



## **ALDRIDGE TRANSPORTATION CONSULTANTS, LLC**

*Advanced Transportation Planning and Traffic Engineering*

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June 3, 2022

Mr. Jason Pock  
Director of Entitlement  
Richmond American Homes  
4350 S. Monaco St.  
Denver, CO 80237

RE: Transportation Impact Study - Revised  
Trails at Overland Ranch

Dear Mr. Pock:

Aldridge Transportation Consultants (ATC) is pleased to present this traffic impact study for the proposed construction of Trails at Overland Ranch a residential development in Aurora.

ATC is professional service firm specializing in traffic engineering and transportation planning. ATC's principal, John M.W. Aldridge is a Colorado licensed professional engineer. In the past 20 years, ATC has prepared over 1,000 traffic impact studies, designed over 100 traffic signals, and has provided expert witness testimony on engineering design and access issues on multi-million-dollar interchange and highway projects in Kansas and Colorado.

We acknowledge that City of Aurora's review of this study is only for general performance with submittal requirements, current design criteria, and standard engineering principles and practice.

ATC appreciates the opportunity to be of service. Please call if you have any questions. We can be reached at 303-703-9112.

Respectfully submitted,  
**Aldridge Transportation Consultants, LLC**



John M.W. Aldridge, P.E.  
Principal



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## INTRODUCTION

This Traffic Impact Study examines the potential impact on traffic that would be caused by the development of Butterfield Trails located on the northeast corner of Monaghan Road and County Road 1. Figure 1 shows the site vicinity and the surrounding streets and intersections.



Figure 1 Site Location and Surrounding Streets and Intersections

In preparing this study we reference a previous traffic impact study prepared by FHU in February 2003 and the COA NEATS and SEATS transportation plans.

## EXISTING CONDITIONS

The Average Daily Traffic (ADT) for each of the following roadway descriptions is based on the PM peak hour being 10 percent of the daily.

**Monaghan Road** is currently a two-lane undivided collector roadway. It is only one mile long in this area. It intersects with County Line Road on the south end and then becomes Delbert Road in Elbert County. On the north end it makes a right angle turn to the west and becomes Smokey Hill Road. From County Line Road north to a mid-point, it consists of two travel lanes, landscaped buffer, and a detached sidewalk on the west side only. From the mid-point to Smokey Hill Road the configuration changes with added bike lanes on each side and an attached sidewalk only on the west side. It is posted at 35 mph. The current average daily is low at approximately 1,250 ADT



**County Line Road.** is a 2-lane undivided collector roadway. The ADT is approximately 2,000 ADT east of Monaghan and approximately 2,500 ADT west of Monaghan. The speed limit is 40 mph. It intersects with Monaghan Road at a two-way stop-controlled intersection. It continues westward to Powhatan Road also a two-way stop-controlled intersection. West of Powhatan Road County Line Road becomes S. Sampson Gulch Way.

**Smokey Hill Road** is a 6-lane Major Arterial at Powhatan Road. East of Powhatan Road it narrows to 4-lanes and then down to an undivided 2-Lane roadway at Monaghan. The intersection at Powhatan is traffic signal controlled with yellow flashing arrows on all approaches. Smokey Hill Road carries approximately 5,000 ADT east of Powhatan Road. To the west it jumps up to about 11,000 ADT. The speed limit is 35 mph.

**Powhatan Road** is a 4-lane minor arterial on the approach to Smokey Hill Road. It carries approximately 9,000 ADT in this section. It narrows to an undivided 2-lane roadway south of Otero Dr. to County Line Road. On the north leg of Powhatan Road at County line Road it carries approximately 2,500 ADT. The speed limit is 35 mph.

AM and PM traffic counts were taken All Traffic Data on Tuesday March 2, 2021, and Wednesday April 7, 2021. The count worksheets and graphics are provided in the appendix for reference.

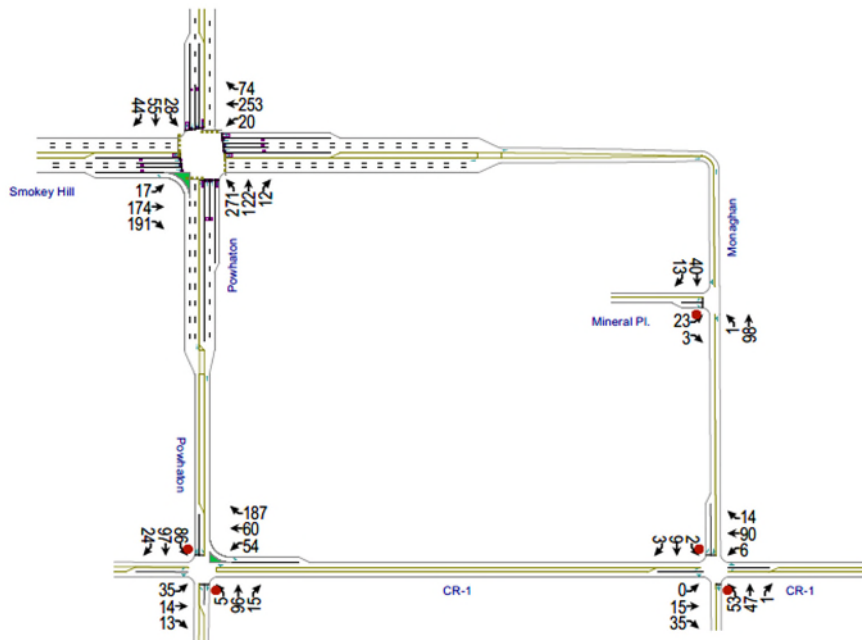


Figure 2 Existing AM Peak Hour

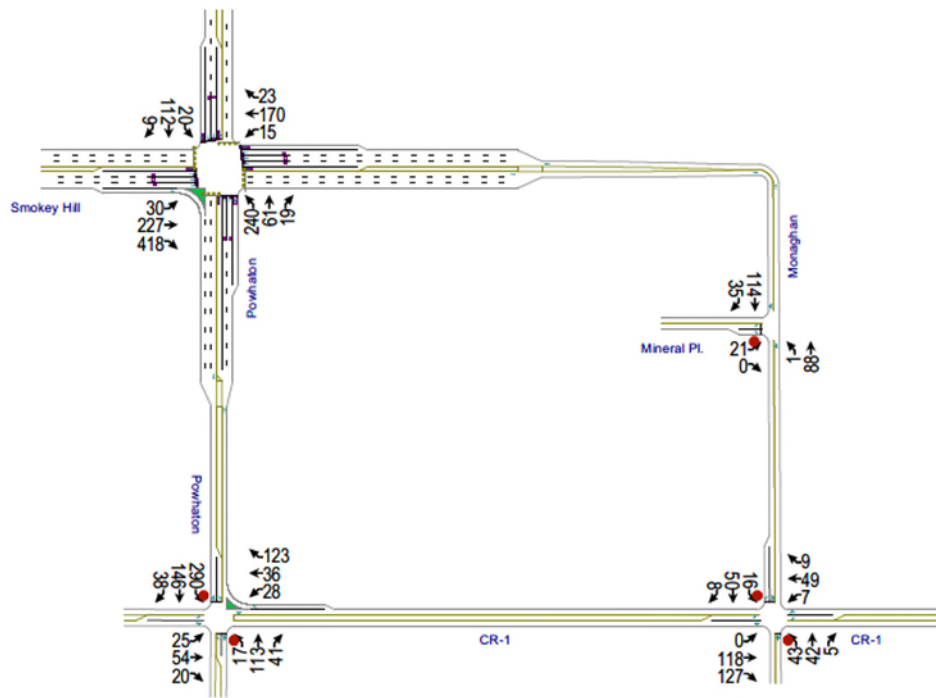


Figure 3 Existing PM Peak Hour

#### ACCESS LOCATIONS

Figure 4 shows the site plan and the access locations. Three accesses are proposed. Two full-movement on Monaghan and one full-movement on County Line Road. The main entrance will be at the northern access across from Mineral Pl. It's proximity to Smokey Hill Road makes it the most convenient way in and out of the property.



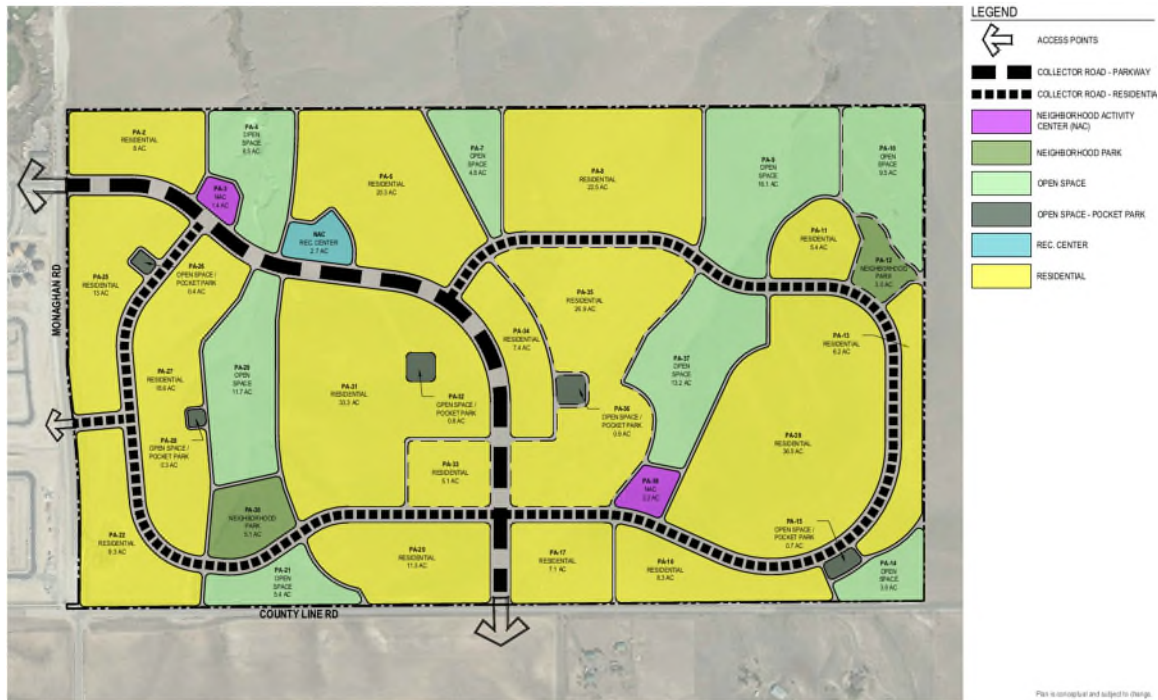


Figure 4 Conceptual Bubble Plan with Access Locations

#### LAND USE and TRIP GENERATION

The property will be developed with 1,119 single family homes on approximately 373 acres (3 units per gross acres). The buildout is expected by 2026. The trip generation rates are from the *ITE Trip Generation Manual, 10<sup>th</sup> Edition*. The following worksheet Table 1 provides the ADT and AM/PM Peak Hour traffic volumes.

Table 1

Trip Generation Worksheet										
ITE CODE	LAND USE	UNIT	QUANTITY	ADT	AM			PM		
					IN	OUT	TOTAL	IN	OUT	TOTAL
210	Single Family	DU	1119	9.44	0.19	0.56		0.63	0.37	
				10563	213	627	839	705	414	1119
Total Trips				10563	213	627	839	705	414	1119



### TRAFFIC DISTRIBUTION & ASSIGNMENT

The distribution and assignment of the site generated traffic at each access and at each intersection in the 2026- and 2041-time frame are shown on the Synchro graphics attached and in Figure 5.

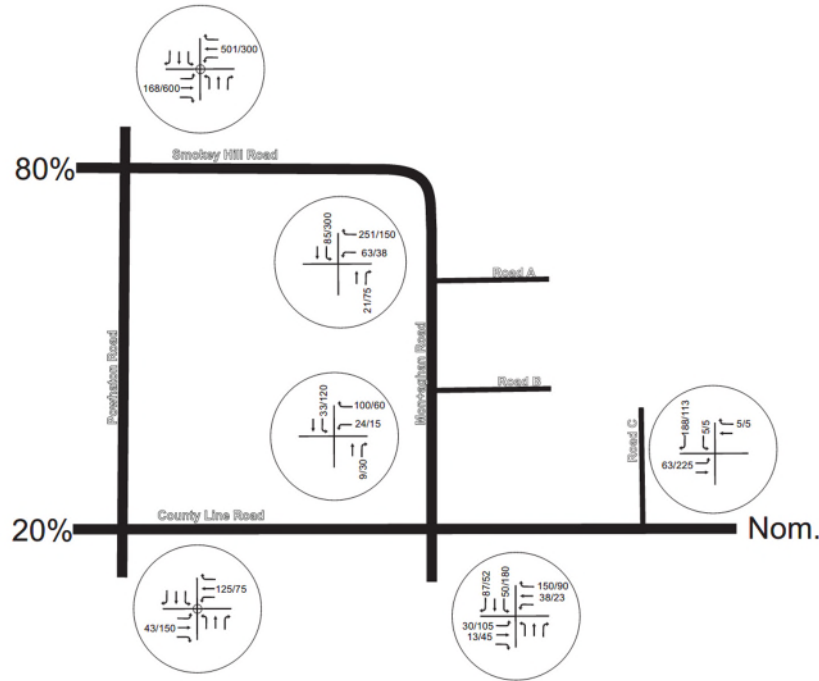


Figure 5 Site Trip Generation Distribution and Assignment

Figure 5 shows that 80 percent of the traffic will orient to/from Smokey Hill Road as it is the most direct route to the major highways and commercial/retail businesses. The Sampson Gulch Way route to the west is circuitous and out of direction. Trips to/from the east on County Line Road are nominal as there are virtually no destinations for employment, schools, or shopping.

### FUTURE TRAFFIC VOLUMES

The City's Traffic Impact Study Guidelines state that future traffic volumes are generally available from the City's transportation planning. It also states, "For some cases developers may instead calculate future background traffic by applying a 2% growth rate factor per year, compounded annually, to existing traffic. In either case, the estimates should account for future development adjacent to or near the proposed site based on the current zoning for undeveloped parcels within the study area." The city participates in the development of the DRCOG Focus Model by providing growth and development data on households, employment, income, etc. for the model's traffic analysis zones (TAZ). The Focus model provides assigned volumes for 2015 and 2040 which is based on data provided by the city. In general, the growth rates in the model equate to a rate of 2 percent per annum and a 20-year growth factor of 1.5 which matches the City's default value. The 5-year growth factor is 1.1. Figures 6 - 9 show the 2026 and 2041 AM and PM peak hours total traffic.

