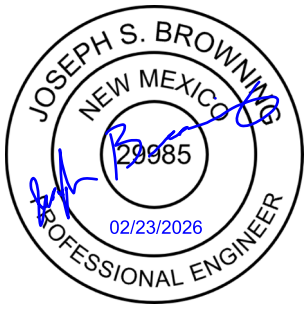
MEMORANDUM



Date: February 23, 2026

To: City of Albuquerque

From: Hales Engineering

Subject: Albuquerque De Vargas Circle K Traffic Impact Analysis

UT25-3155

Introduction

This memorandum discusses the traffic impact analysis (TIA) completed for the proposed Circle K development in Albuquerque, New Mexico. A vicinity map of the proposed development is shown in Figure 1. This memorandum also serves as an addendum to the previous TIA prepared by CLH Associates, LLC for the Taco Bell / Retail Development on Snow Vista Blvd SW. Background traffic counts from that study were used and grown using a 1% annual growth rate to develop existing 2026 and future 2036 traffic conditions. The study area limits established in the original TIA were retained for this analysis.

Figure 1: Vicinity map of the proposed development in Albuquerque, New Mexico

Methodology

Level of service (LOS) is a term that describes the operating performance of an intersection or roadway. LOS is measured quantitatively and reported on a scale from A to F, with A representing the best performance and F the worst.

The Highway Capacity Manual (HCM), 7th Edition, 2022 methodology was used in this study to remain consistent with "state-of-the-practice" professional standards. This methodology has different quantitative evaluations for signalized and unsignalized intersections. For signalized, roundabout, and all-way stop-controlled (AWSC) intersections, the LOS is provided for the overall intersection (weighted average of all approach delays). For all other unsignalized intersections, LOS is reported based on the worst movement.

Using Synchro software, which follows the HCM methodology, the peak hour LOS was computed for each study intersection. The detailed LOS and 95th percentile queue length reports are provided in Appendix B.

Project Background

The proposed Circle K development is located on the southwest corner of the De Vargas Road / Snow Vista Boulevard intersection. The development will consist of a Circle K gas station. A concept plan for the proposed development is provided in Appendix A.

Trip Generation

Trip generation for the development was calculated using trip generation rates published in the Institute of Transportation Engineers (ITE) *Trip Generation (12th Edition, 2025)*. Trip generation for the proposed project is included in Table 1.

As shown in Table 1, it is anticipated that the proposed development will generate approximately 724 (+2,292 pass-by) trips on an average weekday, including 61 (+193 pass-by) trips during the morning peak hour, and 66 (+196 pass-by) trips during the evening peak hour.

Based on ITE pass-by trip data, the average pass-by percentage for a gas station with 9-15 pumps is 76% during the morning peak hour and 75% during the evening peak hour. These percentages were used for the analysis.

Table 1: Trip Generation

Trip Generation Albuquerque - De Vargas Circle K												
	Land Use[1]	# of Units	Unit Type	Trip Generation					Reductions	New Trips		
				Total	% In	% Out	In	Out	Pass-by	In	Out	Total
Weekday Daily												
	Convenience Store/Gas Station, 9-15 pumps (945)	5	KSF	3,016	50%	50%	1,508	1,508	76%	362	362	724
AM Peak Hour												
	Convenience Store/Gas Station, 9-15 pumps (945)	5	KSF	254	50%	50%	127	127	76%	31	30	61
PM Peak Hour												
	Convenience Store/Gas Station, 9-15 pumps (945)	5	KSF	262	50%	50%	131	131	75%	33	33	66

1. Land Use Code from the Institute of Transportation Engineers (ITE) *Trip Generation*, 12th Edition, 2025.

SOURCE: Hales Engineering, December 2025

Trip Distribution and Assignment

Trip distribution percentages for new trips were taken from the Taco Bell / Retail Development on Snow Vista Blvd SW TIA for morning and evening peak hours. The assumed distribution of new trips during the morning and evening peak hour is shown in Table 2.

Table 2: New Trip Distribution

Direction	AM % To/From Project	PM % To/From Project
North (Snow Vista Blvd)	24%	41%
South (Snow Vista Blvd)	38%	24%
East (De Vargas Rd)	10%	16%
West (De Vargas Rd)	17%	13%
East (Benavides Rd)	4%	2%
West (Benavides Rd)	7%	4%

Trip distribution percentages for pass-by trips were calculated based on the existing directional traffic on the major roads near the project, as summarized in Table 3.

Table 3: Pass-by Trip Distribution

Direction	%
Northbound (Snow Vista Blvd)	30%
Southbound (Snow Vista Blvd)	70%

These trip distribution assumptions were used to assign the morning and evening peak hour trip generation at the study intersections to create trip assignment for the proposed development. Trip assignment for the development is shown in Figure 2. Additionally, trip assignment for morning and evening peak hours are shown in Table 4 and Table 5, respectively.


Snow Vista Blvd
De Vargas Rd
North Project Access
East Project Access
Taco Bell Access
Snow Vista Blvd NB
Snow Vista Blvd SB
Benavides Rd
+24
-24
+67
-67
+29
-29
+5
+68
LEGEND
New Trips
+/- ## Pass-By Trips

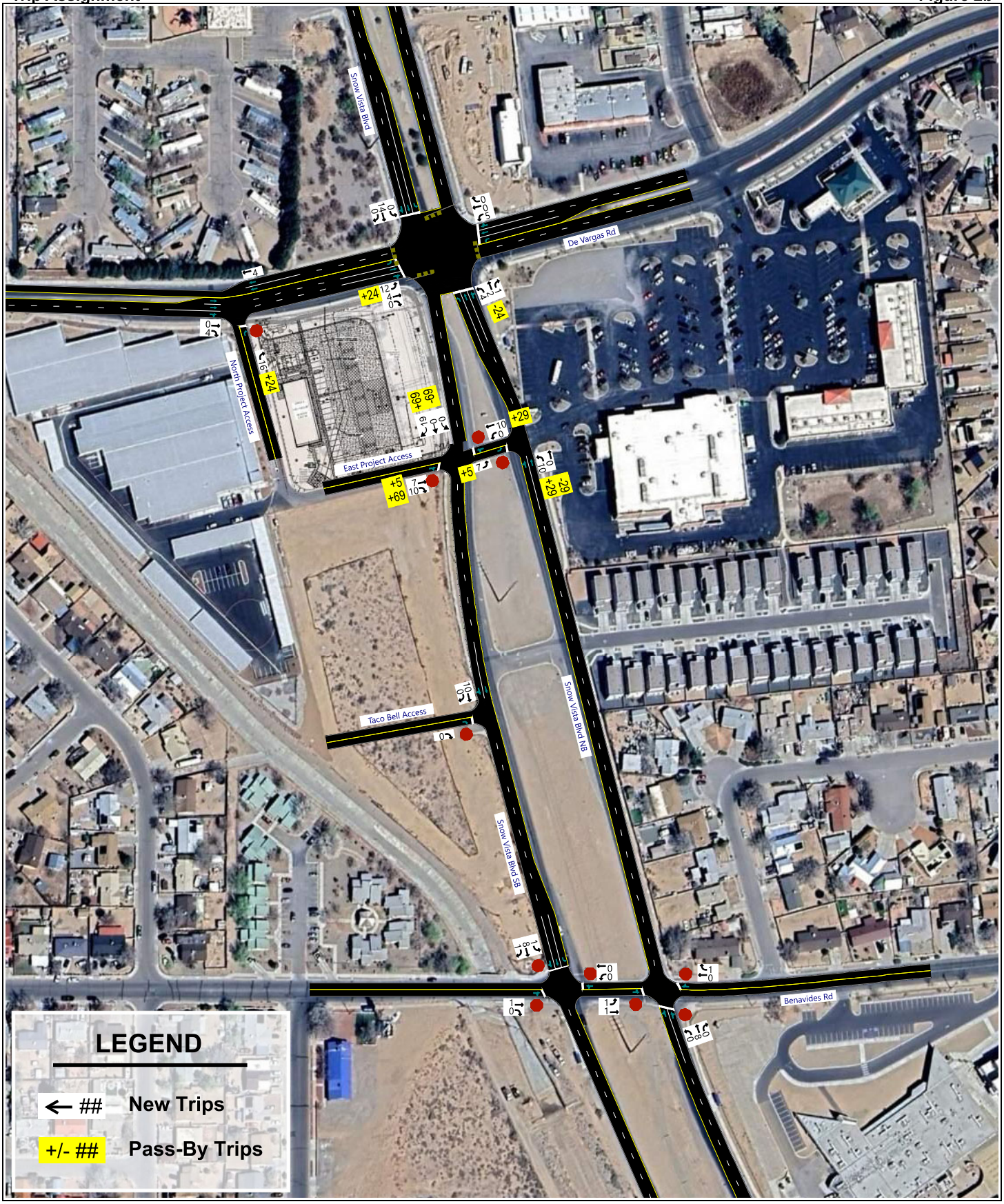

Snow Vista Blvd
De Vargas Rd
North Project Access
East Project Access
Taco Bell Access
Snow Vista Blvd NB
Snow Vista Blvd SB
Benavides Rd
+24
-24
+69
-69
+29
-29
+5
LEGEND
New Trips
+/- ## Pass-By Trips

Table 4: Morning Trip Assignment

Intersection		Morning Trip Assignment											
Description	Control	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
North Project Access / De Vargas Rd	NB Stop	0	0	34	0	0	0	0	0	5	0	5	0
De Vargas Rd / Snow Vista Blvd	Signal	5	-22	1	0	8	0	30	2	2	3	0	0
East Project Access / Snow Vista Blvd SB	EB/WB Stop	0	0	0	0	-65	78	0	13	80	0	44	0
East Project Access / Snow Vista Blvd NB	EB/WB Stop	44	-29	0	0	0	0	13	0	0	0	0	0
Taco Bell Access / Snow Vista Blvd SB	EB Stop	0	0	0	0	14	0	0	0	0	0	0	0
Benavides Rd / Snow Vista Blvd SB	AWSC	0	0	0	1	11	2	0	2	0	0	0	0
Benavides Rd / Snow Vista Blvd NB	AWSC	0	12	0	0	0	0	2	1	0	0	0	1

Source: Hales Engineering, February 2026

Table 5: Evening Trip Assignment

Intersection		Evening Trip Assignment											
Description	Control	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
North Project Access / De Vargas Rd	NB Stop	0	0	40	0	0	0	0	0	4	0	4	0
De Vargas Rd / Snow Vista Blvd	Signal	4	-22	1	0	14	0	36	4	0	5	0	0
East Project Access / Snow Vista Blvd SB	EB/WB Stop	0	0	0	0	-69	88	0	12	79	0	39	0
East Project Access / Snow Vista Blvd NB	EB/WB Stop	39	-29	0	0	0	0	12	0	0	0	0	0
Taco Bell Access / Snow Vista Blvd SB	EB Stop	0	0	0	0	10	0	0	0	0	0	0	0
Benavides Rd / Snow Vista Blvd SB	AWSC	0	0	0	1	8	1	0	1	0	0	0	0
Benavides Rd / Snow Vista Blvd NB	AWSC	0	8	0	0	0	0	1	1	0	0	0	1

Source: Hales Engineering, February 2026

Access

The proposed access for the site will be gained at the following locations:

De Vargas Road:

- The North Project Access is an existing access that is located approximately 360 feet west of the De Vargas Road / Snow Vista Boulevard intersection. The access is a right-in/right-out (RIRO) only access and it will access the project on the south side of De Vargas Road. The access is stop-controlled.

Snow Vista Boulevard:

- The East Project Access is an existing access that is located approximately 335 feet south of the De Vargas Road / Snow Vista Boulevard intersection. It will access the project on the west side of Snow Vista Boulevard. The access is stop-controlled and the north and southbound directions are divided by a wide center median.

Auxiliary Lanes

Auxiliary lanes are deceleration (ingress) or acceleration (egress) turn lanes that provide for safe turning movements that have less impact on through traffic. These lanes are sometimes needed at accesses or roadway intersections if right- or left-turn volumes are high enough.

