.0	18.0			30.0	30.0	
Pedestrian Calls (#/hr)		0				0	0			0	0	
Act Effct Green (s)	36.9	31.7			39.6	35.1	35.1		17.4	8.1	8.1	17.2
Actuated g/C Ratio	0.46	0.40			0.50	0.44	0.44		0.22	0.10	0.10	0.22
v/c Ratio	0.11	0.63			0.27	0.35	0.11		0.19	0.32	0.66	0.52
Control Delay (s/veh)	8.7	21.9			10.5	16.2	0.3		27.2	42.9	15.1	35.9
Queue Delay	0.0	0.0			0.0	0.0	0.0		0.0	0.0	0.0	0.0

Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	17	38
Future Volume (vph)	17	38
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	11	10
Storage Length (ft)		60
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	1837	1507
Flt Permitted		
Satd. Flow (perm)	1837	1507
Right Turn on Red		Yes
Satd. Flow (RTOR)		177
Link Speed (mph)	40	
Link Distance (ft)	991	
Travel Time (s)	16.9	
Peak Hour Factor	0.86	0.86
Heavy Vehicles (%)	0%	0%
Shared Lane Traffic (%)		
Lane Group Flow (vph)	20	44
Turn Type	NA	Perm
Protected Phases	8	
Permitted Phases		8
Detector Phase	8	8
Switch Phase		
Minimum Initial (s)	7.0	7.0
Minimum Split (s)	40.4	40.4
Total Split (s)	15.0	15.0
Total Split (%)	14.3%	14.3%
Maximum Green (s)	8.6	8.6
Yellow Time (s)	4.4	4.4
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.4	6.4
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Walk Time (s)	7.0	7.0
Flash Don't Walk (s)	27.0	27.0
Pedestrian Calls (#/hr)	0	0
Act Effct Green (s)	12.2	12.2
Actuated g/C Ratio	0.15	0.15
v/c Ratio	0.07	0.12
Control Delay (s/veh)	38.5	0.6
Queue Delay	0.0	0.0

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Total Delay (s/veh)	8.7	21.9			10.5	16.2	0.3		27.2	42.9	15.1	35.9
LOS	A	C			B	B	A		C	D	B	D
Approach Delay (s/veh)		21.1				13.6				21.6		
Approach LOS		C				B				C		
Queue Length 50th (ft)	11	187			19	101	0		27	30	0	66
Queue Length 95th (ft)	25	231			37	136	0		64	71	61	132
Internal Link Dist (ft)		1510				458				216		
Turn Bay Length (ft)	235				390		240				150	200
Base Capacity (vph)	486	2351			329	2396	1135		365	206	392	305
Starvation Cap Reductn	0	0			0	0	0		0	0	0	0
Spillback Cap Reductn	0	0			0	0	0		0	0	0	0
Storage Cap Reductn	0	0			0	0	0		0	0	0	0
Reduced v/c Ratio	0.11	0.36			0.26	0.22	0.07		0.18	0.29	0.64	0.51

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 79.8			
Natural Cycle: 105			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay (s/veh): 19.6		Intersection LOS: B	
Intersection Capacity Utilization 67.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 10: SW Pinemount Road/NW Turner Avenue & US Highway 90



Lane Group	SBT	SBR
Total Delay (s/veh)	38.5	0.6
LOS	D	A
Approach Delay (s/veh)	29.1	
Approach LOS	C	
Queue Length 50th (ft)	10	0
Queue Length 95th (ft)	32	0
Internal Link Dist (ft)	911	
Turn Bay Length (ft)		60
Base Capacity (vph)	289	385
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.07	0.11

Intersection Summary

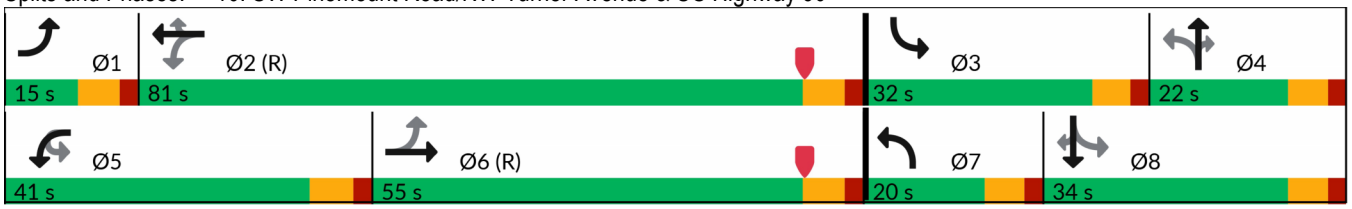
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	32	576	55	28	218	639	119	62	40	103	187	47
Future Volume (vph)	32	576	55	28	218	639	119	62	40	103	187	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	11	11	11	11	11	9	11
Storage Length (ft)	235		0		390		240	0		150	200	
Storage Lanes	1		0		1		1	1		1	1	
Taper Length (ft)	105				85			25			35	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987					0.850			0.850		
Flt Protected	0.950				0.950			0.950			0.950	
Satd. Flow (prot)	1745	3383	0	0	1745	3455	1561	1678	1837	1487	1624	1801
Flt Permitted	0.375				0.286			0.722			0.455	
Satd. Flow (perm)	689	3383	0	0	525	3455	1561	1275	1837	1487	778	1801
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)		7					167			220		
Link Speed (mph)		45				45			40			40
Link Distance (ft)		1590				538			296			991
Travel Time (s)		24.1				8.2			5.0			16.9
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	2%	0%	0%	0%	1%	0%	4%	0%	5%	0%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	718	0	0	280	726	135	70	45	117	213	53
Turn Type	pm+pt	NA		custom	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	1	6			5	2		7	4		3	8
Permitted Phases	6			5	2		2	4		4	8	
Detector Phase	1	6		5	5	2	2	7	4	4	3	8
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	5.0	15.0	15.0	5.0	7.0	7.0	5.0	7.0
Minimum Split (s)	11.8	33.8		11.8	11.8	31.8	31.8	11.4	43.4	43.4	11.4	40.4
Total Split (s)	15.0	55.0		41.0	41.0	81.0	81.0	20.0	22.0	22.0	32.0	34.0
Total Split (%)	10.0%	36.7%		27.3%	27.3%	54.0%	54.0%	13.3%	14.7%	14.7%	21.3%	22.7%
Maximum Green (s)	8.2	48.2		34.2	34.2	74.2	74.2	13.6	15.6	15.6	25.6	27.6
Yellow Time (s)	4.8	4.8		4.8	4.8	4.8	4.8	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8			6.8	6.8	6.8	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag		Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	6.0		3.0	3.0	6.0	6.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max		None	None	C-Max	C-Max	None	None	None	None	None
Walk Time (s)		7.0				7.0	7.0		7.0	7.0		7.0
Flash Don't Walk (s)		20.0				18.0	18.0		30.0	30.0		27.0
Pedestrian Calls (#/hr)		0				0	0		0	0		0
Act Effct Green (s)	82.9	76.1			99.1	87.9	87.9	19.9	9.5	9.5	37.7	23.6
Actuated g/C Ratio	0.55	0.51			0.66	0.59	0.59	0.13	0.06	0.06	0.25	0.16
v/c Ratio	0.08	0.42			0.59	0.36	0.14	0.36	0.39	0.39	0.67	0.19
Control Delay (s/veh)	12.1	25.5			16.4	18.4	1.4	48.3	76.6	3.8	58.2	57.2
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	32
Future Volume (vph)	32
Ideal Flow (vphpl)	1900
Lane Width (ft)	10
Storage Length (ft)	60
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1507
Flt Permitted	
Satd. Flow (perm)	1507
Right Turn on Red	Yes
Satd. Flow (RTOR)	173
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.88
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Lane Group Flow (vph)	36
Turn Type	Perm
Protected Phases	
Permitted Phases	8
Detector Phase	8
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	40.4
Total Split (s)	34.0
Total Split (%)	22.7%
Maximum Green (s)	27.6
Yellow Time (s)	4.4
All-Red Time (s)	2.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	6.4
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Don't Walk (s)	27.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	23.6
Actuated g/C Ratio	0.16
v/c Ratio	0.09
Control Delay (s/veh)	0.5
Queue Delay	0.0

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Total Delay (s/veh)	12.1	25.5			16.4	18.4	1.4	48.3	76.6	3.8	58.2	57.2
LOS	B	C			B	B	A	D	E	A	E	E
Approach Delay (s/veh)		24.9				15.9			31.3			51.1
Approach LOS		C				B			C			D
Queue Length 50th (ft)	12	224			106	198	0	54	43	0	180	46
Queue Length 95th (ft)	28	323			166	266	17	90	83	0	245	87
Internal Link Dist (ft)		1510				458			216			911
Turn Bay Length (ft)	235				390		240			150	200	
Base Capacity (vph)	444	1719			624	2025	984	232	191	351	340	334
Starvation Cap Reductn	0	0			0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0			0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0			0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.42			0.45	0.36	0.14	0.30	0.24	0.33	0.63	0.16

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 113 (75%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay (s/veh): 24.5		Intersection LOS: C	
Intersection Capacity Utilization 70.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 10: SW Pinemount Road/NW Turner Avenue & US Highway 90