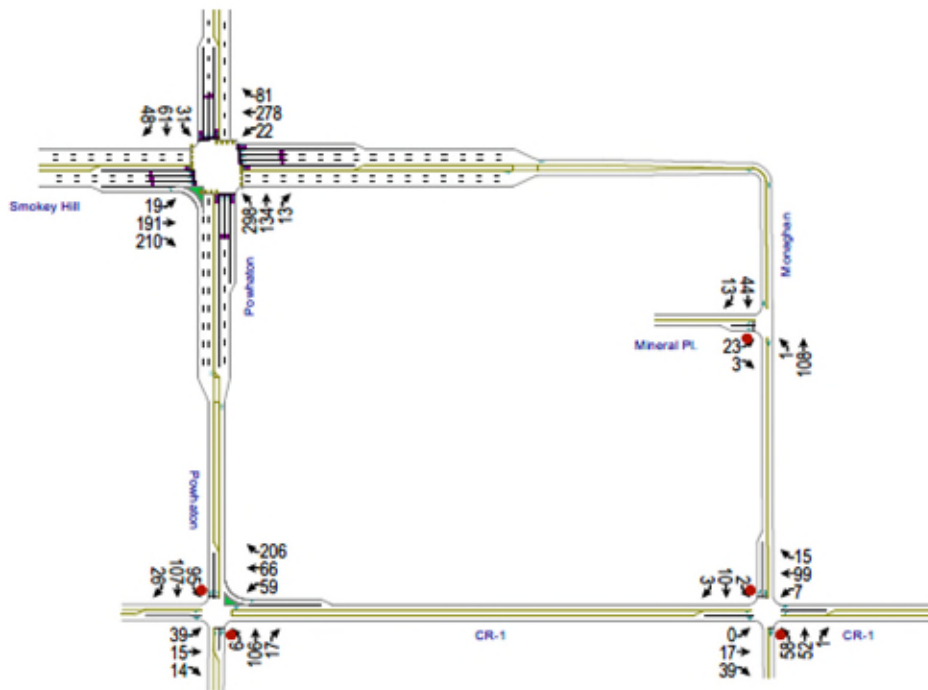


Figure 6 2026 AM Peak Hour Background

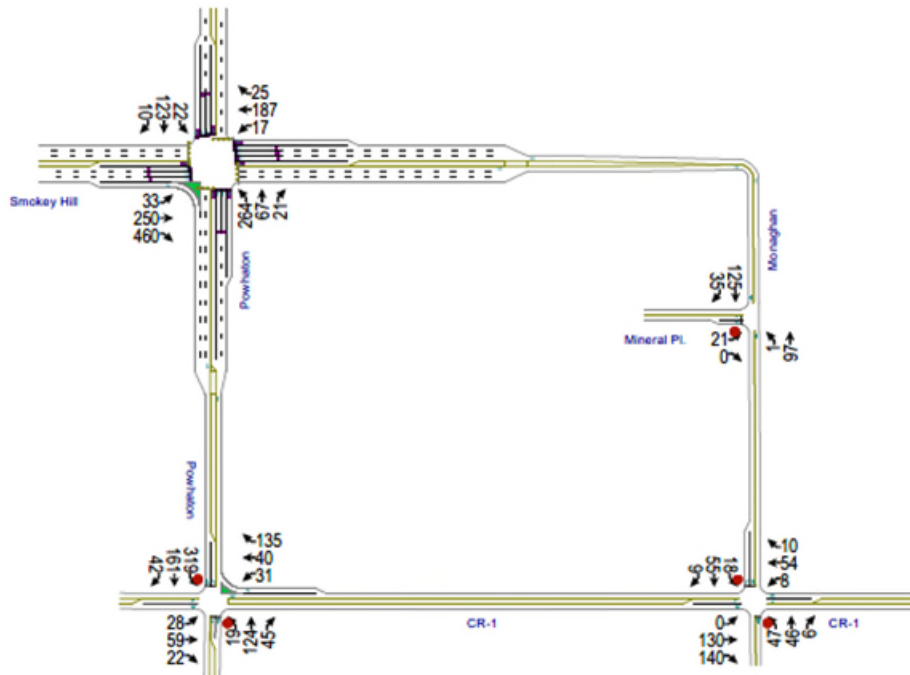


Figure 7 2026 PM Peak Hour Background



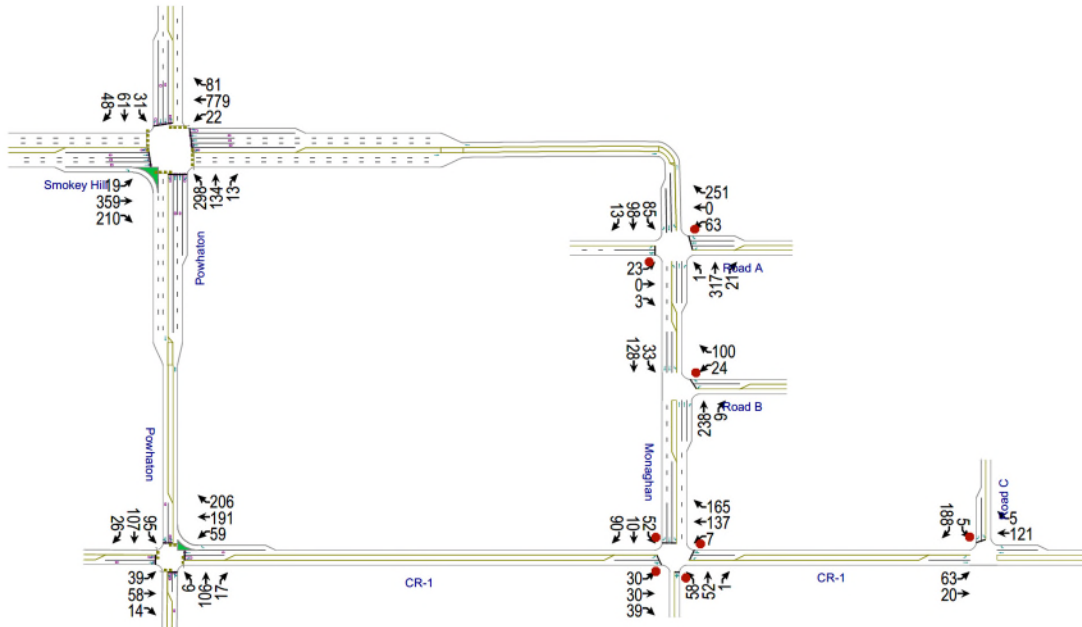


Figure 8 2026 AM Peak Hour Total

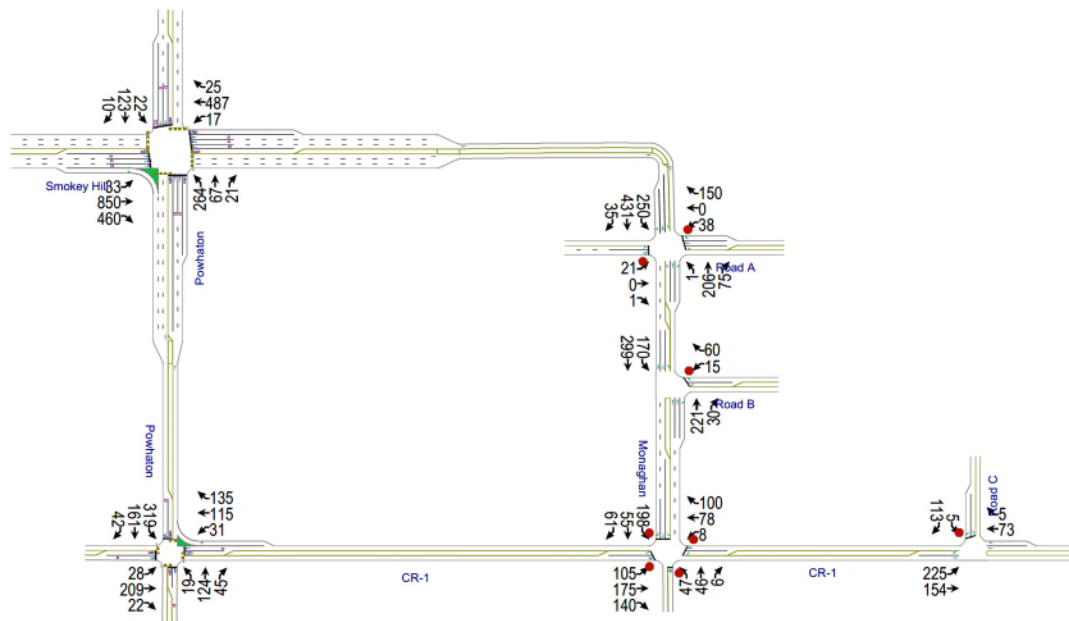


Figure 9 2026 PM Peak Hour Total

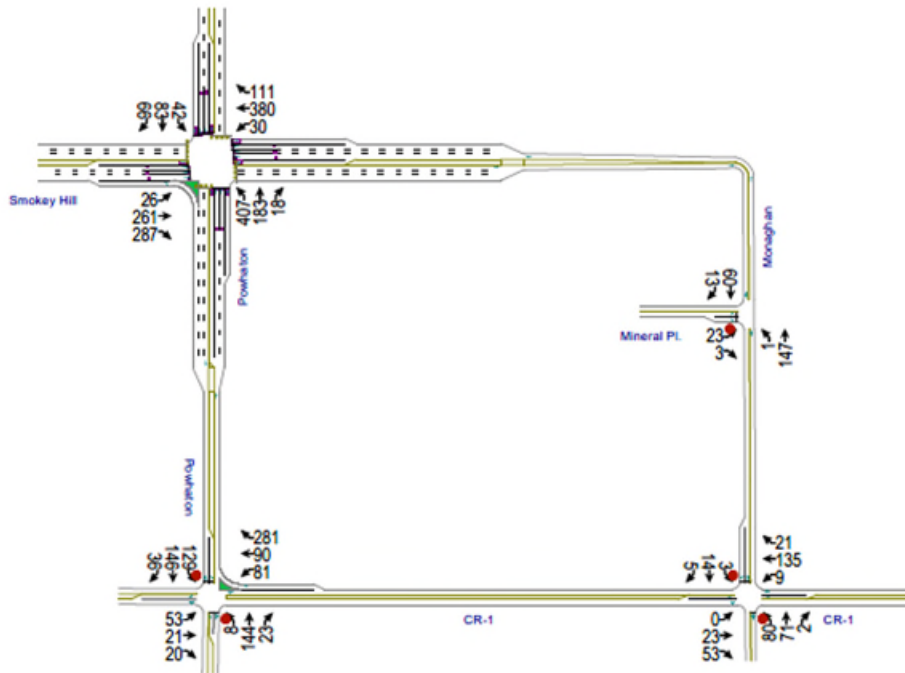


Figure 10 2041 AM Peak Hour Background

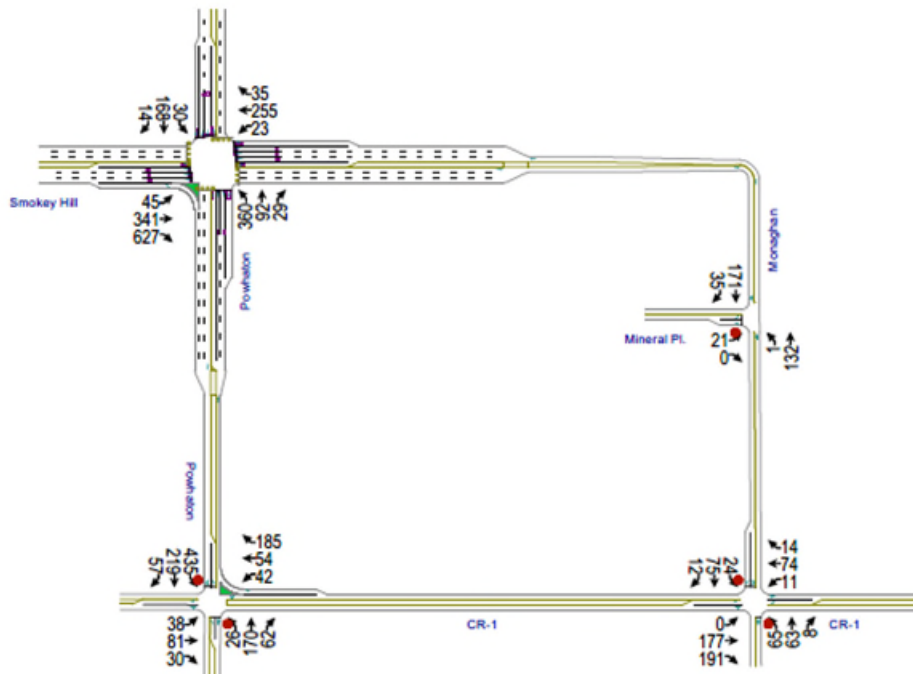


Figure 11 2041 PM Peak Hour Background

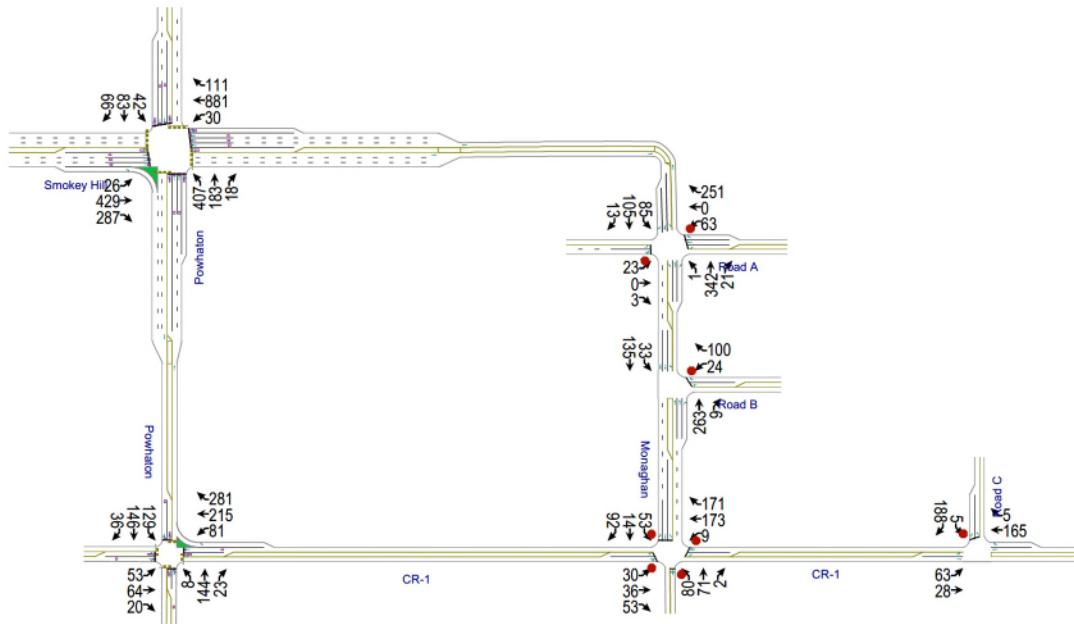


Figure 12 2041 AM Peak Hour Total

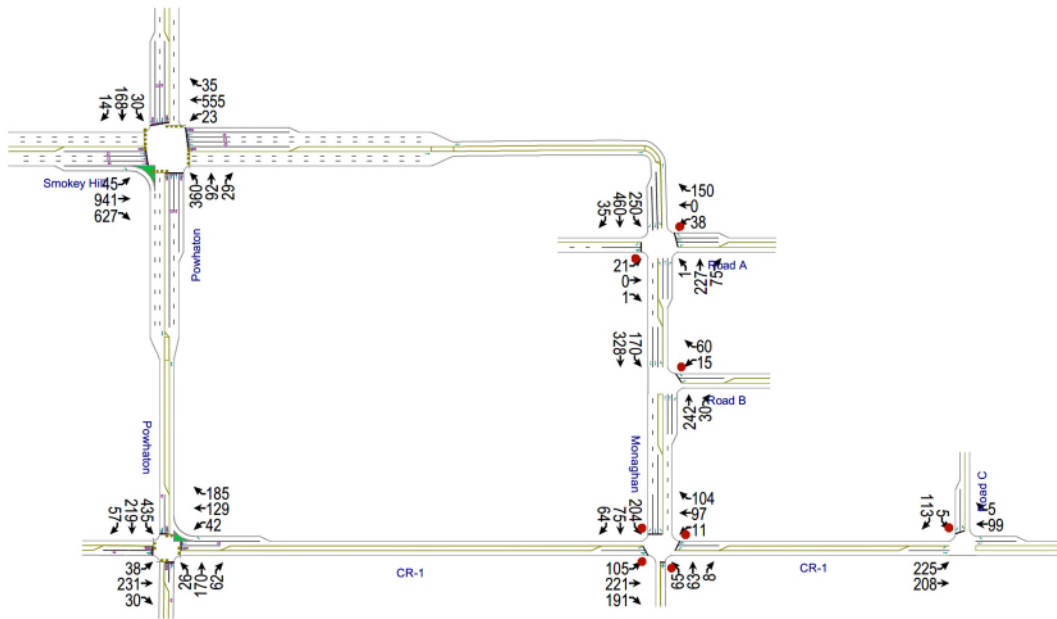


Figure 13 2041 PM Peak Hour Total



### AVERAGE DAILY TRAFFIC

Figure 10 presents the existing and forecast average daily traffic (ADT) for subject streets including at the entry points.

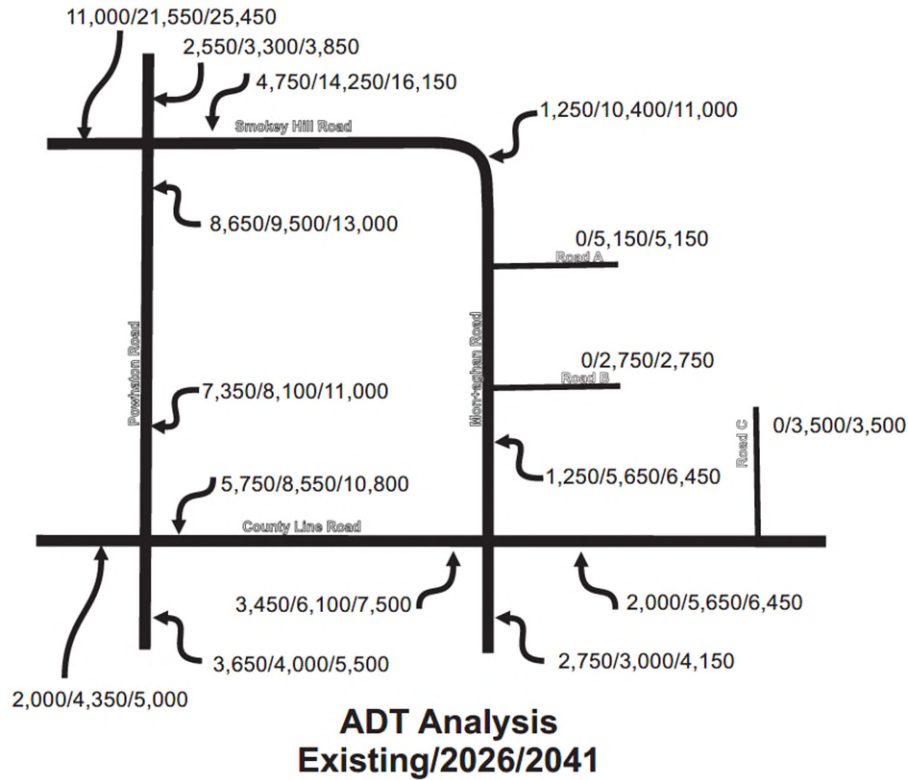


Figure 14 ADT Analysis



## Recommended Traffic Volume Thresholds

ROADWAY CLASSIFICATION	NUMBER OF LANES EACH DIRECTION	RECOMMENDED DAILY TRAFFIC VOLUME LOS THRESHOLDS (VEHICLES PER DAY)		
		C	D <sup>(2)</sup>	E
Collector	1	> 9,500 to 10,500	> 10,500 to 12,000	> 12,000 to 13,500
Minor Arterial	2	> 22,500 to 25,500	> 25,500 to 28,500	> 28,500 to 32,000
Minor Arterial <sup>(1)</sup>	3	>30,000 to 34,500	>34,500 to 38,500	>38,500 to 43,000
Major Arterial	2	> 30,000 to 36,000	> 36,000 to 40,000	> 40,000 to 45,000
Major Arterial	3	> 46,000 to 53,000	> 53,000 to 60,000	> 60,000 to 67,000
Major Arterial <sup>(1)</sup>	4	> 56,000 to 64,000	> 64,000 to 72,000	> 72,000 to 80,000
Expressway	2	> 38,000 to 44,000	> 44,000 to 49,000	> 49,000 to 55,000
Expressway	3	> 56,000 to 64,000	> 64,000 to 72,000	> 72,000 to 80,000

<sup>(1)</sup> System performance evaluation only.

<sup>(2)</sup> LOS D threshold volumes used for development roadway planning consistent with traffic impact study guidelines.

Figure 15 Traffic Volume Thresholds

Figure 15 is copied from the October 2018 Update of the NEATS Master Transportation Plan. It provides the LOS thresholds in vehicles per day used for roadway planning. LOS D is the recommended minimum in COA's traffic impact study guidelines. A 4-lane minor arterial as proposed for Monaghan and County Line will have more than double the capacity needed to manage the traffic flow efficiently and safely.

#### PEAK HOUR INTERSECTION LEVEL OF SERVICE

ATC uses Synchro v.10 for operations analyses. The Synchro methodology is based on the 6<sup>th</sup> Edition of the Highway Capacity Manual (HCM). The table summarizes the AM and PM peak hour LOS for the Existing, 2026 Background and Total and the 2041 Background and Total conditions. Synchro graphics and reports for each timeframe are provided in the appendix.

The HCM states that, "LOS is used to translate complex numerical performance rating into a simple A-F system representative of the travelers' perception of the quality of service provided by a facility or service. Practitioners and decision makers alike must understand that the LOS letter result hides much of the complexity of facility performance<sup>1</sup>." LOS is a letter rating from A to F. LOS A indicates free-flow traffic conditions and no delay at intersections. LOS F is heavy traffic congestion with significant delay. LOS is provided for the overall operations at signalized intersections. LOS D is generally the benchmark for acceptable signalized intersection operations during the weekday peak hours. The critical movement, not the overall, indicates the LOS rating for unsignalized intersections, which is generally a left turn out from the minor street approach. Caution must be used when evaluating the LOS at unsignalized intersections particularly when LOS F is shown. In case of LOS F, the HCM recommends that other evaluation methods should be considered such as the volume over capacity ratios, the 95<sup>th</sup> percentile queue length, and duration of LOS F to make the most effective traffic control decision<sup>2</sup>. LOS F at unsignalized intersections

<sup>1</sup> HCM version 6, Chapter 5, pages 5-3 – 5-6.

<sup>2</sup> ditto



is typically normal during the weekday peak hours as the duration of the LOS F condition is relatively short.

Table 2

Level of Service Summary LOS/Delay in Seconds										
	Existing		2026 Background		2026 Total		2041 Background		2041 Total	
Intersection	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
<b>Signalized</b>										
Smokey Hill/Powhatan	C/20.1	B/17.8	C/20.6	B/18.3	C/25.0	C/23.8	C/23.0	B/19.8	C/27.3	C/25.2
Powhatan/County Line					B/19.8	C/21.2			C/20.2	C/24.0
<b>Unsignalized</b>										
Powhatan/County Line	B/13.9	C/22.6	C/15.2	D/30.6			C/24.8	F/232.4		
Monaghan/County Line	B/10.5	B/12.0	B/10.8	B/12.4	B/11.3*	C/15.3*	B/10.8	C/15.6	B/13.4*	D/25.3*
Road A/Mineral/Monaghan	n/a	n/a	n/a	n/a	C/15.6	D/29.6	n/a	n/a	C/16.2	D/31.6
Road B/Monaghan	n/a	n/a	n/a	n/a	B/11.7	C/18.2	n/a	n/a	B/12.1	C/19.2
Road C/County Line	n/a	n/a	n/a	n/a	B/10.4	C/16.3	n/a	n/a	B/10.9	C/17.8

\*analyzed as an all-way stop sign controlled intersection

The signalized intersection of Smokey Hill and Powhatan is fully built out and operates at LOS C/B in the existing AM/PM peak hours, respectively. It will continue to provide acceptable, no less than LOS C, in all future conditions.

The intersection of Powhatan and County Line will operate at LOS F in the 2041 PM Background condition. However, this intersection is expected to be signalized soon. With signalization it will operate an LOS B/C in 2026 and LOS C/C in the 2041.

The intersection of Monaghan and County Line shows LOS B/C operations in the 2026 AM/PM Total condition and as LOS B/D in the 2041 AM/PM Total condition as an all-way stop sign-controlled intersection. In the existing and background conditions this intersection remains as a two-way stop sign-controlled intersection. This intersection should be monitored in the future to determine if signal warrant criteria are met.

Unsignalized intersections such as Monaghan and County Line must meet the MUTCD Warrant 1 and/or Warrant 2 for signalization which are appropriate for residential areas. Warrant 3 is the peak hour warrant and shall be applied only in unusual cases, such as office complexes, manufacturing/industrial plants that attract or discharge large numbers of vehicles over a short period. Note that actual volumes - not projected - are needed to trigger a warrant. Warrant 1 requires 8 hours of traffic that exceeds specified volumes based on three conditions as shown in Figure 12. Warrant 2 requires 4 hours of traffic that exceeds specified volumes shown in Figure 13. Again, actual volumes are required to determine if Warrants 1 and/or 2 are met. While the 2041 PM peak hour volumes at Road A and Monaghan and at County Line and Monaghan would qualify as one hour of the Warrant 1 and Warrant 2, the other seven needed for Warrant 1 and three needed for Warrant 2 are not likely as the AM peak hour (typically the 2<sup>nd</sup> highest hour) at both intersections do not qualify.



**Table 4C-1. Warrant 1, Eight-Hour Vehicular Volume****Condition A—Minimum Vehicular Volume**

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>	56% <sup>d</sup>	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>	56% <sup>d</sup>
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

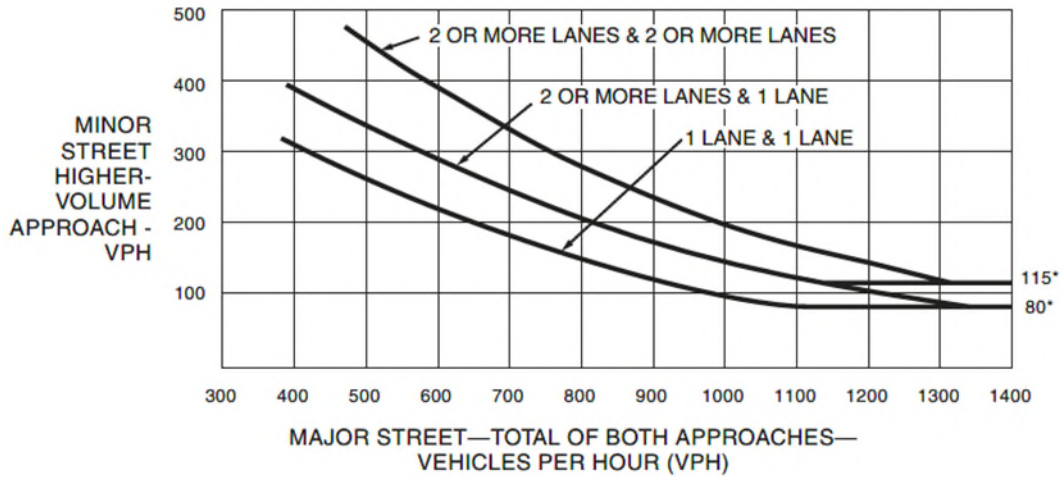
**Condition B—Interruption of Continuous Traffic**

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>	56% <sup>d</sup>	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>	56% <sup>d</sup>
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

<sup>a</sup> Basic minimum hourly volume<sup>b</sup> Used for combination of Conditions A and B after adequate trial of other remedial measures<sup>c</sup> May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000<sup>d</sup> May be used for combination of Conditions A and B after adequate trial of other remedial measures when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000*Figure 16 Warrant 1 Eight-Hour Volume Conditions*



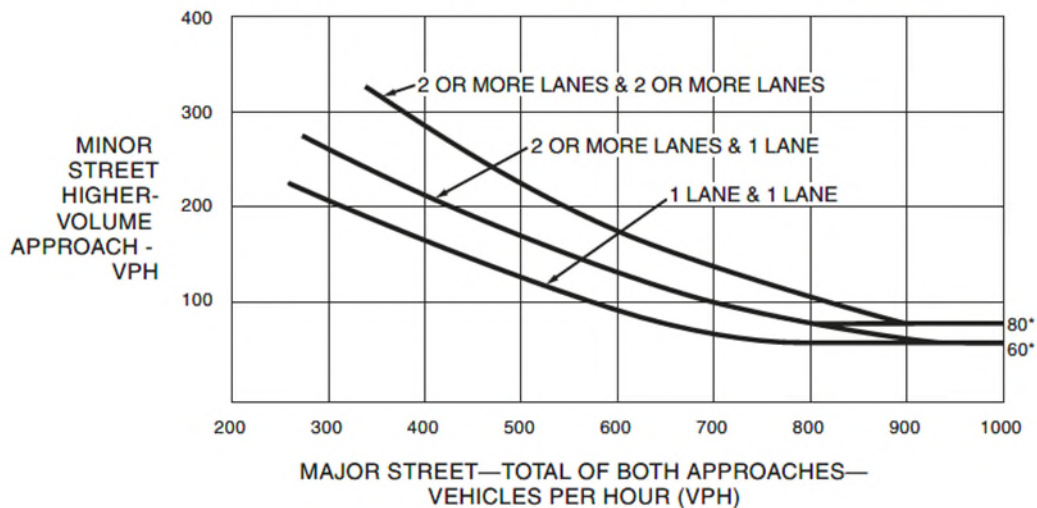
**Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume**



\*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

**Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)**

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



\*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.



### QUEUEING

Table 3 summarizes the 95<sup>th</sup> percentile queue length at the signalized intersection of Smokey Hill Road and Powhatan Road during the highest time of traffic volume in the 2041 AM and PM peak hours. All prior times record less queueing. Only the northbound left turn approaches the bay capacity.

Table 3

95th Percentile Queue Summary Smokey Hill Road/Powhatan Road					
	EBL	EBR	WBL	NBL	SBL
Storage length	200	200	250	400	200
2041 AM TOTAL	32	63	37	299	36
2041 PM TOTAL	41	76	25	309	34

COA defers to the State Highway Access Code (“Code”) for auxiliary lane standards. Monaghan and County Line Road are currently classified as collector roads but with the development and improvement both roads can be considered as minor arterials and classified as non-rural arterials (NR-B) per the Code. As both roads are posted at no greater than 40 mph (35 mph on Monaghan and 40 mph on County Line) the design standard for left turn and right turn lanes consists of storage length and taper. At 35 mph the taper ratio is 10:1. At 40 mph it is 12:1. The storage length is generally one foot per vehicle, i.e., 100 turning vehicles requires 100 feet of lane length. The recommended auxiliary lane lengths are presented in Table 4. Note that many would only require 25 feet of storage per the Code standards. However, we are recommending a minimum of 100 feet of storage (4 vehicles) in most cases.

The 95<sup>th</sup> percentile queue on the southbound left turn at the Powhatan Road and County Line Road intersection is excessive during the 2041 PM peak hour at 40 vehicles and over capacity by a factor of 2.4. Per the previous section on LOS, the intersection is expected to be signalized soon.

At the Monaghan Road and County Line Road all-way stop intersection, the southbound left turn in the 2041 PM peak hour is marginally acceptable at nine vehicles as the volume over capacity ratio is 0.88.

95<sup>th</sup> percentile queues at the access locations are practically non-existent. No movement registered more than a one vehicle queue.



Table 4

Recommended Auxiliary Lane Lengths								
Road A/Monaghan	EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBR
Maximum 95th%ile (vehicles)	0.8		0.07	1.5	0		0.8	
Storage Length (feet)	<b>50</b>		<b>100</b>	<b>100</b>	<b>100</b>		<b>100</b>	
Taper (feet)	120		120	120	120		120	
Total Lane Length (feet)	170		220	220	220		220	
Road B/Monaghan	EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBR
Maximum 95th%ile (vehicles)			0.2	0.2			0.5	
Storage Length (feet)			<b>100</b>	<b>100</b>			<b>100</b>	
Taper (feet)			120	120			120	
Total Lane Length (feet)			220	220			220	
Monaghan/County Line	EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBR
Maximum 95th%ile (vehicles)	1	9.7	0.1	3.9	1.6		2.7	0.6
Storage Length (feet)	<b>100</b>	<b>250</b>	<b>100</b>	<b>100</b>	<b>100</b>		<b>100</b>	<b>100</b>
Taper (feet)	120	120	120	120	120		120	120
Total Lane Length (feet)	<b>220</b>	<b>370</b>	<b>220</b>	<b>220</b>	<b>220</b>		<b>220</b>	<b>220</b>
Road C/County Line	EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBR
Maximum 95th%ile (vehicles)	0.6						0.1	0.4
Storage Length (feet)	<b>100</b>						<b>100</b>	<b>100</b>
Taper (feet)	144						100	100
Total Lane Length (feet)	200						200	200

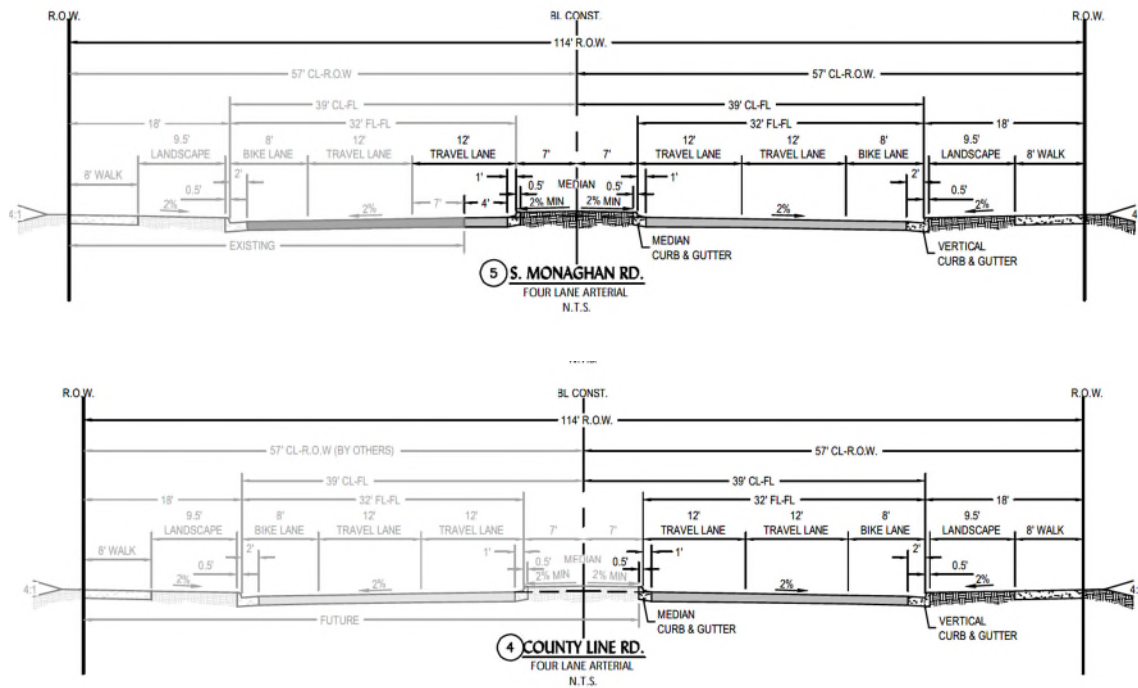
#### SIGHT DISTANCE

A sight distance analysis was conducted at the Road C and County Line Road intersection. Specifically, the southbound left turn movement is compromised by a hill on the west side of the intersection. Although the left-out volume is very low at less than 5 vph, nevertheless a left turn acceleration lane is recommended. Engineering drawings of the sight distance issue and recommended resolution are provided under separate cover.

#### MITIGATION and RECOMMENDED IMPROVEMENTS

Monaghan Road and County Line Road adjacent to the property should be classified as minor arterials with four lanes and a raised median. The cross-sections for Monaghan Road and County Line Road are shown on the next page. They consist of an 8-foot detached sidewalk, 9.5-foot landscaped buffer, and an 8-foot bike lane.