New Mexico administration code (NMAC) 18.31.6 Table 17.B-2 outlines minimum peak hour turn volumes to warrant auxiliary lanes for roadways owned by state agencies and local government. For urban multi-lane highways posted at 35 mph, NMAC Table 17.B-2 indicates that when left- or right-turn volumes reach 50 vph or more, a deceleration (ingress) lane is required regardless of the adjacent through-lane volume. Based on these criteria and the anticipated project traffic, the following deceleration (ingress) lanes are recommended:

- East Project Access / Snow Vista Boulevard: Northbound left-turn and southbound right-turn

Opening Day (2026) Plus Project

The purpose of the opening day (2026) plus project analysis is to study the intersections and roadways during the peak travel periods of the day for opening day background traffic and geometric conditions plus the net trips generated by the proposed development. This scenario provides valuable insight into the potential impacts of the proposed project on background traffic conditions.

Traffic Volumes

Hales Engineering added the project trips to the existing (2025) background traffic volumes, adjusted with a 1% growth rate to 2026, plus the trip generation from the Taco Bell / Retail Development on Snow Vista Boulevard to predict turning movement volumes for existing (2026) plus project conditions. Existing (2026) plus project morning and evening peak hour turning movement volumes are shown in Figure 3.

Level of Service Analysis

Hales Engineering determined that all intersections are anticipated to operate at acceptable levels of service during the morning and evening peak hours with project traffic added, as shown in Table 6.

Table 6: Existing (2026) Plus Project Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Evening Peak
North Project Access / De Vargas Rd	NB Stop	B (11.1) / NBLn1	B (11.1) / NBLn1
De Vargas Rd / Snow Vista Blvd	Signal	C (31.8)	C (30.2)
East Project Access / Snow Vista Blvd SB	EB/WB Stop	C (16.3) / WBLn1	D (30.6) / WBLn1
East Project Access / Snow Vista Blvd NB	EB/WB Stop	B (14.5) / EBLn1	B (13.6) / EBLn1
Taco Bell Access / Snow Vista Blvd SB	EB Stop	B (10.3) / EBLn1	B (14.0) / EBLn1
Benavides Rd / Snow Vista Blvd SB	AWSC	B (10.7)	D (32.3)
Benavides Rd / Snow Vista Blvd NB	AWSC	D (34.5)	B (13.1)

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.

Source: Hales Engineering, February 2026

Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. Significant 95th percentile queue lengths during the morning and evening peak hour are summarized as follows:

De Vargas Road / Snow Vista Boulevard:
- Southbound: 555 feet
- Northbound: 390 feet

Mitigation Measures

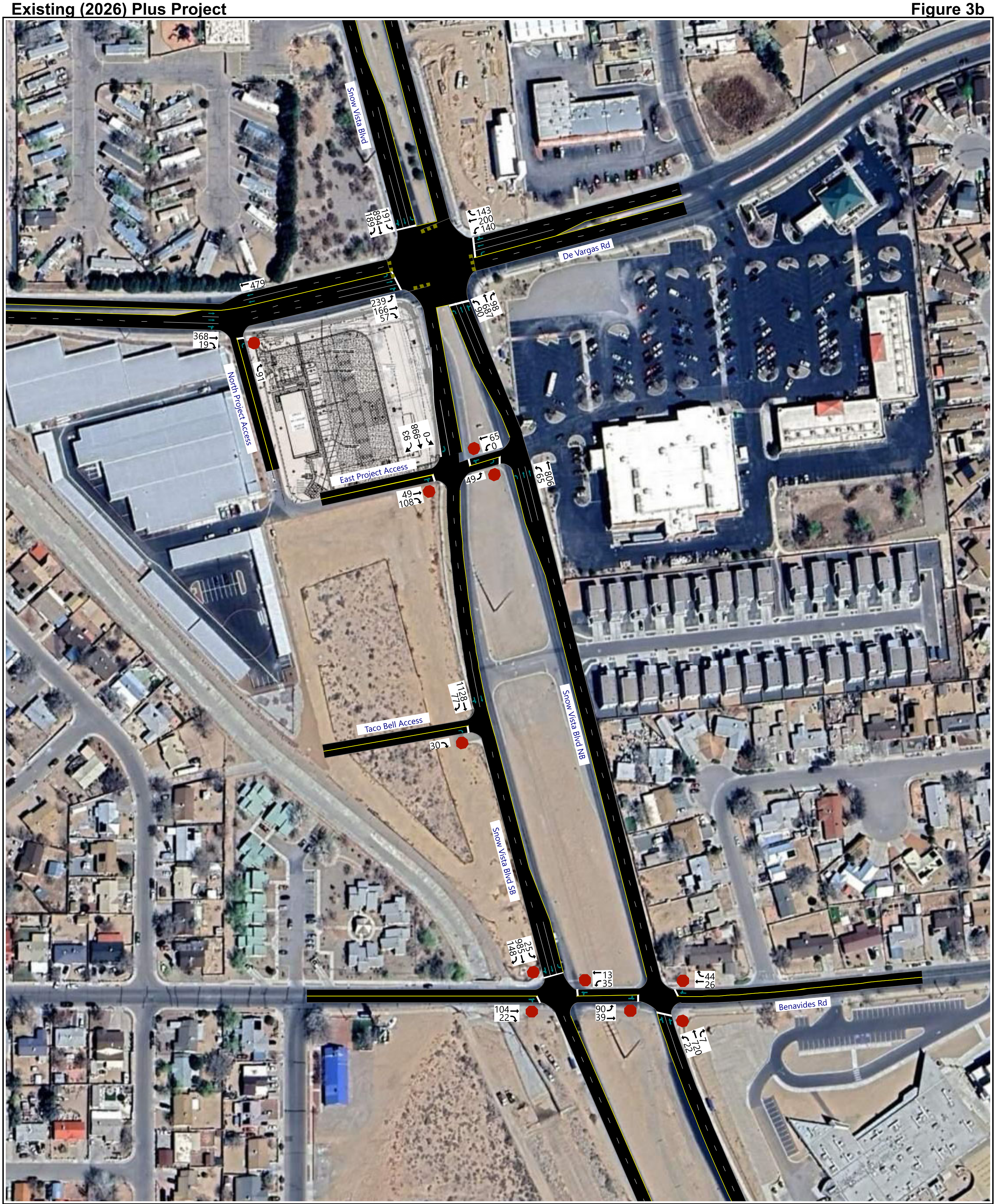
Northbound queuing at the De Vargas Road / Snow Vista Boulevard intersection does extend past the East Project Access during the morning and evening peak hours. However, it is anticipated that if the queueing becomes too excessive drivers will reroute and use the North Project Access. No mitigation measures are recommended.

Albuquerque - De Vargas Circle K TIA
Existing (2026) Plus Project

Morning Peak Hour
Figure 3a

Hales Engineering
1220 North 500 West Ste 202, Lehi, UT, 84043

801.766.4343
12/16/2025



Hales Engineering
1220 North 500 West Ste 202, Lehi, UT, 84043
801.766.4343

12/16/2025

Future (2036) Plus Project

The purpose of the future (2036) plus project analysis is to study the intersections and roadways during the peak travel periods of the day for future traffic and geometric conditions. Through this analysis, future traffic operational deficiencies can be identified, and potential mitigation measures recommended.

Traffic Volumes

Hales Engineering added the project trips to the future (2035) background traffic volumes, adjusted with a 1% growth rate to 2036, plus the trip generation from the Taco Bell / Retail Development on Snow Vista Boulevard to predict turning movement volumes for future (2036) plus project conditions. Future (2036) plus project morning and evening peak hour turning movement volumes are shown in Figure 4

Level of Service Analysis

Hales Engineering determined that the Benavides Road / Snow Vista Boulevard NB intersection is anticipated to operate at a poor LOS during the morning pear hour. Additionally, the East Project Access / Snow Vista Boulevard SB and Benavides Road / Snow Vista Boulevard SB intersections are anticipated to operate at poor levels of service during the evening peak hour, as shown in Table 6.

Table 7: Future (2036) Plus Project Peak Hour LOS

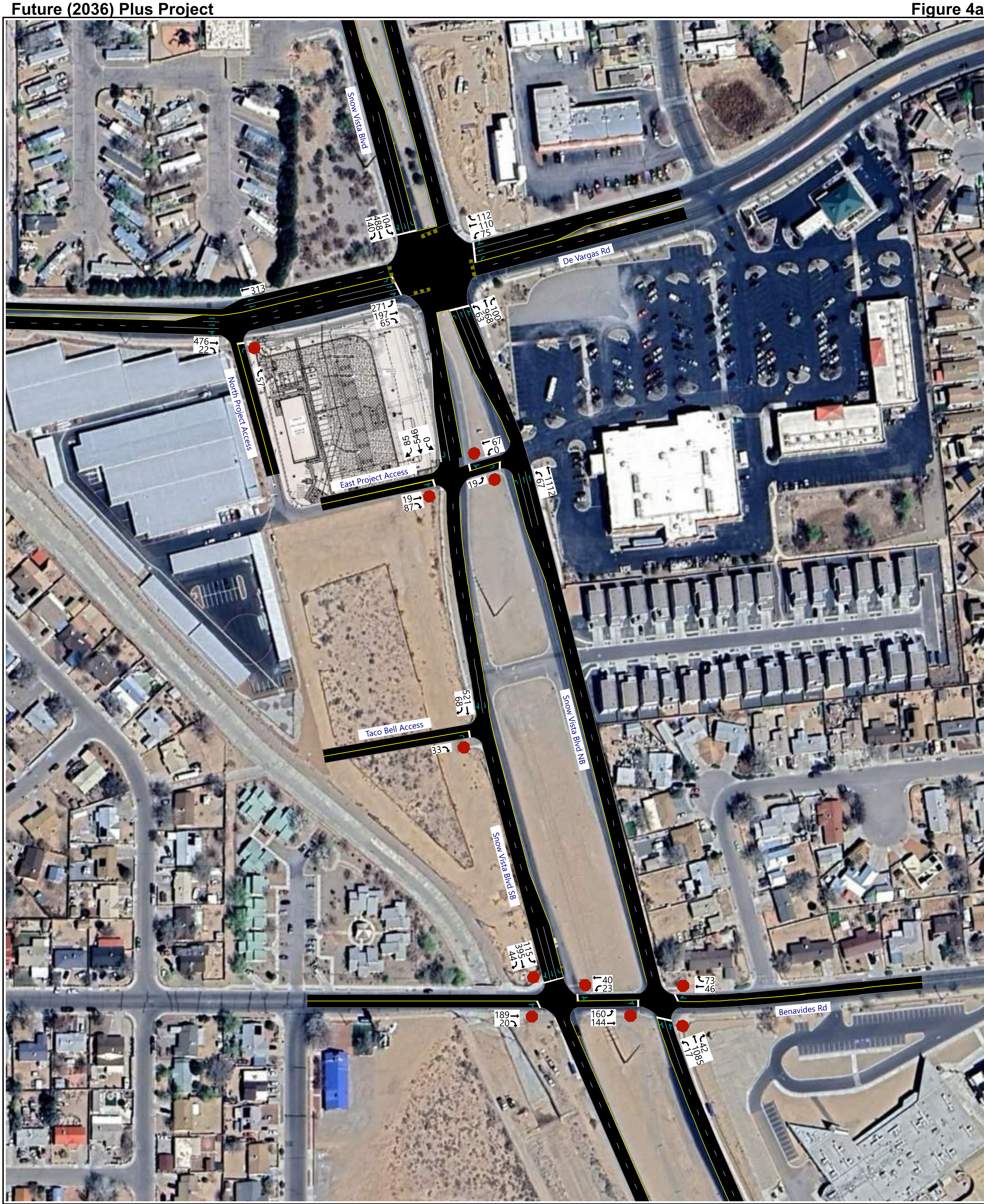
Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Evening Peak
North Project Access / De Vargas Rd	NB Stop	B (11.3) / NBLn1	B (11.3) / NBLn1
De Vargas Rd / Snow Vista Blvd	Signal	C (34.8)	C (34.8)
East Project Access / Snow Vista Blvd SB	EB/WB Stop	C (16.4) / WBLn1	E (36.8) / WBLn1
East Project Access / Snow Vista Blvd NB	EB/WB Stop	C (15.4) / EBLn1	B (12.4) / EBLn1
Taco Bell Access / Snow Vista Blvd SB	EB Stop	B (10.5) / EBLn1	B (14.8) / EBLn1
Benavides Rd / Snow Vista Blvd SB	AWSC	B (11.3)	E (48.0)
Benavides Rd / Snow Vista Blvd NB	AWSC	F (>50)	B (14.6)

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.