Lane Group	SBR
Total Delay (s/veh)	0.5
LOS	A
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	0
Internal Link Dist (ft)	
Turn Bay Length (ft)	60
Base Capacity (vph)	420
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.09

Intersection Summary

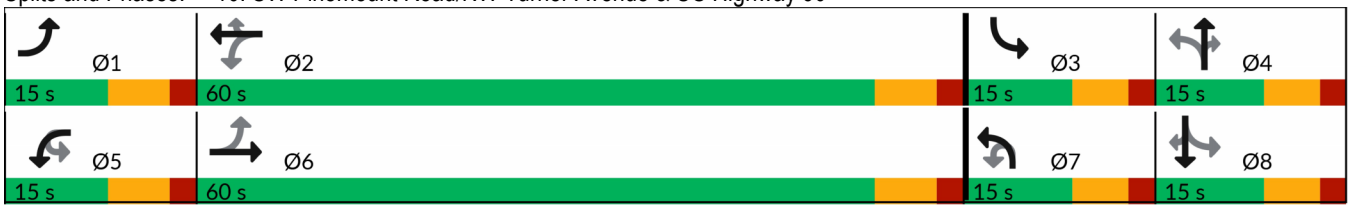
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	45	712	28	3	111	434	73	7	83	54	216	138
Future Volume (vph)	45	712	28	3	111	434	73	7	83	54	216	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	11	11	12	11	11	11	9
Storage Length (ft)	235		0		390		240		0		150	200
Storage Lanes	1		0		1		1		1		1	1
Taper Length (ft)	105				85				25			35
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994					0.850				0.850	
Flt Protected	0.950				0.950				0.950			0.950
Satd. Flow (prot)	1745	3388	0	0	1695	3455	1561	0	1745	1837	1516	1608
Flt Permitted	0.466				0.203				0.682			0.716
Satd. Flow (perm)	856	3388	0	0	362	3455	1561	0	1253	1837	1516	1212
Right Turn on Red			Yes				Yes				Yes	
Satd. Flow (RTOR)		5					172				251	
Link Speed (mph)		45				45				40		
Link Distance (ft)		1590				538				296		
Travel Time (s)		24.1				8.2				5.0		
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	2%	12%	0%	3%	1%	0%	0%	0%	0%	3%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	52	861	0	0	132	505	85	0	105	63	251	160
Turn Type	pm+pt	NA		custom	pm+pt	NA	Perm	custom	pm+pt	NA	Perm	pm+pt
Protected Phases	1	6			5	2			7	4		3
Permitted Phases	6			5	2		2	7	4		4	8
Detector Phase	1	6		5	5	2	2	7	7	4	4	3
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	5.0	15.0	15.0	5.0	5.0	7.0	7.0	5.0
Minimum Split (s)	11.8	33.8		11.8	11.8	31.8	31.8	11.4	11.4	43.4	43.4	11.4
Total Split (s)	15.0	60.0		15.0	15.0	60.0	60.0	15.0	15.0	15.0	15.0	15.0
Total Split (%)	14.3%	57.1%		14.3%	14.3%	57.1%	57.1%	14.3%	14.3%	14.3%	14.3%	14.3%
Maximum Green (s)	8.2	53.2		8.2	8.2	53.2	53.2	8.6	8.6	8.6	8.6	8.6
Yellow Time (s)	4.8	4.8		4.8	4.8	4.8	4.8	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8			6.8	6.8	6.8		6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag		Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	6.0		3.0	3.0	6.0	6.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Min		None	None	Min	Min	None	None	None	None	None
Walk Time (s)		7.0				7.0	7.0			7.0	7.0	
Flash Don't Walk (s)		20.0				18.0	18.0			30.0	30.0	
Pedestrian Calls (#/hr)		0				0	0			0	0	
Act Effct Green (s)	39.7	32.9			44.5	39.8	39.8		17.5	8.0	8.0	16.6
Actuated g/C Ratio	0.47	0.39			0.53	0.47	0.47		0.21	0.09	0.09	0.20
v/c Ratio	0.11	0.65			0.42	0.31	0.10		0.32	0.36	0.68	0.57
Control Delay (s/veh)	8.7	23.1			12.7	15.5	0.2		29.1	44.6	15.8	38.5
Queue Delay	0.0	0.0			0.0	0.0	0.0		0.0	0.0	0.0	0.0

Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	17	38
Future Volume (vph)	17	38
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	11	10
Storage Length (ft)		60
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	1837	1507
Flt Permitted		
Satd. Flow (perm)	1837	1507
Right Turn on Red		Yes
Satd. Flow (RTOR)		177
Link Speed (mph)	40	
Link Distance (ft)	991	
Travel Time (s)	16.9	
Peak Hour Factor	0.86	0.86
Heavy Vehicles (%)	0%	0%
Shared Lane Traffic (%)		
Lane Group Flow (vph)	20	44
Turn Type	NA	Perm
Protected Phases	8	
Permitted Phases		8
Detector Phase	8	8
Switch Phase		
Minimum Initial (s)	7.0	7.0
Minimum Split (s)	40.4	40.4
Total Split (s)	15.0	15.0
Total Split (%)	14.3%	14.3%
Maximum Green (s)	8.6	8.6
Yellow Time (s)	4.4	4.4
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.4	6.4
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Walk Time (s)	7.0	7.0
Flash Don't Walk (s)	27.0	27.0
Pedestrian Calls (#/hr)	0	0
Act Effct Green (s)	11.4	11.4
Actuated g/C Ratio	0.14	0.14
v/c Ratio	0.08	0.12
Control Delay (s/veh)	38.9	0.7
Queue Delay	0.0	0.0

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Total Delay (s/veh)	8.7	23.1			12.7	15.5	0.2		29.1	44.6	15.8	38.5
LOS	A	C			B	B	A		C	D	B	D
Approach Delay (s/veh)		22.3				13.2				23.5		
Approach LOS		C				B				C		
Queue Length 50th (ft)	11	191			30	95	0		43	32	0	68
Queue Length 95th (ft)	25	234			52	128	0		92	74	62	135
Internal Link Dist (ft)		1510				458				216		
Turn Bay Length (ft)	235				390		240				150	200
Base Capacity (vph)	505	2159			321	2200	1056		335	189	381	279
Starvation Cap Reductn	0	0			0	0	0		0	0	0	0
Spillback Cap Reductn	0	0			0	0	0		0	0	0	0
Storage Cap Reductn	0	0			0	0	0		0	0	0	0
Reduced v/c Ratio	0.10	0.40			0.41	0.23	0.08		0.31	0.33	0.66	0.57

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 84.3			
Natural Cycle: 105			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay (s/veh): 20.5		Intersection LOS: C	
Intersection Capacity Utilization 69.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 10: SW Pinemount Road/NW Turner Avenue & US Highway 90



Lane Group	SBT	SBR
Total Delay (s/veh)	38.9	0.7
LOS	D	A
Approach Delay (s/veh)	31.1	
Approach LOS	C	
Queue Length 50th (ft)	10	0
Queue Length 95th (ft)	33	0
Internal Link Dist (ft)	911	
Turn Bay Length (ft)		60
Base Capacity (vph)	256	363
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.08	0.12