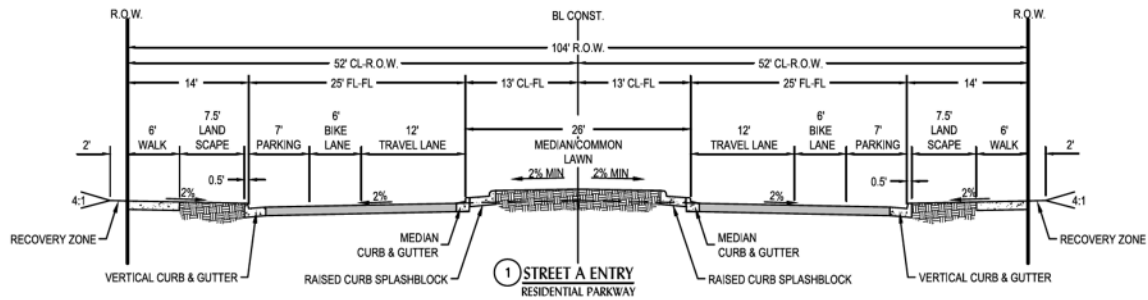
*Please note that the city has recently provided street names for the internal streets. The street name figure is provided in the appendix.*



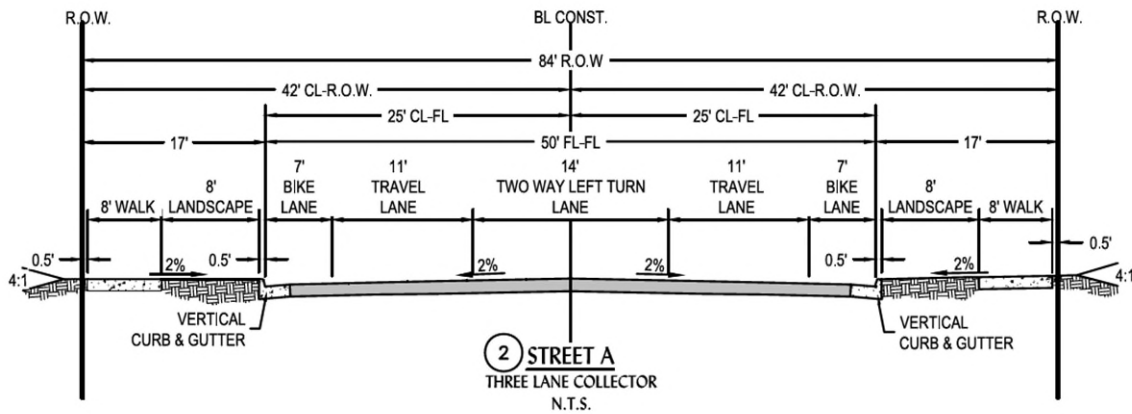
The proposed speed limit 40 mph on County Line and 35 mph on Monaghan. The right turn lane threshold for NR-B Arterial not greater than 40 mph is 50 vehicles per hour in the peak hour. For a left turn deceleration lane, the threshold is 25 vph. On Monaghan Road at Road A and Road B right and left turn lanes are warranted. On County Line Road at Road C, a left turn lane is warranted but a right turn lane is not. The lane lengths consist of taper and storage. The taper is 10:1 for 35 mph and 12:1 for 40 mph. At Road A, the left turn storage should be 100 feet. The right turn lane storage is also 100 feet. At Road B the left turn storage should be 100 feet. The right turn lane is also 100 feet. On County Line Road at Road C, the left turn storage is 100 feet. At Road C a left turn acceleration lane is recommended to mitigate the sight distance issue. The acceleration lane should be 380 feet.

The southbound approach on Monaghan Road to County Line Road should consist of a single left turn lane with storage of 100 feet and an exclusive right turn lane of 250 feet. The westbound approach on County Line Road should include a right turn lane with storage of 100 feet. The eastbound approach should include a left turn lane with storage of 100 feet.

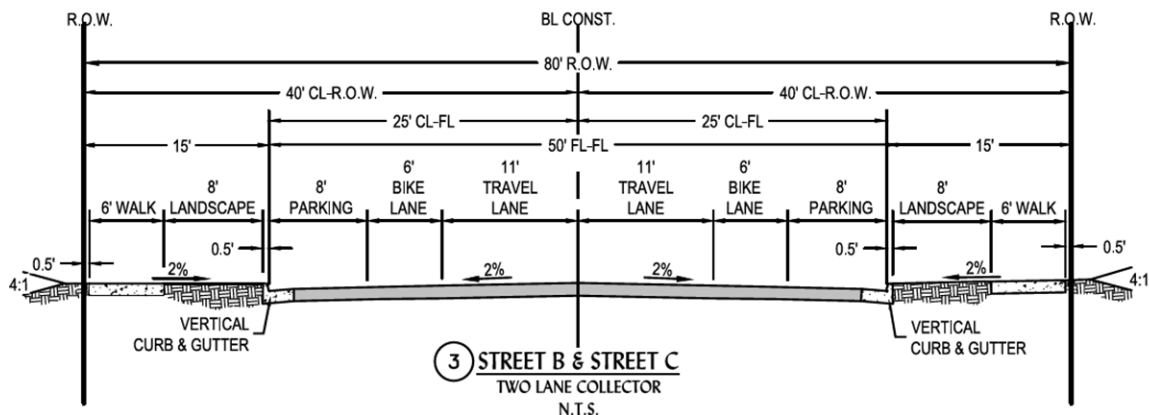
Internally, the entries to Road A and Road C will feature a landscaped median. The entry roadway cross-section is presented below.



Past the entry, Street A from Entry Road A to Entry Road C becomes a three-lane collector. The Street A cross-section is shown below.



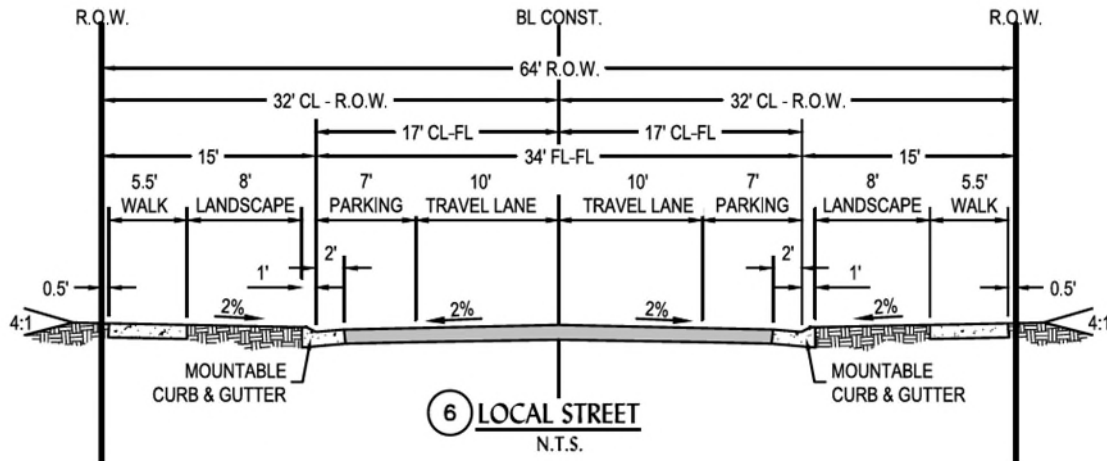
Road B is a short connecting road to Street C. These will be two-lane collectors. On the next page is the two-lane collector cross-section. The cross-section includes 6-foot detached sidewalks, 8-foot landscaped buffers, 8-foot parking lanes, and 6-foot bike lanes on both sides of the street.







All other internal streets are classified as Local streets posted at 25 mph (design speed of 30 mph).



All Local streets will include detached 5.5-foot sidewalks, 8-foot landscaped buffer, 7-foot parking lanes on both sides.

ADA compliant ramps will be constructed on every corner for pedestrian safety. Internal traffic control will consist of two-way stop sign control on the side streets. No all way stop signs are anticipated.

#### TRAFFIC CALMING

There are a considerable number of traffic calming techniques to address a myriad of traffic related problems including speeding, cut-through traffic, and pedestrian safety. Calming options to reduce speed include, but not limited to, automated speed radar signs, curb extensions, speed humps, roundabouts, chicanes, and raised crosswalks. These vary in effectiveness. Speed humps (cushions, tables, etc.) can be very effective, but also dangerous if not used properly. Automated speed radar signs are only marginally effective and unenforceable.

Initial traffic calming measures can include pedestrian bump outs at strategic locations, RRFB ped/bike crossings at community park or activity centers, raised crosswalks, and speed tables at strategic locations. A set of recommended traffic calming measures are included in the appendix.

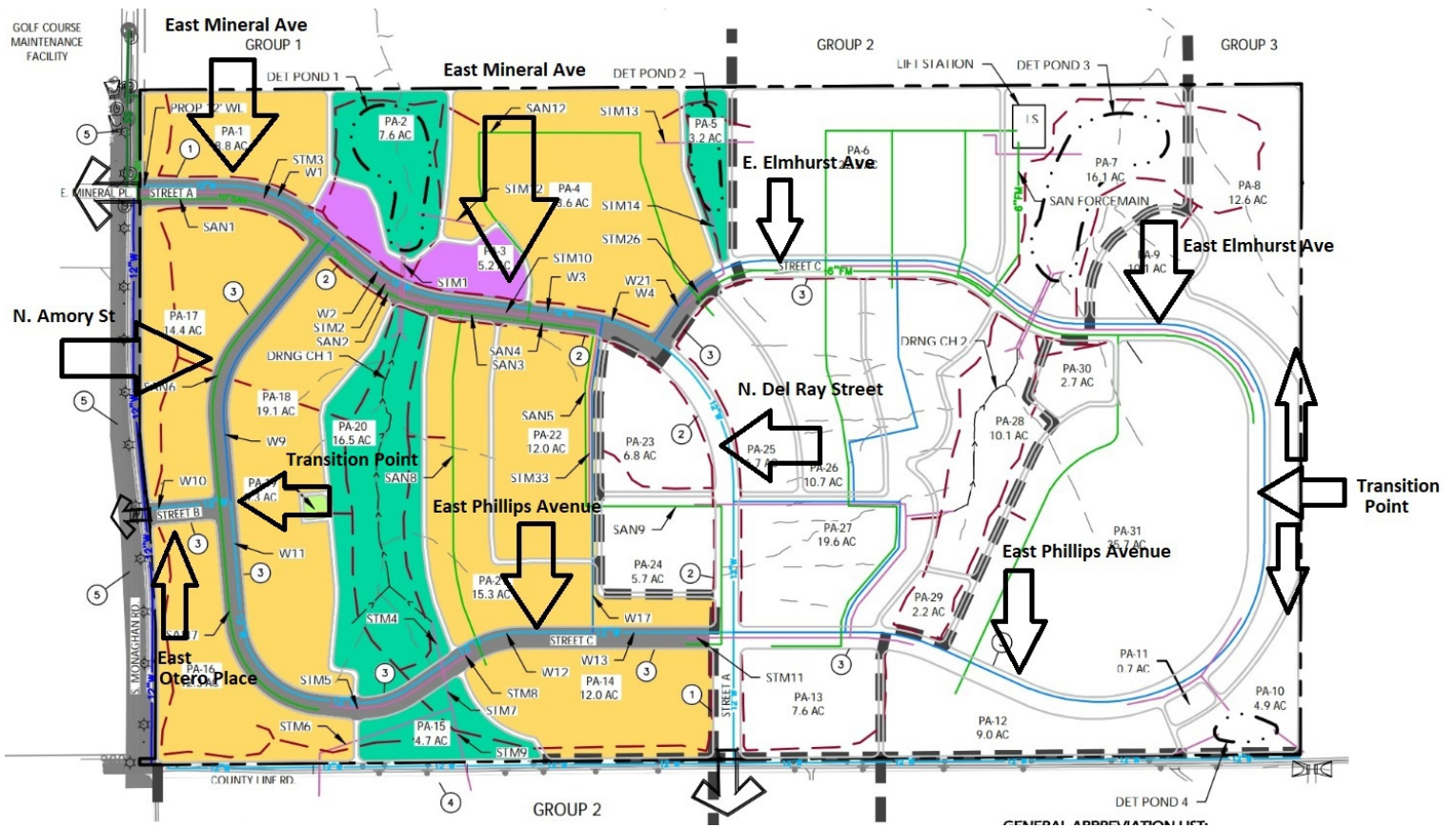
Once the project is fully developed and should problems arise, the City's program for traffic calming embodies a sound process to work with neighborhoods on implementing appropriate measures to resolve problems such as speeding, cut-through traffic, and pedestrian safety.

#### CONCLUSIONS & FINDINGS

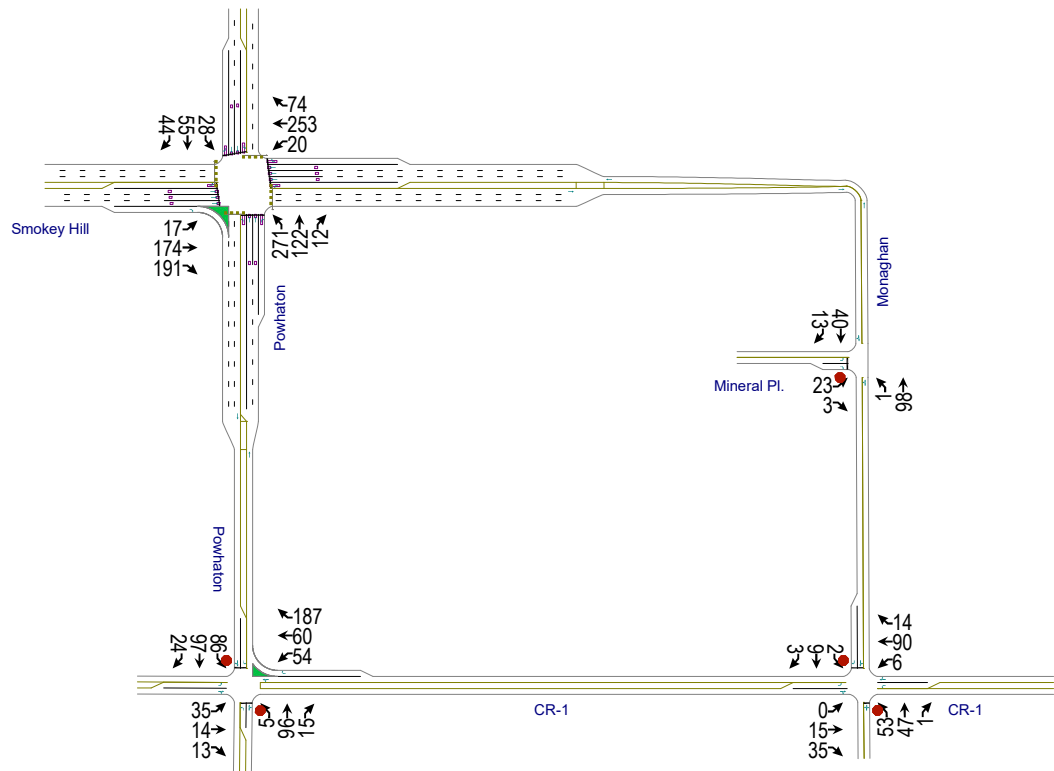
Based on the analysis herein and in my professional opinion and assuming implementation of the recommended improvements, traffic from the site can be absorbed by the adjacent streets and intersections and not cause a safety or operational problem. The proposed access locations are the best engineering fit for the parcel's configuration and accessibility to the streets.



## APPENDIX










## New Street Names



Trails at Overland Ranch  
3: CR-1 & Monaghan

EX AM  
12/07/2021

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	15	35	6	90	14	53	47	1	2	9	3
Future Vol, veh/h	0	15	35	6	90	14	53	47	1	2	9	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	125
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	16	38	7	98	15	58	51	1	2	10	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	113	0	0	54	0	0	161	162	35	181	174	106
Stage 1	-	-	-	-	-	-	35	35	-	120	120	-
Stage 2	-	-	-	-	-	-	126	127	-	61	54	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1476	-	-	1551	-	-	804	730	1038	781	719	948
Stage 1	-	-	-	-	-	-	981	866	-	884	796	-
Stage 2	-	-	-	-	-	-	878	791	-	950	850	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1476	-	-	1551	-	-	790	726	1038	736	715	948
Mov Cap-2 Maneuver	-	-	-	-	-	-	790	726	-	736	715	-
Stage 1	-	-	-	-	-	-	981	866	-	884	792	-
Stage 2	-	-	-	-	-	-	860	787	-	893	850	-





Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.4			10.5			9.8		
HCM LOS							B			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	761	1476	-	-	1551	-	-	719	948
HCM Lane V/C Ratio	0.144	-	-	-	0.004	-	-	0.017	0.003
HCM Control Delay (s)	10.5	0	-	-	7.3	-	-	10.1	8.8
HCM Lane LOS	B	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0.1	0

Trails at Overland Ranch  
4: Mineral Pl. & Monaghan









EX AM  
12/07/2021

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	3	1	98	40	13
Future Vol, veh/h	23	3	1	98	40	13
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	50	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	3	1	107	43	14
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	159	50	57	0	-	0
Stage 1	50	-	-	-	-	-
Stage 2	109	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	832	1018	1547	-	-	-
Stage 1	972	-	-	-	-	-
Stage 2	916	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	831	1018	1547	-	-	-
Mov Cap-2 Maneuver	831	-	-	-	-	-
Stage 1	971	-	-	-	-	-
Stage 2	916	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.4	0.1		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1547	-	831	1018	-	-
HCM Lane V/C Ratio	0.001	-	0.03	0.003	-	-
HCM Control Delay (s)	7.3	0	9.5	8.5	-	-
HCM Lane LOS	A	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0	-	-



Trails at Overland Ranch  
6: CR-1 & Powhaton

EX AM  
12/07/2021

Intersection												
Int Delay, s/veh	9.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	14	13	54	60	187	5	96	15	86	97	24
Future Vol, veh/h	35	14	13	54	60	187	5	96	15	86	97	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	125	-	-	-	-	200	50	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	15	14	59	65	203	5	104	16	93	105	26
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	65	0	0	29	0	0	347	281	22	341	288	65
Stage 1	-	-	-	-	-	-	98	98	-	183	183	-
Stage 2	-	-	-	-	-	-	249	183	-	158	105	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1537	-	-	1584	-	0	607	627	1055	613	622	999
Stage 1	-	-	-	-	-	0	908	814	-	819	748	-
Stage 2	-	-	-	-	-	0	755	748	-	844	808	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1537	-	-	1584	-	-	486	587	1055	497	583	999
Mov Cap-2 Maneuver	-	-	-	-	-	-	486	587	-	497	583	-
Stage 1	-	-	-	-	-	-	885	794	-	799	719	-
Stage 2	-	-	-	-	-	-	603	719	-	704	788	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	4.2			3.5			12.1			12.8		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1 NBLn2		EBL	EBT	EBR	WBL	WBT	SBLn1 SBLn2				
Capacity (veh/h)	486	624	1537	-	-	1584	-	497	635			
HCM Lane V/C Ratio	0.011	0.193	0.025	-	-	0.037	-	0.188	0.207			
HCM Control Delay (s)	12.5	12.1	7.4	-	-	7.4	0	13.9	12.1			
HCM Lane LOS	B	B	A	-	-	A	A	B	B			
HCM 95th %tile Q(veh)	0	0.7	0.1	-	-	0.1	-	0.7	0.8			

Trails at Overland Ranch  
9: Powhaton & Smokey Hill































EX AM  
12/07/2021

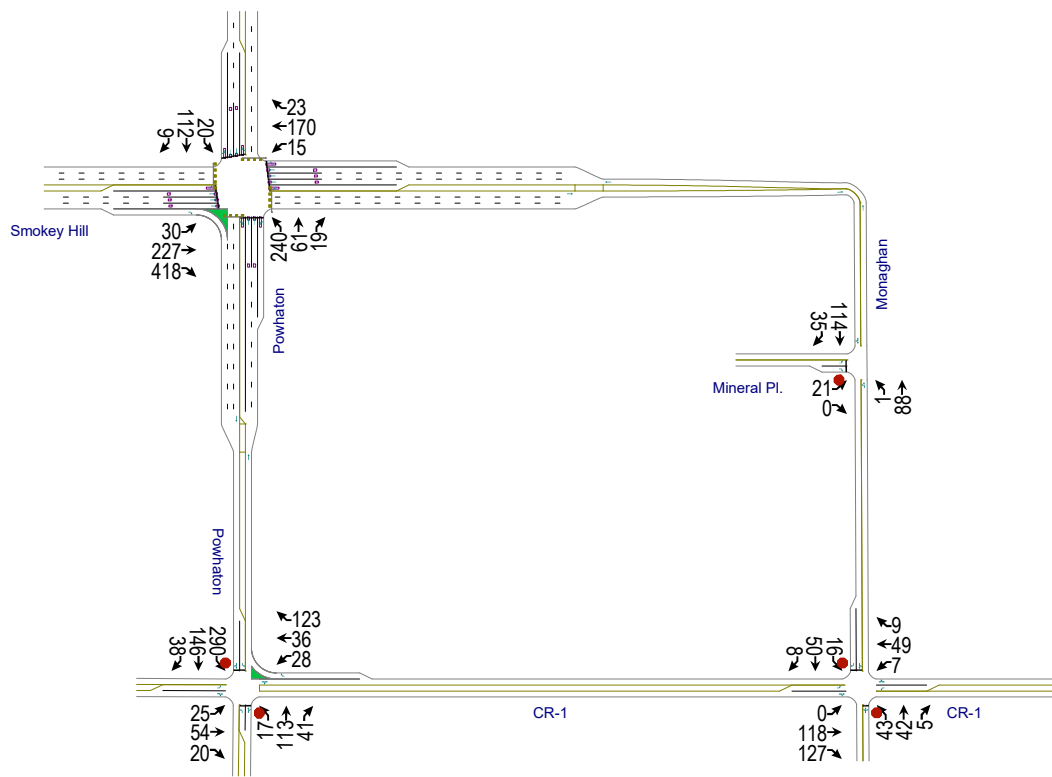


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	18	189	208	22	275	80	295	133	13	30	60	48
v/c Ratio	0.08	0.29	0.54	0.09	0.42	0.25	0.32	0.06	0.01	0.04	0.03	0.06
Control Delay	26.8	33.4	11.5	27.0	34.5	3.2	6.3	8.0	0.0	6.0	12.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.8	33.4	11.5	27.0	34.5	3.2	6.3	8.0	0.0	6.0	12.9	0.1
Queue Length 50th (ft)	7	25	0	8	38	0	31	6	0	3	5	0
Queue Length 95th (ft)	25	60	63	29	83	10	109	35	0	16	23	0
Internal Link Dist (ft)	317			613			420			273		
Turn Bay Length (ft)	200		200	250		250	400		200	200		200
Base Capacity (vph)	242	2558	899	248	2558	863	1113	2302	1063	828	1782	864
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.07	0.23	0.09	0.11	0.09	0.27	0.06	0.01	0.04	0.03	0.06
Intersection Summary												

Trails at Overland Ranch  
9: Powhatan & Smokey Hill








EX AM  
12/07/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (veh/h)	17	174	191	20	253	74	271	122	12	28	55	44
Future Volume (veh/h)	17	174	191	20	253	74	271	122	12	28	55	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	189	0	22	275	80	295	133	13	30	60	48
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	183	514		214	533	165	963	2189	976	822	1936	863
Arrive On Green	0.02	0.10	0.00	0.02	0.10	0.10	0.10	0.62	0.62	0.03	0.54	0.54
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	18	189	0	22	275	80	295	133	13	30	60	48
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.7	2.7	0.0	0.9	4.0	3.7	5.1	1.2	0.3	0.6	0.6	1.1
Cycle Q Clear(g_c), s	0.7	2.7	0.0	0.9	4.0	3.7	5.1	1.2	0.3	0.6	0.6	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	183	514		214	533	165	963	2189	976	822	1936	863
V/C Ratio(X)	0.10	0.37		0.10	0.52	0.48	0.31	0.06	0.01	0.04	0.03	0.06
Avail Cap(c_a), veh/h	316	2431		340	2431	755	1585	2189	976	960	1936	863
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	33.1	0.0	30.6	33.4	33.3	5.1	6.0	5.9	7.2	8.3	8.4
Incr Delay (d2), s/veh	0.2	0.4	0.0	0.2	0.8	2.2	0.2	0.1	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.1	0.0	0.4	1.7	1.5	1.6	0.4	0.1	0.2	0.2	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.0	33.5	0.0	30.8	34.2	35.4	5.3	6.1	5.9	7.2	8.3	8.5
LnGrp LOS	C	C		C	C	D	A	A	A	A	A	A
Approach Vol, veh/h		207	A		377			441			138	
Approach Delay, s/veh		33.3			34.2			5.6			8.2	
Approach LOS		C			C			A			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.4	12.4	12.5	47.4	6.1	12.7	6.9	53.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.5	37.5	35.5	21.5	7.5	37.5	8.5	48.5				
Max Q Clear Time (g_c+I1), s	2.9	4.7	7.1	3.1	2.7	6.0	2.6	3.2				
Green Ext Time (p_c), s	0.0	1.3	0.9	0.4	0.0	2.2	0.0	0.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			20.1									
HCM 6th LOS			C									
<b>Notes</b>												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												