Source: Hales Engineering, February 2026

Albuquerque - De Vargas Circle K TIA
Future (2036) Plus Project

Morning Peak Hour
Figure 4a

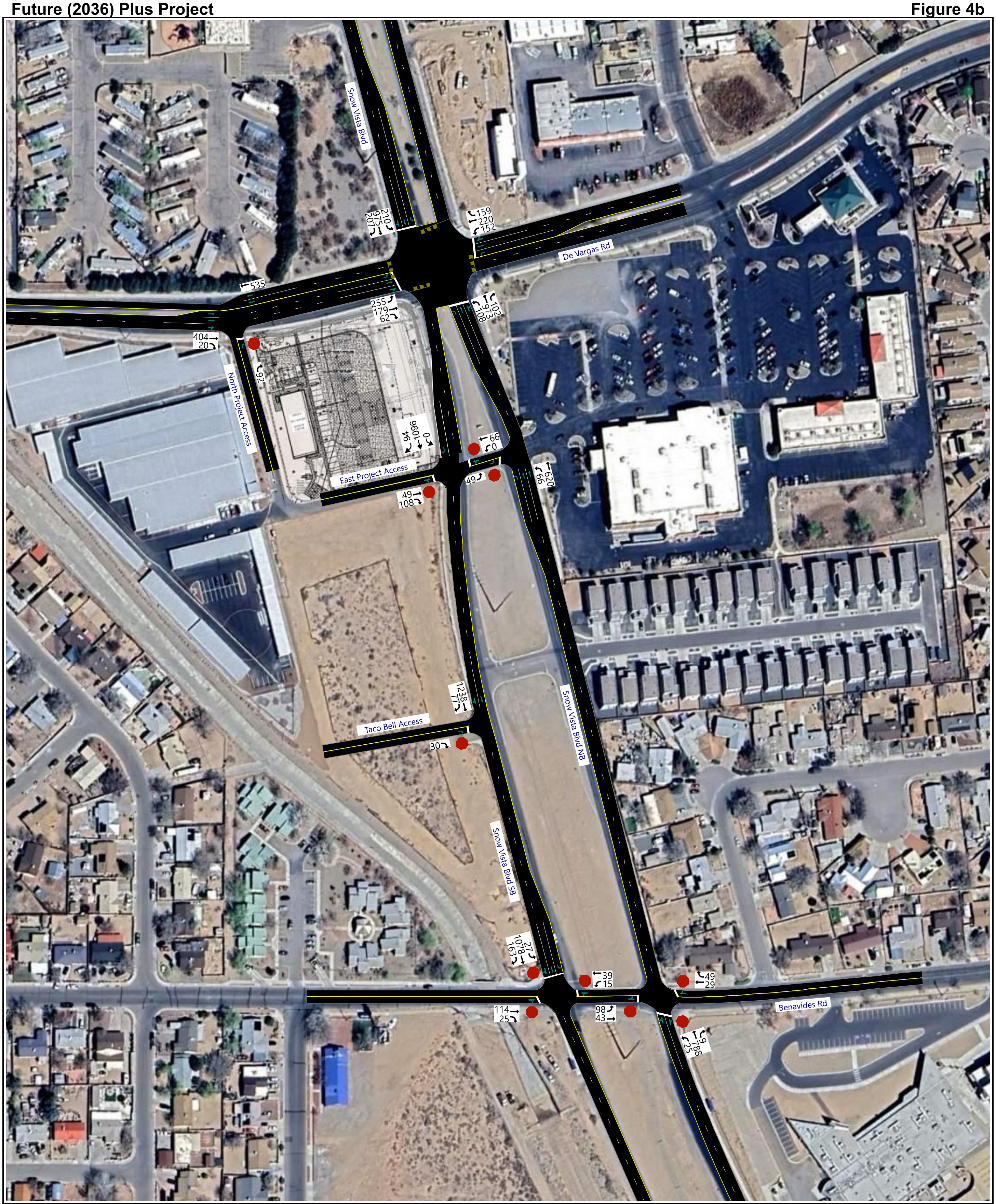


Hales Engineering
1220 North 500 West Ste 202, Lehi, UT, 84043

801.766.4343
12/16/2025

Albuquerque - De Vargas Circle K TIA
Future (2036) Plus Project

Evening Peak Hour
Figure 4b



Hales Engineering
1220 North 500 West Ste 202, Lehi, UT, 84043

801.766.4343
12/16/2025

Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. Significant 95th percentile queue lengths during the morning and evening peak hour are summarized as follows:

De Vargas Road / Snow Vista Boulevard:
- Southbound: 655 feet
- Northbound: 585 feet

Mitigation Measures

It is recommended that a signal be installed at the Benavides Road / Snow Vista Boulevard intersection. It is anticipated that a traffic signal would be warranted at this intersection under the future (2036) background conditions based on the MUTCD Peak Hour Warrant, as shown in Figure 5. The projected future (2036) background volumes are high enough to exceed the warrant chart limits. In addition, the prior TIA had shown a poor LOS at this intersection. However, it is anticipated that the installation would require significant geometric changes, including joining the northbound and southbound directions of travel.

Based on total evening peak hour entering volumes at the intersection in the anticipated future (2036) plus project conditions, the De Vargas Circle K development is estimated to account for 0.86% of the proportional share toward traffic signal installation.

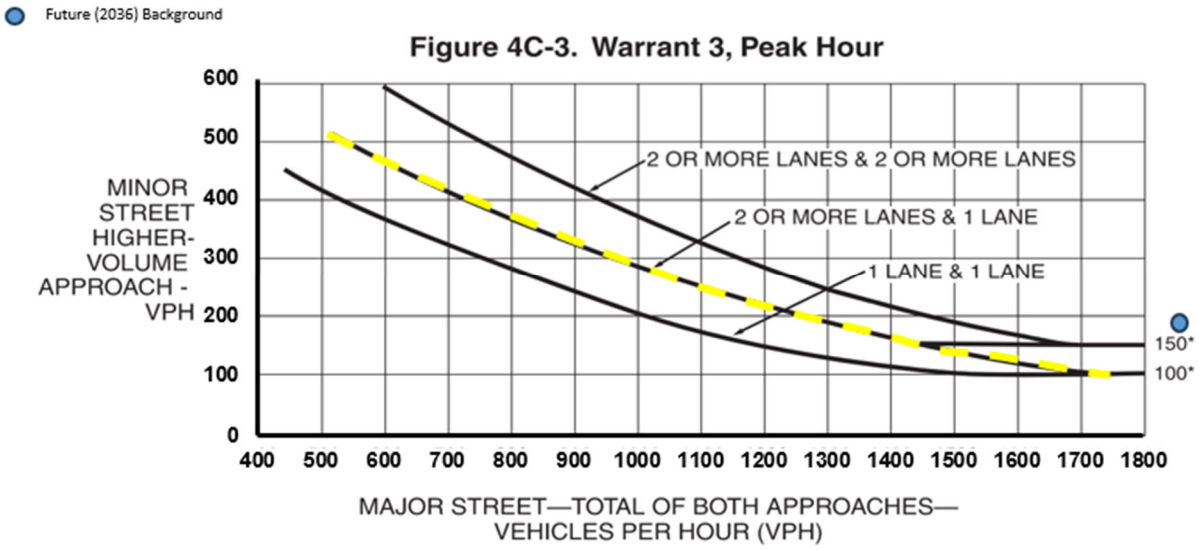


Figure 5: Peak hour signal warrant

Significant northbound and southbound queuing is anticipated at the De Vargas Road / Snow Vista Boulevard intersection, and queues are expected to extend beyond the access points in

both directions. Limited options are available to further reduce delay at the De Vargas Road / Snow Vista Boulevard intersection; multiple lane configurations, cycle lengths, and timing plans were evaluated, and the existing configuration was found to perform best overall. It is recommended that the City continue to monitor this signal for potential future improvements.

Mitigated Scenario

With the proposed signal, it is anticipated that the Benavides Road / Snow Vista Boulevard intersection will operate at an acceptable LOS during the morning and evening peak hours with the proposed mitigation measures, as shown in Table 8.

Table 8: Future (2036) Plus Project Peak Hour LOS - Mitigation

Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Evening Peak
Benavides Rd / Snow Vista Blvd	Signal	C (22.8)	B (15.5)

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, February 2026

Recommend Storage Lengths

Hales Engineering determined recommended storage lengths based on the 95th percentile queue lengths given in the future (2036) plus project scenario. These storage lengths do not include the taper length. Recommended storage lengths for the East Project Access / Snow Vista Boulevard intersection are shown below:

- Right-turn deceleration (ingress) lane: 100 feet
- Left-turn deceleration (ingress) lane: 100 feet

Conclusions

The findings of this study are as follows:

- The proposed development includes a Circle K gas station. It is anticipated that the project will have two access.
- It is anticipated that the proposed project will generate approximately 724 (+2,292 pass-by) trips on an average weekday, including 61 (+193 pass-by) trips during the morning peak hour, and 66 (+196 pass-by) trips during the evening peak hour.
- It is recommended that right and left-turn deceleration (ingress) lanes with 100 feet of storage be installed at the East Project Access / Snow Vista Boulevard intersection.
- It is recommended that a signal be installed at the Benavides Road / Snow Vista Boulevard intersection to accommodate future (2036) conditions.

- Excessive north and southbound queuing are anticipated at the De Vargas Road / Snow Vista Boulevard intersection in future (2036) conditions. It is recommended that the City monitor this intersection.
- It is anticipated that the De Vargas Circle K development will account for 0.86% of the proportional share toward traffic signal installation in the future (2036) plus project conditions.

If you have any questions regarding this memorandum, please contact us at 801.766.4343.