Intersection Summary

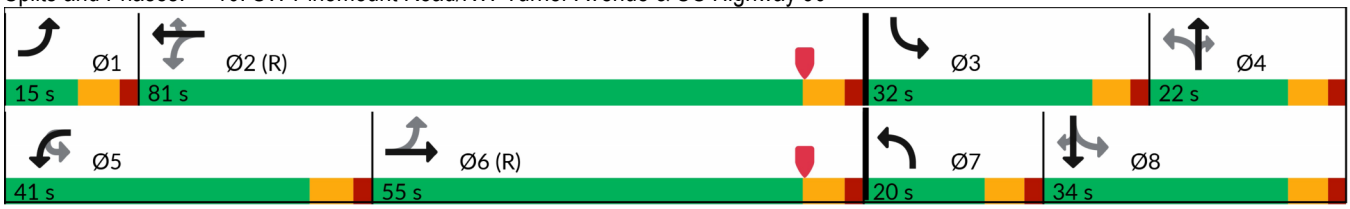
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	32	584	55	28	255	615	119	93	43	103	190	47
Future Volume (vph)	32	584	55	28	255	615	119	93	43	103	190	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	11	11	11	11	11	9	11
Storage Length (ft)	235		0		390		240	0		150	200	
Storage Lanes	1		0		1		1	1		1	1	
Taper Length (ft)	105				85			25			35	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987					0.850			0.850		
Flt Protected	0.950				0.950			0.950			0.950	
Satd. Flow (prot)	1745	3383	0	0	1745	3455	1561	1678	1837	1487	1624	1801
Flt Permitted	0.386				0.273			0.722			0.472	
Satd. Flow (perm)	709	3383	0	0	501	3455	1561	1275	1837	1487	807	1801
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)		7					167			220		
Link Speed (mph)		45				45			40			40
Link Distance (ft)		1590				538			296			991
Travel Time (s)		24.1				8.2			5.0			16.9
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	2%	0%	0%	0%	1%	0%	4%	0%	5%	0%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	727	0	0	322	699	135	106	49	117	216	53
Turn Type	pm+pt	NA		custom	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	1	6			5	2		7	4		3	8
Permitted Phases	6			5	2		2	4		4	8	
Detector Phase	1	6		5	5	2	2	7	4	4	3	8
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	5.0	15.0	15.0	5.0	7.0	7.0	5.0	7.0
Minimum Split (s)	11.8	33.8		11.8	11.8	31.8	31.8	11.4	43.4	43.4	11.4	40.4
Total Split (s)	15.0	55.0		41.0	41.0	81.0	81.0	20.0	22.0	22.0	32.0	34.0
Total Split (%)	10.0%	36.7%		27.3%	27.3%	54.0%	54.0%	13.3%	14.7%	14.7%	21.3%	22.7%
Maximum Green (s)	8.2	48.2		34.2	34.2	74.2	74.2	13.6	15.6	15.6	25.6	27.6
Yellow Time (s)	4.8	4.8		4.8	4.8	4.8	4.8	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8			6.8	6.8	6.8	6.4	6.4	6.4	6.4	6.4
Lead/Lag	Lead	Lag		Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	6.0		3.0	3.0	6.0	6.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max		None	None	C-Max	C-Max	None	None	None	None	None
Walk Time (s)		7.0				7.0	7.0		7.0	7.0		7.0
Flash Don't Walk (s)		20.0				18.0	18.0		30.0	30.0		27.0
Pedestrian Calls (#/hr)		0				0	0		0	0		0
Act Effct Green (s)	79.4	72.5			98.4	87.2	87.2	24.8	9.8	9.8	35.8	18.3
Actuated g/C Ratio	0.53	0.48			0.66	0.58	0.58	0.17	0.07	0.07	0.24	0.12
v/c Ratio	0.09	0.44			0.66	0.35	0.14	0.42	0.41	0.39	0.69	0.24
Control Delay (s/veh)	12.9	28.4			18.8	18.5	1.4	49.1	77.0	3.7	60.3	59.6
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	32
Future Volume (vph)	32
Ideal Flow (vphpl)	1900
Lane Width (ft)	10
Storage Length (ft)	60
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1507
Flt Permitted	
Satd. Flow (perm)	1507
Right Turn on Red	Yes
Satd. Flow (RTOR)	173
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.88
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Lane Group Flow (vph)	36
Turn Type	Perm
Protected Phases	
Permitted Phases	8
Detector Phase	8
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	40.4
Total Split (s)	34.0
Total Split (%)	22.7%
Maximum Green (s)	27.6
Yellow Time (s)	4.4
All-Red Time (s)	2.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	6.4
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Don't Walk (s)	27.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	18.3
Actuated g/C Ratio	0.12
v/c Ratio	0.11
Control Delay (s/veh)	0.7
Queue Delay	0.0

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Total Delay (s/veh)	12.9	28.4			18.8	18.5	1.4	49.1	77.0	3.7	60.3	59.6
LOS	B	C			B	B	A	D	E	A	E	E
Approach Delay (s/veh)		27.6				16.6			34.6			53.1
Approach LOS		C				B			C			D
Queue Length 50th (ft)	12	236			127	191	0	82	47	0	182	47
Queue Length 95th (ft)	28	353			195	257	17	127	88	0	247	87
Internal Link Dist (ft)		1510				458			216			911
Turn Bay Length (ft)	235				390		240			150	200	
Base Capacity (vph)	438	1639			611	2009	977	260	191	351	341	331
Starvation Cap Reductn	0	0			0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0			0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0			0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.44			0.53	0.35	0.14	0.41	0.26	0.33	0.63	0.16

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 113 (75%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay (s/veh): 26.4		Intersection LOS: C	
Intersection Capacity Utilization 72.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 10: SW Pinemount Road/NW Turner Avenue & US Highway 90



Lane Group	SBR
Total Delay (s/veh)	0.7
LOS	A
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	0
Internal Link Dist (ft)	
Turn Bay Length (ft)	60
Base Capacity (vph)	418
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.09

Intersection Summary

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1054	11	0	676	0	12
Future Vol, veh/h	1054	11	0	676	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	1211	13	0	777	0	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	612
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	441
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	441
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	13.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	441	-	-	-
HCM Lane V/C Ratio	0.031	-	-	-
HCM Ctrl Dly (s/v)	13.4	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q (veh)	0.1	-	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	872	6	0	1001	0	24
Future Vol, veh/h	872	6	0	1001	0	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	0	0	1	0	0
Mvmt Flow	1002	7	0	1151	0	28

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	505
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	518
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	518
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	12.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	518	-	-	-
HCM Lane V/C Ratio	0.053	-	-	-
HCM Ctrl Dly (s/v)	12.3	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q (veh)	0.2	-	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1011	65	0	689	0	69
Future Vol, veh/h	1011	65	0	689	0	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	1162	75	0	792	0	79

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	619
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	436
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	436
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	15.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	436	-	-	-
HCM Lane V/C Ratio	0.182	-	-	-
HCM Ctrl Dly (s/v)	15.1	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q (veh)	0.7	-	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	831	58	0	1014	0	79
Future Vol, veh/h	831	58	0	1014	0	79
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	0	0	1	0	0
Mvmt Flow	955	67	0	1166	0	91

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	511
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	513
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	513
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	13.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	513	-	-	-
HCM Lane V/C Ratio	0.177	-	-	-
HCM Ctrl Dly (s/v)	13.5	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q (veh)	0.6	-	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	24	37	281	65	31	80
Future Vol, veh/h	24	37	281	65	31	80
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	-	-	-	185	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	1	0	0	6
Mvmt Flow	28	43	323	75	36	92

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	479	361	0	0	398	0
Stage 1	361	-	-	-	-	-
Stage 2	118	-	-	-	-	-
Critical Hdwy	6.6	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	535	688	-	-	1172	-
Stage 1	710	-	-	-	-	-
Stage 2	900	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	518	688	-	-	1172	-
Mov Cap-2 Maneuver	518	-	-	-	-	-
Stage 1	710	-	-	-	-	-
Stage 2	872	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	11.7	0	2.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	609	1172	-
HCM Lane V/C Ratio	-	-	0.115	0.03	-
HCM Ctrl Dly (s/v)	-	-	11.7	8.2	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q (veh)	-	-	0.4	0.1	-

Intersection	
Int Delay, s/veh	3.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	86	80	125	55	78	278
Future Vol, veh/h	86	80	125	55	78	278
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	-	-	-	185	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	4	0	0	2
Mvmt Flow	90	83	130	57	81	290

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	466	159	0	0	187	0
Stage 1	159	-	-	-	-	-
Stage 2	307	-	-	-	-	-
Critical Hdwy	6.6	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	544	892	-	-	1399	-
Stage 1	875	-	-	-	-	-
Stage 2	725	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	512	892	-	-	1399	-
Mov Cap-2 Maneuver	512	-	-	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	683	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.6	0	1.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	644	1399	-
HCM Lane V/C Ratio	-	-	0.269	0.058	-
HCM Ctrl Dly (s/v)	-	-	12.6	7.7	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q (veh)	-	-	1.1	0.2	-

Intersection	
Int Delay, s/veh	2.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	35	37	284	65	77	73
Future Vol, veh/h	35	37	284	65	77	73
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	-	-	-	185	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	1	0	0	6
Mvmt Flow	40	43	326	75	89	84

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	584	364	0	0	401	0
Stage 1	364	-	-	-	-	-
Stage 2	220	-	-	-	-	-
Critical Hdwy	6.6	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	462	685	-	-	1169	-
Stage 1	707	-	-	-	-	-
Stage 2	802	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	427	685	-	-	1169	-
Mov Cap-2 Maneuver	427	-	-	-	-	-
Stage 1	707	-	-	-	-	-
Stage 2	741	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	13.1	0	4.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	529	1169	-
HCM Lane V/C Ratio	-	-	0.156	0.076	-
HCM Ctrl Dly (s/v)	-	-	13.1	8.3	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q (veh)	-	-	0.6	0.2	-

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	97	80	128	55	123	270
Future Vol, veh/h	97	80	128	55	123	270
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	-	-	-	185	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	4	0	0	2
Mvmt Flow	101	83	133	57	128	281

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	559	162	0	0	190	0
Stage 1	162	-	-	-	-	-
Stage 2	397	-	-	-	-	-
Critical Hdwy	6.6	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	478	888	-	-	1396	-
Stage 1	872	-	-	-	-	-
Stage 2	654	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	434	888	-	-	1396	-
Mov Cap-2 Maneuver	434	-	-	-	-	-
Stage 1	872	-	-	-	-	-
Stage 2	594	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	14.5	0	2.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	564	1396	-
HCM Lane V/C Ratio	-	-	0.327	0.092	-
HCM Ctrl Dly (s/v)	-	-	14.5	7.8	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q (veh)	-	-	1.4	0.3	-

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	44	316	12	0	162
Future Vol, veh/h	0	44	316	12	0	162
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	81	81	81	81	81	81
Heavy Vehicles, %	0	2	2	2	0	5
Mvmt Flow	0	54	390	15	0	200

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	398	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.23	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.319	-	-	-	-
Pot Cap-1 Maneuver	0	651	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	651	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	11	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	651	-
HCM Lane V/C Ratio	-	-	0.083	-
HCM Ctrl Dly (s/v)	-	-	11	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q (veh)	-	-	0.3	-

Intersection	
Int Delay, s/veh	1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	42	197	11	0	357
Future Vol, veh/h	0	42	197	11	0	357
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	25	25	25	25	25	25
Heavy Vehicles, %	0	2	4	2	0	1
Mvmt Flow	0	168	788	44	0	1428

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	810	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.23	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.319	-	-	-	-
Pot Cap-1 Maneuver	0	379	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	379	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	21.8	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	379	-
HCM Lane V/C Ratio	-	-	0.443	-
HCM Ctrl Dly (s/v)	-	-	21.8	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q (veh)	-	-	2.2	-

Appendix D
Trip Generation

Land Use: 945
Convenience Store/Gas Station

Description

A convenience store/gas station is a facility with a co-located convenience store and gas station. The convenience store sells grocery and other everyday items that a person may need or want as a matter of convenience. The gas station sells automotive fuels such as gasoline and diesel.