Trails at Overland Ranch  
3: CR-1 & Monaghan

EX AM  
12/07/2021

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	118	127	7	49	9	43	42	5	16	50	8
Future Vol, veh/h	0	118	127	7	49	9	43	42	5	16	50	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	125
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	128	138	8	53	10	47	46	5	17	54	9
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	63	0	0	266	0	0	303	276	197	297	340	58
Stage 1	-	-	-	-	-	-	197	197	-	74	74	-
Stage 2	-	-	-	-	-	-	106	79	-	223	266	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1540	-	-	1298	-	-	649	632	844	655	582	1008
Stage 1	-	-	-	-	-	-	805	738	-	935	833	-
Stage 2	-	-	-	-	-	-	900	829	-	780	689	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1540	-	-	1298	-	-	594	628	844	612	579	1008
Mov Cap-2 Maneuver	-	-	-	-	-	-	594	628	-	612	579	-
Stage 1	-	-	-	-	-	-	805	738	-	935	828	-
Stage 2	-	-	-	-	-	-	829	824	-	727	689	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.8			11.9			11.6		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2			
Capacity (veh/h)	620	1540	-	-	1298	-	-	587	1008			
HCM Lane V/C Ratio	0.158	-	-	-	0.006	-	-	0.122	0.009			
HCM Control Delay (s)	11.9	0	-	-	7.8	-	-	12	8.6			
HCM Lane LOS	B	A	-	-	A	-	-	B	A			
HCM 95th %tile Q(veh)	0.6	0	-	-	0	-	-	0.4	0			

Trails at Overland Ranch  
4: Mineral Pl. & Monaghan

EX AM  
12/07/2021

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	0	1	88	114	35
Future Vol, veh/h	21	0	1	88	114	35
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	50	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	0	1	96	124	38

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	241	143	162	0	-	0
Stage 1	143	-	-	-	-	-
Stage 2	98	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	747	905	1417	-	-	-
Stage 1	884	-	-	-	-	-
Stage 2	926	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	746	905	1417	-	-	-
Mov Cap-2 Maneuver	746	-	-	-	-	-
Stage 1	883	-	-	-	-	-
Stage 2	926	-	-	-	-	-









Approach	EB	NB	SB
HCM Control Delay, s	10	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1417	-	746	-	-	-
HCM Lane V/C Ratio	0.001	-	0.031	-	-	-
HCM Control Delay (s)	7.5	0	10	0	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-	-



Trails at Overland Ranch  
6: CR-1 & Powhaton

EX AM  
12/07/2021

Intersection												
Int Delay, s/veh	13.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	54	20	28	36	123	17	113	41	290	146	38
Future Vol, veh/h	25	54	20	28	36	123	17	113	41	290	146	38
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	125	-	-	-	-	200	50	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	59	22	30	39	134	18	123	45	315	159	41
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	39	0	0	81	0	0	323	223	70	307	234	39
Stage 1	-	-	-	-	-	-	124	124	-	99	99	-
Stage 2	-	-	-	-	-	-	199	99	-	208	135	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1571	-	-	1517	-	0	630	676	993	645	666	1033
Stage 1	-	-	-	-	-	0	880	793	-	907	813	-
Stage 2	-	-	-	-	-	0	803	813	-	794	785	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1571	-	-	1517	-	-	476	651	993	512	641	1033
Mov Cap-2 Maneuver	-	-	-	-	-	-	476	651	-	512	641	-
Stage 1	-	-	-	-	-	-	865	780	-	892	797	-
Stage 2	-	-	-	-	-	-	605	797	-	628	772	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.9			3.2			11.6			18.6		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1 NBLn2		EBL	EBT	EBR	WBL	WBT	SBLn1 SBLn2				
Capacity (veh/h)	476	717	1571	-	-	1517	-	512	696			
HCM Lane V/C Ratio	0.039	0.233	0.017	-	-	0.02	-	0.616	0.287			
HCM Control Delay (s)	12.9	11.5	7.3	-	-	7.4	0	22.6	12.2			
HCM Lane LOS	B	B	A	-	-	A	A	C	B			
HCM 95th %tile Q(veh)	0.1	0.9	0.1	-	-	0.1	-	4.1	1.2			

Trails at Overland Ranch  
9: Powhaton & Smokey Hill































EX AM  
12/07/2021

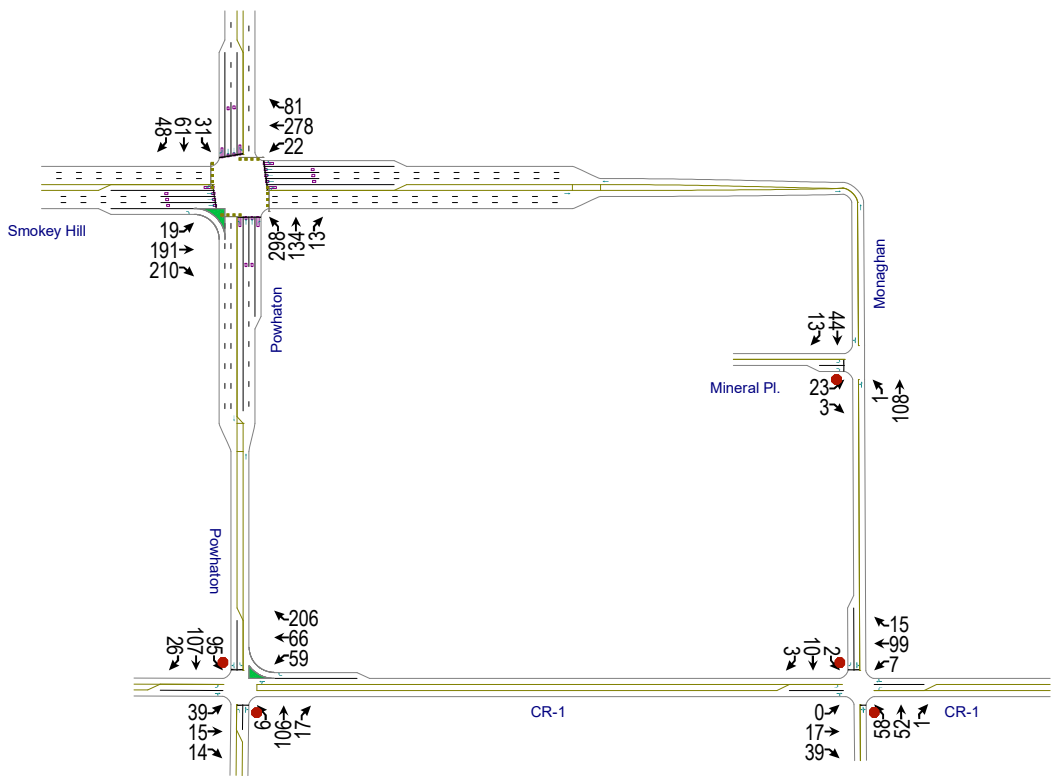









Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	33	247	454	16	185	25	261	66	21	22	122	10
v/c Ratio	0.13	0.29	0.70	0.07	0.25	0.07	0.30	0.03	0.02	0.03	0.07	0.01
Control Delay	26.3	29.7	9.9	25.5	32.2	0.4	7.2	9.7	0.1	7.3	13.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	29.7	9.9	25.5	32.2	0.4	7.2	9.7	0.1	7.3	13.9	0.0
Queue Length 50th (ft)	12	34	0	6	25	0	29	3	0	2	12	0
Queue Length 95th (ft)	37	73	87	23	57	0	122	24	0	16	46	0
Internal Link Dist (ft)	317				613				420		273	
Turn Bay Length (ft)	200			200	250			250	400			200
Base Capacity (vph)	267	2518	1013	259	2518	852	1079	2267	1048	860	1765	858
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.10	0.45	0.06	0.07	0.03	0.24	0.03	0.02	0.03	0.07	0.01
Intersection Summary												

Trails at Overland Ranch  
9: Powhatan & Smokey Hill

EX AM  
12/07/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (veh/h)	30	227	418	15	170	23	240	61	19	20	112	9
Future Volume (veh/h)	30	227	418	15	170	23	240	61	19	20	112	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	247	0	16	185	25	261	66	21	22	122	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	206	482		182	410	127	943	2235	997	874	2000	892
Arrive On Green	0.03	0.09	0.00	0.02	0.08	0.08	0.09	0.63	0.63	0.02	0.56	0.56
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	33	247	0	16	185	25	261	66	21	22	122	10
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	1.3	3.5	0.0	0.6	2.7	1.1	4.2	0.5	0.4	0.4	1.2	0.2
Cycle Q Clear(g_c), s	1.3	3.5	0.0	0.6	2.7	1.1	4.2	0.5	0.4	0.4	1.2	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	206	482		182	410	127	943	2235	997	874	2000	892
V/C Ratio(X)	0.16	0.51		0.09	0.45	0.20	0.28	0.03	0.02	0.03	0.06	0.01
Avail Cap(c_a), veh/h	320	2483		321	2483	771	1602	2235	997	1027	2000	892
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	33.2	0.0	31.6	33.8	33.1	4.7	5.4	5.4	6.7	7.6	7.4
Incr Delay (d2), s/veh	0.4	0.8	0.0	0.2	0.8	0.7	0.2	0.0	0.0	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.5	0.0	0.3	1.1	0.5	1.3	0.2	0.1	0.1	0.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.3	34.1	0.0	31.8	34.6	33.9	4.9	5.4	5.4	6.7	7.7	7.4
LnGrp LOS	C	C		C	C	C	A	A	A	A	A	A
Approach Vol, veh/h		280	A		226			348			154	
Approach Delay, s/veh		33.7			34.3			5.0			7.5	
Approach LOS		C			C			A			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.0	11.8	11.5	47.9	7.0	10.7	6.4	53.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.5	37.5	35.5	21.5	7.5	37.5	8.5	48.5				
Max Q Clear Time (g_c+I1), s	2.6	5.5	6.2	3.2	3.3	4.7	2.4	2.5				
Green Ext Time (p_c), s	0.0	1.7	0.8	0.6	0.0	1.3	0.0	0.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			20.0									
HCM 6th LOS			B									
<b>Notes</b>												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												



Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	15	35	6	90	14	53	47	1	2	9	3
Future Vol, veh/h	0	15	35	6	90	14	53	47	1	2	9	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	125
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	18	42	7	108	17	63	56	1	2	11	4





Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	125	0	0	60	0	0	177	178	39	199	191	117
Stage 1	-	-	-	-	-	-	39	39	-	131	131	-
Stage 2	-	-	-	-	-	-	138	139	-	68	60	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1462	-	-	1544	-	-	785	716	1033	760	704	935
Stage 1	-	-	-	-	-	-	976	862	-	873	788	-
Stage 2	-	-	-	-	-	-	865	782	-	942	845	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1462	-	-	1544	-	-	770	712	1033	711	700	935
Mov Cap-2 Maneuver	-	-	-	-	-	-	770	712	-	711	700	-
Stage 1	-	-	-	-	-	-	976	862	-	873	784	-
Stage 2	-	-	-	-	-	-	846	778	-	880	845	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.4	10.8	9.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	744	1462	-	-	1544	-	-	702	935
HCM Lane V/C Ratio	0.162	-	-	-	0.005	-	-	0.019	0.004
HCM Control Delay (s)	10.8	0	-	-	7.3	-	-	10.2	8.9
HCM Lane LOS	B	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	0.6	0	-	-	0	-	-	0.1	0









Trails at Overland Ranch  
4: Mineral Pl. & Monaghan

2026 AM BKG  
12/07/2021

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	3	1	98	40	13
Future Vol, veh/h	23	3	1	98	40	13
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	50	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	3	1	117	48	14
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	174	55	62	0	-	0
Stage 1	55	-	-	-	-	-
Stage 2	119	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	816	1012	1541	-	-	-
Stage 1	968	-	-	-	-	-
Stage 2	906	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	815	1012	1541	-	-	-
Mov Cap-2 Maneuver	815	-	-	-	-	-
Stage 1	967	-	-	-	-	-
Stage 2	906	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.5	0.1		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1541	-	815	1012	-	-
HCM Lane V/C Ratio	0.001	-	0.031	0.003	-	-
HCM Control Delay (s)	7.3	0	9.6	8.6	-	-
HCM Lane LOS	A	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0	-	-

Trails at Overland Ranch  
6: CR-1 & Powhaton













2026 AM BKG  
12/07/2021

Intersection												
Int Delay, s/veh	10											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	14	13	54	60	187	5	96	15	86	97	24
Future Vol, veh/h	35	14	13	54	60	187	5	96	15	86	97	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	125	-	-	-	-	200	50	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	17	16	65	72	224	6	115	18	103	116	29
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	72	0	0	33	0	0	384	311	25	378	319	72
Stage 1	-	-	-	-	-	-	109	109	-	202	202	-
Stage 2	-	-	-	-	-	-	275	202	-	176	117	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1528	-	-	1579	-	0	574	604	1051	580	598	990
Stage 1	-	-	-	-	-	0	896	805	-	800	734	-
Stage 2	-	-	-	-	-	0	731	734	-	826	799	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1528	-	-	1579	-	-	444	562	1051	456	557	990
Mov Cap-2 Maneuver	-	-	-	-	-	-	444	562	-	456	557	-
Stage 1	-	-	-	-	-	-	872	783	-	778	702	-
Stage 2	-	-	-	-	-	-	567	702	-	674	777	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	4.2			3.5			12.7			13.7		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	SBLn1	SBLn2			
Capacity (veh/h)	444	600	1528	-	-	1579	-	456	610			
HCM Lane V/C Ratio	0.013	0.221	0.027	-	-	0.041	-	0.225	0.237			
HCM Control Delay (s)	13.2	12.7	7.4	-	-	7.4	0	15.2	12.7			
HCM Lane LOS	B	B	A	-	-	A	A	C	B			
HCM 95th %tile Q(veh)	0	0.8	0.1	-	-	0.1	-	0.9	0.9			

































Trails at Overland Ranch  
9: Powhaton & Smokey Hill

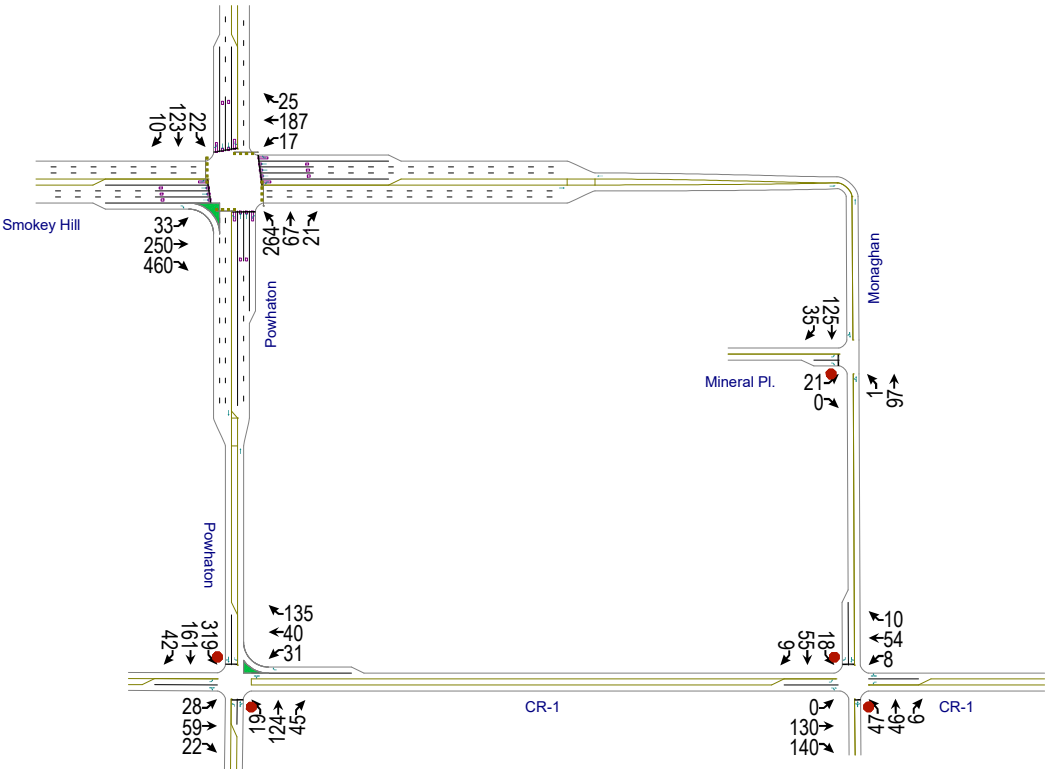
2026 AM BKG  
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	20	208	228	24	303	88	324	146	14	33	66	53
v/c Ratio	0.09	0.32	0.57	0.10	0.46	0.27	0.35	0.07	0.01	0.04	0.04	0.06
Control Delay	28.2	35.0	11.4	28.4	36.4	4.2	6.6	8.8	0.0	6.3	13.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.2	35.0	11.4	28.4	36.4	4.2	6.6	8.8	0.0	6.3	13.4	0.1
Queue Length 50th (ft)	9	35	0	11	52	0	36	13	0	3	6	0
Queue Length 95th (ft)	27	65	65	31	91	15	125	38	0	18	25	0
Internal Link Dist (ft)	317			613			420			273		
Turn Bay Length (ft)	200		200	250		250	400		200	200		200
Base Capacity (vph)	234	2426	874	243	2426	826	1106	2229	1032	795	1806	874
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.09	0.26	0.10	0.12	0.11	0.29	0.07	0.01	0.04	0.04	0.06
Intersection Summary												





Trails at Overland Ranch  
9: Powhatan & Smokey Hill









2026 AM BKG  
12/07/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (veh/h)	17	174	191	20	253	74	271	122	12	28	55	44
Future Volume (veh/h)	17	174	191	20	253	74	271	122	12	28	55	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	20	208	0	24	302	88	324	146	14	33	66	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	183	548		216	565	175	954	2175	970	801	1897	846
Arrive On Green	0.02	0.11	0.00	0.03	0.11	0.11	0.11	0.61	0.61	0.03	0.53	0.53
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	20	208	0	24	302	88	324	146	14	33	66	53
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.8	3.1	0.0	1.0	4.5	4.2	6.0	1.3	0.3	0.7	0.7	1.3
Cycle Q Clear(g_c), s	0.8	3.1	0.0	1.0	4.5	4.2	6.0	1.3	0.3	0.7	0.7	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	183	548		216	565	175	954	2175	970	801	1897	846
V/C Ratio(X)	0.11	0.38		0.11	0.53	0.50	0.34	0.07	0.01	0.04	0.03	0.06
Avail Cap(c_a), veh/h	309	2367		336	2367	735	1539	2175	970	909	1897	846
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.1	33.6	0.0	30.9	34.0	33.9	5.5	6.3	6.1	7.8	9.0	9.1
Incr Delay (d2), s/veh	0.3	0.4	0.0	0.2	0.8	2.2	0.2	0.1	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.3	0.0	0.4	1.9	1.7	1.8	0.5	0.1	0.2	0.3	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.4	34.0	0.0	31.1	34.8	36.1	5.7	6.4	6.2	7.8	9.0	9.2
LnGrp LOS	C	C		C	C	D	A	A	A	A	A	A
Approach Vol, veh/h		228	A		414			484			152	
Approach Delay, s/veh		33.8			34.8			5.9			8.8	
Approach LOS		C			C			A			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.6	13.2	13.4	47.7	6.3	13.5	7.1	54.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.5	37.5	35.5	21.5	7.5	37.5	7.5	49.5				
Max Q Clear Time (g_c+I1), s	3.0	5.1	8.0	3.3	2.8	6.5	2.7	3.3				
Green Ext Time (p_c), s	0.0	1.4	1.0	0.4	0.0	2.4	0.0	1.0				
Intersection Summary												
HCM 6th Ctrl Delay			20.6									
HCM 6th LOS			C									
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												















Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	118	127	7	49	9	43	42	5	16	50	8
Future Vol, veh/h	0	118	127	7	49	9	43	42	5	16	50	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	125
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	141	152	8	59	11	51	50	6	19	60	10
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	70	0	0	293	0	0	333	303	217	326	374	65
Stage 1	-	-	-	-	-	-	217	217	-	81	81	-
Stage 2	-	-	-	-	-	-	116	86	-	245	293	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1531	-	-	1269	-	-	620	610	823	627	557	999
Stage 1	-	-	-	-	-	-	785	723	-	927	828	-
Stage 2	-	-	-	-	-	-	889	824	-	759	670	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1531	-	-	1269	-	-	560	606	823	580	554	999
Mov Cap-2 Maneuver	-	-	-	-	-	-	560	606	-	580	554	-
Stage 1	-	-	-	-	-	-	785	723	-	927	823	-
Stage 2	-	-	-	-	-	-	811	819	-	701	670	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.8			12.4			12.1		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2			
Capacity (veh/h)	591	1531	-	-	1269	-	-	560	999			
HCM Lane V/C Ratio	0.182	-	-	-	0.007	-	-	0.141	0.01			
HCM Control Delay (s)	12.4	0	-	-	7.9	-	-	12.5	8.6			
HCM Lane LOS	B	A	-	-	A	-	-	B	A			
HCM 95th %tile Q(veh)	0.7	0	-	-	0	-	-	0.5	0			

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	0	1	88	114	35
Future Vol, veh/h	21	0	1	88	114	35
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	50	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	0	1	105	136	38
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	262	155	174	0	-	0
Stage 1	155	-	-	-	-	-
Stage 2	107	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	727	891	1403	-	-	-
Stage 1	873	-	-	-	-	-
Stage 2	917	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	726	891	1403	-	-	-
Mov Cap-2 Maneuver	726	-	-	-	-	-
Stage 1	872	-	-	-	-	-
Stage 2	917	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	10.1	0.1		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1403	-	726	-	-	-
HCM Lane V/C Ratio	0.001	-	0.031	-	-	-
HCM Control Delay (s)	7.6	0	10.1	0	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-	-

Intersection												
Int Delay, s/veh	17											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	54	20	28	36	123	17	113	41	290	146	38
Future Vol, veh/h	25	54	20	28	36	123	17	113	41	290	146	38
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	125	-	-	-	-	200	50	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	65	24	33	43	147	20	135	49	347	175	45
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	43	0	0	89	0	0	356	246	77	338	258	43
Stage 1	-	-	-	-	-	-	137	137	-	109	109	-
Stage 2	-	-	-	-	-	-	219	109	-	229	149	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1566	-	-	1506	-	0	599	656	984	616	646	1027
Stage 1	-	-	-	-	-	0	866	783	-	896	805	-
Stage 2	-	-	-	-	-	0	783	805	-	774	774	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1566	-	-	1506	-	-	435	629	984	474	620	1027
Mov Cap-2 Maneuver	-	-	-	-	-	-	435	629	-	474	620	-
Stage 1	-	-	-	-	-	-	850	768	-	879	787	-
Stage 2	-	-	-	-	-	-	570	787	-	594	759	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.9			3.3			12.2			23.7		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	SBLn1	SBLn2			
Capacity (veh/h)	435	696	1566	-	-	1506	-	474	675			
HCM Lane V/C Ratio	0.047	0.265	0.019	-	-	0.022	-	0.732	0.326			
HCM Control Delay (s)	13.7	12	7.3	-	-	7.4	0	30.6	12.9			
HCM Lane LOS	B	B	A	-	-	A	A	D	B			
HCM 95th %tile Q(veh)	0.1	1.1	0.1	-	-	0.1	-	5.9	1.4			

Trails at Overland Ranch  
9: Powhaton & Smokey Hill































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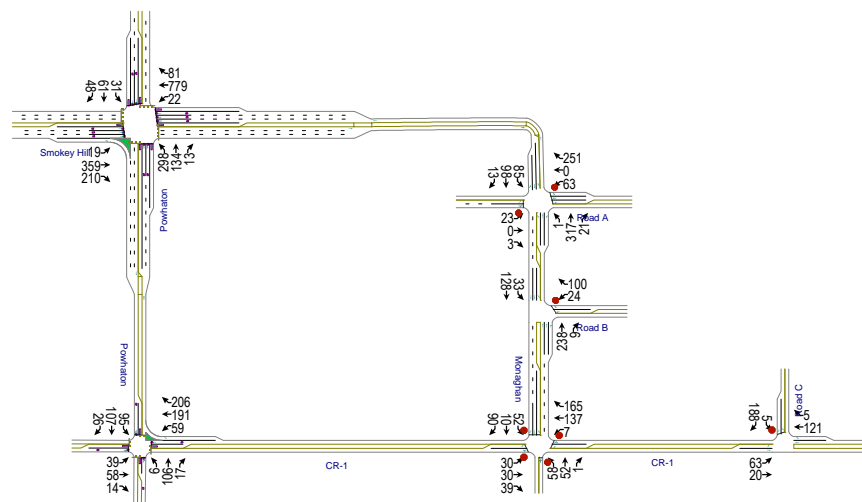
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	36	271	500	18	203	28	287	73	23	24	134	11
v/c Ratio	0.13	0.29	0.72	0.07	0.26	0.08	0.35	0.03	0.02	0.03	0.08	0.01
Control Delay	25.1	30.8	9.8	24.4	32.8	0.4	8.9	11.1	0.0	8.9	16.5	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.1	30.8	9.8	24.4	32.8	0.4	8.9	11.1	0.0	8.9	16.5	0.0
Queue Length 50th (ft)	13	37	0	7	34	0	56	6	0	4	20	0
Queue Length 95th (ft)	39	80	91	24	62	0	144	27	0	18	54	0
Internal Link Dist (ft)	317			613			420			273		
Turn Bay Length (ft)	200		200	250		250	400		200	200		200
Base Capacity (vph)	289	2399	1011	282	2399	818	1025	2160	1003	795	1628	801
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.11	0.49	0.06	0.08	0.03	0.28	0.03	0.02	0.03	0.08	0.01
Intersection Summary												