APPENDIX A

Site Plan

1220 North 500 West, Ste. 202 Lehi, UT 84043 p 801.766.4343
www.halesengineering.com

CAUTION NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 7 DAYS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES HORIZONTALLY AND VERTICALLY WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

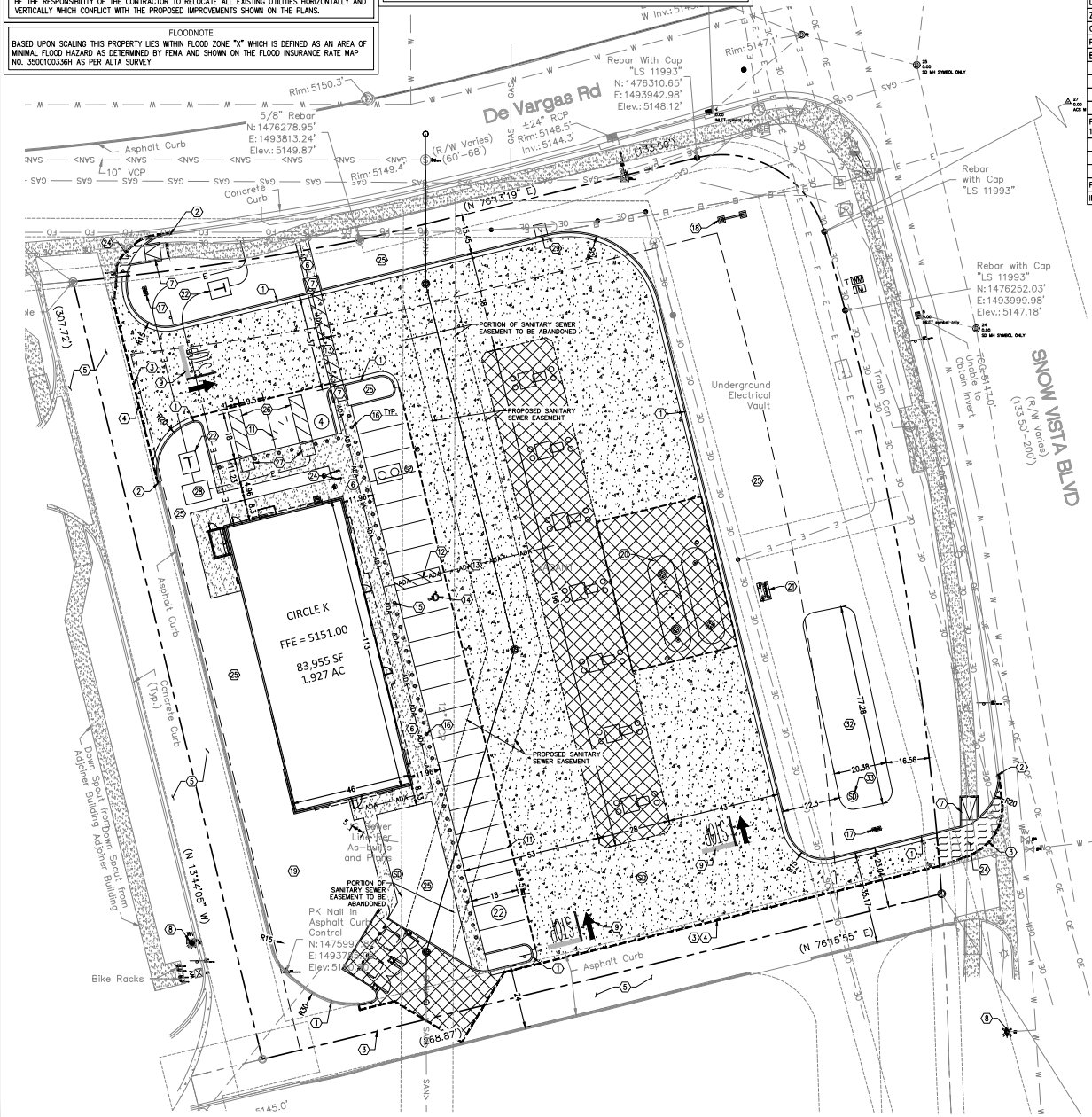
FLOODNOTE

BASED UPON SCALING THIS PROPERTY LIES WITHIN FLOOD ZONE "X" WHICH IS DEFINED AS AN AREA OF MINIMAL FLOOD HAZARD AS DETERMINED BY FEMA AND SHOWN ON THE FLOOD INSURANCE RATE MAP NO. 35001C0336H AS PER ALTA SURVEY

BENCHMARKS

ACS MONUMENT 2_L7 NAD 1983 CENTRAL ZONE– NAVD 1988. X=1486604.908 Y=1480475.091 ELEVATION=5415.511'

ACS MONUMENT 11L–10 NAD 1983 CENTRAL ZONE – NAVD 1988. X=1499894.295 Y=1479206.196 ELEVATION=5081.821'



SITE DATA TABLE

LOCATION:	SNOW VISTA BLVD DE VARGAS RD SW ALBUQUERQUE, NM 87121	
LOT AREA:	1.9274 AC. (83,955 S.F.)	
ZONING:	ZONING – NRC	
CURRENT USE:	VACANT	
PROPOSED USE:	C STORE W FUEL DISPENSING	
BUILDING DATA:		
BUILDING AREA	5,200 S.F.	
BUILDING HEIGHT	38' (1 STORY)	
BUILDING COVERAGE	6.19%	
F.A.R.	16:1	
PARKING SUMMARY: 1 SP PER 200 SF (5,200 SF)	REQUIRED	PROVIDED
PARKING SPACES	25	25
ACCESSIBLE SPACES	1	1
TOTAL SPACES	26	26
PERVIOUS:	28,037 S.F.	
IMPERVIOUS:	55,918 S.F.	

NOTES:

1. ALL BROKEN OR CRACKED SIDEWALK MUST BE REPLACED WITH SIDEWALK AND CURB AND GUTTER.
2. LANDSCAPING AND SIGNAGE WILL NOT INTERFERE WITH CLEAR SIGHT REQUIREMENT. THEREFORE, SIGNS WALLS, TREES AND SHRUBBERY BETWEEN 3 AND 8 FEET TALL (AS MEASURED FROM THE GUTTER PAN) WILL NOT BE ACCEPTABLE IN THE CLEAR SIGHT TRIANGLE.

SITE KEY NOTES:

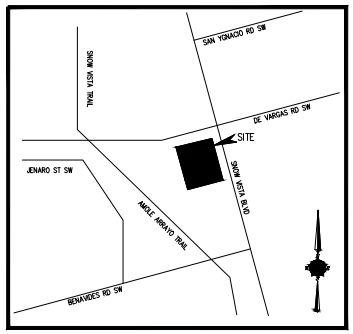
1. CONCRETE CURB AND GUTTER. (CITY DETAIL #2415A & #2415B)
2. TAPER CURB TO MATCH EXISTING.
3. MATCH EXISTING PAVEMENT ELEVATION.
4. LIMITS OF FULL DEPTH SAWCUT AND PAVEMENT REMOVAL.
5. EXISTING PAVEMENT TO REMAIN.
6. CONCRETE SIDEWALK. 2% MAX. CROSS SLOPE AND 5% MAX. STRAIGHT SLOPE. (CITY DETAIL #2430)
7. SIDEWALK RAMP @ 8.33% MAX. (CITY DETAIL #2443)
8. EXISTING FIRE HYDRANT.
9. STOP BAR. (PER LOCAL CODES)
10. DIRECTIONAL TRAFFIC ARROW. (PER LOCAL CODES)
11. PARKING STALL STRIPING. (PER LOCAL CODES)
12. 4" WIDE PAINTED STRIPES, 2' OFF CENTER @ 45°.
13. PEDESTRIAN/ACCESSIBLE CROSSWALK STRIPING.
14. ACCESSIBLE STRIPING & SYMBOL. (TYPICAL–PER ADA AND LOCAL REQUIREMENTS)
15. ACCESSIBLE SIGNS. (TYPICAL–PER ADA AND LOCAL REQUIREMENTS)
16. BOLLARD.
17. PROPOSED LIGHT POLE.
18. MONUMENT/PYLON SIGN. (PER ARCH. PLANS)
19. DUMPSTER ENCLOSURE. (PER ARCH. PLANS)
20. FUEL STORAGE TANKS (PER M.E.P. PLANS)
21. FUEL TANK VENTS (PER M.E.P. PLANS)
22. PROPOSED PAD MOUNTED TRANSFORMER.
23. "STOP" SIGN.
24. BICYCLE PARKING. (PER ARCH. PLANS)
25. LANDSCAPE AREA. (PER LANDSCAPE PLAN)
26. EV PARKING STALLS.
27. EV CHARGING EQUIPMENT.
28. EV POWER BANK/GENERATOR.
29. AIR/VAC. UNIT
30. DIRECTIONAL SIGN FOR DRIVE THRU.
31. STORAGE UNIT. (PER ARCH. PLANS)
32. DETENTION BASIN.
33. INLET. (SEE PLAN FOR SIZE)
24. CITY PAVEMENT PER DETAIL #2405B

GRAPHIC SCALE

20 0 10 20

(IN FEET)

1 inch = 20 ft.



LOCATION MAP

ZONE ATLAS MAP NO. M–9–Z
NOT TO SCALE

SITE LEGEND:

- PROPERTY LINE
- PROPOSED CURB & GUTTER
- LIMITS OF FULL DEPTH SAWCUT
- PARKING COUNT
- FIRELANE
- ACCESSIBLE SPACES
- ADA RAMP
- BOLLARD
- TRAFFIC SIGN
- BOLLARD MOUNTED ACCESSIBLE SIGN
- STOP BAR & SIGN
- LIGHT POLE
- AREA DRAIN
- GREASE TRAP
- CLEAN–OUT
- DOUBLE CLEAN–OUT
- GAS METER
- WATER METER
- IRRIGATION METER
- MANHOLE
- CURB INLET

PROPOSED PAVING LEGEND:

- CONCRETE SIDEWALK. 4" MINIMUM WIDTH WITH FIBER REINFORCEMENT, 5'x5' TOOLED JOINTS, AN FULL CONSTRUCTION JOINTS EVERY 50'.
- 6" LIGHT DUTY CONCRETE PAVEMENT. AT A MINIMUM 4,000 PSI AT 28 DAYS. #3 BARS @ 18" ON CENTER EACH WAY. REFER TO LOCAL JURISDICTION OR GEOTECH FOR SUBGRADE PREPARATION, WHICHEVER IS MORE STRINGENT.
- 4" HEAVY DUTY ASPHALT. REFER TO LOCAL JURISDICTION OR GEOTECH FOR SUBGRADE PREPARATION, WHICHEVER IS MORE STRINGENT.
- 9" HEAVY DUTY CANOPY–TANK CONCRETE PAVEMENT. AT A MINIMUM 4,000 PSI AT 28 DAYS. #4 BARS @ 16" ON CENTER EACH WAY. REFER TO LOCAL JURISDICTION OR GEOTECH FOR SUBGRADE PREPARATION, WHICHEVER IS MORE STRINGENT.
- CITY OF ALBUQUERQUE STANDARD PAVING DETAIL #2405B.
- CONSTRUCTION JOINT
- EXPANSION JOINT
- SAWED JOINT
- LIMITS OF FULL DEPTH SAWCUT

EXISTING LEGEND:

- ADJACENT PROPERTY/R.O.W LINE
- EXISTING EASEMENT LINE
- EXISTING ELECTRIC LINE
- EXISTING OVERHEAD ELECTRIC
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING SANITARY SEWER LINE
- EXISTING CONCRETE PAVEMENT
- EX. SURVEYED MONUMENT
- EX. TEMPORARY BENCHMARK
- EX. SERVICE BOX
- EX. PULL BOX
- EX. ELECTRIC EQUIPMENT
- EX. WATER VALVE
- EX. STORM DRAIN MANHOLE
- EX. FIRE HYDRANT

811 Know what's below. Call before you dig.

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1101 Central Expressway South
Suite 215
Allen, TX 75013
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John Meesels, PE
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11/12/2025

TRAFFIC CIRCULATION LAYOUT

CIRCLE K, INC
LOT 1A, SNOW VISTA INVESTORS
9800 DE VARGAS RD.
ALBUQUERQUE, NEW MEXICO 87121

REV	DATE	DESCRIPTION	NAME
	11/12/25	INITIAL SUBMITTAL	CPK

PROJECT NO: 24-XXXXX
DRAWN BY: ASS, JK, CPK
CHECKED BY: KNF
ISSUE DATE: 11/14/2025

TCL

HALES ENGINEERING
innovative transportation solutions

APPENDIX B

LOS and Queue Results

1220 North 500 West, Ste. 202 Lehi, UT 84043 p 801.766.4343
www.halesengineering.com

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	432	22	0	285	0	57
Future Vol, veh/h	432	22	0	285	0	57
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	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	445	23	0	294	0	59