A convenience store/gas station is typically located along a major thoroughfare to optimize motorist convenience. Extended hours of operation (with many open 24 hours, 7 days a week) are common at these facilities.

The convenience store product mix typically includes pre-packaged grocery items, beverages, dairy products, snack foods, confectionary, tobacco products, over-the-counter drugs, and toiletries. A convenience store may sell alcohol, often limited to beer and wine. Coffee and pre-made sandwiches are also commonly sold at a convenience store. Made-to-order food orders are sometimes offered. Some stores offer limited seating.

The sites in this land use include both self-pump and attendant-pumped fueling positions and both pre-pay and post-pay operations.

Convenience store (Land Use 851), gasoline/service station (Land Use 944), and truck stop (Land Use 950) are related uses.

Land Use Subcategory

Multiple subcategories were added to this land use to allow for multi-variable evaluation of sites with single-variable data plots. All study sites are assigned to one of three subcategories, based on the number of vehicle fueling positions (VFP) at the site: between 2 and 8 VFP, between 9 and 15 VFP, and between 16 and 24 VFP. For each VFP range subcategory, data plots are presented with GFA as the independent variable for all time periods and trip types for which data are available. The use of both GFA and VFP (as the independent variable and land use subcategory, respectively) provides a significant improvement in the reliability of a trip generation estimate when compared to the single-variable data plots in prior editions of *Trip Generation Manual*.

Further, the study sites were also assigned to one of three other subcategories, based on the gross floor area (GFA) of the convenience store at the site: between 2,000 and 4,000 square feet, between 4,000 and 5,500 square feet, and between 5,500 and 10,000 square feet. For each GFA subcategory range, data plots are presented with VFP as the independent variable for all time periods and trip types for which data are available. The use of both VFP and GFA (as the independent variable and land use subcategory, respectively) provides a significant improvement in the reliability of a trip generation estimate when compared to the single-variable data plots in prior editions of *Trip Generation Manual*.

When analyzing the convenience store/gas station land use with each combination of GFA and VFP values as described above, the two sets of data plots will produce two estimates of site-generated trips. Both values can be considered when determining a site trip generation estimate.

Data plots are also provided for three additional independent variables: AM peak hour traffic on adjacent street, PM peak hour traffic on adjacent street, and employees. These independent variables are intended to be analyzed as single independent variables and do not have sub-categories associated with them. Within the data plots and within the ITETripGen web app, these plots are found under the land use subcategory "none."

Additional Data

ITE recognizes there are existing convenience store/gas station sites throughout North America that are larger than the sites presented in the data plots. However, the ITE database does not include any site with more than 24 VFP or any site with gross floor area greater than 10,000 square feet. Submission of trip generation data for larger sites is encouraged.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), Arkansas, California, Connecticut, Delaware, Florida, Indiana, Iowa, Kentucky, Maryland, Massachusetts, Minnesota, Nevada, New Hampshire, New Jersey, Pennsylvania, Rhode Island, South Dakota, Texas, Utah, Vermont, Washington, and Wisconsin.

Source Numbers

221, 245, 274, 288, 300, 340, 350, 351, 352, 355, 359, 385, 440, 617, 718, 810, 813, 844, 850, 853, 864, 865, 867, 869, 882, 883, 888, 904, 926, 927, 936, 938, 954, 960, 962, 977, 1004, 1024, 1025, 1027, 1052

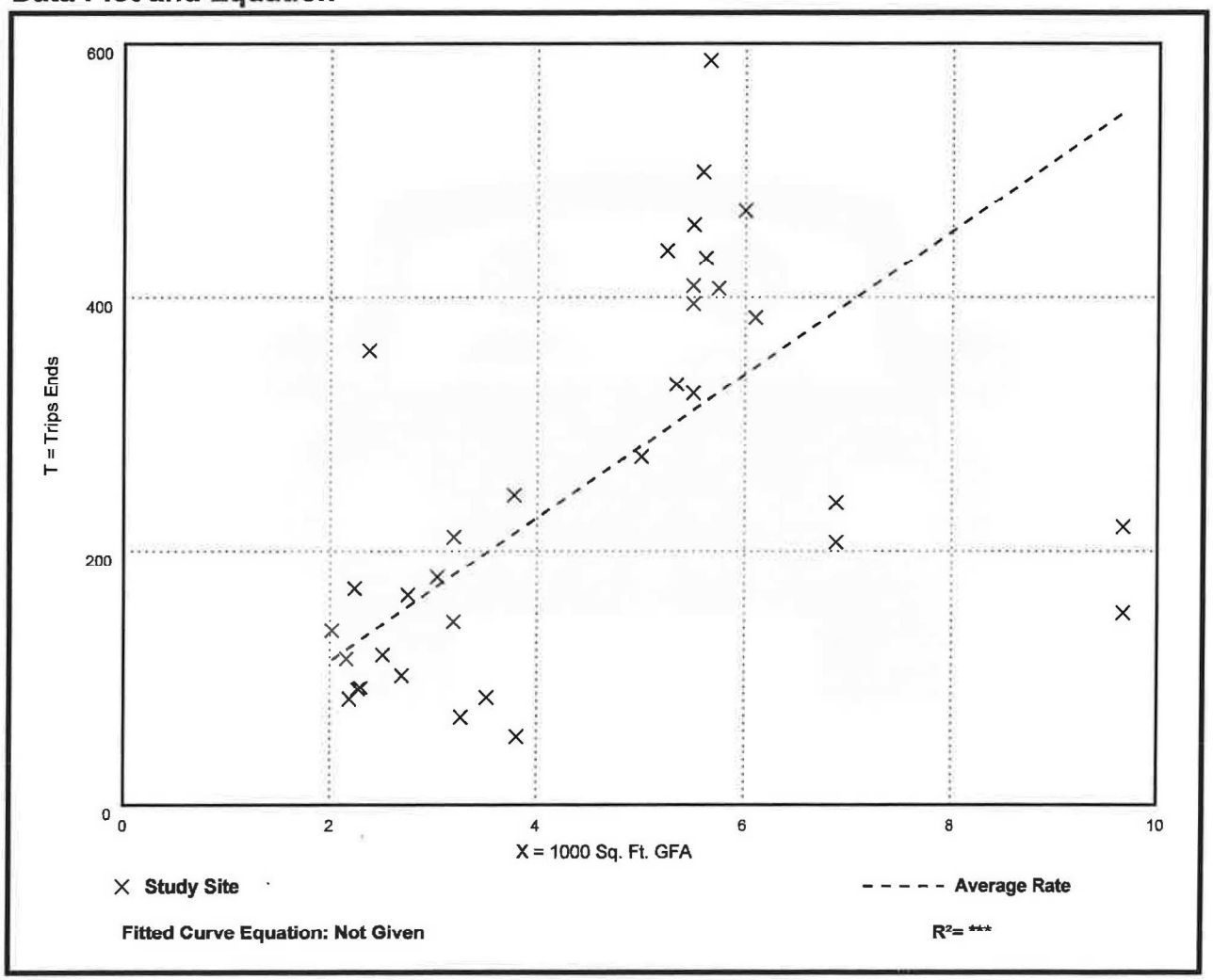
Convenience Store/Gas Station - VFP (9-15) (945)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 34
Avg. 1000 Sq. Ft. GFA: 4
Directional Distribution: 50% entering, 50% exiting 112 in, 112 out

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
56.52 x 3.956 = 224	14.17 - 150.67	27.56