Trails at Overland Ranch  
9: Powhatan & Smokey Hill

2026 PM BKG  
12/07/2021









												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (veh/h)	30	227	418	15	170	23	240	61	19	20	112	9
Future Volume (veh/h)	30	227	418	15	170	23	240	61	19	20	112	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	271	0	18	203	28	287	73	23	24	134	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	210	513		185	442	137	929	2210	986	852	1950	870
Arrive On Green	0.03	0.10	0.00	0.02	0.09	0.09	0.10	0.62	0.62	0.03	0.55	0.55
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	36	271	0	18	203	28	287	73	23	24	134	11
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	1.4	3.9	0.0	0.7	2.9	1.3	4.9	0.6	0.4	0.5	1.4	0.2
Cycle Q Clear(g_c), s	1.4	3.9	0.0	0.7	2.9	1.3	4.9	0.6	0.4	0.5	1.4	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	210	513		185	442	137	929	2210	986	852	1950	870
V/C Ratio(X)	0.17	0.53		0.10	0.46	0.20	0.31	0.03	0.02	0.03	0.07	0.01
Avail Cap(c_a), veh/h	320	2456		319	2456	762	1563	2210	986	1000	1950	870
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	33.3	0.0	31.4	33.9	33.1	5.0	5.7	5.7	7.1	8.2	8.0
Incr Delay (d2), s/veh	0.4	0.8	0.0	0.2	0.7	0.7	0.2	0.0	0.0	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.6	0.0	0.3	1.2	0.5	1.5	0.2	0.1	0.2	0.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.2	34.2	0.0	31.7	34.6	33.8	5.2	5.7	5.7	7.2	8.3	8.0
LnGrp LOS	C	C		C	C	C	A	A	A	A	A	A
Approach Vol, veh/h		307	A		249			383			169	
Approach Delay, s/veh		33.8			34.3			5.4			8.1	
Approach LOS		C			C			A			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.1	12.3	12.2	47.3	7.2	11.2	6.5	53.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.5	37.5	35.5	21.5	7.5	37.5	8.5	48.5				
Max Q Clear Time (g_c+I1), s	2.7	5.9	6.9	3.4	3.4	4.9	2.5	2.6				
Green Ext Time (p_c), s	0.0	1.9	0.9	0.7	0.0	1.5	0.0	0.5				
Intersection Summary												
HCM 6th Ctrl Delay			20.2									
HCM 6th LOS			C									
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												



Trails at Overland Ranch  
3: CR-1 & Monaghan

2026 AM TOTAL










05/29/2022

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	30	30	39	7	137	165	58	52	1	52	10	90
Future Vol, veh/h	30	30	39	7	137	165	58	52	1	52	10	90
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	33	42	8	149	179	63	57	1	57	11	98
Number of Lanes	1	1	0	1	1	0	0	1	0	1	1	1
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	2			2			3			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	3			1			2			2		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			3			2			2		
HCM Control Delay	9.6			13			11.1			9.3		
HCM LOS	A			B			B			A		
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3				
Vol Left, %	52%	100%	0%	100%	0%	100%	0%	0%				
Vol Thru, %	47%	0%	43%	0%	45%	0%	100%	0%				
Vol Right, %	1%	0%	57%	0%	55%	0%	0%	100%				
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop				
Traffic Vol by Lane	111	30	69	7	302	52	10	90				
LT Vol	58	30	0	7	0	52	0	0				
Through Vol	52	0	30	0	137	0	10	0				
RT Vol	1	0	39	0	165	0	0	90				
Lane Flow Rate	121	33	75	8	328	57	11	98				
Geometry Grp	8	8	8	8	8	7	7	7				
Degree of Util (X)	0.22	0.061	0.122	0.013	0.489	0.102	0.018	0.143				
Departure Headway (Hd)	6.565	6.757	5.852	6.256	5.368	6.484	5.979	5.271				
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes				
Cap	548	531	613	573	673	553	599	681				
Service Time	4.298	4.491	3.585	3.982	3.094	4.214	3.708	3.001				
HCM Lane V/C Ratio	0.221	0.062	0.122	0.014	0.487	0.103	0.018	0.144				
HCM Control Delay	11.1	9.9	9.4	9.1	13.1	10	8.8	8.9				
HCM Lane LOS	B	A	A	A	B	A	A	A				
HCM 95th-tile Q	0.8	0.2	0.4	0	2.7	0.3	0.1	0.5				

Trails at Overland Ranch  
6: CR-1 & Powhaton

2026 AM TOTAL  
05/29/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	58	14	59	191	206	6	106	17	95	107	26
Future Volume (veh/h)	39	58	14	59	191	206	6	106	17	95	107	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No				No				No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	42	63	15	64	208	0	7	115	18	103	116	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	218	204	49	318	280		747	804	126	794	814	197
Arrive On Green	0.04	0.14	0.14	0.05	0.15	0.00	0.01	0.51	0.51	0.06	0.56	0.56
Sat Flow, veh/h	1781	1460	348	1781	1870	1585	1781	1579	247	1781	1456	351
Grp Volume(v), veh/h	42	0	78	64	208	0	7	0	133	103	0	144
Grp Sat Flow(s),veh/h/ln	1781	0	1808	1781	1870	1585	1781	0	1826	1781	0	1807
Q Serve(g_s), s	1.5	0.0	2.9	2.2	7.9	0.0	0.1	0.0	2.9	1.9	0.0	2.8
Cycle Q Clear(g_c), s	1.5	0.0	2.9	2.2	7.9	0.0	0.1	0.0	2.9	1.9	0.0	2.8
Prop In Lane	1.00		0.19	1.00		1.00	1.00		0.14	1.00		0.19
Lane Grp Cap(c), veh/h	218	0	252	318	280		747	0	930	794	0	1011
V/C Ratio(X)	0.19	0.00	0.31	0.20	0.74		0.01	0.00	0.14	0.13	0.00	0.14
Avail Cap(c_a), veh/h	376	0	963	506	1046		959	0	930	1109	0	1011
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	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.0	0.0	28.7	25.4	30.2	0.0	8.6	0.0	9.6	6.9	0.0	7.8
Incr Delay (d2), s/veh	0.4	0.0	0.7	0.3	3.9	0.0	0.0	0.0	0.3	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.3	0.9	3.7	0.0	0.1	0.0	1.1	0.6	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.4	0.0	29.4	25.7	34.0	0.0	8.6	0.0	10.0	7.0	0.0	8.1
LnGrp LOS	C	A	C	C	C		A	A	A	A	A	A
Approach Vol, veh/h	120				272		A		140		247	
Approach Delay, s/veh	28.4				32.1				9.9		7.6	
Approach LOS	C				C				A		A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.9	42.3	8.2	14.8	5.2	46.0	7.4	15.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	17.5	33.5	11.5	39.5	9.5	41.5	9.5	41.5				
Max Q Clear Time (g_c+I), s	13.9	4.9	4.2	4.9	2.1	4.8	3.5	9.9				
Green Ext Time (p_c), s	0.2	0.7	0.1	0.4	0.0	0.9	0.0	1.2				

Intersection Summary

HCM 6th Ctrl Delay	19.8
HCM 6th LOS	B













Notes

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

Trails at Overland Ranch  
9: Powhaton & Smokey Hill

2026 AM TOTAL  
05/29/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	359	210	22	779	81	298	134	13	31	61	48
Future Volume (veh/h)	19	359	210	22	779	81	298	134	13	31	61	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	390	0	24	847	88	324	146	14	34	66	52
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	175	1241		302	1253	389	814	1795	800	633	1444	644
Arrive On Green	0.02	0.24	0.00	0.02	0.25	0.25	0.13	0.51	0.51	0.03	0.41	0.41
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	21	390	0	24	847	88	324	146	14	34	66	52
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.8	5.8	0.0	0.9	13.8	4.1	9.0	2.0	0.4	1.0	1.0	1.9
Cycle Q Clear(g_c), s	0.8	5.8	0.0	0.9	13.8	4.1	9.0	2.0	0.4	1.0	1.0	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	175	1241		302	1253	389	814	1795	800	633	1444	644
V/C Ratio(X)	0.12	0.31		0.08	0.68	0.23	0.40	0.08	0.02	0.05	0.05	0.08
Avail Cap(c_a), veh/h	280	2246		403	2246	697	1230	1795	800	721	1444	644
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.2	28.6	0.0	25.2	31.4	27.8	11.0	11.8	11.4	14.8	16.5	16.8
Incr Delay (d2), s/veh	0.3	0.1	0.0	0.1	0.6	0.3	0.3	0.1	0.0	0.0	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.3	0.0	0.4	5.6	1.6	3.4	0.8	0.1	0.4	0.4	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.5	28.7	0.0	25.3	32.1	28.0	11.4	11.9	11.4	14.9	16.6	17.0
LnGrp LOS	C	C		C	C	C	B	B	B	B	B	B
Approach Vol, veh/h	411		A	959			484			152		
Approach Delay, s/veh	28.6			31.5			11.5			16.4		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.8	26.9	16.5	41.9	6.6	27.1	7.4	51.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.5	40.5	33.5	20.5	7.5	40.5	7.5	46.5				
Max Q Clear Time (g_c+I2, s)	12.9	7.8	11.0	3.9	2.8	15.8	3.0	4.0				
Green Ext Time (p_c), s	0.0	2.9	1.0	0.4	0.0	6.8	0.0	1.0				

Intersection Summary












HCM 6th Ctrl Delay	25.0
HCM 6th LOS	C

Notes

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

Trails at Overland Ranch  
12: Road A

2026 AM TOTAL  
05/29/2022

Intersection												
Int Delay, s/veh	6.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	0	3	63	0	251	1	317	21	85	98	13
Future Vol, veh/h	23	0	3	63	0	251	1	317	21	85	98	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	100	-	100	100	-	100	200	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	0	3	68	0	273	1	345	23	92	107	14







Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	786	661	107	647	652	345	121	0	0	368	0	0
Stage 1	291	291	-	347	347	-	-	-	-	-	-	-
Stage 2	495	370	-	300	305	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	310	383	947	384	387	698	1467	-	-	1191	-	-
Stage 1	717	672	-	669	635	-	-	-	-	-	-	-
Stage 2	556	620	-	709	662	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	178	353	947	360	357	698	1467	-	-	1191	-	-
Mov Cap-2 Maneuver	178	353	-	360	357	-	-	-	-	-	-	-
Stage 1	716	620	-	668	634	-	-	-	-	-	-	-
Stage 2	338	619	-	652	611	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	26.2		14.2		0		3.6	
HCM LOS	D		B					







Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1467	-	-	178	947	360	-	698	1191	-	-
HCM Lane V/C Ratio	0.001	-	-	0.14	0.003	0.19	-	0.391	0.078	-	-
HCM Control Delay (s)	7.5	-	-	28.5	8.8	17.3	0	13.4	8.3	-	-
HCM Lane LOS	A	-	-	D	A	C	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0	0.7	-	1.9	0.3	-	-

Trails at Overland Ranch  
14: Monaghan & Road B

2026 AM TOTAL  
05/29/2022










Intersection						
Int Delay, s/veh	2.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	24	100	238	9	33	128
Future Vol, veh/h	24	100	238	9	33	128
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	100	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	109	259	10	36	139
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	401	130	0	0	269	0
Stage 1	259	-	-	-	-	-
Stage 2	142	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	577	896	-	-	1292	-
Stage 1	761	-	-	-	-	-
Stage 2	870	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	561	896	-	-	1292	-
Mov Cap-2 Maneuver	561	-	-	-	-	-
Stage 1	761	-	-	-	-	-
Stage 2	846	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	10	0	1.6			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 561 896 1292	-	-		
HCM Lane V/C Ratio	-	- 0.047 0.121 0.028	-	-		
HCM Control Delay (s)	-	- 11.7 9.6 7.9	-	-		
HCM Lane LOS	-	- B A A	-	-		
HCM 95th %tile Q(veh)	-	- 0.1 0.4 0.1	-	-		



Intersection						
Int Delay, s/veh	6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	63	20	121	5	5	188
Future Vol, veh/h	63	20	121	5	5	188
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	100	0	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	68	22	132	5	5	204
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	137	0	-	0	290	132
Stage 1	-	-	-	-	132	-
Stage 2	-	-	-	-	158	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1447	-	-	-	701	917
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	871	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1447	-	-	-	668	917
Mov Cap-2 Maneuver	-	-	-	-	668	-
Stage 1	-	-	-	-	852	-
Stage 2	-	-	-	-	871	-
Approach	EB	WB		SB		
HCM Control Delay, s	5.8	0		10		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1447	-	-	-	668	917
HCM Lane V/C Ratio	0.047	-	-	-	0.008	0.223
HCM Control Delay (s)	7.6	-	-	-	10.4	10
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0	0.9













Trails at Overland Ranch  
6: CR-1 & Powhaton

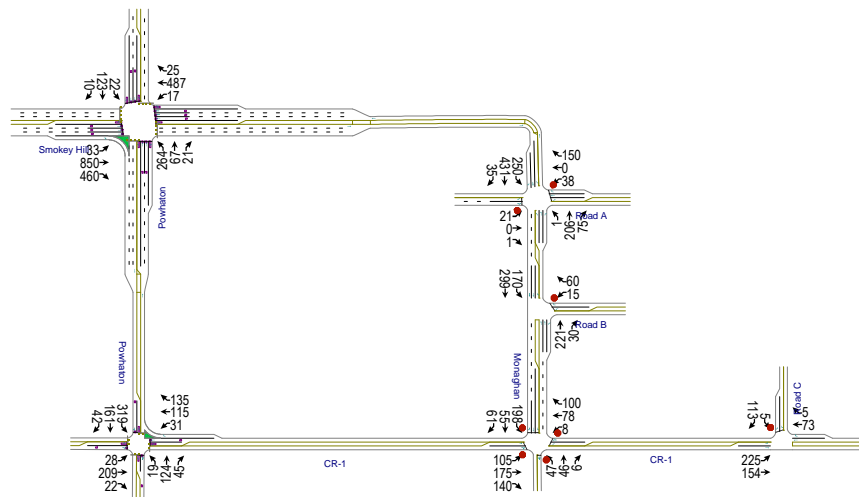
2026 AM TOTAL  
12/07/2021

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	42	78	64	208	224	7	133	103	144
v/c Ratio	0.14	0.25	0.18	0.55	0.45	0.01	0.15	0.14	0.14
Control Delay	20.7	28.5	21.0	35.8	7.6	10.2	16.5	9.9	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.7	28.5	21.0	35.8	7.6	10.2	16.5	9.9	11.1
Queue Length 50th (ft)	15	29	22	98	0	1	39	22	29
Queue Length 95th (ft)	39	72	54	183	58	8	93	56	91
Internal Link Dist (ft)		132		1160			96		420
Turn Bay Length (ft)	125		100		200	50		100	
Base Capacity (vph)	351	934	430	1005	957	761	862	814	1038
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	0.12	0.08	0.15	0.21	0.23	0.01	0.15	0.13	0.14
Intersection Summary									

Trails at Overland Ranch  
9: Powhaton & Smokey Hill

2026 AM TOTAL  
12/07/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	21	390	228	24	847	88	324	146	14	34	66	52
v/c Ratio	0.11	0.30	0.39	0.08	0.64	0.17	0.41	0.08	0.02	0.06	0.05	0.07
Control Delay	22.9	28.5	6.2	22.4	33.1	2.1	13.0	15.1	0.0	12.6	24.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.9	28.5	6.2	22.4	33.1	2.1	13.0	15.1	0.0	12.6	24.0	0.2
Queue Length 50th (ft)	9	65	0	10	156	0	72	20	0	6	10	0
Queue Length 95th (ft)	25	107	56	27	234	11	200	55	0	28	37	0
Internal Link Dist (ft)	317			613			420			273		
Turn Bay Length (ft)	200		200	250		250	400		200	200		200
Base Capacity (vph)	217	2339	851	328	2339	801	928	1869	880	625	1368	695
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.17	0.27	0.07	0.36	0.11	0.35	0.08	0.02	0.05	0.05	0.07
Intersection Summary												











Trails at Overland Ranch  
3: CR-1 & Monaghan

2026 PM TOTAL

05/29/2022

Intersection	
Intersection Delay, s/veh	15.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	105	175	140	8	78	100	47	46	6	198	55	61
Future Vol, veh/h	105	175	140	8	78	100	47	46	6	198	55	61
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	114	190	152	9	85	109	51	50	7	215	60	66
Number of Lanes	1	1	0	1	1	0	0	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	3	2	2
HCM Control Delay	17.6	14	13.3	13.7
HCM LOS	C	B	B	B










Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	47%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	46%	0%	56%	0%	44%	0%	100%	0%
Vol Right, %	6%	0%	44%	0%	56%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	99	105	315	8	178	198	55	61
LT Vol	47	105	0	8	0	198	0	0
Through Vol	46	0	175	0	78	0	55	0
RT Vol	6	0	140	0	100	0	0	61
Lane Flow Rate	108	114	342	9	193	215	60	66
Geometry Grp	8	8	8	8	8	7	7	7
Degree of Util (X)	0.24	0.233	0.62	0.019	0.379	0.442	0.114	0.114
Departure Headway (Hd)	8.03	7.345	6.521	7.968	7.056	7.393	6.852	6.171
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	448	490	555	449	509	491	524	584
Service Time	5.779	5.084	4.26	5.715	4.802	5.093	4.584	3.871
HCM Lane V/C Ratio	0.241	0.233	0.616	0.02	0.379	0.438	0.115	0.113
HCM Control Delay	13.3	12.3	19.4	10.9	14.1	15.8	10.5	9.7
HCM Lane LOS	B	B	C	B	B	C	B	A
HCM 95th-tile Q	0.9	0.9	4.2	0.1	1.8	2.2	0.4	0.4

Trails at Overland Ranch  
6: CR-1 & Powhaton

2026 PM TOTAL

05/29/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	209	22	31	115	135	19	124	45	319	161	42
Future Volume (veh/h)	28	209	22	31	115	135	19	124	45	319	161	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	227	24	34	125	0	21	135	49	347	175	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	297	291	31	202	333		630	560	203	765	768	202
Arrive On Green	0.03	0.18	0.18	0.03	0.18	0.00	0.02	0.43	0.43	0.13	0.54	0.54
Sat Flow, veh/h	1781	1663	176	1781	1870	1585	1781	1310	475	1781	1428	375
Grp Volume(v), veh/h	30	0	251	34	125	0	21	0	184	347	0	221
Grp Sat Flow(s),veh/h/ln	1781	0	1839	1781	1870	1585	1781	0	1785	1781	0	1803
Q Serve(g_s), s	1.1	0.0	10.2	1.2	4.6	0.0	0.5	0.0	5.2	7.8	0.0	5.1
Cycle Q Clear(g_c), s	1.1	0.0	10.2	1.2	4.6	0.0	0.5	0.0	5.2	7.8	0.0	5.1
Prop In Lane	1.00		0.10	1.00		1.00	1.00		0.27	1.00		0.21
Lane Grp Cap(c), veh/h	297	0	322	202	333		630	0	763	765	0	970
V/C Ratio(X)	0.10	0.00	0.78	0.17	0.38		0.03	0.00	0.24	0.45	0.00	0.23
Avail Cap(c_a), veh/h	459	0	927	404	991		804	0	763	924	0	970
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	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.3	0.0	30.9	25.7	28.4	0.0	11.9	0.0	14.3	8.7	0.0	9.5
Incr Delay (d2), s/veh	0.1	0.0	4.1	0.4	0.7	0.0	0.0	0.0	0.7	0.4	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	4.7	0.5	2.1	0.0	0.2	0.0	2.1	2.7	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.4	0.0	35.0	26.1	29.1	0.0	12.0	0.0	15.0	9.2	0.0	10.1
LnGrp LOS	C	A	C	C	C		B	A	B	A	A	B
Approach Vol, veh/h	281		159			A		205		568		
Approach Delay, s/veh	33.9		28.4					14.7		9.5		
Approach LOS	C		C					B		A		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	38.0	7.1	18.2	6.3	46.7	6.9	18.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.5	33.5	11.5	39.5	9.5	41.5	9.5	41.5				
Max Q Clear Time (g_c+I), s	19.8	7.2	3.2	12.2	2.5	7.1	3.1	6.6				
Green Ext Time (p_c), s	0.7	1.1	0.0	1.5	0.0	1.4	0.0	0.7				

Intersection Summary

HCM 6th Ctrl Delay 18.5

HCM 6th LOS B

Notes

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

Trails at Overland Ranch  
9: Powhaton & Smokey Hill

2026 PM TOTAL  
05/29/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↑	↱	↰	↑↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	33	850	460	17	487	25	264	67	21	22	123	10
Future Volume (veh/h)	33	850	460	17	487	25	264	67	21	22	123	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	924	0	18	529	27	287	73	23	24	134	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	273	1329		172	1265	393	766	1780	794	653	1451	647
Arrive On Green	0.03	0.26	0.00	0.02	0.25	0.25	0.12	0.50	0.50	0.02	0.41	0.41
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	36	924	0	18	529	27	287	73	23	24	134	11
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	1.4	15.2	0.0	0.7	8.1	1.2	8.1	1.0	0.7	0.7	2.2	0.4
Cycle Q Clear(g_c), s	1.4	15.2	0.0	0.7	8.1	1.2	8.1	1.0	0.7	0.7	2.2	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	273	1329		172	1265	393	766	1780	794	653	1451	647
V/C Ratio(X)	0.13	0.70		0.10	0.42	0.07	0.37	0.04	0.03	0.04	0.09	0.02
Avail Cap(c_a), veh/h	359	2228		280	2228	692	1199	1780	794	752	1451	647
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.9	31.0	0.0	26.2	29.3	26.7	11.5	11.8	11.7	15.1	16.9	16.4
Incr Delay (d2), s/veh	0.2	0.7	0.0	0.3	0.2	0.1	0.3	0.0	0.1	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	6.2	0.0	0.3	3.3	0.5	3.1	0.4	0.2	0.3	0.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.1	31.7	0.0	26.5	29.5	26.8	11.8	11.8	11.8	15.1	17.0	16.4
LnGrp LOS	C	C		C	C	C	B	B	B	B	B	B
Approach Vol, veh/h	960		A	574			383			169		
Approach Delay, s/veh	31.4			29.3			11.8			16.7		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.4	28.7	15.4	42.4	7.5	27.5	6.8	51.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.5	40.5	33.5	20.5	7.5	40.5	7.5	46.5				
Max Q Clear Time (g_c+12), s	12.5	17.2	10.1	4.2	3.4	10.1	2.7	3.0				
Green Ext Time (p_c), s	0.0	7.0	0.8	0.7	0.0	4.0	0.0	0.5				

Intersection Summary

HCM 6th Ctrl Delay	26.0
HCM 6th LOS	C












Notes

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



Trails at Overland Ranch  
12: Road A

2026 PM TOTAL  
05/29/2022

Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	0	1	38	0	150	1	206	75	250	431	35
Future Vol, veh/h	21	0	1	38	0	150	1	206	75	250	431	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	100	-	100	100	-	100	200	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	0	1	41	0	163	1	224	82	272	468	38







Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1361	1320	468	1258	1276	224	506	0	0	306	0	0
Stage 1	1012	1012	-	226	226	-	-	-	-	-	-	-
Stage 2	349	308	-	1032	1050	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	125	157	595	148	167	815	1059	-	-	1255	-	-
Stage 1	288	317	-	777	717	-	-	-	-	-	-	-
Stage 2	667	660	-	281	304	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	83	123	595	123	131	815	1059	-	-	1255	-	-
Mov Cap-2 Maneuver	83	123	-	123	131	-	-	-	-	-	-	-
Stage 1	288	248	-	776	716	-	-	-	-	-	-	-
Stage 2	533	659	-	220	238	-	-	-	-	-	-	-







Approach	EB		WB		NB		SB	
HCM Control Delay, s	61.7		18.2		0		3	
HCM LOS	F		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1059	-	-	83	595	123	-	815	1255	-	-
HCM Lane V/C Ratio	0.001	-	-	0.275	0.002	0.336	-	0.2	0.217	-	-
HCM Control Delay (s)	8.4	-	-	64.1	11.1	48.4	0	10.5	8.7	-	-
HCM Lane LOS	A	-	-	F	B	E	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1	0	1.3	-	0.7	0.8	-	-

Trails at Overland Ranch  
14: Monaghan & Road B










2026 PM TOTAL  
05/29/2022

Intersection						
Int Delay, s/veh	2.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	60	221	30	170	299
Future Vol, veh/h	15	60	221	30	170	299
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	100	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	65	240	33	185	325
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	773	120	0	0	273	0
Stage 1	240	-	-	-	-	-
Stage 2	533	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	336	909	-	-	1287	-
Stage 1	777	-	-	-	-	-
Stage 2	553	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	288	909	-	-	1287	-
Mov Cap-2 Maneuver	288	-	-	-	-	-
Stage 1	777	-	-	-	-	-
Stage 2	473	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	11.1	0	3			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 288 909 1287	-	-		
HCM Lane V/C Ratio	-	- 0.057 0.072 0.144	-	-		
HCM Control Delay (s)	-	- 18.2 9.3 8.3	-	-		
HCM Lane LOS	-	- C A A	-	-		
HCM 95th %tile Q(veh)	-	- 0.2 0.2 0.5	-	-		

Intersection						
Int Delay, s/veh	5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	225	154	73	5	5	113
Future Vol, veh/h	225	154	73	5	5	113
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	100	0	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	245	167	79	5	5	123
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	84	0	-	0	736	79
Stage 1	-	-	-	-	79	-
Stage 2	-	-	-	-	657	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1513	-	-	-	386	981
Stage 1	-	-	-	-	944	-
Stage 2	-	-	-	-	516	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1513	-	-	-	323	981
Mov Cap-2 Maneuver	-	-	-	-	323	-
Stage 1	-	-	-	-	791	-
Stage 2	-	-	-	-	516	-
Approach	EB	WB		SB		
HCM Control Delay, s	4.7	0		9.5		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1513	-	-	-	323	981
HCM Lane V/C Ratio	0.162	-	-	-	0.017	0.125
HCM Control Delay (s)	7.8	-	-	-	16.3	9.2
HCM Lane LOS	A	-	-	-	C	A
HCM 95th %tile Q(veh)	0.6	-	-	-	0.1	0.4