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	234
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.16
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.93
Pot Cap-1 Maneuver	-	-	0	-	0	652
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	652
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	11.07
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	652	-	-	-
HCM Lane V/C Ratio	0.09	-	-	-
HCM Ctrl Dly (s/v)	11.1	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	259	245	72	209	59	1001	98	591
v/c Ratio	0.94	0.46	0.32	0.57	0.12	0.53	0.32	0.31
Control Delay (s/veh)	85.6	45.7	39.9	33.2	8.5	18.0	10.7	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	85.6	45.7	39.9	33.2	8.5	18.0	10.7	13.0
Queue Length 50th (ft)	204	91	49	45	15	245	25	112
Queue Length 95th (ft)	#311	127	82	81	39	388	59	190
Internal Link Dist (ft)		299		385		261		435
Turn Bay Length (ft)	305		145		115		225	
Base Capacity (vph)	275	639	267	570	524	1880	330	1913
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.38	0.27	0.37	0.11	0.53	0.30	0.31

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	251	177	61	70	101	102	57	880	91	95	446	127
Future Volume (veh/h)	251	177	61	70	101	102	57	880	91	95	446	127
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709
Adj Flow Rate, veh/h	259	182	63	72	104	105	59	907	94	98	460	131
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	266	398	133	241	148	132	529	1788	185	355	1534	434
Arrive On Green	0.12	0.17	0.17	0.05	0.09	0.09	0.03	0.60	0.60	0.04	0.61	0.61
Sat Flow, veh/h	1628	2388	800	1628	1624	1448	1628	2970	308	1628	2499	706
Grp Volume(v), veh/h	259	122	123	72	104	105	59	496	505	98	298	293
Grp Sat Flow(s),veh/h/ln	1628	1624	1565	1628	1624	1448	1628	1624	1654	1628	1624	1582
Q Serve(g_s), s	15.0	8.8	9.3	5.2	8.1	9.2	1.8	22.7	22.7	3.0	11.3	11.4
Cycle Q Clear(g_c), s	15.0	8.8	9.3	5.2	8.1	9.2	1.8	22.7	22.7	3.0	11.3	11.4
Prop In Lane	1.00		0.51	1.00		1.00	1.00		0.19	1.00		0.45
Lane Grp Cap(c), veh/h	266	270	261	241	148	132	529	978	996	355	997	971
V/C Ratio(X)	0.97	0.45	0.47	0.30	0.70	0.80	0.11	0.51	0.51	0.28	0.30	0.30
Avail Cap(c_a), veh/h	266	312	301	314	262	234	593	978	996	400	997	971
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.4	48.8	49.0	50.0	57.4	57.9	9.7	14.8	14.8	11.4	11.9	11.9
Incr Delay (d2), s/veh	47.2	1.2	1.3	0.3	6.0	10.4	0.0	1.9	1.8	0.2	0.8	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	3.6	3.7	2.1	3.5	3.7	0.6	8.6	8.7	1.0	4.2	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	96.6	50.0	50.3	50.3	63.4	68.3	9.8	16.7	16.7	11.5	12.6	12.7
LnGrp LOS	F	D	D	D	E	E	A	B	B	B	B	B
Approach Vol, veh/h		504			281			1060			689	
Approach Delay, s/veh		74.0			61.9			16.3			12.5	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	83.8	10.2	27.6	6.9	85.3	20.0	17.8
Change Period (Y+Rc), s	3.5	5.5	3.5	6.0	3.5	5.5	5.0	6.0
Max Green Setting (Gmax), s	8.5	65.5	12.5	25.0	8.5	65.5	15.0	21.0
Max Q Clear Time (g_c+I1), s	5.0	24.7	7.2	11.3	3.8	13.4	17.0	11.2
Green Ext Time (p_c), s	0.0	9.1	0.0	0.8	0.0	4.7	0.0	0.6

Intersection Summary	
HCM 7th Control Delay, s/veh	31.8
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	19	87	0	67	0	0	0	0	0	538	85
Future Vol, veh/h	0	19	87	0	67	0	0	0	0	0	538	85
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	20	90	0	69	0	0	0	0	0	555	88

Major/Minor	Minor2			Minor1					Major2		
Conflicting Flow All	-	555	277	287	642	-			-	-	0
Stage 1	-	555	-	0	0	-			-	-	-
Stage 2	-	0	-	287	642	-			-	-	-
Critical Hdwy	-	6.56	6.96	7.56	6.56	-			-	-	-
Critical Hdwy Stg 1	-	5.56	-	-	-	-			-	-	-
Critical Hdwy Stg 2	-	-	-	6.56	5.56	-			-	-	-
Follow-up Hdwy	-	4.03	3.33	3.53	4.03	-			-	-	-
Pot Cap-1 Maneuver	0	436	717	640	389	0			0	-	-
Stage 1	0	509	-	-	-	0			0	-	-
Stage 2	0	-	-	693	465	0			0	-	-
Platoon blocked, %										-	-
Mov Cap-1 Maneuver	-	436	717	535	389	-			-	-	-
Mov Cap-2 Maneuver	-	436	-	535	389	-			-	-	-
Stage 1	-	509	-	-	-	-			-	-	-
Stage 2	-	-	-	583	465	-			-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	11.74	16.26	0
HCM LOS	B	C	

Minor Lane/Major Mvmt	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	643	389	-	-
HCM Lane V/C Ratio	0.17	0.178	-	-
HCM Ctrl Dly (s/v)	11.7	16.3	-	-
HCM Lane LOS	B	C	-	-
HCM 95th %tile Q(veh)	0.6	0.6	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	19	0	67	998	0	0
Future Vol, veh/h	19	0	67	998	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	20	0	69	1029	0	0

Major/Minor	Minor2		Major1	
Conflicting Flow All	653	-	0	0
Stage 1	0	-	-	-
Stage 2	653	-	-	-
Critical Hdwy	6.86	-	4.16	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-
Follow-up Hdwy	3.53	-	2.23	-
Pot Cap-1 Maneuver	398	0	-	-
Stage 1	-	0	-	-
Stage 2	477	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	398	-	-	-
Mov Cap-2 Maneuver	398	-	-	-
Stage 1	-	-	-	-
Stage 2	477	-	-	-

Approach	EB	NB
HCM Ctrl Dly, s/v	14.51	
HCM LOS	B	

Minor Lane/Major Mvmt	NBL	NBT	EBLn1
Capacity (veh/h)	-	-	398
HCM Lane V/C Ratio	-	-	0.049
HCM Ctrl Dly (s/v)	-	-	14.5
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.2

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	33	0	0	478	68
Future Vol, veh/h	0	33	0	0	478	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	34	0	0	493	70

Major/Minor	Minor2			Major2	
Conflicting Flow All	-	281		-	0
Stage 1	-	-		-	-
Stage 2	-	-		-	-
Critical Hdwy	-	6.96		-	-
Critical Hdwy Stg 1	-	-		-	-
Critical Hdwy Stg 2	-	-		-	-
Follow-up Hdwy	-	3.33		-	-
Pot Cap-1 Maneuver	0	713		-	-
Stage 1	0	-		-	-
Stage 2	0	-		-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	-	713		-	-
Mov Cap-2 Maneuver	-	-		-	-
Stage 1	-	-		-	-
Stage 2	-	-		-	-

Approach	EB	SB
HCM Ctrl Dly, s/v	10.3	0
HCM LOS	B	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	713	-	-
HCM Lane V/C Ratio	0.048	-	-
HCM Ctrl Dly (s/v)	10.3	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	173	18	20	36	0	0	0	0	105	363	43
Future Vol, veh/h	0	173	18	20	36	0	0	0	0	105	363	43
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.97	0.97	0.97	0.93	0.93	0.93
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	186	19	22	39	0	0	0	0	113	390	46
Number of Lanes	0	1	0	0	1	0	0	0	0	1	2	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	1
HCM Control Delay, s/veh	11.5	9.8	10.5
HCM LOS	B	A	B

Lane	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	36%	100%	0%	0%
Vol Thru, %	91%	64%	0%	100%	74%
Vol Right, %	9%	0%	0%	0%	26%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	191	56	105	242	164
LT Vol	0	20	105	0	0
Through Vol	173	36	0	242	121
RT Vol	18	0	0	0	43
Lane Flow Rate	205	60	113	260	176
Geometry Grp	5	5	5	5	5
Degree of Util (X)	0.333	0.105	0.183	0.385	0.252
Departure Headway (Hd)	5.835	6.283	5.825	5.322	5.137
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	612	565	613	671	695
Service Time	3.612	4.08	3.59	3.087	2.902
HCM Lane V/C Ratio	0.335	0.106	0.184	0.387	0.253
HCM Control Delay, s/veh	11.5	9.8	9.9	11.4	9.6
HCM Lane LOS	B	A	A	B	A
HCM 95th-tile Q	1.5	0.4	0.7	1.8	1

Intersection	
Intersection Delay, s/veh	34.5
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	146	132	0	0	42	70	14	991	38	0	0	0
Future Vol, veh/h	146	132	0	0	42	70	14	991	38	0	0	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.97	0.97	0.97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	157	142	0	0	45	75	15	1066	41	0	0	0
Number of Lanes	0	1	0	0	1	0	0	2	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay, s/veh	15.6	10.7	42.1
HCM LOS	C	B	E

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	3%	0%	53%	0%
Vol Thru, %	97%	93%	47%	38%
Vol Right, %	0%	7%	0%	63%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	510	534	278	112
LT Vol	14	0	146	0
Through Vol	496	496	132	42
RT Vol	0	38	0	70
Lane Flow Rate	548	574	299	120
Geometry Grp	5	5	2	2
Degree of Util (X)	0.897	0.929	0.512	0.206
Departure Headway (Hd)	5.896	5.832	6.169	6.151
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	619	625	580	586
Service Time	3.602	3.538	4.257	4.158
HCM Lane V/C Ratio	0.885	0.918	0.516	0.205
HCM Control Delay, s/veh	39.5	44.5	15.6	10.7
HCM Lane LOS	E	E	C	B
HCM 95th-tile Q	10.9	12.2	2.9	0.8

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	368	19	0	479	0	91
Future Vol, veh/h	368	19	0	479	0	91
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	98	98	98	98	98	98
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	376	19	0	489	0	93

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	197
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.16
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.93
Pot Cap-1 Maneuver	-	-	0	-	0	688
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	688
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	11.05
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	688	-	-	-
HCM Lane V/C Ratio	0.135	-	-	-
HCM Ctrl Dly (s/v)	11.1	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.5	-	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	244	227	143	350	92	801	195	1105
v/c Ratio	0.92	0.43	0.44	0.65	0.36	0.52	0.52	0.67
Control Delay (s/veh)	71.7	35.2	31.4	30.5	14.6	22.9	15.7	23.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	71.7	35.2	31.4	30.5	14.6	22.9	15.7	23.7
Queue Length 50th (ft)	149	65	80	74	23	191	53	282
Queue Length 95th (ft)	#213	90	108	106	63	342	123	#553
Internal Link Dist (ft)		299		385		261		435
Turn Bay Length (ft)	305		145		115		225	
Base Capacity (vph)	265	849	348	878	348	1536	413	1661
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.27	0.41	0.40	0.26	0.52	0.47	0.67