Data Plot and Equation



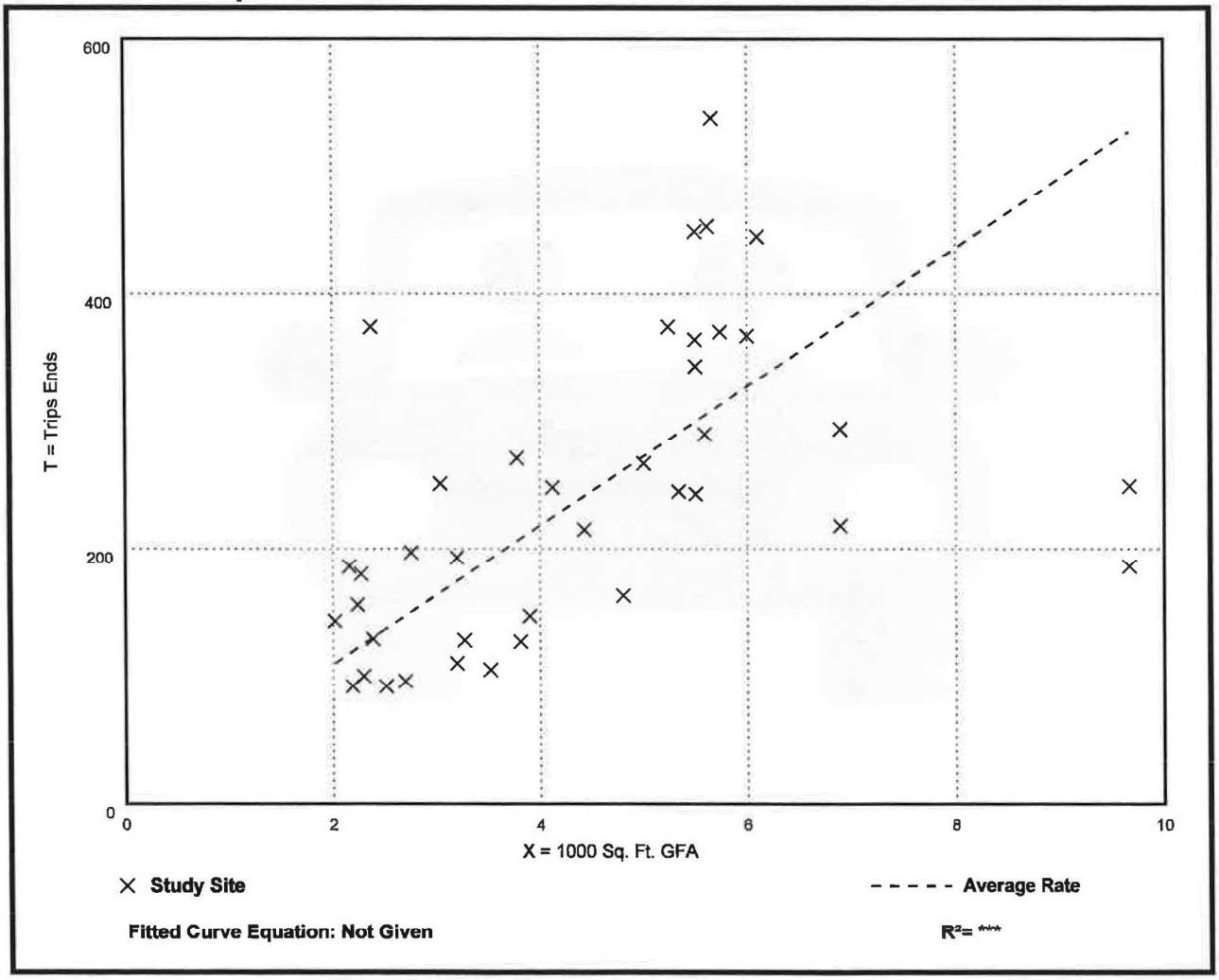
Convenience Store/Gas Station - VFP (9-15) (945)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 39
Avg. 1000 Sq. Ft. GFA: 4
Directional Distribution: 50% entering, 50% exiting 108 in, 108 out

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
54.52 x 3.956 = 216	19.23 - 157.41	23.69

Data Plot and Equation



Vehicle Pass-By Rates by Land Use

Source: ITE *Trip Generation Manual*, 11th Edition

Land Use Code	945									
Land Use	Convenience Store/Gas Station									
Setting	General Urban/Suburban									
Time Period	Weekday AM Peak Period									
# Data Sites	16 Sites with between 2 and 8 VFP					28 Sites with between 9 and 20 VFP				
Average Pass-By Rate	60% for Sites with between 2 and 8 VFP					76% for Sites with between 9 and 20 VFP				
	Pass-By Characteristics for Individual Sites									
			Survey		Pass-By	Non-Pass-By Trips			Adj Street Peak	
GFA (000)	VFP	State or Province	Year	# Interviews	Trip (%)	Primary (%)	Diverted (%)	Total (%)	Hour Volume	Source
2	8	Maryland	1992	46	87	13	0	13	2235	25
2.1	6	Maryland	1992	26	58	23	19	42	2080	25
2.1	6	Maryland	1992	26	58	23	19	42	2080	25
2.2	8	Maryland	1992	31	47	34	19	53	1785	25
2.2	< 8	Indiana	1993	79	56	6	38	44	635	2
2.2	8	Maryland	1992	35	78	9	13	22	7080	25
2.3	6	Maryland	1992	37	32	41	27	68	2080	25
2.3	< 8	Kentucky	1993	58	64	5	31	36	1255	2
2.3	6	Maryland	1992	37	32	41	27	68	2080	25
2.4	< 8	Kentucky	1993	—	48	17	35	52	1210	2
2.6	< 8	Kentucky	1993	—	72	15	13	28	940	2
2.8	< 8	Kentucky	1993	—	54	11	35	46	1240	2
3	< 8	Indiana	1993	62	74	10	16	26	790	2
3.6	< 8	Kentucky	1993	49	67	4	29	33	1985	2
3.7	< 8	Kentucky	1993	49	66	16	18	34	990	2
4.694	12	Maryland	2000	—	72	—	—	28	2440	30
4.694	12	Maryland	2000	—	78	—	—	22	1561	30
4.694	12	Maryland	2000	—	79	—	—	21	2764	30
4.848	12	Virginia	2000	—	55	—	—	45	1398	30
5.06	12	Pennsylvania	2000	—	84	—	—	16	3219	30
5.242	12	Virginia	2000	—	74	—	—	26	1160	30
5.242	12	Virginia	2000	—	71	—	—	29	548	30
5.488	12	Delaware	2000	—	80	—	—	20	—	30
5.5	12	Pennsylvania	2000	—	85	—	—	15	2975	30
4.2	< 8	Kentucky	1993	47	62	19	19	38	1705	2
4.694	16	Maryland	2000	—	90	—	—	10	2278	30
4.694	16	Delaware	2000	—	74	—	—	26	2185	30
4.694	16	Delaware	2000	—	58	—	—	42	962	30
4.694	16	Delaware	2000	—	84	—	—	16	2956	30
4.694	16	New Jersey	2000	—	79	—	—	21	1859	30
4.694	20	Delaware	2000	—	84	—	—	16	3864	30
4.848	16	Virginia	2000	—	68	—	—	32	2106	30
4.848	16	Virginia	2000	—	85	—	—	15	2676	30
4.848	16	Virginia	2000	—	75	—	—	25	3244	30
4.848	16	Virginia	2000	—	71	—	—	29	1663	30
4.993	16	Pennsylvania	2000	—	75	—	—	25	1991	30
5.094	16	New Jersey	2000	—	86	—	—	14	1260	30
5.5	16	Pennsylvania	2000	—	82	—	—	18	1570	30
5.543	16	Pennsylvania	2000	—	84	—	—	16	1933	30
5.565	16	Pennsylvania	2000	—	77	—	—	23	2262	30
5.565	16	Pennsylvania	2000	—	68	—	—	32	2854	30
5.565	16	New Jersey	2000	—	58	—	—	42	1253	30
5.565	16	New Jersey	2000	—	79	—	—	21	1928	30
5.565	16	New Jersey	2000	---	84	---	---	16	1953	30

Vehicle Pass-By Rates by Land Use

Source: ITE *Trip Generation Manual*, 11th Edition

Land Use Code	945									
Land Use	Convenience Store/Gas Station									
Setting	General Urban/Suburban									
Time Period	Weekday PM Peak Period									
# Data Sites	12 Sites with between 2 and 8 VFP					28 Sites with between 9 and 20 VFP				
Average Pass-By Rate	56% for Sites with between 2 and 8 VFP					75% for Sites with between 9 and 20 VFP				
	Pass-By Characteristics for Individual Sites									
			Survey		Pass-By	Non-Pass-By Trips			Adj Street Peak	
GFA (000)	VFP	State or Province	Year	# Interviews	Trip (%)	Primary (%)	Diverted (%)	Total (%)	Hour Volume	Source
2.1	8	Maryland	1992	31	52	13	35	48	1785	25
2.1	6	Maryland	1992	30	53	20	27	47	1060	25
2.2	< 8	Indiana	1993	115	48	16	36	52	820	2
2.3	< 8	Kentucky	1993	67	57	16	27	43	1954	2
2.3	6	Maryland	1992	55	40	11	49	60	2760	25
2.4	< 8	Kentucky	1993	—	58	13	29	42	2655	2
2.6	< 8	Kentucky	1993	68	67	15	18	33	950	2
2.8	< 8	Kentucky	1993	—	62	11	27	38	2875	2
3	< 8	Indiana	1993	80	65	15	20	35	1165	2
3.6	< 8	Kentucky	1993	60	56	17	27	44	2505	2
3.7	< 8	Kentucky	1993	70	61	16	23	39	2175	2
4.2	< 8	Kentucky	1993	61	58	26	16	42	2300	2
4.694	12	Maryland	2000	—	78	—	—	22	3549	30
4.694	12	Maryland	2000	—	67	—	—	33	2272	30
4.694	12	Maryland	2000	—	66	—	—	34	3514	30
4.848	12	Virginia	2000	—	71	—	—	29	2350	30
5.06	12	Pennsylvania	2000	—	91	—	—	9	4181	30
5.242	12	Virginia	2000	—	70	—	—	30	2445	30
5.242	12	Virginia	2000	—	56	—	—	44	950	30
5.488	12	Delaware	2000	—	73	—	—	27	—	30
5.5	12	Pennsylvania	2000	—	84	—	—	16	4025	30
4.694	16	Maryland	2000	—	89	—	—	11	2755	30
4.694	16	Delaware	2000	—	73	—	—	27	1858	30
4.694	16	Delaware	2000	—	59	—	—	41	1344	30
4.694	16	Delaware	2000	—	72	—	—	28	3434	30
4.694	16	New Jersey	2000	—	81	—	—	19	1734	30
4.694	20	Delaware	2000	—	76	—	—	24	1616	30
4.848	16	Virginia	2000	—	67	—	—	33	2.954	30
4.848	16	Virginia	2000	—	78	—	—	22	3086	30
4.848	16	Virginia	2000	—	83	—	—	17	4143	30
4.848	16	Virginia	2000	—	73	—	—	27	2534	30
4.993	16	Pennsylvania	2000	—	72	—	—	28	2917	30
5.094	16	New Jersey	2000	—	86	—	—	14	1730	30
5.5	16	Pennsylvania	2000	—	90	—	—	10	2616	30
5.543	16	Pennsylvania	2000	—	87	—	—	13	2363	30
5.565	16	Pennsylvania	2000	—	81	—	—	19	2770	30
5.565	16	Pennsylvania	2000	—	76	—	—	24	3362	30
5.565	16	New Jersey	2000	—	61	—	—	39	1713	30
5.565	16	New Jersey	2000	—	86	—	—	14	1721	30
5.565	16	New Jersey	2000	---	81	---	---	19	2227	30