Trails at Overland Ranch  
6: CR-1 & Powhaton

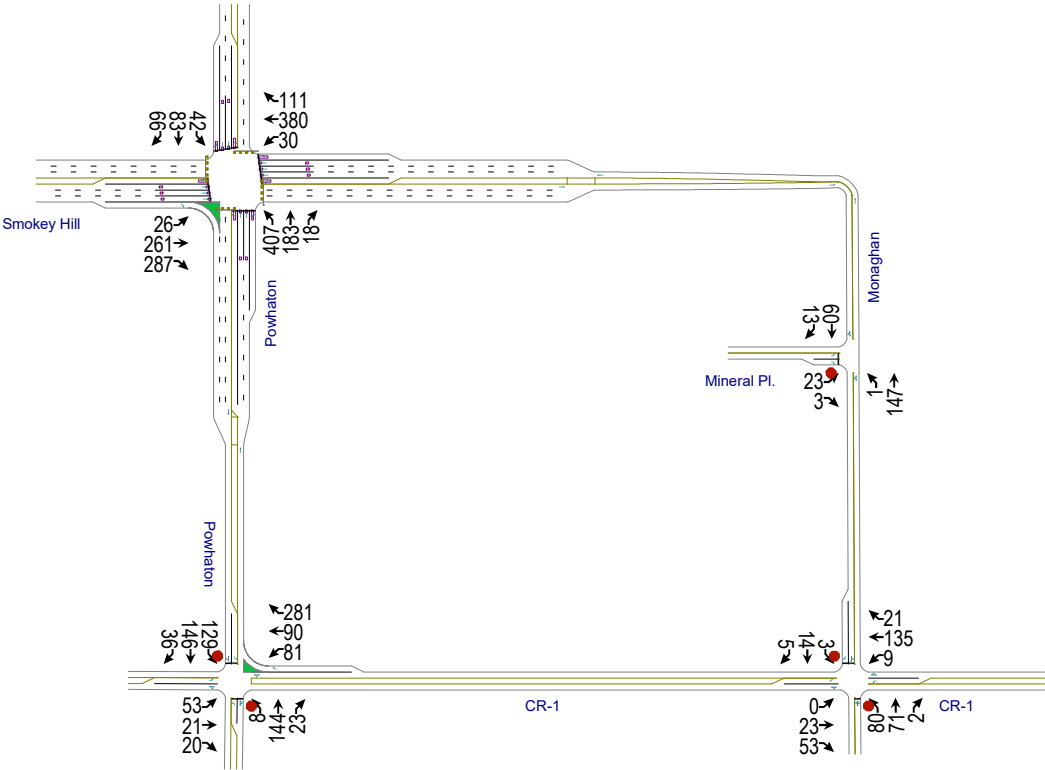
2026 PM TOTAL  
12/07/2021

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	30	251	34	125	147	21	184	347	221
v/c Ratio	0.10	0.72	0.18	0.37	0.36	0.03	0.22	0.43	0.20
Control Delay	27.5	48.3	29.1	38.9	8.9	9.8	18.8	10.4	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.5	48.3	29.1	38.9	8.9	9.8	18.8	10.4	10.9
Queue Length 50th (ft)	13	138	14	66	0	4	64	90	49
Queue Length 95th (ft)	38	246	41	132	52	16	144	175	131
Internal Link Dist (ft)		132		1160			96		420
Turn Bay Length (ft)	125		100		200	50		100	
Base Capacity (vph)	295	670	190	646	645	653	826	960	1121
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	0.37	0.18	0.19	0.23	0.03	0.22	0.36	0.20
Intersection Summary									

Trails at Overland Ranch  
9: Powhaton & Smokey Hill








2026 PM TOTAL  
12/07/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	36	924	500	18	529	27	287	73	23	24	134	11
v/c Ratio	0.11	0.53	0.57	0.08	0.32	0.05	0.43	0.04	0.03	0.05	0.13	0.02
Control Delay	17.1	24.5	5.0	16.9	23.5	0.2	17.8	18.8	0.0	17.6	29.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.1	24.5	5.0	16.9	23.5	0.2	17.8	18.8	0.0	17.6	29.7	0.1
Queue Length 50th (ft)	11	124	0	6	80	0	79	8	0	6	25	0
Queue Length 95th (ft)	32	222	65	20	123	0	211	35	0	26	74	0
Internal Link Dist (ft)		317			613			420			273	
Turn Bay Length (ft)	200		200	250		250	400		200	200		200
Base Capacity (vph)	326	3021	1143	224	3021	995	768	1686	804	504	1047	564
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.31	0.44	0.08	0.18	0.03	0.37	0.04	0.03	0.05	0.13	0.02
Intersection Summary												



Trails at Overland Ranch  
3: CR-1 & Monaghan

2041 AM BKG  
12/07/2021

Intersection												
Int Delay, s/veh	5.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	15	35	6	90	14	53	47	1	2	9	3
Future Vol, veh/h	0	15	35	6	90	14	53	47	1	2	9	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	125
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	24	57	10	147	23	86	77	2	3	15	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	170	0	0	81	0	0	242	243	53	271	260	159
Stage 1	-	-	-	-	-	-	53	53	-	179	179	-
Stage 2	-	-	-	-	-	-	189	190	-	92	81	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1407	-	-	1517	-	-	712	659	1014	682	645	886
Stage 1	-	-	-	-	-	-	960	851	-	823	751	-
Stage 2	-	-	-	-	-	-	813	743	-	915	828	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1407	-	-	1517	-	-	692	654	1014	617	640	886
Mov Cap-2 Maneuver	-	-	-	-	-	-	692	654	-	617	640	-
Stage 1	-	-	-	-	-	-	960	851	-	823	746	-
Stage 2	-	-	-	-	-	-	787	738	-	831	828	-





Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.4			12			10.4		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	676	1407	-	-	1517	-	-	636	886
HCM Lane V/C Ratio	0.244	-	-	-	0.006	-	-	0.028	0.006
HCM Control Delay (s)	12	0	-	-	7.4	-	-	10.8	9.1
HCM Lane LOS	B	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	1	0	-	-	0	-	-	0.1	0

Trails at Overland Ranch  
4: Mineral Pl. & Monaghan









2041 AM BKG  
12/07/2021

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	3	1	98	40	13
Future Vol, veh/h	23	3	1	98	40	13
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	50	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	3	1	160	65	14
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	234	72	79	0	-	0
Stage 1	72	-	-	-	-	-
Stage 2	162	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	754	990	1519	-	-	-
Stage 1	951	-	-	-	-	-
Stage 2	867	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	753	990	1519	-	-	-
Mov Cap-2 Maneuver	753	-	-	-	-	-
Stage 1	950	-	-	-	-	-
Stage 2	867	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.8	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1519	-	753	990	-	-
HCM Lane V/C Ratio	0.001	-	0.033	0.003	-	-
HCM Control Delay (s)	7.4	0	9.9	8.6	-	-
HCM Lane LOS	A	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0	-	-















Trails at Overland Ranch  
6: CR-1 & Powhaton

2041 AM BKG  
12/07/2021

Intersection												
Int Delay, s/veh	13.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	14	13	54	60	187	5	96	15	86	97	24
Future Vol, veh/h	35	14	13	54	60	187	5	96	15	86	97	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	125	-	-	-	-	200	50	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	23	21	88	98	305	8	157	24	140	158	39
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	98	0	0	44	0	0	521	422	34	512	432	98
Stage 1	-	-	-	-	-	-	148	148	-	274	274	-
Stage 2	-	-	-	-	-	-	373	274	-	238	158	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1495	-	-	1564	-	0	466	523	1039	472	516	958
Stage 1	-	-	-	-	-	0	855	775	-	732	683	-
Stage 2	-	-	-	-	-	0	648	683	-	765	767	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1495	-	-	1564	-	-	307	473	1039	319	467	958
Mov Cap-2 Maneuver	-	-	-	-	-	-	307	473	-	319	467	-
Stage 1	-	-	-	-	-	-	823	746	-	704	643	-
Stage 2	-	-	-	-	-	-	441	643	-	568	738	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	4.2			3.5			15.9			19.7		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1 NBLn2		EBL	EBT	EBR	WBL	WBT	SBLn1 SBLn2				
Capacity (veh/h)	307	511	1495	-	-	1564	-	319	520			
HCM Lane V/C Ratio	0.027	0.354	0.038	-	-	0.056	-	0.44	0.379			
HCM Control Delay (s)	17	15.9	7.5	-	-	7.4	0	24.8	16.1			
HCM Lane LOS	C	C	A	-	-	A	A	C	C			
HCM 95th %tile Q(veh)	0.1	1.6	0.1	-	-	0.2	-	2.1	1.8			































Trails at Overland Ranch  
9: Powhaton & Smokey Hill

2041 AM BKG  
12/07/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	28	284	311	33	413	121	442	199	20	46	90	72
v/c Ratio	0.12	0.38	0.62	0.13	0.47	0.31	0.50	0.09	0.02	0.07	0.06	0.09
Control Delay	27.2	35.9	10.5	27.2	34.8	7.6	9.7	10.6	0.1	8.7	19.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.2	35.9	10.5	27.2	34.8	7.6	9.7	10.6	0.1	8.7	19.0	0.3
Queue Length 50th (ft)	13	57	0	15	72	0	105	28	0	8	15	0
Queue Length 95th (ft)	34	85	74	38	120	39	199	54	0	25	39	2
Internal Link Dist (ft)	317			613			420			273		
Turn Bay Length (ft)	200		200	250		250	400		200	200		200
Base Capacity (vph)	249	2300	886	268	2300	790	1039	2113	983	666	1533	762
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.12	0.35	0.12	0.18	0.15	0.43	0.09	0.02	0.07	0.06	0.09
Intersection Summary												

Trails at Overland Ranch  
9: Powhatan & Smokey Hill

2041 AM BKG  
12/07/2021

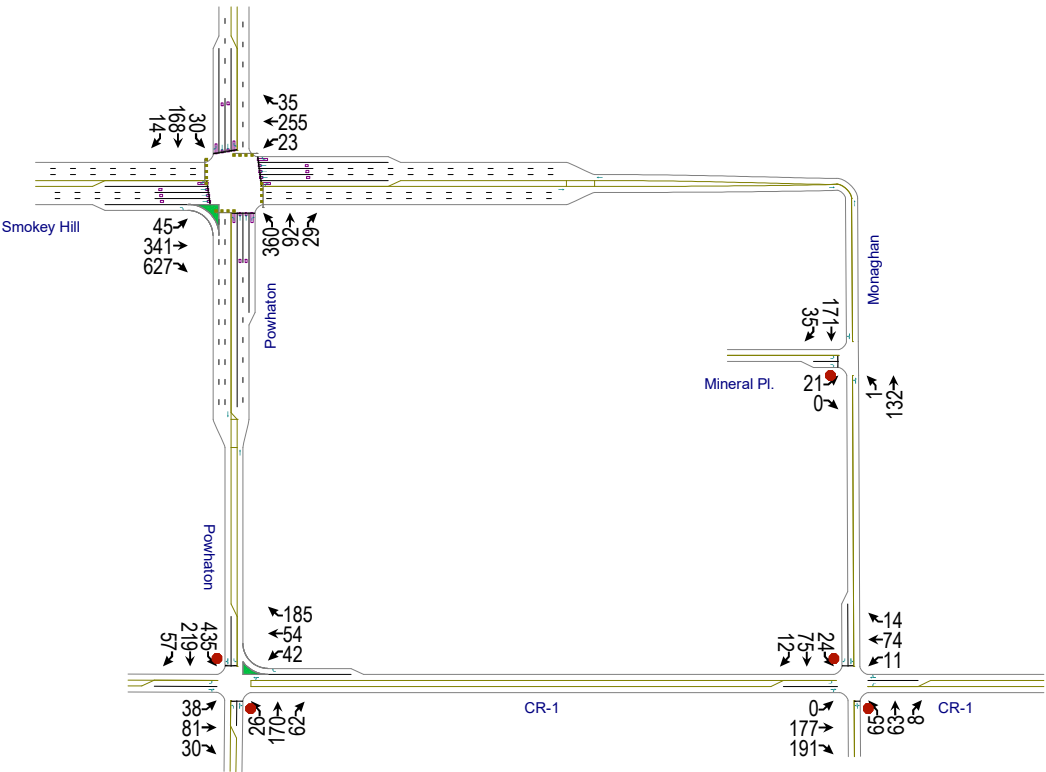
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (veh/h)	17	174	191	20	253	74	271	122	12	28	55	44
Future Volume (veh/h)	17	174	191	20	253	74	271	122	12	28	55	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	28	284	0	33	412	121	442	199	20	46	90	72
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	191	692		234	709	220	915	2068	923	693	1648	735
Arrive On Green	0.03	0.14	0.00	0.03	0.14	0.14	0.16	0.58	0.58	0.04	0.46	0.46
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	28	284	0	33	412	121	442	199	20	46	90	72
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	1.1	4.3	0.0	1.3	6.4	6.1	10.0	2.1	0.5	1.1	1.2	2.2
Cycle Q Clear(g_c), s	1.1	4.3	0.0	1.3	6.4	6.1	10.0	2.1	0.5	1.1	1.2	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	191	692		234	709	220	915	2068	923	693	1648	735
V/C Ratio(X)	0.15	0.41		0.14	0.58	0.55	0.48	0.10	0.02	0.07	0.05	0.10
Avail Cap(c_a), veh/h	297	2251		334	2251	699	1379	2068	923	781	1648	735
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	33.6	0.0	30.2	34.3	34.1	7.2	7.9	7.5	10.8	12.6	12.8
Incr Delay (d2), s/veh	0.4	0.4	0.0	0.3	0.8	2.1	0.4	0.1	0.0	0.0	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.8	0.0	0.6	2.7	2.4	3.3	0.8	0.2	0.4	0.5	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.8	34.0	0.0	30.4	35.1	36.3	7.6	8.0	7.6	10.8	12.6	13.1
LnGrp LOS	C	C		C	D	D	A	A	A	B	B	B
Approach Vol, veh/h		312	A		566			661			208	
Approach Delay, s/veh		33.7			35.0			7.7			12.4	
Approach LOS		C			D			A			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.2	16.0	17.9	43.9	6.9	16.3	7.8	54.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.5	37.5	35.5	21.5	7.5	37.5	7.5	49.5				
Max Q Clear Time (g_c+I1), s	3.3	6.3	12.0	4.2	3.1	8.4	3.1	4.1				
Green Ext Time (p_c), s	0.0	2.0	1.4	0.6	0.0	3.4	0.0	1.4				

Intersection Summary

HCM 6th Ctrl Delay	21.8
HCM 6th LOS	C

Notes








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







Trails at Overland Ranch  
3: CR-1 & Monaghan

2041 PM BKG









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










Intersection												
Int Delay, s/veh	5.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	118	127	7	49	9	43	42	5	16	50	8
Future Vol, veh/h	0	118	127	7	49	9	43	42	5	16	50	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	125
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	192	207	11	80	15	70	68	8	26	82	13
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	95	0	0	399	0	0	453	413	296	444	509	88
Stage 1	-	-	-	-	-	-	296	296	-	110	110	-
Stage 2	-	-	-	-	-	-	157	117	-	334	399	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1499	-	-	1160	-	-	517	529	743	524	467	970
Stage 1	-	-	-	-	-	-	712	668	-	895	804	-
Stage 2	-	-	-	-	-	-	845	799	-	680	602	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1499	-	-	1160	-	-	438	524	743	463	463	970
Mov Cap-2 Maneuver	-	-	-	-	-	-	438	524	-	463	463	-
Stage 1	-	-	-	-	-	-	712	668	-	895	797	-
Stage 2	-	-	-	-	-	-	741	792	-	604	602	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.9			15.6			14.4		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2			
Capacity (veh/h)	486	1499	-	-	1160	-	-	463	970			
HCM Lane V/C Ratio	0.302	-	-	-	0.01	-	-	0.232	0.013			
HCM Control Delay (s)	15.6	0	-	-	8.1	-	-	15.1	8.8			
HCM Lane LOS	C	A	-	-	A	-	-	C	A			
HCM 95th %tile Q(veh)	1.3	0	-	-	0	-	-	0.9	0			

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	0	1	88	114	35
Future Vol, veh/h	21	0	1	88	114	35
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	50	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	0	1	143	186	38
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	350	205	224	0	-	0
Stage 1	205	-	-	-	-	-
Stage 2	145	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	647	836	1345	-	-	-
Stage 1	829	-	-	-	-	-
Stage 2	882	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	646	836	1345	-	-	-
Mov Cap-2 Maneuver	646	-	-	-	-	-
Stage 1	828	-	-	-	-	-
Stage 2	882	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	10.8	0.1		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1345	-	646	-	-	-
HCM Lane V/C Ratio	0.001	-	0.035	-	-	-
HCM Control Delay (s)	7.7	0	10.8	0	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-	-

Trails at Overland Ranch  
6: CR-1 & Powhaton

2041 PM BKG  
12/07/2021































Intersection												
Int Delay, s/veh	91											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	54	20	28	36	123	17	113	41	290	146	38
Future Vol, veh/h	25	54	20	28	36	123	17	113	41	290	146	38
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	125	-	-	-	-	200	50	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	41	88	33	46	59	201	28	184	67	473	238	62
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	59	0	0	121	0	0	488	338	105	463	354	59
Stage 1	-	-	-	-	-	-	187	187	-	151	151	-
Stage 2	-	-	-	-	-	-	301	151	-	312	203	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1545	-	-	1467	-	0	490	583	949	509	571	1007
Stage 1	-	-	-	-	-	0	815	745	-	851	772	-
Stage 2	-	-	-	-	-	0	708	772	-	699	733	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	1545	-	-	1467	-	-	289	549	949	~ 335	538	1007
Mov Cap-2 Maneuver	-	-	-	-	-	-	289	549	-	~ 335	538	-
Stage 1	-	-	-	-	-	-	793	725	-	828	747	-
Stage 2	-	-	-	-	-	-	438	747	-	~ 472	713	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.9			3.3			15.2			148.8		
HCM LOS							C			F		
Minor Lane/Major Mvmt	NBLn1		NBLn2	EBL	EBT	EBR	WBL	WBT	SBLn1	SBLn2		
Capacity (veh/h)	289		618	1545	-	-	1467	-	335	595		
HCM Lane V/C Ratio	0.096		0.406	0.026	-	-	0.031	-	1.411	0.504		
HCM Control Delay (s)	18.8		14.8	7.4	-	-	7.5	0	232.4	17		
HCM Lane LOS	C		B	A	-	-	A	A	F	C		
HCM 95th %tile Q(veh)	0.3		2	0.1	-	-	0.1	-	24.5	2.8		
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s				+: Computation Not Defined				*: All major volume in platoon		

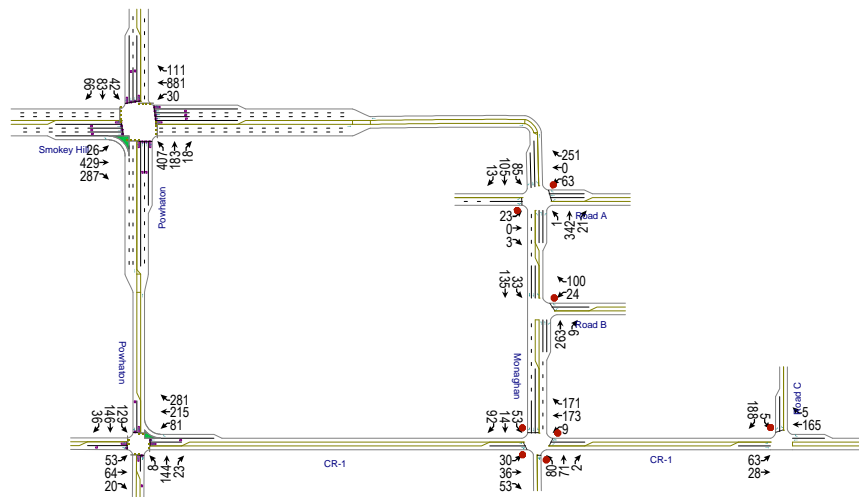
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	49	370	682	24	277	38	391	99	31	33	183	15
v/c Ratio	0.16	0.33	0.78	0.08	0.28	0.09	0.49	0.05	0.03	0.05	0.13	0.02
Control Delay	25.0	30.7	9.5	24.0	32.4	0.4	12.9	14.6	0.1	12.3	23.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.0	30.7	9.5	24.0	32.4	0.4	12.9	14.6	0.1	12.3	23.4	0.1
Queue Length 50th (ft)	22	63	0	11	55	0	88	13	0	6	31	0
Queue Length 95th (ft)	48	105	100	28	80	0	261	42	0	29	94	0
Internal Link Dist (ft)		317			613			420			273	
Turn Bay Length (ft)	200		200	250		250	400		200	200		200
Base Capacity (vph)	310	2219	1075	299	2219	767	964	1997	934	694	1431	721
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.17	0.63	0.08	0.12	0.05	0.41	0.05	0.03	0.05	0.13	0.02
Intersection Summary												



Trails at Overland Ranch  
9: Powhatan & Smokey Hill

2041 PM BKG  
12/07/2021









												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (veh/h)	30	227	418	15	170	23	240	61	19	20	112	9
Future Volume (veh/h)	30	227	418	15	170	23	240	61	19	20	112	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	49	370	0	24	277	38	391	99	31	33	183	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	224	641		192	562	174	881	2116	944	764	1743	777
Arrive On Green	0.04	0.13	0.00	0.03	0.11	0.11	0.14	0.60	0.60	0.03	0.49	0.49
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	49	370	0	24	277	38	391	99	31	33	183	15
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	2.0	5.6	0.0	1.0	4.2	1.8	8.0	0.9	0.7	0.7	2.3	0.4
Cycle Q Clear(g_c), s	2.0	5.6	0.0	1.0	4.2	1.8	8.0	0.9	0.7	0.7	2.3	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	224	641		192	562	174	881	2116	944	764	1743	777
V/C Ratio(X)	0.22	0.58		0.12	0.49	0.22	0.44	0.05	0.03	0.04	0.10	0.02
Avail Cap(c_a), veh/h	315	2351		310	2351	730	1413	2116	944	892	1743	777
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	33.6	0.0	30.9	34.1	33.0	6.5	6.9	6.8	9.4	11.1	10.7
Incr Delay (d2), s/veh	0.5	0.8	0.0	0.3	0.7	0.6	0.4	0.0	0.1	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	2.3	0.0	0.4	1.7	0.7	2.6	0.3	0.2	0.3	0.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.8	34.4	0.0	31.2	34.8	33.7	6.8	6.9	6.9	9.5	11.3	10.7
LnGrp LOS	C	C		C	C	C	A	A	A	A	B	B
Approach Vol, veh/h		419	A		339			521			231	
Approach Delay, s/veh		34.0			34.4			6.8			11.0	
Approach LOS		C			C			A			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.6	14.7	15.7	44.4	7.8	13.5	7.1	53.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.5	37.5	35.5	21.5	7.5	37.5	8.5	48.5				
Max Q Clear Time (g_c+I1), s	3.0	7.6	10.0	4.3	4.0	6.2	2.7	2.9				
Green Ext Time (p_c), s	0.0	2.7	1.2	1.0	0.0	2.1	0.0	0.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			21.2									
HCM 6th LOS			C									
<b>Notes</b>												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												



Trails at Overland Ranch  
3: CR-1 & Monaghan

2041 AM TOTAL

05/29/2022










Intersection												
Intersection Delay, s/veh	13.4											
Intersection LOS	B											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	36	53	9	173	171	80	71	2	53	14	92
Future Vol, veh/h	30	36	53	9	173	171	80	71	2	53	14	92
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	39	58	10	188	186	87	77	2	58	15	100
Number of Lanes	1	1	0	1	1	0	0	1	0	1	1	1
Approach	EB	WB		NB		SB						
Opposing Approach	WB	EB		SB		NB						
Opposing Lanes	2	2		3		1						
Conflicting Approach Left	SB	NB		EB		WB						
Conflicting Lanes Left	3	1		2		2						
Conflicting Approach Right	NB	SB		WB		EB						
Conflicting Lanes Right	1	3		2		2						
HCM Control Delay	10.3	16.3		12.9		9.8						
HCM LOS	B	C		B		A						
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3				
Vol Left, %	52%	100%	0%	100%	0%	100%	0%	0%				
Vol Thru, %	46%	0%	40%	0%	50%	0%	100%	0%				
Vol Right, %	1%	0%	60%	0%	50%	0%	0%	100%				
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop				
Traffic Vol by Lane	153	30	89	9	344	53	14	92				
LT Vol	80	30	0	9	0	53	0	0				
Through Vol	71	0	36	0	173	0	14	0				
RT Vol	2	0	53	0	171	0	0	92				
Lane Flow Rate	166	33	97	10	374	58	15	100				
Geometry Grp	8	8	8	8	8	7	7	7				
Degree of Util (X)	0.318	0.065	0.167	0.018	0.593	0.11	0.027	0.157				
Departure Headway (Hd)	6.886	7.157	6.227	6.561	5.705	6.861	6.354	5.644				
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes				
Cap	521	499	574	545	632	521	561	633				
Service Time	4.651	4.925	3.994	4.311	3.455	4.622	4.115	3.405				
HCM Lane V/C Ratio	0.319	0.066	0.169	0.018	0.592	0.111	0.027	0.158				
HCM Control Delay	12.9	10.4	10.3	9.4	16.5	10.5	9.3	9.5				
HCM Lane LOS	B	B	B	A	C	B	A	A				
HCM 95th-tile Q	1.4	0.2	0.6	0.1	3.9	0.4	0.1	0.6				