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	239	166	57	140	200	143	90	687	98	191	894	189
Future Volume (veh/h)	239	166	57	140	200	143	90	687	98	191	894	189
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709
Adj Flow Rate, veh/h	244	169	58	143	204	146	92	701	100	195	912	193
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	274	416	138	339	263	179	276	1400	200	408	1394	295
Arrive On Green	0.11	0.17	0.17	0.09	0.14	0.14	0.04	0.49	0.49	0.08	0.52	0.52
Sat Flow, veh/h	1628	2395	795	1628	1847	1259	1628	2853	407	1628	2667	564
Grp Volume(v), veh/h	244	113	114	143	178	172	92	399	402	195	555	550
Grp Sat Flow(s),veh/h/ln	1628	1624	1566	1628	1624	1482	1628	1624	1636	1628	1624	1608
Q Serve(g_s), s	12.0	6.8	7.2	8.1	11.6	12.4	3.1	18.2	18.3	6.2	27.3	27.3
Cycle Q Clear(g_c), s	12.0	6.8	7.2	8.1	11.6	12.4	3.1	18.2	18.3	6.2	27.3	27.3
Prop In Lane	1.00		0.51	1.00		0.85	1.00		0.25	1.00		0.35
Lane Grp Cap(c), veh/h	274	282	272	339	231	211	276	797	803	408	849	840
V/C Ratio(X)	0.89	0.40	0.42	0.42	0.77	0.81	0.33	0.50	0.50	0.48	0.65	0.65
Avail Cap(c_a), veh/h	274	428	413	375	413	377	404	797	803	484	849	840
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	40.3	40.5	35.5	45.4	45.7	15.8	18.9	18.9	13.4	19.0	19.0
Incr Delay (d2), s/veh	27.6	0.9	1.0	0.3	5.3	7.4	0.3	2.2	2.2	0.3	3.9	4.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	2.8	2.8	3.2	5.0	4.9	1.1	7.1	7.1	2.1	10.6	10.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	66.3	41.3	41.5	35.8	50.8	53.1	16.0	21.2	21.2	13.7	22.9	23.0
LnGrp LOS	E	D	D	D	D	D	B	C	C	B	C	C
Approach Vol, veh/h		471			493			893			1300	
Approach Delay, s/veh		54.3			47.2			20.6			21.6	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	59.5	13.6	25.1	8.3	63.0	17.0	21.7
Change Period (Y+Rc), s	3.5	5.5	3.5	6.0	3.5	5.5	5.0	6.0
Max Green Setting (Gmax), s	13.5	36.5	12.5	29.0	13.5	36.5	12.0	28.0
Max Q Clear Time (g_c+I1), s	8.2	20.3	10.1	9.2	5.1	29.3	14.0	14.4
Green Ext Time (p_c), s	0.2	5.1	0.1	0.9	0.1	4.2	0.0	1.3

Intersection Summary	
HCM 7th Control Delay, s/veh	30.2
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	49	108	0	65	0	0	0	0	0	998	93
Future Vol, veh/h	0	49	108	0	65	0	0	0	0	0	998	93
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	50	110	0	66	0	0	0	0	0	1018	95

Major/Minor	Minor2			Minor1					Major2		
Conflicting Flow All	-	1018	509	534	1113	-			-	-	0
Stage 1	-	1018	-	0	0	-			-	-	-
Stage 2	-	0	-	534	1113	-			-	-	-
Critical Hdwy	-	6.56	6.96	7.56	6.56	-			-	-	-
Critical Hdwy Stg 1	-	5.56	-	-	-	-			-	-	-
Critical Hdwy Stg 2	-	-	-	6.56	5.56	-			-	-	-
Follow-up Hdwy	-	4.03	3.33	3.53	4.03	-			-	-	-
Pot Cap-1 Maneuver	0	234	507	427	206	0			0	-	-
Stage 1	0	311	-	-	-	0			0	-	-
Stage 2	0	-	-	495	280	0			0	-	-
Platoon blocked, %										-	-
Mov Cap-1 Maneuver	-	234	507	263	206	-			-	-	-
Mov Cap-2 Maneuver	-	234	-	263	206	-			-	-	-
Stage 1	-	311	-	-	-	-			-	-	-
Stage 2	-	-	-	325	280	-			-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	21.83	30.65	0
HCM LOS	C	D	

Minor Lane/Major Mvmt	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	372	206	-	-
HCM Lane V/C Ratio	0.431	0.323	-	-
HCM Ctrl Dly (s/v)	21.8	30.6	-	-
HCM Lane LOS	C	D	-	-
HCM 95th %tile Q(veh)	2.1	1.3	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	49	0	65	806	0	0
Future Vol, veh/h	49	0	65	806	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	50	0	66	822	0	0

Major/Minor	Minor2		Major1	
Conflicting Flow All	544	-	0	0
Stage 1	0	-	-	-
Stage 2	544	-	-	-
Critical Hdwy	6.86	-	4.16	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-
Follow-up Hdwy	3.53	-	2.23	-
Pot Cap-1 Maneuver	467	0	-	-
Stage 1	-	0	-	-
Stage 2	543	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	467	-	-	-
Mov Cap-2 Maneuver	467	-	-	-
Stage 1	-	-	-	-
Stage 2	543	-	-	-

Approach	EB	NB
HCM Ctrl Dly, s/v	13.64	
HCM LOS	B	

Minor Lane/Major Mvmt	NBL	NBT	EBLn1
Capacity (veh/h)	-	-	467
HCM Lane V/C Ratio	-	-	0.107
HCM Ctrl Dly (s/v)	-	-	13.6
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.4

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	30	0	0	1128	77
Future Vol, veh/h	0	30	0	0	1128	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	31	0	0	1151	79

Major/Minor	Minor2			Major2	
Conflicting Flow All	-	615		-	0
Stage 1	-	-		-	-
Stage 2	-	-		-	-
Critical Hdwy	-	6.96		-	-
Critical Hdwy Stg 1	-	-		-	-
Critical Hdwy Stg 2	-	-		-	-
Follow-up Hdwy	-	3.33		-	-
Pot Cap-1 Maneuver	0	432		-	-
Stage 1	0	-		-	-
Stage 2	0	-		-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	-	432		-	-
Mov Cap-2 Maneuver	-	-		-	-
Stage 1	-	-		-	-
Stage 2	-	-		-	-

Approach	EB	SB
HCM Ctrl Dly, s/v	13.97	0
HCM LOS	B	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	432	-	-
HCM Lane V/C Ratio	0.071	-	-
HCM Ctrl Dly (s/v)	14	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-

Intersection	
Intersection Delay, s/veh	32.3
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	104	22	35	13	0	0	0	0	25	985	148
Future Vol, veh/h	0	104	22	35	13	0	0	0	0	25	985	148
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.98	0.98	0.98	0.97	0.97	0.97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	107	23	36	13	0	0	0	0	26	1015	153
Number of Lanes	0	1	0	0	1	0	0	0	0	1	2	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	1
HCM Control Delay, s/veh	11.9	11.2	35.4
HCM LOS	B	B	E

Lane	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	73%	100%	0%	0%
Vol Thru, %	83%	27%	0%	100%	69%
Vol Right, %	17%	0%	0%	0%	31%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	126	48	25	657	476
LT Vol	0	35	25	0	0
Through Vol	104	13	0	657	328
RT Vol	22	0	0	0	148
Lane Flow Rate	130	49	26	677	491
Geometry Grp	5	5	5	5	5
Degree of Util (X)	0.25	0.104	0.041	0.97	0.674
Departure Headway (Hd)	6.941	7.576	5.66	5.157	4.939
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	521	476	629	697	727
Service Time	4.642	5.279	3.431	2.928	2.71
HCM Lane V/C Ratio	0.25	0.103	0.041	0.971	0.675
HCM Control Delay, s/veh	11.9	11.2	8.7	49.4	17.4
HCM Lane LOS	B	B	A	E	C
HCM 95th-tile Q	1	0.3	0.1	14.6	5.3

Intersection	
Intersection Delay, s/veh	13.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	90	39	0	0	26	44	22	720	7	0	0	0
Future Vol, veh/h	90	39	0	0	26	44	22	720	7	0	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	93	40	0	0	27	45	23	742	7	0	0	0
Number of Lanes	0	1	0	0	1	0	0	2	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay, s/veh	10.3	9	14
HCM LOS	B	A	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	6%	0%	70%	0%
Vol Thru, %	94%	98%	30%	37%
Vol Right, %	0%	2%	0%	63%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	382	367	129	70
LT Vol	22	0	90	0
Through Vol	360	360	39	26
RT Vol	0	7	0	44
Lane Flow Rate	394	378	133	72
Geometry Grp	5	5	2	2
Degree of Util (X)	0.562	0.536	0.211	0.106
Departure Headway (Hd)	5.138	5.096	5.719	5.312
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	701	704	626	671
Service Time	2.887	2.845	3.771	3.372
HCM Lane V/C Ratio	0.562	0.537	0.212	0.107
HCM Control Delay, s/veh	14.3	13.6	10.3	9
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	3.5	3.2	0.8	0.4

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	476	22	0	313	0	57
Future Vol, veh/h	476	22	0	313	0	57
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	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	491	23	0	323	0	59

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	257
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.16
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.93
Pot Cap-1 Maneuver	-	-	0	-	0	630
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	630
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	11.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	630	-	-	-
HCM Lane V/C Ratio	0.093	-	-	-
HCM Ctrl Dly (s/v)	11.3	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	279	270	77	228	65	1101	107	647
v/c Ratio	1.04	0.51	0.34	0.60	0.14	0.59	0.39	0.34
Control Delay (s/veh)	108.1	47.7	40.1	33.6	8.7	19.4	12.2	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	108.1	47.7	40.1	33.6	8.7	19.4	12.2	13.6
Queue Length 50th (ft)	~239	103	52	50	16	288	28	127
Queue Length 95th (ft)	#297	142	86	87	42	445	63	212
Internal Link Dist (ft)		299		385		261		435
Turn Bay Length (ft)	305		145		115		225	
Base Capacity (vph)	269	637	266	578	492	1869	295	1904
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.04	0.42	0.29	0.39	0.13	0.59	0.36	0.34

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	271	197	65	75	110	112	63	968	100	104	488	140
Future Volume (veh/h)	271	197	65	75	110	112	63	968	100	104	488	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709
Adj Flow Rate, veh/h	279	203	67	77	113	115	65	998	103	107	503	144
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	266	412	132	245	159	142	493	1760	182	318	1508	429
Arrive On Green	0.12	0.17	0.17	0.05	0.10	0.10	0.03	0.59	0.59	0.04	0.60	0.60
Sat Flow, veh/h	1628	2418	775	1628	1624	1448	1628	2971	307	1628	2495	710
Grp Volume(v), veh/h	279	134	136	77	113	115	65	545	556	107	326	321
Grp Sat Flow(s),veh/h/ln	1628	1624	1570	1628	1624	1448	1628	1624	1654	1628	1624	1581
Q Serve(g_s), s	15.0	9.7	10.2	5.5	8.8	10.1	2.1	26.8	26.8	3.4	12.9	13.1
Cycle Q Clear(g_c), s	15.0	9.7	10.2	5.5	8.8	10.1	2.1	26.8	26.8	3.4	12.9	13.1
Prop In Lane	1.00		0.49	1.00		1.00	1.00		0.19	1.00		0.45
Lane Grp Cap(c), veh/h	266	277	268	245	159	142	493	962	980	318	981	956
V/C Ratio(X)	1.05	0.49	0.51	0.31	0.71	0.81	0.13	0.57	0.57	0.34	0.33	0.34
Avail Cap(c_a), veh/h	266	312	302	313	262	234	554	962	980	358	981	956
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.2	48.8	49.0	49.0	56.9	57.5	10.3	16.3	16.3	12.9	12.7	12.8
Incr Delay (d2), s/veh	68.3	1.3	1.5	0.3	5.8	10.5	0.0	2.4	2.4	0.2	0.9	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	4.0	4.1	2.2	3.8	4.1	0.7	10.2	10.4	1.2	4.8	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	117.5	50.1	50.4	49.3	62.6	67.9	10.3	18.7	18.7	13.1	13.6	13.7
LnGrp LOS	F	D	D	D	E	E	B	B	B	B	B	B
Approach Vol, veh/h		549			305			1166			754	
Approach Delay, s/veh		84.5			61.3			18.2			13.6	
Approach LOS		F			E			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	82.5	10.6	28.2	7.2	84.1	20.0	18.7
Change Period (Y+Rc), s	3.5	5.5	3.5	6.0	3.5	5.5	5.0	6.0
Max Green Setting (Gmax), s	8.5	65.5	12.5	25.0	8.5	65.5	15.0	21.0
Max Q Clear Time (g_c+I1), s	5.4	28.8	7.5	12.2	4.1	15.1	17.0	12.1
Green Ext Time (p_c), s	0.0	10.3	0.1	0.9	0.0	5.2	0.0	0.6

Intersection Summary	
HCM 7th Control Delay, s/veh	34.8
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	19	87	0	67	0	0	0	0	0	546	85
Future Vol, veh/h	0	19	87	0	67	0	0	0	0	0	546	85
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	20	90	0	69	0	0	0	0	0	563	88

