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July 7th, 2026

Ms. Kelly Nelson,
Development Manager
Reagan Ranch Metropolitan District No.1
90 South Cascade Ave., Suite 1500
Colorado Springs, CO 80903

RE: 7-Eleven at Reagan Ranch – Traffic Letter

Dear Ms. Nelson,

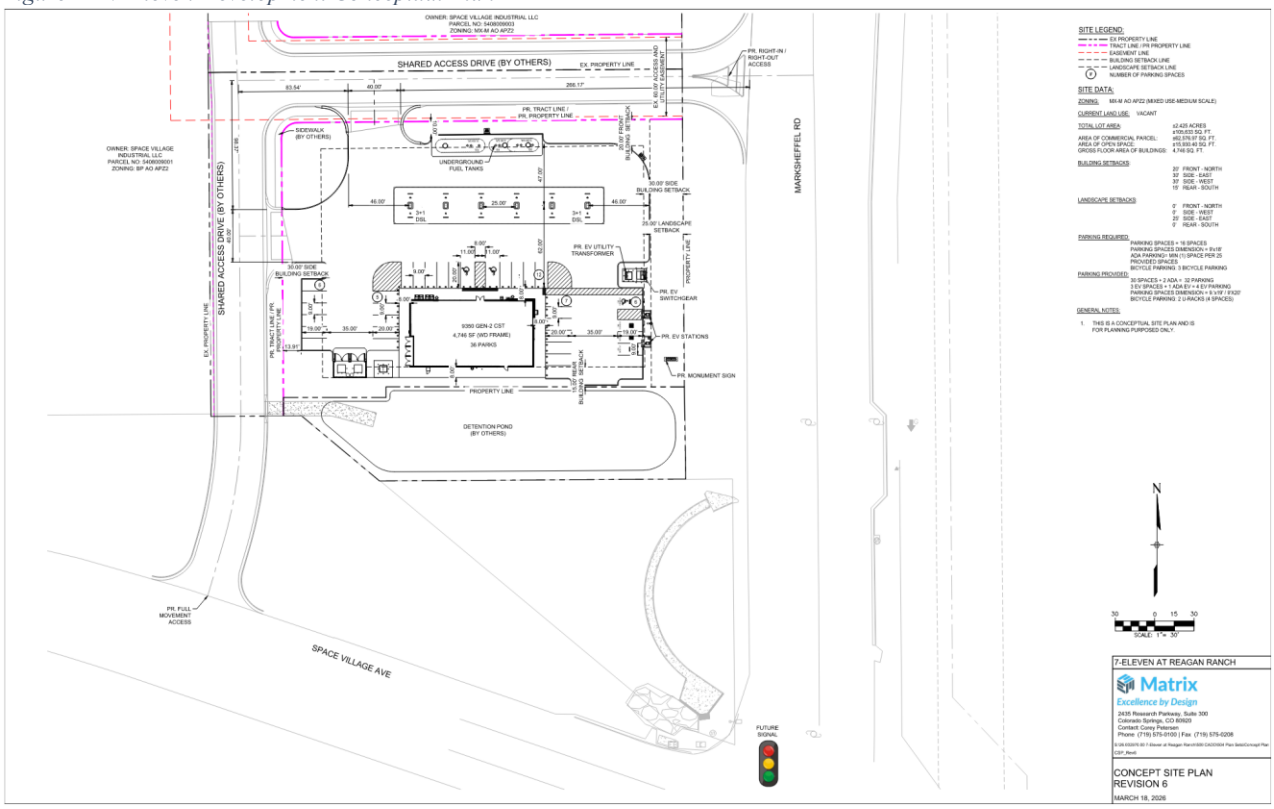
Matrix Design Group (Matrix) is pleased to provide this letter summarizing the traffic impacts associated with the proposed 7-Eleven development at Reagan Ranch under the projected buildout (2030) conditions. This letter is prepared based on the *Reagan Ranch Traffic Impact Analysis Addendum* (November 2024) prepared by Matrix. The items discussed in the traffic letter are listed below.