Trails at Overland Ranch  
6: CR-1 & Powhaton

2041 AM TOTAL

05/29/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	64	20	81	215	281	8	144	23	129	146	36
Future Volume (veh/h)	53	64	20	81	215	281	8	144	23	129	146	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	70	22	88	234	0	9	157	25	140	159	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	228	208	65	336	307		691	774	123	729	787	193
Arrive On Green	0.05	0.15	0.15	0.06	0.16	0.00	0.01	0.49	0.49	0.06	0.54	0.54
Sat Flow, veh/h	1781	1364	429	1781	1870	1585	1781	1575	251	1781	1451	356
Grp Volume(v), veh/h	58	0	92	88	234	0	9	0	182	140	0	198
Grp Sat Flow(s),veh/h/ln	1781	0	1793	1781	1870	1585	1781	0	1825	1781	0	1806
Q Serve(g_s), s	2.1	0.0	3.5	3.1	9.1	0.0	0.2	0.0	4.3	2.8	0.0	4.3
Cycle Q Clear(g_c), s	2.1	0.0	3.5	3.1	9.1	0.0	0.2	0.0	4.3	2.8	0.0	4.3
Prop In Lane	1.00		0.24	1.00		1.00	1.00		0.14	1.00		0.20
Lane Grp Cap(c), veh/h	228	0	274	336	307		691	0	897	729	0	981
V/C Ratio(X)	0.25	0.00	0.34	0.26	0.76		0.01	0.00	0.20	0.19	0.00	0.20
Avail Cap(c_a), veh/h	367	0	926	501	1015		892	0	897	1025	0	981
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	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.8	0.0	28.9	25.2	30.5	0.0	9.5	0.0	11.0	7.8	0.0	9.0
Incr Delay (d2), s/veh	0.6	0.0	0.7	0.4	3.9	0.0	0.0	0.0	0.5	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	1.5	1.3	4.3	0.0	0.1	0.0	1.7	1.0	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.4	0.0	29.7	25.6	34.5	0.0	9.5	0.0	11.5	7.9	0.0	9.4
LnGrp LOS	C	A	C	C	C		A	A	B	A	A	A
Approach Vol, veh/h	150		322			A		191		338		
Approach Delay, s/veh	28.4		32.0			11.4		8.8				
Approach LOS	C		C			B		A				
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.3	42.1	8.9	16.2	5.4	46.0	8.0	17.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.5	33.5	11.5	39.5	9.5	41.5	9.5	41.5				
Max Q Clear Time (g_c+14),s	14.8	6.3	5.1	5.5	2.2	6.3	4.1	11.1				
Green Ext Time (p_c), s	0.3	1.0	0.1	0.5	0.0	1.2	0.0	1.4				

Intersection Summary

HCM 6th Ctrl Delay 19.7

HCM 6th LOS B













Notes

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

Trails at Overland Ranch  
9: Powhaton & Smokey Hill

2041 AM TOTAL  
05/29/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	429	287	30	881	111	407	183	18	42	83	66
Future Volume (veh/h)	26	429	287	30	881	111	407	183	18	42	83	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	28	466	0	33	958	121	442	199	20	46	90	72
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	1312		292	1327	412	808	1785	796	551	1275	569
Arrive On Green	0.03	0.26	0.00	0.03	0.26	0.26	0.18	0.50	0.50	0.04	0.36	0.36
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	28	466	0	33	958	121	442	199	20	46	90	72
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	1.2	7.7	0.0	1.4	17.5	6.3	15.0	3.0	0.7	1.6	1.7	3.1
Cycle Q Clear(g_c), s	1.2	7.7	0.0	1.4	17.5	6.3	15.0	3.0	0.7	1.6	1.7	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	164	1312		292	1327	412	808	1785	796	551	1275	569
V/C Ratio(X)	0.17	0.36		0.11	0.72	0.29	0.55	0.11	0.03	0.08	0.07	0.13
Avail Cap(c_a), veh/h	212	1917		335	1917	595	1158	1785	796	600	1275	569
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.3	31.2	0.0	26.9	34.6	30.4	13.5	13.5	12.9	19.3	21.6	22.1
Incr Delay (d2), s/veh	0.5	0.2	0.0	0.2	0.8	0.4	0.6	0.1	0.1	0.1	0.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.1	0.0	0.6	7.2	2.4	5.8	1.2	0.2	0.7	0.7	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	31.3	0.0	27.1	35.3	30.8	14.0	13.6	12.9	19.4	21.7	22.5
LnGrp LOS	C	C		C	D	C	B	B	B	B	C	C
Approach Vol, veh/h	494		A	1112		661		208				
Approach Delay, s/veh	31.2			34.6		13.9		21.5				
Approach LOS	C			C		B		C				
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	30.8	22.9	41.3	7.2	31.1	8.2	56.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	38.5	38.5	19.5	5.5	38.5	6.5	51.5				
Max Q Clear Time (g_c+I), s	13.4	9.7	17.0	5.1	3.2	19.5	3.6	5.0				
Green Ext Time (p_c), s	0.0	3.4	1.4	0.6	0.0	7.1	0.0	1.4				

Intersection Summary












HCM 6th Ctrl Delay	27.3
HCM 6th LOS	C

Notes

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

Trails at Overland Ranch  
12: Road A

2041 AM TOTAL  
05/29/2022

Intersection												
Int Delay, s/veh	6.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	0	3	63	0	251	1	342	21	85	105	13
Future Vol, veh/h	23	0	3	63	0	251	1	342	21	85	105	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	100	-	100	100	-	100	200	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	0	3	68	0	273	1	372	23	92	114	14







Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	820	695	114	681	686	372	128	0	0	395	0	0
Stage 1	298	298	-	374	374	-	-	-	-	-	-	-
Stage 2	522	397	-	307	312	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	294	366	939	364	370	674	1458	-	-	1164	-	-
Stage 1	711	667	-	647	618	-	-	-	-	-	-	-
Stage 2	538	603	-	703	658	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	164	337	939	341	340	674	1458	-	-	1164	-	-
Mov Cap-2 Maneuver	164	337	-	341	340	-	-	-	-	-	-	-
Stage 1	710	614	-	646	617	-	-	-	-	-	-	-
Stage 2	320	602	-	645	606	-	-	-	-	-	-	-







Approach	EB		WB		NB		SB	
HCM Control Delay, s	28.4		14.8		0		3.5	
HCM LOS	D		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1458	-	-	164	939	341	-	674	1164	-	-
HCM Lane V/C Ratio	0.001	-	-	0.152	0.003	0.201	-	0.405	0.079	-	-
HCM Control Delay (s)	7.5	-	-	30.9	8.8	18.2	0	13.9	8.4	-	-
HCM Lane LOS	A	-	-	D	A	C	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0	0.7	-	2	0.3	-	-

Trails at Overland Ranch  
14: Monaghan & Road B

2041 AM TOTAL  
05/29/2022










Intersection						
Int Delay, s/veh	2.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	24	100	263	9	33	135
Future Vol, veh/h	24	100	263	9	33	135
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	100	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	109	286	10	36	147
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	432	143	0	0	296	0
Stage 1	286	-	-	-	-	-
Stage 2	146	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	552	879	-	-	1262	-
Stage 1	737	-	-	-	-	-
Stage 2	866	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	536	879	-	-	1262	-
Mov Cap-2 Maneuver	536	-	-	-	-	-
Stage 1	737	-	-	-	-	-
Stage 2	841	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	10.2	0	1.6			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 536 879 1262	-	-		
HCM Lane V/C Ratio	-	- 0.049 0.124 0.028	-	-		
HCM Control Delay (s)	-	- 12.1 9.7 7.9	-	-		
HCM Lane LOS	-	- B A A	-	-		
HCM 95th %tile Q(veh)	-	- 0.2 0.4 0.1	-	-		

Intersection						
Int Delay, s/veh	5.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	63	28	165	5	5	188
Future Vol, veh/h	63	28	165	5	5	188
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	100	0	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	68	30	179	5	5	204
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	184	0	-	0	345	179
Stage 1	-	-	-	-	179	-
Stage 2	-	-	-	-	166	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1391	-	-	-	652	864
Stage 1	-	-	-	-	852	-
Stage 2	-	-	-	-	863	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1391	-	-	-	620	864
Mov Cap-2 Maneuver	-	-	-	-	620	-
Stage 1	-	-	-	-	810	-
Stage 2	-	-	-	-	863	-
Approach	EB	WB		SB		
HCM Control Delay, s	5.3	0		10.5		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1391	-	-	-	620	864
HCM Lane V/C Ratio	0.049	-	-	-	0.009	0.237
HCM Control Delay (s)	7.7	-	-	-	10.9	10.5
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0	0.9















Trails at Overland Ranch  
6: CR-1 & Powhaton

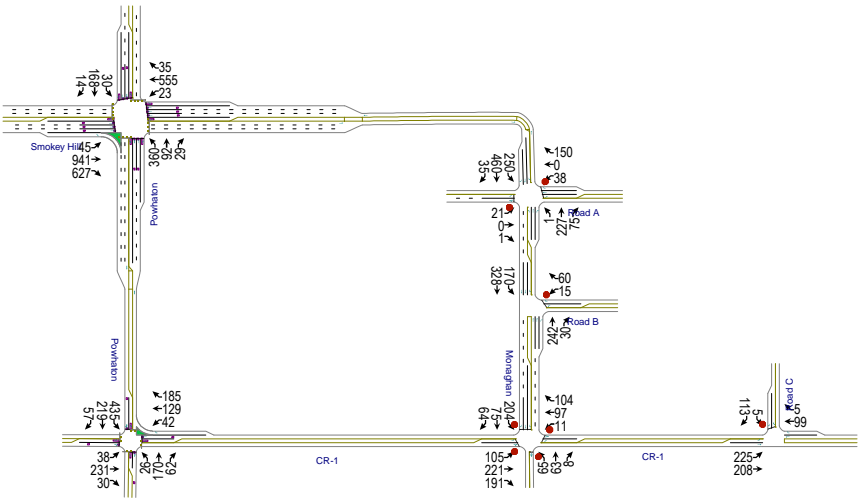
2041 AM TOTAL  
12/07/2021

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	58	92	88	234	305	9	182	140	198
v/c Ratio	0.20	0.26	0.22	0.64	0.55	0.01	0.24	0.20	0.19
Control Delay	21.7	28.7	21.7	40.6	7.8	11.2	19.4	11.2	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.7	28.7	21.7	40.6	7.8	11.2	19.4	11.2	12.5
Queue Length 50th (ft)	21	36	33	117	0	2	61	34	46
Queue Length 95th (ft)	51	84	71	210	66	10	134	78	128
Internal Link Dist (ft)		132		1160			96		420
Turn Bay Length (ft)	125		100		200	50		100	
Base Capacity (vph)	320	884	435	932	944	657	772	751	1017
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	0.18	0.10	0.20	0.25	0.32	0.01	0.24	0.19	0.19
Intersection Summary									

Trails at Overland Ranch  
9: Powhaton & Smokey Hill

2041 AM TOTAL  
12/07/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	28	466	312	33	958	121	442	199	20	46	90	72
v/c Ratio	0.17	0.32	0.46	0.11	0.67	0.22	0.56	0.11	0.02	0.09	0.08	0.12
Control Delay	24.7	30.2	5.8	23.4	35.4	4.9	17.5	16.5	0.1	16.1	31.4	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.7	30.2	5.8	23.4	35.4	4.9	17.5	16.5	0.1	16.1	31.4	0.4
Queue Length 50th (ft)	13	98	0	15	226	0	175	41	0	14	23	0
Queue Length 95th (ft)	32	129	63	37	273	34	299	73	0	36	54	0
Internal Link Dist (ft)		317			613			420			273	
Turn Bay Length (ft)	200		200	250		250	400		200	200		200
Base Capacity (vph)	167	1967	803	296	1967	695	900	1831	865	495	1151	606
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.24	0.39	0.11	0.49	0.17	0.49	0.11	0.02	0.09	0.08	0.12
Intersection Summary												











Trails at Overland Ranch  
3: CR-1 & Monaghan

2041 PM TOTAL

05/29/2022

Intersection	
Intersection Delay, s/veh	25.3
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	105	221	191	11	97	104	65	63	8	204	75	64
Future Vol, veh/h	105	221	191	11	97	104	65	63	8	204	75	64
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	114	240	208	12	105	113	71	68	9	222	82	70
Number of Lanes	1	1	0	1	1	0	0	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	3	2	2
HCM Control Delay	37.1	17.6	16.7	15.7
HCM LOS	E	C	C	C










Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	48%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	46%	0%	54%	0%	48%	0%	100%	0%
Vol Right, %	6%	0%	46%	0%	52%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	136	105	412	11	201	204	75	64
LT Vol	65	105	0	11	0	204	0	0
Through Vol	63	0	221	0	97	0	75	0
RT Vol	8	0	191	0	104	0	0	64
Lane Flow Rate	148	114	448	12	218	222	82	70
Geometry Grp	8	8	8	8	8	7	7	7
Degree of Util (X)	0.364	0.252	0.883	0.029	0.48	0.499	0.172	0.133
Departure Headway (Hd)	8.86	7.941	7.099	8.805	7.917	8.095	7.583	6.865
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	404	451	511	405	452	443	471	520
Service Time	6.656	5.712	4.87	6.595	5.707	5.869	5.356	4.638
HCM Lane V/C Ratio	0.366	0.253	0.877	0.03	0.482	0.501	0.174	0.135
HCM Control Delay	16.7	13.4	43.1	11.9	17.9	18.7	11.9	10.7
HCM Lane LOS	C	B	E	B	C	C	B	B
HCM 95th-tile Q	1.6	1	9.7	0.1	2.5	2.7	0.6	0.5

Trails at Overland Ranch  
6: CR-1 & Powhatan

2041 PM TOTAL

05/29/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	231	30	42	129	185	26	170	62	435	219	57
Future Volume (veh/h)	38	231	30	42	129	185	26	170	62	435	219	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	251	33	46	140	0	28	185	67	473	238	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	307	309	41	198	362		549	505	183	720	765	199
Arrive On Green	0.04	0.19	0.19	0.04	0.19	0.00	0.03	0.39	0.39	0.18	0.53	0.53
Sat Flow, veh/h	1781	1619	213	1781	1870	1585	1781	1310	475	1781	1431	373
Grp Volume(v), veh/h	41	0	284	46	140	0	28	0	252	473	0	300
Grp Sat Flow(s),veh/h/ln	1781	0	1832	1781	1870	1585	1781	0	1785	1781	0	1803
Q Serve(g_s), s	1.6	0.0	12.9	1.8	5.7	0.0	0.8	0.0	8.8	13.0	0.0	8.1
Cycle Q Clear(g_c), s	1.6	0.0	12.9	1.8	5.7	0.0	0.8	0.0	8.8	13.0	0.0	8.1
Prop In Lane	1.00		0.12	1.00		1.00	1.00		0.27	1.00		0.21
Lane Grp Cap(c), veh/h	307	0	350	198	362		549	0	688	720	0	965
V/C Ratio(X)	0.13	0.00	0.81	0.23	0.39		0.05	0.00	0.37	0.66	0.00	0.31
Avail Cap(c_a), veh/h	438	0	833	365	893		694	0	688	762	0	965
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	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.7	0.0	33.7	27.5	30.6	0.0	15.2	0.0	19.1	11.3	0.0	11.3
Incr Delay (d2), s/veh	0.2	0.0	4.5	0.6	0.7	0.0	0.0	0.0	1.5	1.9	0.0	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	0.7	0.0	6.0	0.8	2.6	0.0	0.3	0.0	3.8	4.9	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.9	0.0	38.2	28.1	31.2	0.0	15.2	0.0	20.6	13.2	0.0	12.1
LnGrp LOS	C	A	D	C	C		B	A	C	B	A	B
Approach Vol, veh/h	325				186		A		280		773	
Approach Delay, s/veh	36.8				30.4				20.1		12.8	
Approach LOS	D				C				C		B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	38.0	7.9	21.1	7.0	51.0	7.6	21.3					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	33.5	11.5	39.5	9.5	41.5	9.5	41.5					
Max Q Clear Time (g_c+T1), s	10.8	3.8	14.9	2.8	10.1	3.6	7.7					
Green Ext Time (p_c), s	0.4	1.5	0.0	1.7	0.0	1.9	0.0	0.8				

Intersection Summary

HCM 6th Ctrl Delay	21.2
HCM 6th LOS	C

Notes

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

Trails at Overland Ranch  
9: Powhaton & Smokey Hill

2041 PM TOTAL  
05/29/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	941	627	23	555	35	360	92	29	30	168	14
Future Volume (veh/h)	45	941	627	23	555	35	360	92	29	30	168	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	49	1023	0	25	603	38	391	100	32	33	183	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	289	1489		186	1422	442	715	1630	727	533	1133	505
Arrive On Green	0.04	0.29	0.00	0.03	0.28	0.28	0.17	0.46	0.46	0.03	0.32	0.32
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	49	1023	0	25	603	38	391	100	32	33	183	15
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	1.8	16.5	0.0	0.9	9.0	1.6	12.8	1.5	1.0	1.1	3.4	0.6
Cycle Q Clear(g_c), s	1.8	16.5	0.0	0.9	9.0	1.6	12.8	1.5	1.0	1.1	3.4	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	289	1489		186	1422	442	715	1630	727	533	1133	505
V/C Ratio(X)	0.17	0.69		0.13	0.42	0.09	0.55	0.06	0.04	0.06	0.16	0.03
Avail Cap(c_a), veh/h	318	2693		238	2693	836	980	1630	727	576	1133	505
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	29.2	0.0	24.2	27.5	24.8	14.5	14.0	13.9	20.1	22.8	21.8
Incr Delay (d2), s/veh	0.3	0.6	0.0	0.3	0.2	0.1	0.7	0.1	0.1	0.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	6.7	0.0	0.4	3.6	0.6	5.0	0.6	0.4	0.5	1.5	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.1	29.8	0.0	24.5	27.7	24.9	15.2	14.1	14.0	20.1	23.1	21.9
LnGrp LOS	C	C		C	C	C	B	B	B	C	C	C
Approach Vol, veh/h	1072		A	666			523			231		
Approach Delay, s/veh	29.5			27.4			14.9			22.6		
Approach LOS	C			C			B			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.9	31.6	20.4	34.2	8.1	30.4	7.4	47.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	49.1	29.7	18.1	5.1	49.1	5.1	42.7				
Max Q Clear Time (g_c+I2), s	12.9	18.5	14.8	5.4	3.8	11.0	3.1	3.5				
Green Ext Time (p_c), s	0.0	8.6	1.1	0.9	0.0	4.9	0.0	0.7				

Intersection Summary












HCM 6th Ctrl Delay	25.2
HCM 6th LOS	C

Notes

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

Trails at Overland Ranch  
12: Road A

2041 PM TOTAL  
05/29/2022

Intersection												
Int Delay, s/veh	5.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	0	1	38	0	150	1	227	75	250	460	35
Future Vol, veh/h	21	0	1	38	0	150	1	227	75	250	460	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	100	-	100	100	-	100	200	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	0	1	41	0	163	1	247	82	272	500	38







Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1416	1375	500	1313	1331	247	538	0	0	329	0	0
Stage 1	1044	1044	-	249	249	-	-	-	-	-	-	-
Stage 2	372	331	-	1064	1082	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	115	145	571	135	154	792	1030	-	-	1231	-	-
Stage 1	277	306	-	755	701	-	-	-	-	-	-	-
Stage 2	648	645	-	270	294	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	76	113	571	112	120	792	1030	-	-	1231	-	-
Mov Cap-2 Maneuver	76	113	-	112	120	-	-	-	-	-	-	-
Stage 1	277	238	-	754	700	-	-	-	-	-	-	-
Stage 2	514	644	-	210	229	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	68.8		19.6		0		2.9	
HCM LOS	F		C					







Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1030	-	-	76	571	112	-	792	1231	-	-
HCM Lane V/C Ratio	0.001	-	-	0.3	0.002	0.369	-	0.206	0.221	-	-
HCM Control Delay (s)	8.5	-	-	71.5	11.3	54.8	0	10.7	8.8	-	-
HCM Lane LOS	A	-	-	F	B	F	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.1	0	1.5	-	0.8	0.8	-	-

Trails at Overland Ranch  
14: Monaghan & Road B

2041 PM TOTAL  
05/29/2022










Intersection						
Int Delay, s/veh	2.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	60	242	30	170	328
Future Vol, veh/h	15	60	242	30	170	328
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	100	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	65	263	33	185	357
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	812	132	0	0	296	0
Stage 1	263	-	-	-	-	-
Stage 2	549	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	317	893	-	-	1262	-
Stage 1	757	-	-	-	-	-
Stage 2	542	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	270	893	-	-	1262	-
Mov Cap-2 Maneuver	270	-	-	-	-	-
Stage 1	757	-	-	-	-	-
Stage 2	462	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	11.3	0	2.8			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 270 893 1262	-	-		
HCM Lane V/C Ratio	-	- 0.06 0.073 0.146	-	-		
HCM Control Delay (s)	-	- 19.2 9.3 8.3	-	-		
HCM Lane LOS	-	- C A A	-	-		
HCM 95th %tile Q(veh)	-	- 0.2 0.2 0.5	-	-		



Intersection						
Int Delay, s/veh	4.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	225	208	99	5	5	113
Future Vol, veh/h	225	208	99	5	5	113
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	100	0	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	245	226	108	5	5	123
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	113	0	-	0	824	108
Stage 1	-	-	-	-	108	-
Stage 2	-	-	-	-	716	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1476	-	-	-	343	946
Stage 1	-	-	-	-	916	-
Stage 2	-	-	-	-	484	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1476	-	-	-	286	946
Mov Cap-2 Maneuver	-	-	-	-	286	-
Stage 1	-	-	-	-	764	-
Stage 2	-	-	-	-	484	-
Approach	EB	WB		SB		
HCM Control Delay, s	4.1	0		9.8		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1476	-	-	-	286	946
HCM Lane V/C Ratio	0.166	-	-	-	0.019	0.13
HCM Control Delay (s)	7.9	-	-	-	17.8	9.4
HCM Lane LOS	A	-	-	-	C	A
HCM 95th %tile Q(veh)	0.6	-	-	-	0.1	0.4













Trails at Overland Ranch  
6: CR-1 & Powhaton

2041 PM TOTAL  
12/07/2021

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	41	284	46	140	201	28	252	473	300
v/c Ratio	0.14	0.76	0.25	0.37	0.42	0.05	0.33	0.62	0.27
Control Delay	30.2	53.9	32.5	40.0	7.9	12.1	25.4	14.1	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.2	53.9	32.5	40.0	7.9	12.1	25.4	14.1	12.7
Queue Length 50th (ft)	22	195	25	89	0	7	116	159	106
Queue Length 95th (ft)	49	291	53	148	60	21	231	267	182
Internal Link Dist (ft)		132		1160			96		420
Turn Bay Length (ft)	125		100		200	50		100	
Base Capacity (vph)	283	518	181	531	595	538	758	918	1106
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	0.14	0.55	0.25	0.26	0.34	0.05	0.33	0.52	0.27
Intersection Summary									

Trails at Overland Ranch  
9: Powhaton & Smokey Hill

2041 PM TOTAL  
12/07/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	49	1023	682	25	603	38	391	100	32	33	183	15
v/c Ratio	0.15	0.54	0.67	0.12	0.32	0.06	0.61	0.06	0.04	0.08	0.22	0.03
Control Delay	17.7	26.3	5.5	17.7	23.3	0.2	24.7	22.4	0.1	21.7	38.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.7	26.3	5.5	17.7	23.3	0.2	24.7	22.4	0.1	21.7	38.2	0.1
Queue Length 50th (ft)	19	211	0	10	112	0	186	23	0	13	56	0
Queue Length 95th (ft)	41	253	76	25	143	0	309	46	0	34	104	0
Internal Link Dist (ft)		317			613			420			273	
Turn Bay Length (ft)	200		200	250		250	400		200	200		200
Base Capacity (vph)	324	2553	1134	204	2553	862	722	1545	744	398	845	481
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.40	0.60	0.12	0.24	0.04	0.54	0.06	0.04	0.08	0.22	0.03
Intersection Summary												



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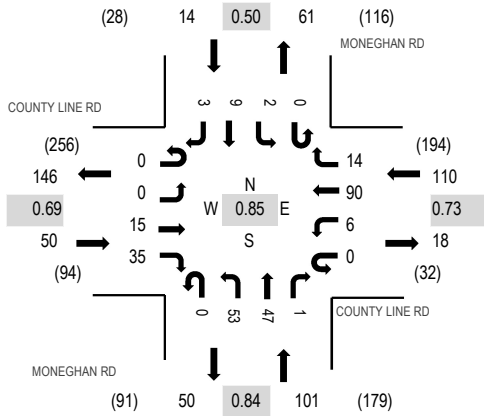
**Location:** 1 MONEGHAN RD & COUNTY LINE RD AM

**Date:** Tuesday, March 2, 2021

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

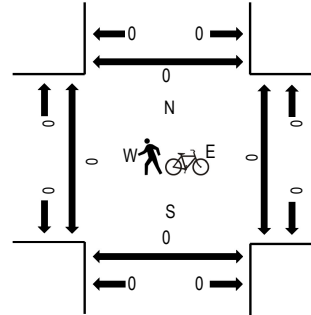
**Peak 15-Minutes:** 08:15 AM - 08:30 AM

### Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

### Peak Hour - Pedestrians/Bicycles on Crosswalk



### Traffic Counts

Interval Start Time	COUNTY LINE RD Eastbound				COUNTY LINE RD Westbound				MONEGHAN RD Northbound				MONEGHAN RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	2	2	0	0	15	0	0	10	18	0	0	0	2	0	49	253	0	0	0	0
7:15 AM	0	0	1	11	0	0	25	4	0	7	7	0	0	0	5	0	60	254	0	0	0	0
7:30 AM	0	0	4	7	0	0	23	5	0	12	14	0	0	0	1	2	68	275	0	0	0	0
7:45 AM	0	0	2	7	0	3	32	5	0	14	11	0	0	1	1	0	76	258	0	0	0	0
8:00 AM	0	0	2	7	0	2	18	0	0	8	11	1	0	1	0	0	50	242	0	0	0	0
8:15 AM	0	0	7	14	0	1	17	4	0	19	11	0	0	0	7	1	81		0	0	0	0
8:30 AM	0	1	5	3	0	1	18	3	0	6	9	0	0	0	3	2	51		0	0	0	0
8:45 AM	0	1	6	12	0	0	14	4	0	13	8	0	0	0	2	0	60		0	0	0	0
Count Total	0	2	29	63	0	7	162	25	0	89	89	1	0	2	21	5	495		0	0	0	0
Peak Hour	0	0	15	35	0	6	90	14	0	53	47	1	0	2	9	3	275		0	0	0	0



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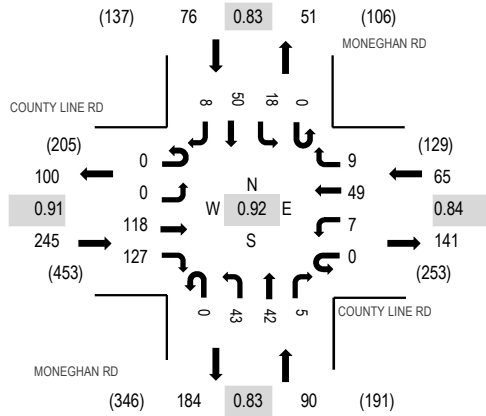
**Location:** 1 MONEGHAN RD & COUNTY LINE RD PM

**Date:** Tuesday, March 2, 2021

**Peak Hour:** 04:45 PM - 05:45 PM

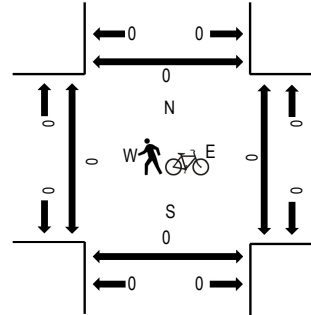
**Peak 15-Minutes:** 05:30 PM - 05:45 PM

### Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

### Peak Hour - Pedestrians/Bicycles on Crosswalk



### Traffic Counts

Interval Start Time	COUNTY LINE RD Eastbound				COUNTY LINE RD Westbound				MONEGHAN RD Northbound				MONEGHAN RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	1	10	34	0	2	13	2	0	11	10	2	0	4	9	1	99	435	0	0	0	0
4:15 PM	0	2	25	26	0	0	18	5	0	16	10	4	0	4	16	0	126	461	0	0	0	0
4:30 PM	0	0	26	32	0	0	10	5	0	12	10	1	0	1	8	0	105	451	0	0	0	0
4:45 PM	0	0	22	27	0	3	17	2	0	10	13	0	0	4	6	1	105	476	0	0	0	0
5:00 PM	0	0	34	34	0	1	10	2	0	6	11	2	0	8	15	2	125	475	0	0	0	0
5:15 PM	0	0	37	28	0	2	10	3	0	12	7	2	0	1	10	4	116		0	0	0	0
5:30 PM	0	0	25	38	0	1	12	2	0	15	11	1	0	5	19	1	130		0	0	0	0
5:45 PM	0	0	31	21	0	1	7	1	0	15	9	1	0	3	13	2	104		0	0	0	0
Count Total	0	3	210	240	0	10	97	22	0	97	81	13	0	30	96	11	910		0	0	0	0
Peak Hour	0	0	118	127	0	7	49	9	0	43	42	5	0	18	50	8	476		0	0	0	0



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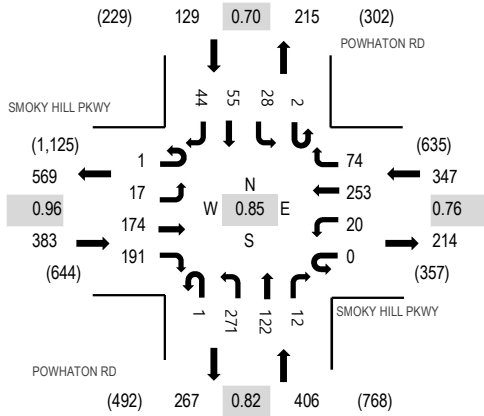
**Location:** 1 POWHATON RD & SMOKY HILL PKWY AM

**Date:** Wednesday, April 7, 2021

**Peak Hour:** 07:45 AM - 08:45 AM

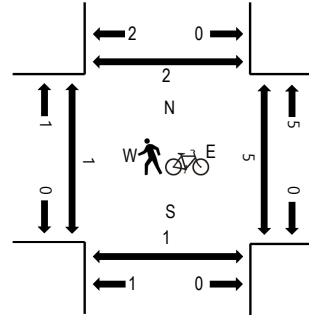
**Peak 15-Minutes:** 07:45 AM - 08:00 AM

### Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

### Peak Hour - Pedestrians/Bicycles on Crosswalk



### Traffic Counts

Interval Start Time	SMOKY HILL PKWY Eastbound				SMOKY HILL PKWY Westbound				POWHATON RD Northbound				POWHATON RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	25	21	0	1	59	9	0	82	9	5	0	3	16	1	231	1,150	0	0	0	0
7:15 AM	0	2	21	44	0	3	73	10	0	71	10	2	1	1	12	1	251	1,234	0	0	0	0
7:30 AM	0	4	29	36	0	4	66	12	0	93	9	6	1	14	20	4	298	1,255	0	0	0	0
7:45 AM	0	1	46	44	0	11	91	20	0	86	36	4	2	9	11	9	370	1,265	0	0	1	0
8:00 AM	0	7	46	40	0	3	56	21	0	56	35	2	0	8	11	30	315	1,126	0	1	0	0
8:15 AM	1	6	46	47	0	3	51	16	1	61	17	4	0	4	15	0	272		1	0	0	0
8:30 AM	0	3	36	60	0	3	55	17	0	68	34	2	0	7	18	5	308		0	0	0	0
8:45 AM	0	3	25	51	0	4	40	7	0	64	8	3	2	9	13	2	231		0	0	0	0
Count Total	1	26	274	343	0	32	491	112	1	581	158	28	6	55	116	52	2,276		1	1	1	0
Peak Hour	1	17	174	191	0	20	253	74	1	271	122	12	2	28	55	44	1,265		1	1	1	0



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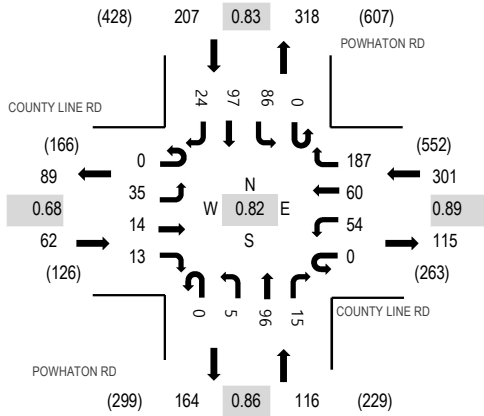
**Location:** 2 POWHATON RD & COUNTY LINE RD AM

**Date:** Wednesday, April 7, 2021

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

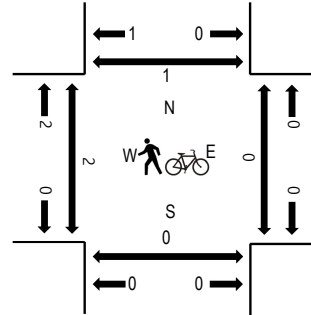
**Peak 15-Minutes:** 07:30 AM - 07:45 AM

### Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

### Peak Hour - Pedestrians/Bicycles on Crosswalk



### Traffic Counts

Interval Start Time	COUNTY LINE RD Eastbound				COUNTY LINE RD Westbound				POWHATON RD Northbound				POWHATON RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	1	2	0	0	14	11	49	0	0	16	1	0	18	19	5	136	684	1	0	0	1
7:15 AM	0	1	4	3	0	17	16	50	0	1	19	2	0	26	25	3	167	686	0	0	0	1
7:30 AM	0	9	4	3	0	15	18	58	0	2	29	3	0	29	36	3	209	676	0	0	0	0
7:45 AM	0	14	1	4	0	16	14	45	0	0	26	6	0	20	19	7	172	662	1	0	0	0
8:00 AM	0	11	5	3	0	6	12	34	0	2	22	4	0	11	17	11	138	651	0	0	0	0
8:15 AM	0	10	2	2	0	9	7	43	0	8	17	7	1	25	19	7	157		0	0	0	0
8:30 AM	0	15	10	5	0	10	10	41	0	4	32	2	1	39	20	6	195		0	0	0	0
8:45 AM	0	2	11	4	0	11	6	40	0	1	21	4	0	27	22	12	161		0	0	0	3
Count Total	0	63	39	24	0	98	94	360	0	18	182	29	2	195	177	54	1,335		2	0	0	5
Peak Hour	0	35	14	13	0	54	60	187	0	5	96	15	0	86	97	24	686		1	0	0	1



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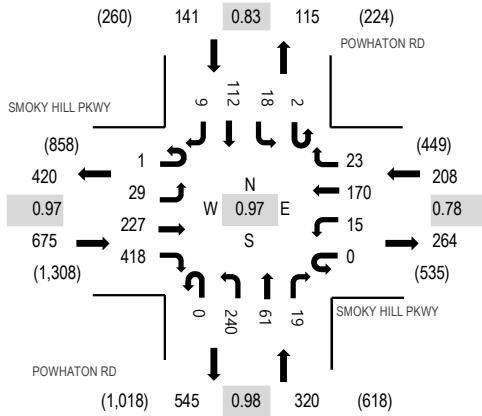
**Location:** 1 POWHATON RD & SMOKY HILL PKWY PM

**Date:** Wednesday, April 7, 2021

**Peak Hour:** 04:45 PM - 05:45 PM

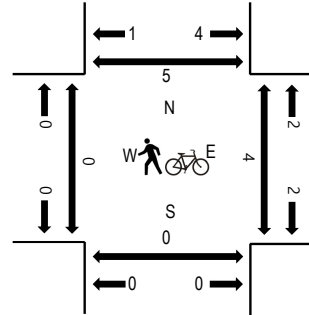
**Peak 15-Minutes:** 05:00 PM - 05:15 PM

### Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

### Peak Hour - Pedestrians/Bicycles on Crosswalk



### Traffic Counts

Interval Start Time	SMOKY HILL PKWY Eastbound				SMOKY HILL PKWY Westbound				POWHATON RD Northbound				POWHATON RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	5	62	100	0	5	66	5	0	45	13	1	0	6	22	4	334	1,297	0	2	1	1
4:15 PM	0	5	49	89	0	5	43	4	0	53	15	6	0	11	15	3	298	1,309	0	3	0	0
4:30 PM	0	8	52	91	0	2	54	6	0	59	18	3	1	9	28	2	333	1,334	0	0	0	1
4:45 PM	0	10	56	101	0	4	43	1	0	60	17	5	1	4	29	1	332	1,344	0	0	0	0
5:00 PM	0	5	55	111	0	4	40	4	0	66	10	6	0	8	36	1	346	1,338	0	0	0	1
5:15 PM	1	10	53	98	0	4	45	6	0	59	19	6	0	1	18	3	323		0	2	0	1
5:30 PM	0	4	63	108	0	3	42	12	0	55	15	2	1	5	29	4	343		0	0	0	0
5:45 PM	0	10	61	101	0	2	46	3	0	63	16	6	0	5	13	0	326		0	0	0	1
Count Total	1	57	451	799	0	29	379	41	0	460	123	35	3	49	190	18	2,635		0	7	1	5
Peak Hour	1	29	227	418	0	15	170	23	0	240	61	19	2	18	112	9	1,344		0	2	0	2





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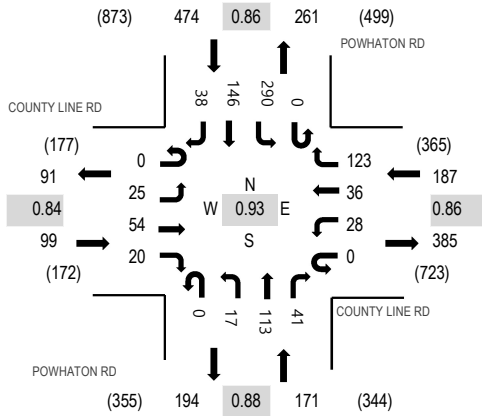
**Location:** 2 POWHATON RD & COUNTY LINE RD PM

**Date:** Wednesday, April 7, 2021

**Peak Hour:** 04:45 PM - 05:45 PM

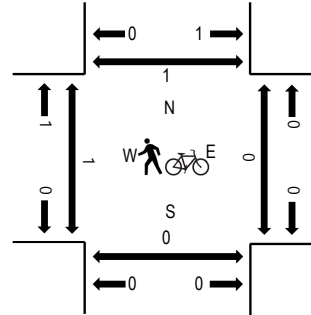
**Peak 15-Minutes:** 05:00 PM - 05:15 PM

### Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

### Peak Hour - Pedestrians/Bicycles on Crosswalk



### Traffic Counts

Interval Start Time	COUNTY LINE RD Eastbound				COUNTY LINE RD Westbound				POWHATON RD Northbound				POWHATON RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	7	13	2	0	7	10	27	0	7	15	17	0	64	48	11	228	877	0	0	0	0
4:15 PM	0	5	12	3	0	7	8	23	0	3	35	11	1	61	26	9	204	900	0	0	0	0
4:30 PM	0	5	15	2	0	16	9	32	0	6	22	9	0	64	23	5	208	916	0	0	0	0
4:45 PM	0	13	15	5	0	9	5	26	0	4	31	11	0	72	34	12	237	931	0	0	0	0
5:00 PM	0	8	15	8	0	4	6	38	0	3	26	5	0	84	47	7	251	877	0	0	0	0
5:15 PM	0	3	18	4	0	12	13	27	0	4	26	12	0	57	32	12	220		0	0	0	0
5:30 PM	0	1	6	3	0	3	12	32	0	6	30	13	0	77	33	7	223		1	0	0	1
5:45 PM	0	4	5	0	0	2	6	31	0	5	31	12	0	55	25	7	183		0	0	0	1
Count Total	0	46	99	27	0	60	69	236	0	38	216	90	1	534	268	70	1,754		1	0	0	2
Peak Hour	0	25	54	20	0	28	36	123	0	17	113	41	0	290	146	38	931		1	0	0	1



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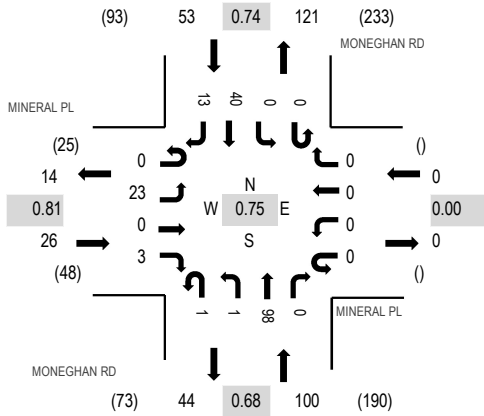
**Location:** 1 MONEGHAN RD & MINERAL PL AM

**Date:** Wednesday, November 24, 2021

**Peak Hour:** 08:00 AM - 09:00 AM

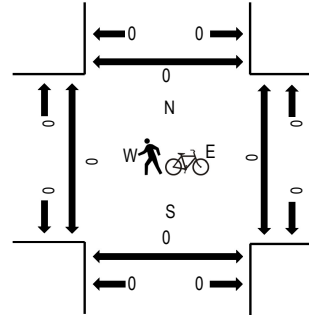
**Peak 15-Minutes:** 08:15 AM - 08:30 AM

### Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

### Peak Hour - Pedestrians/Bicycles on Crosswalk

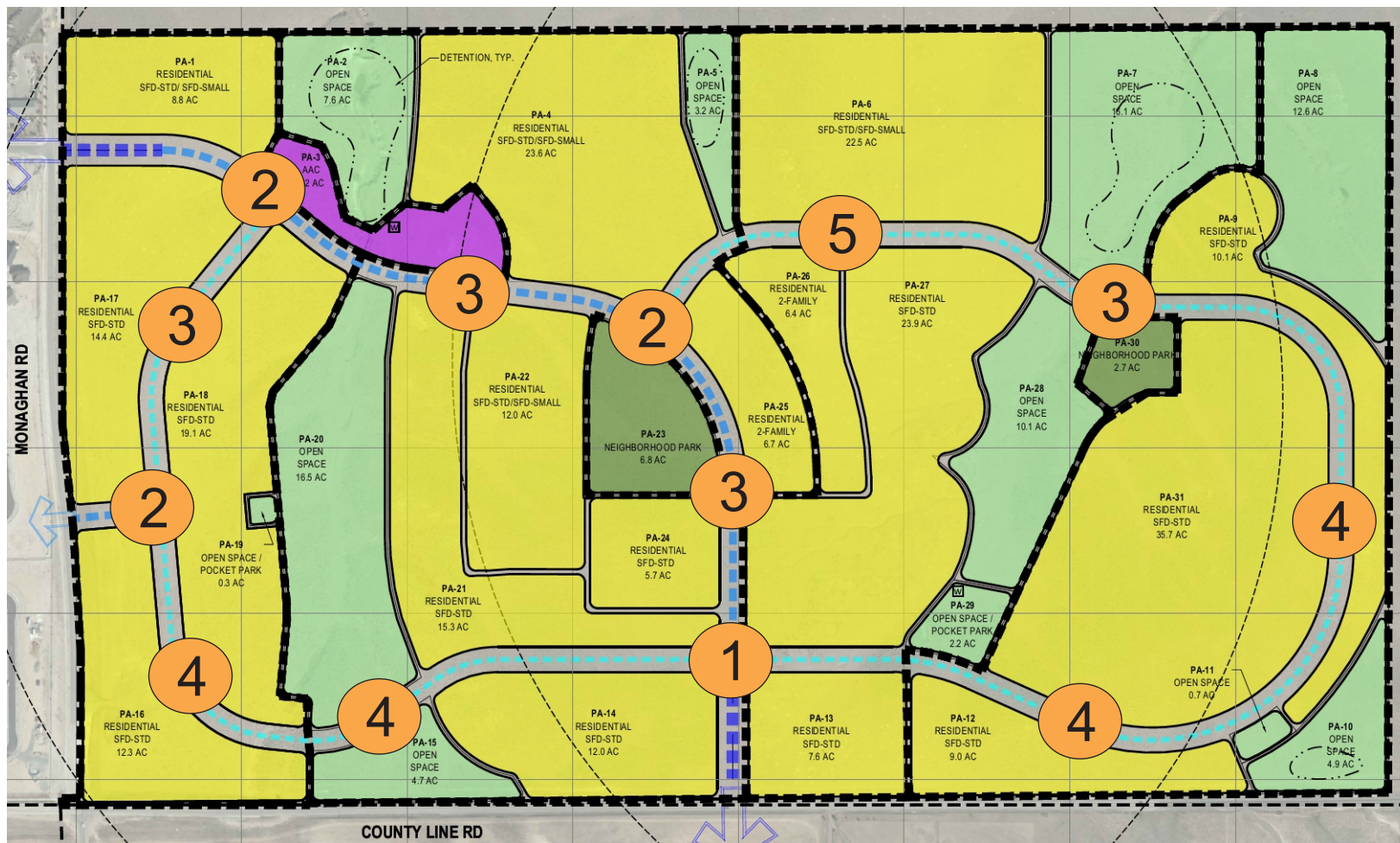


### Traffic Counts

Interval Start Time	MINERAL PL Eastbound				MINERAL PL Westbound				MONEGHAN RD Northbound				MONEGHAN RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	9	0	0	0	0	0	0	0	0	21	0	0	0	7	0	37	152	0	0	0	0
7:15 AM	0	7	0	0	0	0	0	0	0	0	24	0	0	0	7	6	44	149	0	0	0	0
7:30 AM	0	5	0	0	0	0	0	0	0	0	25	0	0	0	7	1	38	165	0	0	0	0
7:45 AM	0	1	0	0	0	0	0	0	0	0	20	0	0	0	8	4	33	164	0	0	0	0
8:00 AM	0	4	0	2	0	0	0	0	0	0	24	0	0	0	4	0	34	179	0	0	0	0
8:15 AM	0	4	0	1	0	0	0	0	0	1	39	0	0	0	11	4	60		0	0	0	0
8:30 AM	0	8	0	0	0	0	0	0	1	0	12	0	0	0	10	6	37		0	0	0	0
8:45 AM	0	7	0	0	0	0	0	0	0	0	23	0	0	0	15	3	48		0	0	0	0
Count Total	0	45	0	3	0	0	0	0	1	1	188	0	0	0	69	24	331		0	0	0	0
Peak Hour	0	23	0	3	0	0	0	0	1	1	98	0	0	0	40	13	179		0	0	0	0

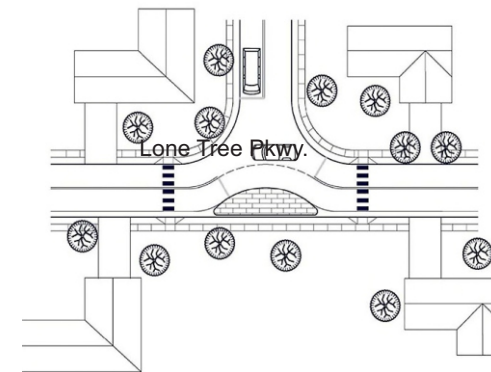






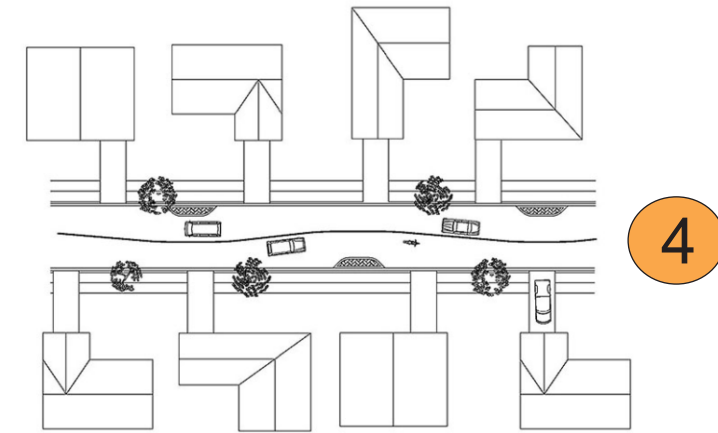
All Way Stop

1



Intersection  
Bump Out

5

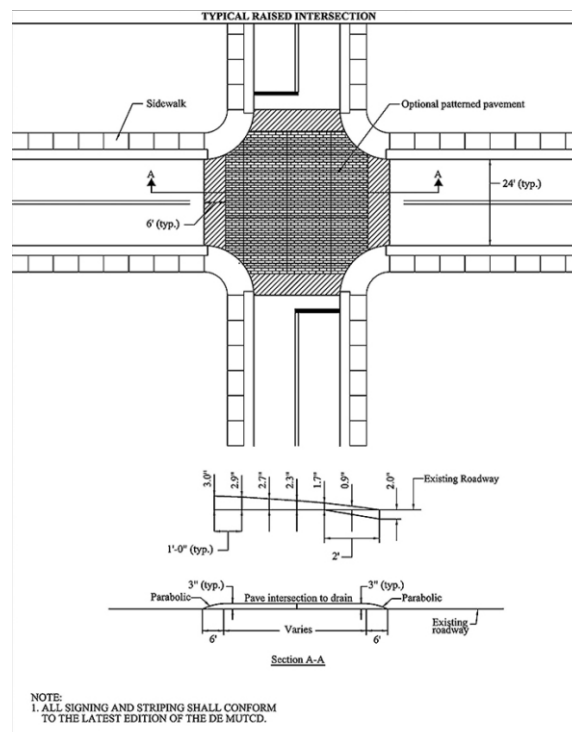


4



Sunningdale Blvd. Lone Tree

Chicane

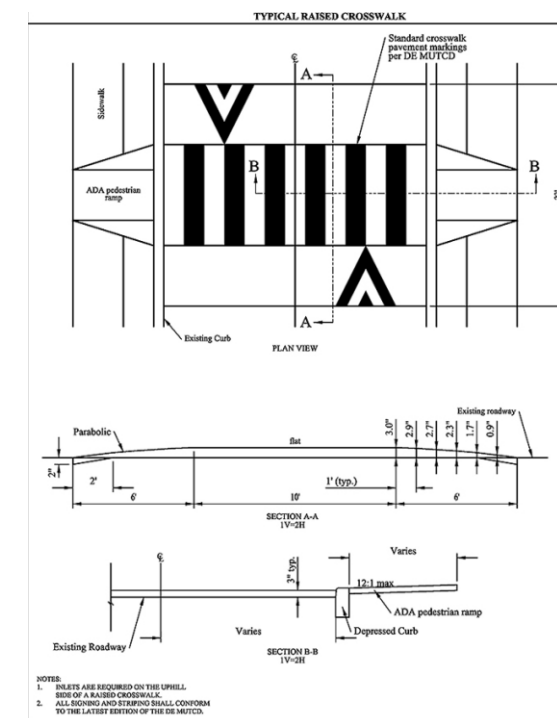


Raised Intersection



Lone Tree Pkwy.

2



Raised Crosswalk

3



Lone Tree Pkwy.

Traffic Calming Options