Major/Minor	Minor2			Minor1					Major2		
Conflicting Flow All	-	563	281	291	651	-			-	-	0
Stage 1	-	563	-	0	0	-			-	-	-
Stage 2	-	0	-	291	651	-			-	-	-
Critical Hdwy	-	6.56	6.96	7.56	6.56	-			-	-	-
Critical Hdwy Stg 1	-	5.56	-	-	-	-			-	-	-
Critical Hdwy Stg 2	-	-	-	6.56	5.56	-			-	-	-
Follow-up Hdwy	-	4.03	3.33	3.53	4.03	-			-	-	-
Pot Cap-1 Maneuver	0	432	713	636	384	0			0	-	-
Stage 1	0	505	-	-	-	0			0	-	-
Stage 2	0	-	-	690	461	0			0	-	-
Platoon blocked, %										-	-
Mov Cap-1 Maneuver	-	432	713	531	384	-			-	-	-
Mov Cap-2 Maneuver	-	432	-	531	384	-			-	-	-
Stage 1	-	505	-	-	-	-			-	-	-
Stage 2	-	-	-	579	461	-			-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	11.8	16.41	0
HCM LOS	B	C	

Minor Lane/Major Mvmt	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	638	384	-	-
HCM Lane V/C Ratio	0.171	0.18	-	-
HCM Ctrl Dly (s/v)	11.8	16.4	-	-
HCM Lane LOS	B	C	-	-
HCM 95th %tile Q(veh)	0.6	0.6	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	19	0	67	1112	0	0
Future Vol, veh/h	19	0	67	1112	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	20	0	69	1146	0	0

Major/Minor	Minor2		Major1	
Conflicting Flow All	711	-	0	0
Stage 1	0	-	-	-
Stage 2	711	-	-	-
Critical Hdwy	6.86	-	4.16	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-
Follow-up Hdwy	3.53	-	2.23	-
Pot Cap-1 Maneuver	365	0	-	-
Stage 1	-	0	-	-
Stage 2	445	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	365	-	-	-
Mov Cap-2 Maneuver	365	-	-	-
Stage 1	-	-	-	-
Stage 2	445	-	-	-

Approach	EB	NB
HCM Ctrl Dly, s/v	15.42	
HCM LOS	C	

Minor Lane/Major Mvmt	NBL	NBT	EBLn1
Capacity (veh/h)	-	-	365
HCM Lane V/C Ratio	-	-	0.054
HCM Ctrl Dly (s/v)	-	-	15.4
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	0.2

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	33	0	0	521	68
Future Vol, veh/h	0	33	0	0	521	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	34	0	0	537	70

Major/Minor	Minor2			Major2	
Conflicting Flow All	-	304		-	0
Stage 1	-	-		-	-
Stage 2	-	-		-	-
Critical Hdwy	-	6.96		-	-
Critical Hdwy Stg 1	-	-		-	-
Critical Hdwy Stg 2	-	-		-	-
Follow-up Hdwy	-	3.33		-	-
Pot Cap-1 Maneuver	0	689		-	-
Stage 1	0	-		-	-
Stage 2	0	-		-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	-	689		-	-
Mov Cap-2 Maneuver	-	-		-	-
Stage 1	-	-		-	-
Stage 2	-	-		-	-

Approach	EB	SB
HCM Ctrl Dly, s/v	10.49	0
HCM LOS	B	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	689	-	-
HCM Lane V/C Ratio	0.049	-	-
HCM Ctrl Dly (s/v)	10.5	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	189	20	23	40	0	0	0	0	115	395	44
Future Vol, veh/h	0	189	20	23	40	0	0	0	0	115	395	44
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.97	0.97	0.97	0.93	0.93	0.93
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	203	22	25	43	0	0	0	0	124	425	47
Number of Lanes	0	1	0	0	1	0	0	0	0	1	2	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	1
HCM Control Delay, s/veh	12.3	10.2	11.1
HCM LOS	B	B	B

Lane	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	37%	100%	0%	0%
Vol Thru, %	90%	63%	0%	100%	75%
Vol Right, %	10%	0%	0%	0%	25%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	209	63	115	263	176
LT Vol	0	23	115	0	0
Through Vol	189	40	0	263	132
RT Vol	20	0	0	0	44
Lane Flow Rate	225	68	124	283	189
Geometry Grp	5	5	5	5	5
Degree of Util (X)	0.371	0.123	0.203	0.425	0.274
Departure Headway (Hd)	5.947	6.538	5.911	5.407	5.231
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	600	551	602	660	680
Service Time	3.739	4.238	3.694	3.19	3.013
HCM Lane V/C Ratio	0.375	0.123	0.206	0.429	0.278
HCM Control Delay, s/veh	12.3	10.2	10.2	12.2	10
HCM Lane LOS	B	B	B	B	A
HCM 95th-tile Q	1.7	0.4	0.8	2.1	1.1

Intersection	
Intersection Delay, s/veh	53.1
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	160	144	0	0	46	73	17	1085	42	0	0	0
Future Vol, veh/h	160	144	0	0	46	73	17	1085	42	0	0	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.97	0.97	0.97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	172	155	0	0	49	78	18	1167	45	0	0	0
Number of Lanes	0	1	0	0	1	0	0	2	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay, s/veh	17.2	11	67
HCM LOS	C	B	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	3%	0%	53%	0%
Vol Thru, %	97%	93%	47%	39%
Vol Right, %	0%	7%	0%	61%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	560	585	304	119
LT Vol	17	0	160	0
Through Vol	543	543	144	46
RT Vol	0	42	0	73
Lane Flow Rate	602	628	327	128
Geometry Grp	5	5	2	2
Degree of Util (X)	1.007	1.04	0.567	0.219
Departure Headway (Hd)	6.025	5.958	6.24	6.174
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	608	616	579	578
Service Time	3.725	3.658	4.288	4.251
HCM Lane V/C Ratio	0.99	1.019	0.565	0.221
HCM Control Delay, s/veh	62.6	71.2	17.2	11
HCM Lane LOS	F	F	C	B
HCM 95th-tile Q	15.3	16.9	3.5	0.8

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	404	20	0	535	0	92
Future Vol, veh/h	404	20	0	535	0	92
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	98	98	98	98	98	98
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	412	20	0	546	0	94

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	216
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.16
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.93
Pot Cap-1 Maneuver	-	-	0	-	0	669
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	669
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	11.26
HCM LOS			B

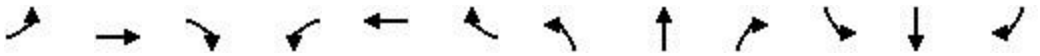
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	669	-	-	-
HCM Lane V/C Ratio	0.14	-	-	-
HCM Ctrl Dly (s/v)	11.3	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.5	-	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	260	246	155	386	110	1097	214	1206
v/c Ratio	1.01	0.46	0.47	0.68	0.49	0.77	0.71	0.76
Control Delay (s/veh)	92.8	36.1	31.7	30.8	18.9	32.0	29.7	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	92.8	36.1	31.7	30.8	18.9	32.0	29.7	27.9
Queue Length 50th (ft)	~172	72	86	82	29	341	60	335
Queue Length 95th (ft)	#226	98	116	116	73	#584	#210	#656
Internal Link Dist (ft)		299		385		261		435
Turn Bay Length (ft)	305		145		115		225	
Base Capacity (vph)	258	849	351	890	310	1426	318	1578
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.01	0.29	0.44	0.43	0.35	0.77	0.67	0.76

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	255	179	62	152	220	159	108	973	102	210	975	207
Future Volume (veh/h)	255	179	62	152	220	159	108	973	102	210	975	207
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709
Adj Flow Rate, veh/h	260	183	63	155	224	162	110	993	104	214	995	211
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	274	432	144	347	284	196	244	1395	146	306	1341	284
Arrive On Green	0.11	0.18	0.18	0.10	0.15	0.15	0.05	0.47	0.47	0.08	0.50	0.50
Sat Flow, veh/h	1628	2392	797	1628	1835	1270	1628	2966	311	1628	2667	564
Grp Volume(v), veh/h	260	122	124	155	197	189	110	543	554	214	605	601
Grp Sat Flow(s),veh/h/ln	1628	1624	1566	1628	1624	1481	1628	1624	1653	1628	1624	1607
Q Serve(g_s), s	12.0	7.3	7.7	8.7	12.8	13.6	3.8	29.3	29.3	7.1	32.5	32.7
Cycle Q Clear(g_c), s	12.0	7.3	7.7	8.7	12.8	13.6	3.8	29.3	29.3	7.1	32.5	32.7
Prop In Lane	1.00		0.51	1.00		0.86	1.00		0.19	1.00		0.35
Lane Grp Cap(c), veh/h	274	293	283	347	251	229	244	764	778	306	816	808
V/C Ratio(X)	0.95	0.42	0.44	0.45	0.79	0.83	0.45	0.71	0.71	0.70	0.74	0.74
Avail Cap(c_a), veh/h	274	428	413	374	413	377	360	764	778	369	816	808
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.1	39.9	40.1	34.2	44.7	45.1	18.5	23.2	23.2	19.3	21.7	21.7
Incr Delay (d2), s/veh	40.6	0.9	1.1	0.3	5.4	7.4	0.5	5.6	5.5	3.0	6.0	6.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	3.0	3.0	3.4	5.5	5.4	1.4	11.9	12.1	2.7	13.0	13.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	79.7	40.9	41.2	34.5	50.1	52.5	19.0	28.8	28.7	22.3	27.7	27.9
LnGrp LOS	E	D	D	C	D	D	B	C	C	C	C	C
Approach Vol, veh/h		506			541			1207			1420	
Approach Delay, s/veh		60.9			46.5			27.8			26.9	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	57.2	14.1	25.9	9.2	60.8	17.0	23.0
Change Period (Y+Rc), s	3.5	5.5	3.5	6.0	3.5	5.5	5.0	6.0
Max Green Setting (Gmax), s	13.5	36.5	12.5	29.0	13.5	36.5	12.0	28.0
Max Q Clear Time (g_c+I1), s	9.1	31.3	10.7	9.7	5.8	34.7	14.0	15.6
Green Ext Time (p_c), s	0.2	3.2	0.1	1.0	0.1	1.4	0.0	1.4

Intersection Summary	
HCM 7th Control Delay, s/veh	34.8
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	49	108	0	66	0	0	0	0	0	1096	94
Future Vol, veh/h	0	49	108	0	66	0	0	0	0	0	1096	94
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	50	110	0	67	0	0	0	0	0	1118	96

Major/Minor	Minor2			Minor1					Major2		
Conflicting Flow All	-	1118	559	584	1214	-			-	-	0
Stage 1	-	1118	-	0	0	-			-	-	-
Stage 2	-	0	-	584	1214	-			-	-	-
Critical Hdwy	-	6.56	6.96	7.56	6.56	-			-	-	-
Critical Hdwy Stg 1	-	5.56	-	-	-	-			-	-	-
Critical Hdwy Stg 2	-	-	-	6.56	5.56	-			-	-	-
Follow-up Hdwy	-	4.03	3.33	3.53	4.03	-			-	-	-
Pot Cap-1 Maneuver	0	204	470	393	179	0			0	-	-
Stage 1	0	278	-	-	-	0			0	-	-
Stage 2	0	-	-	462	250	0			0	-	-
Platoon blocked, %										-	-
Mov Cap-1 Maneuver	-	204	470	227	179	-			-	-	-
Mov Cap-2 Maneuver	-	204	-	227	179	-			-	-	-
Stage 1	-	278	-	-	-	-			-	-	-
Stage 2	-	-	-	290	250	-			-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	25.32	36.83	0
HCM LOS	D	E	