1. **Trip Generation**: Trips that are expected to be generated by the 7-Eleven development at Reagan Ranch are updated per the latest conceptual plan (March 2026), and the Institute of Transportation Engineers (ITE) Trip Generation Manual, 12th Edition. It is anticipated that 7-Eleven will generate more traffic than was previously analyzed in the 2024 addendum. This development was previously studied as 25,000 sq. ft. of commercial, whereas the latest conceptual plan shows a 4,746-square-foot convenience store and gas station.
2. **Traffic Circulation**: The latest conceptual site plan provides two shared access points. One full-movement access is located on Space Village Avenue and one right-in/right-out (RIRO) access is located on Marksheffel Road. This access configuration is consistent with the layout evaluated in the 2024 TIA. For more information see Figure 2 – Study Area.
3. **Traffic Operations**: Traffic operations under projected buildout (2030) conditions, including the full buildout of Reagan Ranch and the proposed 7-Eleven development, were evaluated. The results are summarized in this letter. Based on the analysis, Matrix concludes that the proposed development will not result in adverse traffic impacts to the surrounding transportation network.

Development

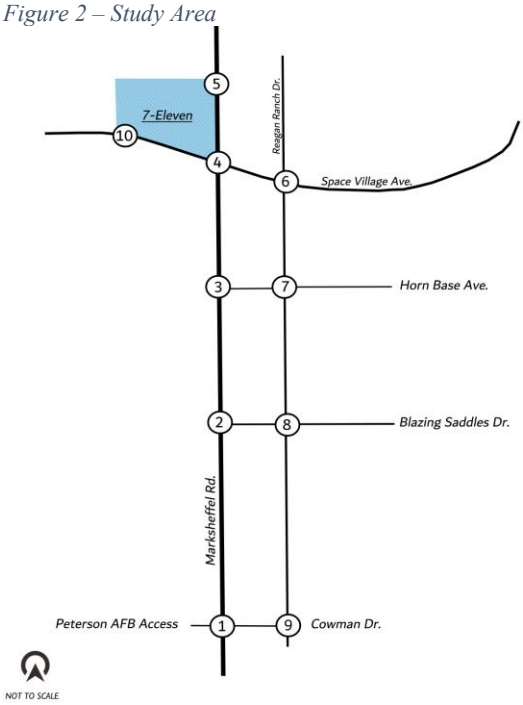
The proposed 7-Eleven at Reagan Ranch is a 2.43 acre development located at the northwest corner of Marksheffel Road and Space Village Avenue in Colorado Springs, Colorado. The project will consist of 4,746-square-foot convenience store and a fuel station equipped with 12 vehicle fueling positions (VFPs), as shown in Figure 1. This site was previously evaluated in the TIA (November 2024) as 12,500-square-foot of shopping plaza and 12,500-square-foot of general office building which is now being replaced with 4,746-square-foot convenience store and a gas station with 12 VFP. This project is anticipated to be completed by 2030 and will have two access points: one full-movement driveway located at Space Village Avenue and one RIRO driveway at Marksheffel Road.

Figure 1 – 7-Eleven Development Conceptual Plan



The conceptual plans can be found in the attachments. The site layout has been evaluated using WB-50 truck turning template to confirm that adequate space is provided for truck maneuvering, and the corresponding turning movement figures are included in the attachment. The study area for this development is shown in Figure 2.

Figure 2 – Study Area



The vehicle trips associated with the project were calculated using the ITE *Trip Generation Manual*, *12th Edition*. This methodology consists of choosing an independent variable for the land use for a particular time of day. The independent variable correlates to the variation in trip ends and is related to the land use. The value of the independent variable is either multiplied by a weighted average or used in a regression equation to calculate the trips generated by the land use. The *ITE Trip Generation Manual* provides guidance on when to use the weighted average versus the regression equation. Pass-by trips were deducted per the ITE recommendations. The trip generation estimates presented in Table 1 and Table 2 reflect traffic during the adjacent street network's peak periods, corresponding to the AM peak hours of 7:00–9:00 a.m. and the PM peak hours of 4:00–6:00 p.m. Table 1 shows the trips that are expected to be generated after pass-by trip reduction by the 7-Eleven development at buildout. The anticipated number of trips generated by this development from the previous TIA (November 2024) are shown in Table 2 for comparison.