Appendix E
Turn Lane Warrant Analysis Worksheets

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	40
Major-road volume (one direction), veh/h:	316
Right-turn volume, veh/h:	12

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	295
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

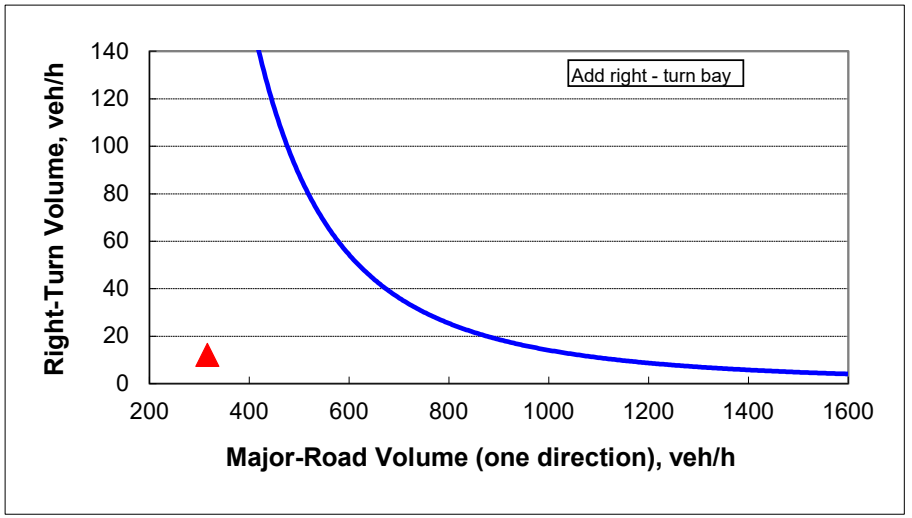


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

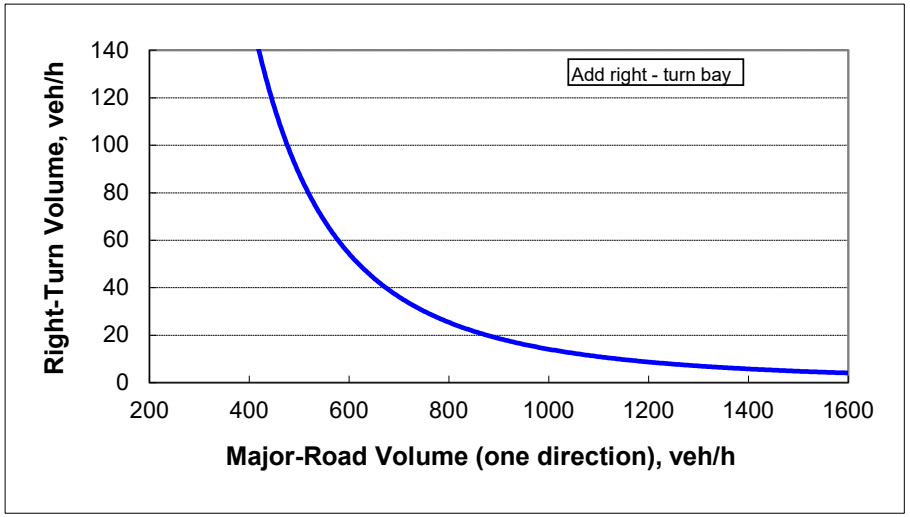
INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	40
Major-road volume (one direction), veh/h:	197
Right-turn volume, veh/h:	11

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	1029
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	



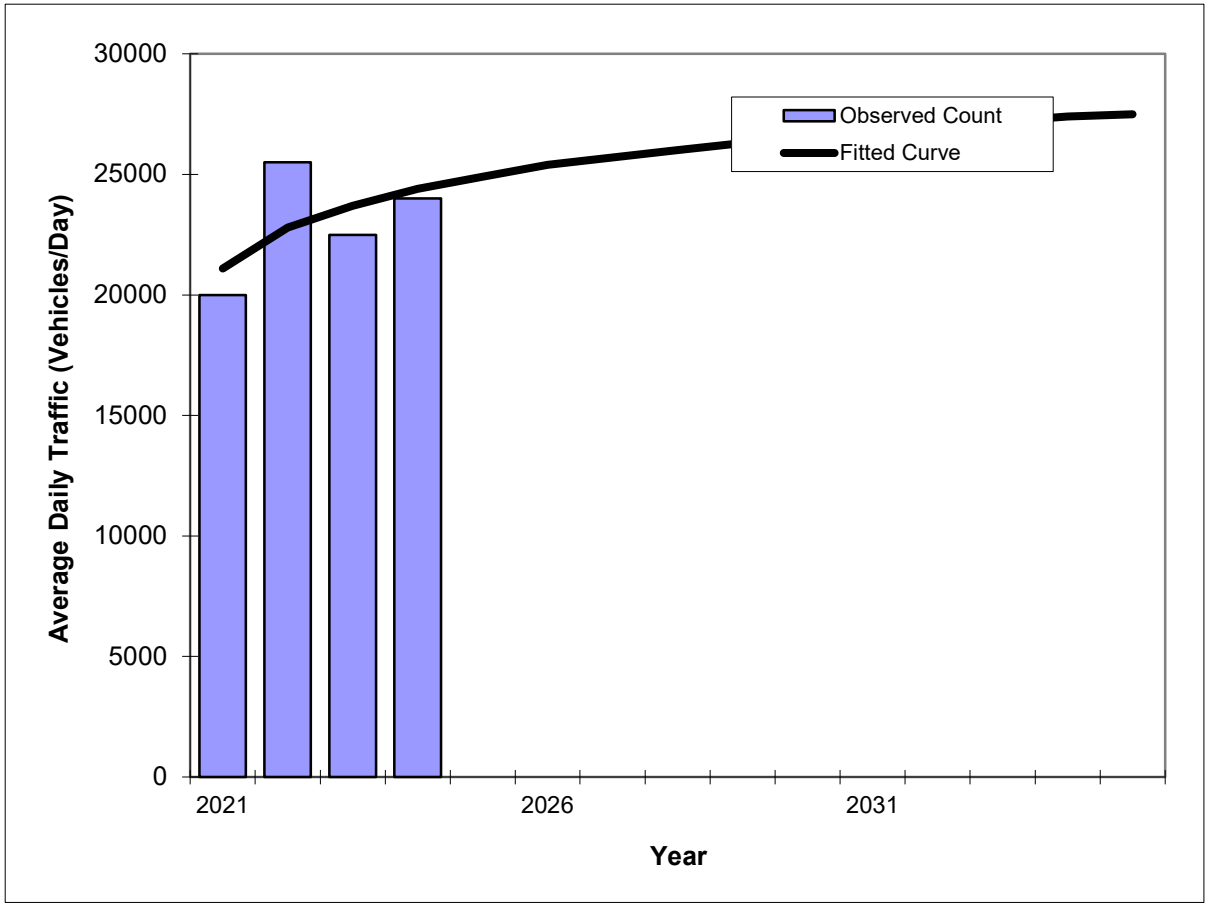
Appendix F
FDOT Traffic Trends Analysis Tool Worksheets

Traffic Trends - V03.a

US 90 -- SW Pinemount Road to CR-252B

FIN#	1234
Location	1

County:	Columbia (29)
Station #:	290279
Highway:	US 90



Year	Traffic (ADT/AADT) Count*	Trend**
2021	20000	21100
2022	25500	22800
2023	22500	23700
2024	24000	24400
2027 Opening Year Trend		
2027	N/A	25700
2028 Mid-Year Trend		
2028	N/A	26000
2029 Design Year Trend		
2029	N/A	26300
TRANPLAN Forecasts/Trends		