Minor Lane/Major Mvmt	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	334	179	-	-
HCM Lane V/C Ratio	0.48	0.377	-	-
HCM Ctrl Dly (s/v)	25.3	36.8	-	-
HCM Lane LOS	D	E	-	-
HCM 95th %tile Q(veh)	2.5	1.6	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	49	0	66	620	0	0
Future Vol, veh/h	49	0	66	620	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	50	0	67	633	0	0

Major/Minor	Minor2		Major1	
Conflicting Flow All	451	-	0	0
Stage 1	0	-	-	-
Stage 2	451	-	-	-
Critical Hdwy	6.86	-	4.16	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-
Follow-up Hdwy	3.53	-	2.23	-
Pot Cap-1 Maneuver	534	0	-	-
Stage 1	-	0	-	-
Stage 2	606	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	534	-	-	-
Mov Cap-2 Maneuver	534	-	-	-
Stage 1	-	-	-	-
Stage 2	606	-	-	-

Approach	EB	NB
HCM Ctrl Dly, s/v	12.43	
HCM LOS	B	

Minor Lane/Major Mvmt	NBL	NBT	EBLn1
Capacity (veh/h)	-	-	534
HCM Lane V/C Ratio	-	-	0.094
HCM Ctrl Dly (s/v)	-	-	12.4
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.3

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	30	0	0	1238	77
Future Vol, veh/h	0	30	0	0	1238	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	31	0	0	1263	79

Major/Minor	Minor2			Major2	
Conflicting Flow All	-	671		-	0
Stage 1	-	-		-	-
Stage 2	-	-		-	-
Critical Hdwy	-	6.96		-	-
Critical Hdwy Stg 1	-	-		-	-
Critical Hdwy Stg 2	-	-		-	-
Follow-up Hdwy	-	3.33		-	-
Pot Cap-1 Maneuver	0	397		-	-
Stage 1	0	-		-	-
Stage 2	0	-		-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	-	397		-	-
Mov Cap-2 Maneuver	-	-		-	-
Stage 1	-	-		-	-
Stage 2	-	-		-	-

Approach	EB	SB
HCM Ctrl Dly, s/v	14.84	0
HCM LOS	B	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	397	-	-
HCM Lane V/C Ratio	0.077	-	-
HCM Ctrl Dly (s/v)	14.8	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-

Intersection	
Intersection Delay, s/veh	48
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	114	25	15	39	0	0	0	0	27	1078	163
Future Vol, veh/h	0	114	25	15	39	0	0	0	0	27	1078	163
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.98	0.98	0.98	0.97	0.97	0.97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	118	26	15	40	0	0	0	0	28	1111	168
Number of Lanes	0	1	0	0	1	0	0	0	0	1	2	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	1
HCM Control Delay, s/veh	12.5	11.2	53.5
HCM LOS	B	B	F

Lane	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	28%	100%	0%	0%
Vol Thru, %	82%	72%	0%	100%	69%
Vol Right, %	18%	0%	0%	0%	31%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	139	54	27	719	522
LT Vol	0	15	27	0	0
Through Vol	114	39	0	719	359
RT Vol	25	0	0	0	163
Lane Flow Rate	143	56	28	741	538
Geometry Grp	5	5	5	5	5
Degree of Util (X)	0.276	0.113	0.044	1.076	0.749
Departure Headway (Hd)	7.111	7.532	5.731	5.228	5.009
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	509	479	622	689	716
Service Time	4.811	5.232	3.496	2.993	2.774
HCM Lane V/C Ratio	0.281	0.117	0.045	1.075	0.751
HCM Control Delay, s/veh	12.5	11.2	8.8	78.5	21.3
HCM Lane LOS	B	B	A	F	C
HCM 95th-tile Q	1.1	0.4	0.1	20.1	6.8

Intersection	
Intersection Delay, s/veh	14.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	98	43	0	0	29	49	25	788	9	0	0	0
Future Vol, veh/h	98	43	0	0	29	49	25	788	9	0	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	101	44	0	0	30	51	26	812	9	0	0	0
Number of Lanes	0	1	0	0	1	0	0	2	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay, s/veh	10.7	9.3	15.8
HCM LOS	B	A	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	6%	0%	70%	0%
Vol Thru, %	94%	98%	30%	37%
Vol Right, %	0%	2%	0%	63%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	419	403	141	78
LT Vol	25	0	98	0
Through Vol	394	394	43	29
RT Vol	0	9	0	49
Lane Flow Rate	432	415	145	80
Geometry Grp	5	5	2	2
Degree of Util (X)	0.625	0.595	0.236	0.121
Departure Headway (Hd)	5.205	5.159	5.833	5.437
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	691	698	613	655
Service Time	2.962	2.917	3.892	3.508
HCM Lane V/C Ratio	0.625	0.595	0.237	0.122
HCM Control Delay, s/veh	16.3	15.3	10.7	9.3
HCM Lane LOS	C	C	B	A
HCM 95th-tile Q	4.4	4	0.9	0.4

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	172	53	25	121	18	1162	124	472
v/c Ratio	0.59	0.15	0.12	0.61	0.03	0.63	0.49	0.23
Control Delay (s/veh)	47.2	28.0	34.0	41.6	9.2	21.5	15.3	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	47.2	28.0	34.0	41.6	9.2	21.5	15.3	11.9
Queue Length 50th (ft)	124	23	16	51	5	334	35	76
Queue Length 95th (ft)	174	57	35	110	17	500	75	153
Internal Link Dist (ft)		387		395		632		315
Turn Bay Length (ft)	100		100		100		100	
Base Capacity (vph)	301	349	319	298	590	1854	269	2017
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.15	0.08	0.41	0.03	0.63	0.46	0.23

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	29	20	23	40	73	17	1085	42	115	395	44
Future Volume (veh/h)	160	29	20	23	40	73	17	1085	42	115	395	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709
Adj Flow Rate, veh/h	172	31	22	25	43	78	18	1119	43	124	425	47
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.97	0.97	0.97	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	254	184	130	211	52	94	594	1910	73	309	1863	205
Arrive On Green	0.11	0.20	0.20	0.02	0.10	0.10	0.01	0.60	0.60	0.04	0.63	0.63
Sat Flow, veh/h	1628	930	660	1628	544	987	1628	3188	122	1628	2950	325
Grp Volume(v), veh/h	172	0	53	25	0	121	18	570	592	124	233	239
Grp Sat Flow(s),veh/h/ln	1628	0	1590	1628	0	1531	1628	1624	1687	1628	1624	1651
Q Serve(g_s), s	12.0	0.0	3.6	1.8	0.0	10.1	0.6	28.2	28.2	3.7	8.0	8.1
Cycle Q Clear(g_c), s	12.0	0.0	3.6	1.8	0.0	10.1	0.6	28.2	28.2	3.7	8.0	8.1
Prop In Lane	1.00		0.42	1.00		0.64	1.00		0.07	1.00		0.20
Lane Grp Cap(c), veh/h	254	0	314	211	0	146	594	973	1011	309	1025	1042
V/C Ratio(X)	0.68	0.00	0.17	0.12	0.00	0.83	0.03	0.59	0.59	0.40	0.23	0.23
Avail Cap(c_a), veh/h	290	0	314	365	0	247	682	973	1011	345	1025	1042
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	0.0	43.3	52.0	0.0	57.8	10.0	16.1	16.1	13.0	10.3	10.3
Incr Delay (d2), s/veh	3.6	0.0	0.3	0.1	0.0	11.4	0.0	2.6	2.5	0.3	0.5	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	1.5	0.8	0.0	4.4	0.2	10.7	11.1	1.3	2.9	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.6	0.0	43.5	52.1	0.0	69.1	10.1	18.7	18.6	13.3	10.8	10.8
LnGrp LOS	D		D	D		E	B	B	B	B	B	B
Approach Vol, veh/h		225			146			1180			596	
Approach Delay, s/veh		47.4			66.2			18.5			11.3	
Approach LOS		D			E			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	83.4	5.8	31.7	4.9	87.6	19.1	18.4
Change Period (Y+Rc), s	3.5	5.5	3.5	6.0	3.5	5.5	5.0	6.0
Max Green Setting (Gmax), s	8.5	63.5	14.5	25.0	8.5	63.5	17.0	21.0
Max Q Clear Time (g_c+I1), s	5.7	30.2	3.8	5.6	2.6	10.1	14.0	12.1
Green Ext Time (p_c), s	0.0	10.8	0.0	0.1	0.0	3.5	0.1	0.3

Intersection Summary	
HCM 7th Control Delay, s/veh	22.8
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	101	42	15	91	26	813	28	1279
v/c Ratio	0.42	0.15	0.07	0.46	0.11	0.39	0.07	0.63
Control Delay (s/veh)	38.8	20.7	29.6	30.4	8.0	12.2	7.3	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.8	20.7	29.6	30.4	8.0	12.2	7.3	15.8
Queue Length 50th (ft)	61	9	8	29	5	150	6	291
Queue Length 95th (ft)	97	40	23	74	19	254	20	482
Internal Link Dist (ft)		387		371		632		273
Turn Bay Length (ft)	100		100		100		100	
Base Capacity (vph)	246	322	294	310	286	2072	450	2042
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.13	0.05	0.29	0.09	0.39	0.06	0.63

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	16	25	15	39	49	25	788	9	27	1078	163
Future Volume (veh/h)	98	16	25	15	39	49	25	788	9	27	1078	163
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709	1709
Adj Flow Rate, veh/h	101	16	26	15	40	51	26	804	9	28	1111	168
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.98	0.98	0.98	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	205	88	144	186	52	67	275	2156	24	453	1856	280
Arrive On Green	0.07	0.15	0.15	0.01	0.08	0.08	0.01	0.66	0.66	0.02	0.66	0.66
Sat Flow, veh/h	1628	586	952	1628	682	870	1628	3289	37	1628	2829	427
Grp Volume(v), veh/h	101	0	42	15	0	91	26	397	416	28	636	643
Grp Sat Flow(s),veh/h/ln	1628	0	1538	1628	0	1552	1628	1624	1702	1628	1624	1632
Q Serve(g_s), s	6.1	0.0	2.6	0.9	0.0	6.3	0.6	12.3	12.3	0.6	24.4	24.6
Cycle Q Clear(g_c), s	6.1	0.0	2.6	0.9	0.0	6.3	0.6	12.3	12.3	0.6	24.4	24.6
Prop In Lane	1.00		0.62	1.00		0.56	1.00		0.02	1.00		0.26
Lane Grp Cap(c), veh/h	205	0	232	186	0	119	275	1064	1116	453	1065	1071
V/C Ratio(X)	0.49	0.00	0.18	0.08	0.00	0.76	0.09	0.37	0.37	0.06	0.60	0.60
Avail Cap(c_a), veh/h	238	0	266	340	0	268	377	1064	1116	553	1065	1071
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	0.0	40.8	46.3	0.0	49.8	9.0	8.6	8.6	6.8	10.7	10.7
Incr Delay (d2), s/veh	0.7	0.0	0.4	0.1	0.0	9.6	0.1	1.0	1.0	0.0	2.5	2.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	1.0	0.4	0.0	2.8	0.2	4.2	4.4	0.2	8.5	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.9	0.0	41.2	46.4	0.0	59.4	9.0	9.6	9.6	6.8	13.2	13.2
LnGrp LOS	D		D	D		E	A	A	A	A	B	B
Approach Vol, veh/h		143			106			839			1307	
Approach Delay, s/veh		41.7			57.6			9.6			13.1	
Approach LOS		D			E			A			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	77.6	4.6	22.6	5.1	77.7	12.7	14.4
Change Period (Y+Rc), s	3.5	5.5	3.5	6.0	3.5	5.5	5.0	6.0
Max Green Setting (Gmax), s	8.5	52.5	11.5	19.0	8.5	52.5	10.0	19.0
Max Q Clear Time (g_c+I1), s	2.6	14.3	2.9	4.6	2.6	26.6	8.1	8.3
Green Ext Time (p_c), s	0.0	6.7	0.0	0.1	0.0	11.3	0.0	0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	15.5
HCM 7th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.