Table 1 - Trip Generation

ITE Code - Land Use - Units	AM			PM			Daily
	In	Out	Total	In	Out	Total	Total
New Site Trips							
945 – Convenience Store/Gas Station – 12 VFP	31	31	**62**	36	36	**72**	**2,436**
Pass-By Trips							
945 – Convenience Store/Gas Station – 12 VFP	51	51	**102**	59	59	**118**	**-**
Total Site Trips							
945 – Convenience Store/Gas Station – 12 VFP	82	82	**164**	95	95	**190**	**2,436**

Table 2 - Trip Generation Comparison Table

Development	Code - Land Use - Units	AM			PM			Daily
		In	Out	Total	In	Out	Total	Total
Reagan Ranch TIA (November 2024)								
Commercial	821 – Shopping Plaza – 12,500 sq. ft.	13	8	**21**	32	33	**65**	**844**
	710 – General Office Building – 12,500 sq. ft.	25	3	**28**	5	25	**30**	**190**
Traffic Conformance Letter (July 2026)								
7-Eleven	945 – Convenience Store/Gas Station – 12 VFP	31	31	**62**	36	36	**72**	**2,436**
DIFFERENCE		-7	+20	**+13**	-1	-22	**-23**	**+1,402**

As summarized in Table 1 and Table 2, the proposed 7-Eleven development is anticipated to generate 2,436 daily trips, including 62 new trips during the morning peak hour, and 72 new trips during the afternoon peak hour. For comparison, the land use previously evaluated in the Reagan Ranch TIA Addendum was projected to generate 1,034 daily trips, with 49 of those trips occurring during the morning peak hour, and 95 trips occurring during the afternoon peak hour. As a result, the proposed 7-Eleven at Reagan Ranch development is expected to generate 1,402 more weekday daily trips, 13 more morning peak hour trips, and 23 fewer afternoon peak hour trips than previously assumed in the TIA Addendum. It is estimated that approximately 62% of the development's inbound and outbound traffic will consist of pass-by trips, while the remaining 38% will be primary (new site trips). No diverted trips were assumed for this development. The trip generation worksheets are included in the attachments.

The site traffic assignments for the 7-Eleven at Reagan Ranch development are shown in Figure 3 and Figure 4 for the AM and PM peak hours, respectively.

Figure 3 – 7-Eleven Site Traffic (AM Peak Hour)