Trend R-squared:	36.92%
Compounded Annual Historic Growth Rate:	4.96%
Compounded Growth Rate (2024 to Design Year):	1.51%
Printed:	18-Apr-25

Decaying Exponential Growth Option

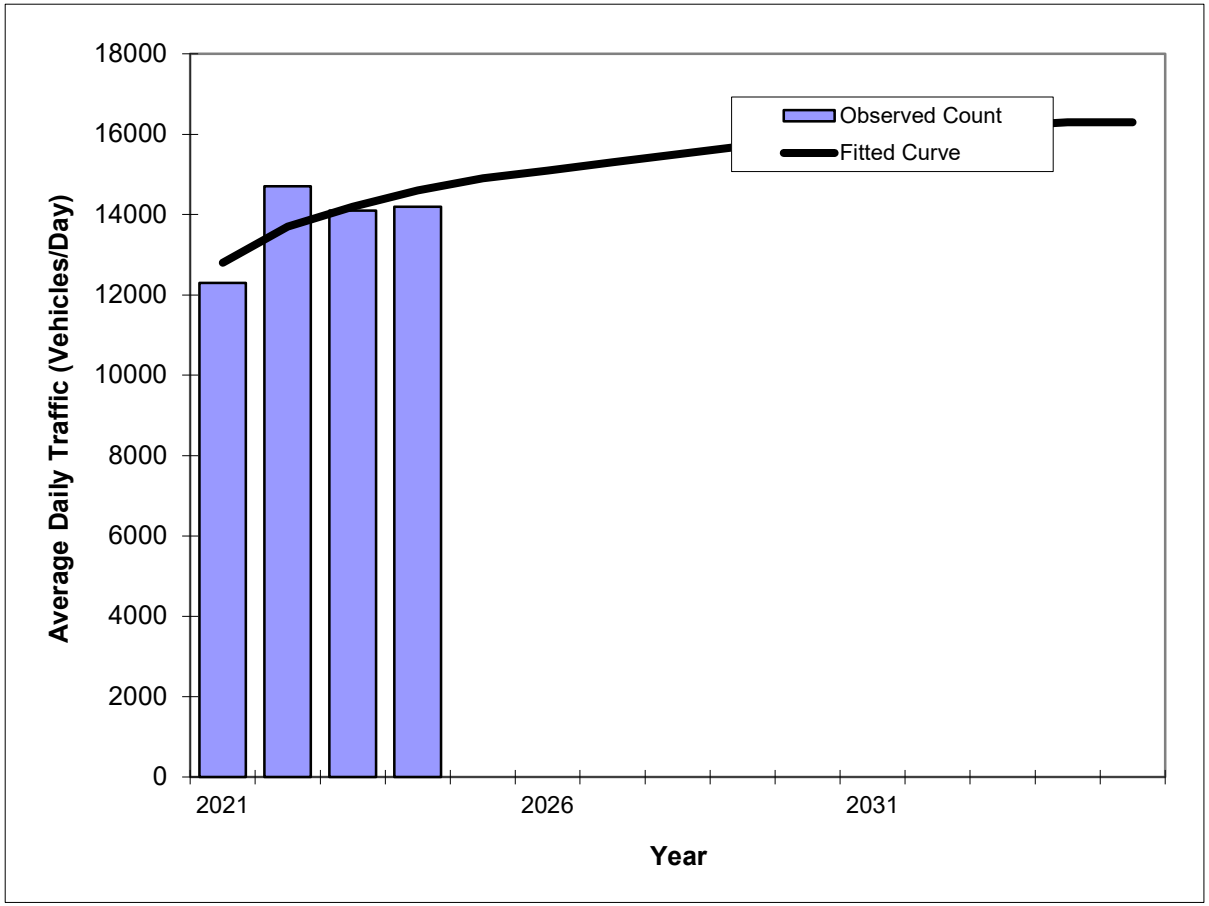
***Axle-Adjusted**

Traffic Trends - V03.a

US 90 -- SW Executive Drive to SW Pinemount Road

FIN#	1234
Location	1

County:	Columbia (29)
Station #:	295046
Highway:	US 90



Year	Traffic (ADT/AADT) Count*	Trend**
2021	12300	12800
2022	14700	13700
2023	14100	14200
2024	14200	14600
2027 Opening Year Trend		
2027	N/A	15300
2028 Mid-Year Trend		
2028	N/A	15500
2029 Design Year Trend		
2029	N/A	15700
TRANPLAN Forecasts/Trends		

Trend R-squared:	56.90%
Compounded Annual Historic Growth Rate:	4.48%
Compounded Growth Rate (2024 to Design Year):	1.46%
Printed:	18-Apr-25

Decaying Exponential Growth Option

***Axle-Adjusted**

Appendix G
Signal Timing Directive

Final Report

Prepared for:

Florida Department of Transportation
District Two

Districtwide Traffic Signal Timing Consultant Contract

Contract Number: C-9AC31
Financial Project: 439043-1-32-01
Task Work Order #02

US 90 (State Road 10)

Executive Drive-Northwest Brown Road to Marion Avenue (State Road 47)

Southwest Baya Drive (State Road 10A)

McFarlane Avenue to South Marion Avenue (State Road 25A)

Lake City, within Columbia County, Florida

Prepared by:

Iteris, Inc.
1907 N US 301, Suite 120
Tampa, Florida 33619

December 2021

12/22/2021

Professional Engineer: Helmuth Arens
Florida PE No.: 77615

Location Details			
Signal ID:	**648**	Date:	**November 20, 2021**
Major Street:	**US 90 (SR 10)**	Orientation:	**E-W**
Minor Street:	**SW Pinemount Rd-NW Turner Ave**	Orientation:	**N-S**

Controller Timings (seconds)

Movement # (Controller Phase Ø)	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø11	Ø12	Ø13	Ø14	Ø15	Ø16	Notes
Direction	EBLT	WB	SBLT	NB	WBLT	EB	NBLT	SB									
Turn Type	FYA		FYA		FYA		FYA										
Min Green	5	15	5	7	5	15	5	7									
Ext	3.0	6.0	3.0	3.0	3.0	6.0	3.0	3.0									
Yellow	4.8	4.8	4.4	4.4	4.8	4.8	4.4	4.4									
All Red	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0									
Max I	15	60	15	15	15	60	15	15									
Max II																	
Walk		7		7		7		7									
Flashing Don't Walk		18		30		20		27									
Detector Memory																	
Det. Switching to:																	
Recall		MIN				MIN											
CNA																	

Coordination Timings (seconds)

Pattern	C-S-O	Cycle Length	Splits															Offset	Seq	Coord Ø
			Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø11	Ø12	Ø13	Ø14	Ø15	Ø16			
3		150	15	81 Max	32	22	41	55 Max	20	34									113	1	2

Offset Reference Point	Phase Mode
End of Green of first through movement	STD 8

Notes:
1) Use 'Max I' during FREE Operation.

SEQ 1

Ring - 1	1	2	3	4
Ring - 2	5	6	7	8

Signal ID:	**648**
Major Street:	**US 90 (SR 10)**
Minor Street:	**SW Pinemount Rd-NW Turner Ave**

Day Plans

Monday-Thursday			
Day Plan 1			
Hr	Min	Patt	Cycl
00	00	254	Free
15	00	3	150
18	00	254	Free

Saturday			
Day Plan 2			
Hr	Min	Patt	Cycl
00	00	254	Free

Sunday			
Day Plan 3			
Hr	Min	Patt	Cycl
00	00	254	Free

Friday			
Day Plan 4			
Hr	Min	Patt	Cycl
00	00	254	Free
15	00	3	150
18	00	254	Free

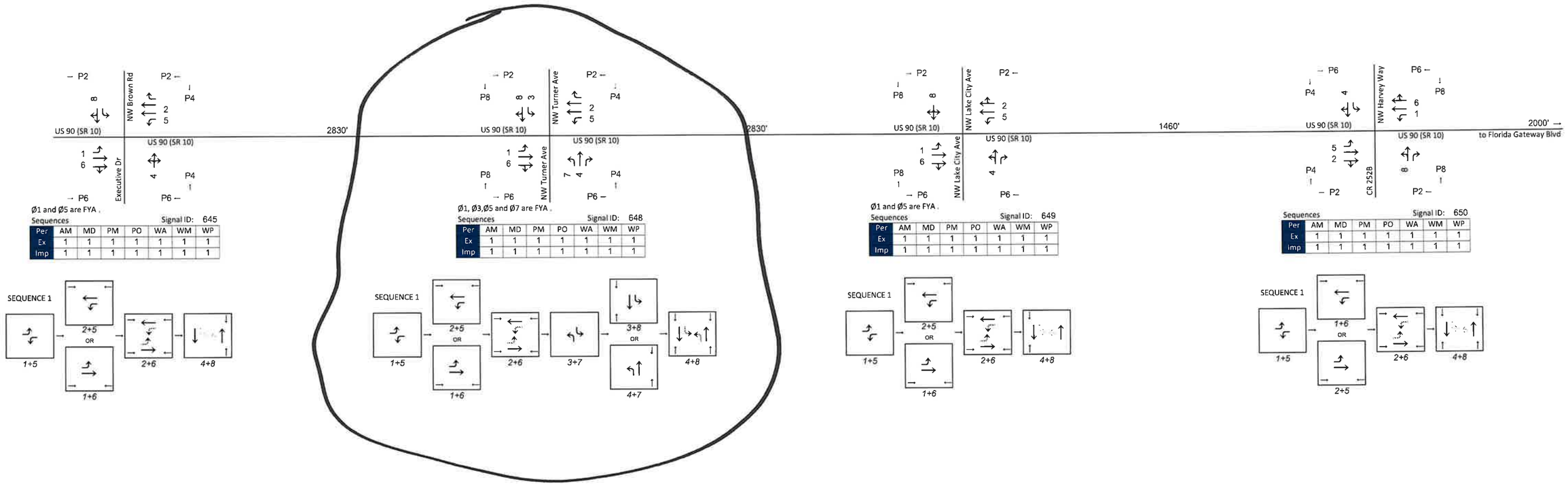
Day Plan 5			
Hr	Min	Patt	Cycl

Day Plan 6			
Hr	Min	Patt	Cycl

Day Plan 7			
Hr	Min	Patt	Cycl

Day Plan 8			
Hr	Min	Patt	Cycl

Patt	Force Mode	Alt Opt Table	Alt Time Table	Coord Max Plan	Alt Time Table Max Values (Seconds)															
					Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø11	Ø12	Ø13	Ø14	Ø15	Ø16
3	FIXED	None	None	Max Inh																



Ø1 and Ø5 are FYA .

Sequences — Signal ID: 645

	AM	MD	PM	PO	WA	WM	WP
Per	1	1	1	1	1	1	1
Ex	1	1	1	1	1	1	1
Imp	1	1	1	1	1	1	1

Ø1, Ø3,Ø5 and Ø7 are FYA .

Sequences — Signal ID: 648

	AM	MD	PM	PO	WA	WM	WP
Per	1	1	1	1	1	1	1
Ex	1	1	1	1	1	1	1
Imp	1	1	1	1	1	1	1

Ø1 and Ø5 are FYA .

Sequences — Signal ID: 649

	AM	MD	PM	PO	WA	WM	WP
Per	1	1	1	1	1	1	1
Ex	1	1	1	1	1	1	1
Imp	1	1	1	1	1	1	1

Sequences — Signal ID: 650

	AM	MD	PM	PO	WA	WM	WP
Per	1	1	1	1	1	1	1
Ex	1	1	1	1	1	1	1
Imp	1	1	1	1	1	1	1

Phase Diagrams

- Permissive Movement
- Protected + Permissive Movement
- Protected-Only Movement

NTS

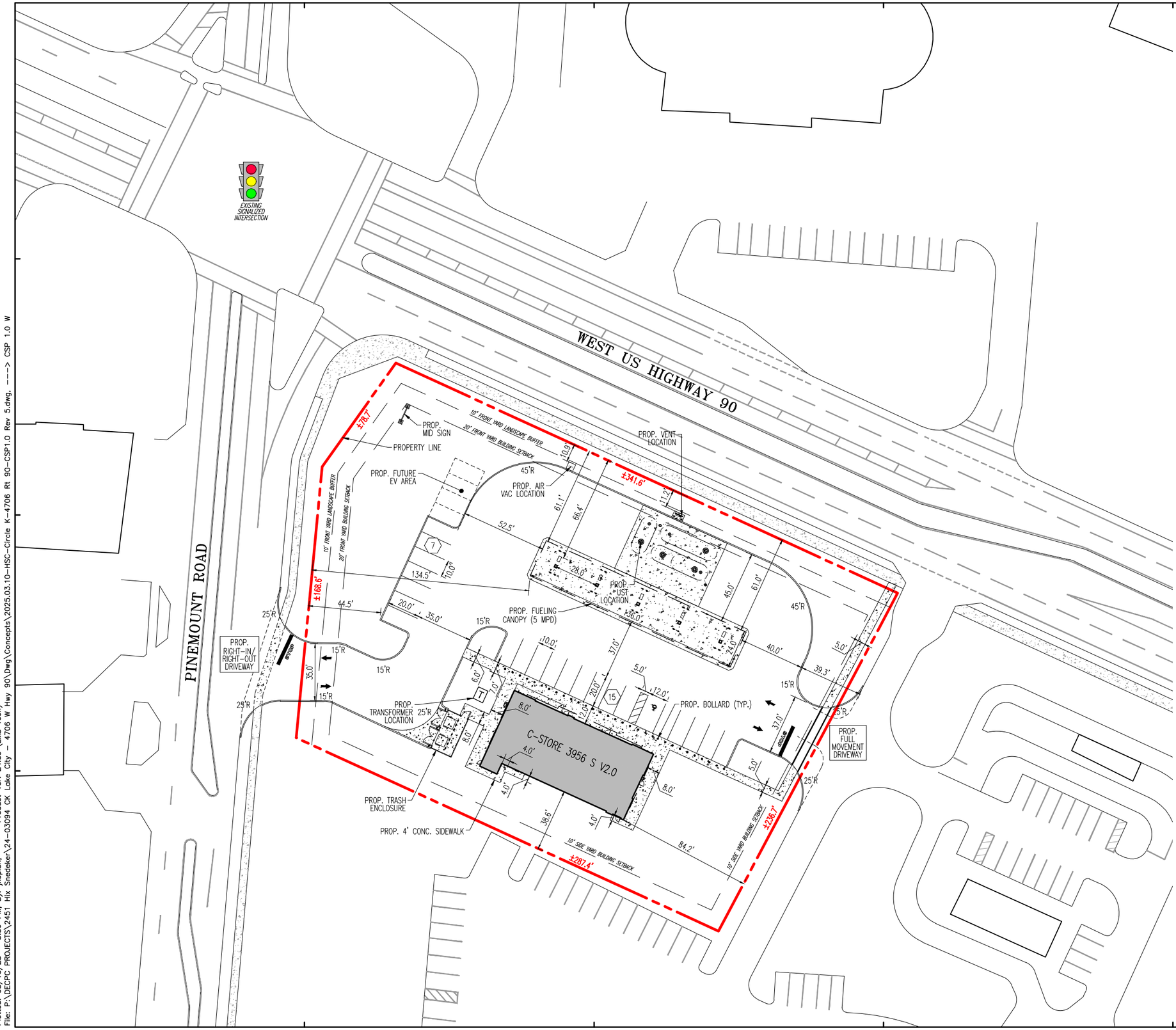
Prepared by: Iteris, Inc.

Figure 16

Phase Sequence Diagrams

US 90 (SR 10) - Executive Dr-NW Brown Rd to CR 252B-NW Harvey Way

Appendix H
Site Plan



SITE LEGEND

- PROPERTY LINE
- BUILDING SETBACK LINE
- LANDSCAPE BUFFER LINE
- (#) PARKING COUNT

SITE DATA:

ZONING:	CI ZONE (COMMERCIAL INTENSIVE)
CURRENT LAND USE:	AGRICULTURAL
TOTAL LOT AREA:	77,670 SF (1.78 AC)
GROSS FLOOR AREA OF BUILDINGS:	3,956 SF
BUILDING SETBACKS:	
FRONT: 20 FT REQUIRED	61.0 FT
SIDE: 10 FT REQUIRED	84.2 FT
REAR: NO REAR YARD FOR CORNER LOTS	N/A
GREENSPACE SETBACKS:	
FRONT: 10 FT REQUIRED	10.9 FT
GASOLINE PUMP SETBACK:	
FRONT: 35 FT REQUIRED	66.4 FT
PARKING REQUIRED:	(10 FT X 20 FT PER CODE)
ONE (1) SPACE PER THREE HUNDRED (300) SQUARE FEET OF GROSS FLOOR AREA	3,956 SF/300 = 14 SPACES REQUIRED
PARKING PROVIDED:	22 SPACES + 10 FUELING POSITIONS
TRUCK USED:	WB-50
OVERALL LENGTH	55 FT
TRAILER LENGTH	42.5 FT

GRAPHIC SCALE
0 30 60 120
(IN FEET)

N W E S

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DATE:	DESCRIPTION:
10/14/2024	CLIENT COMMENTS
11/05/2024	CLIENT COMMENTS
12/09/2024	CLIENT COMMENTS
01/15/2025	CK COMMENTS
03/10/2025	CK COMMENTS

PROFESSIONAL SEAL:

PROFESSIONAL IN CHARGE:
MICHAEL D. MILES
PROJECT MANAGER:
LUIZA P. GUAZZELLI
QUALITY CONTROL:
DRAWN BY:
KYLE A. KONKUS
DATE ISSUED:
11/05/2024

PROJECT NAME:
CIRCLE K
LAKE CITY, FL

4706 W. US HWY 90
LAKE CITY, FL

FLORIDA
BUSINESS UNIT

CIRCLE K STORES INC.

PROJECT NUMBER:
2451-24-03094

SHEET TITLE:
CONCEPTUAL SITE PLAN

SHEET NUMBER:
CSP 1.0 W

Plotted: 03/10/25 – 5:39 PM, By: jkaplan, – Product Ver: 24.3s (LMS Tech)
File: P:\DECPC PROJECTS\2451 Hix Snedeker\24-03094 CK Lake City – 4706 W Hwy 90\Dwg\Concepts\2025.03.10-HSC-Circle K-4706 Rt 90-CSP1.0 Rev 5.dwg, ---> CSP 1.0 W