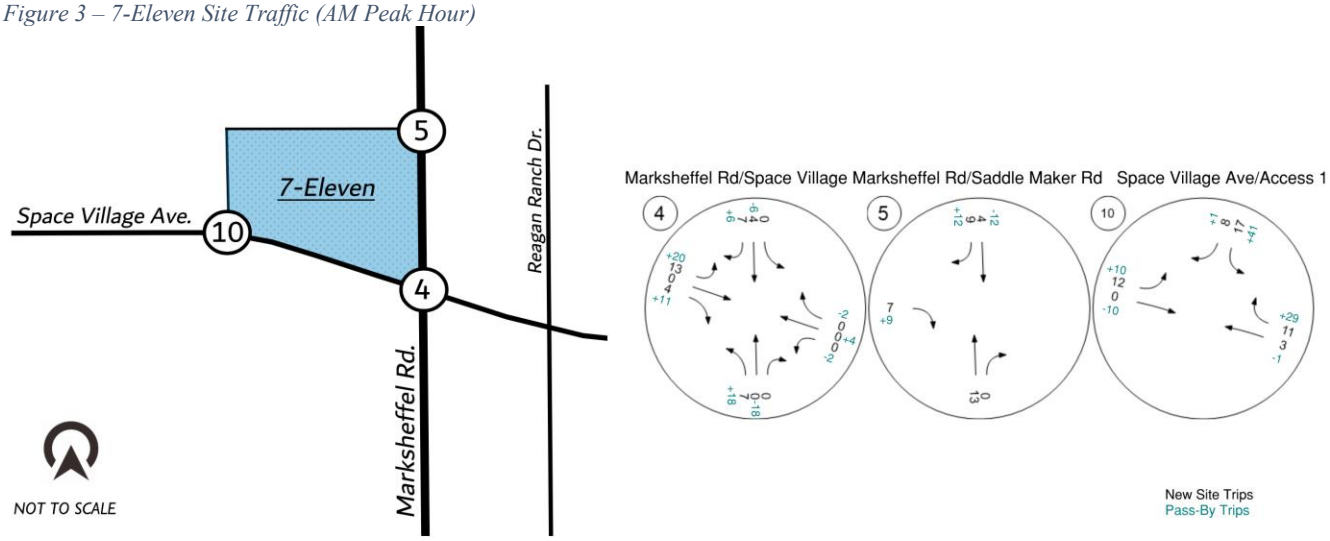
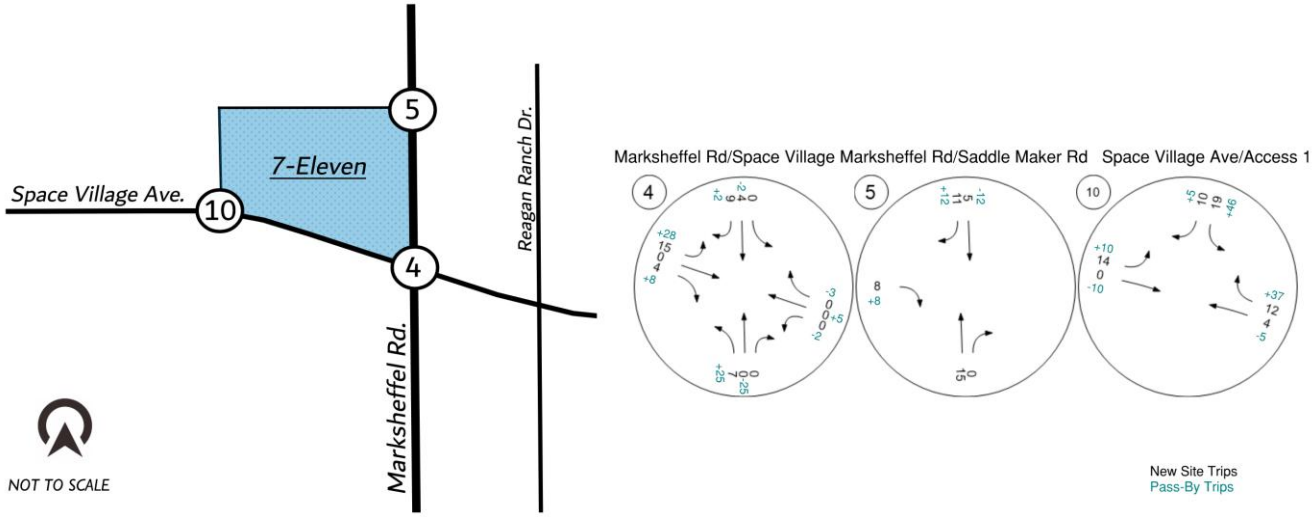


Figure 4 – 7-Eleven Site Traffic (PM Peak Hour)



Pass-by trips were assigned based on the directional distribution of traffic during the AM and PM peak hours. Inbound traffic approaching from southbound Marksheffel Road was distributed between the two site access points using a 70/30 weighting, with 70% assigned to the first access encountered in the direction of travel and 30% assigned to the secondary access. Because the Marksheffel Road/Saddlemaker Road access (Intersection #5) is restricted to RIRO movements, all inbound traffic approaching from other directions was assigned to the full-movement access on Space Village Avenue (Intersection #10). Outbound traffic was conservatively weighted more heavily toward the full-movement access, rather than being evenly distributed between the two site access points, while still reflecting the available turning movements and general direction of travel.

Traffic Operations

In this letter, Matrix studied the short-term (2030) traffic conditions under the assumption that all developments within Reagan Ranch are built out. Traffic volumes in the year (2030) are shown in Figure 5 and Figure 6. The intersection operations for the buildout (2030) total AM and PM peak hours are shown in Table 2 and Table 3, respectively. Intersection configurations and approach level of service (LOS) are shown in Figure 7.

Figure 5 – Buildout (2030) Total Volumes (AM Peak Hour)

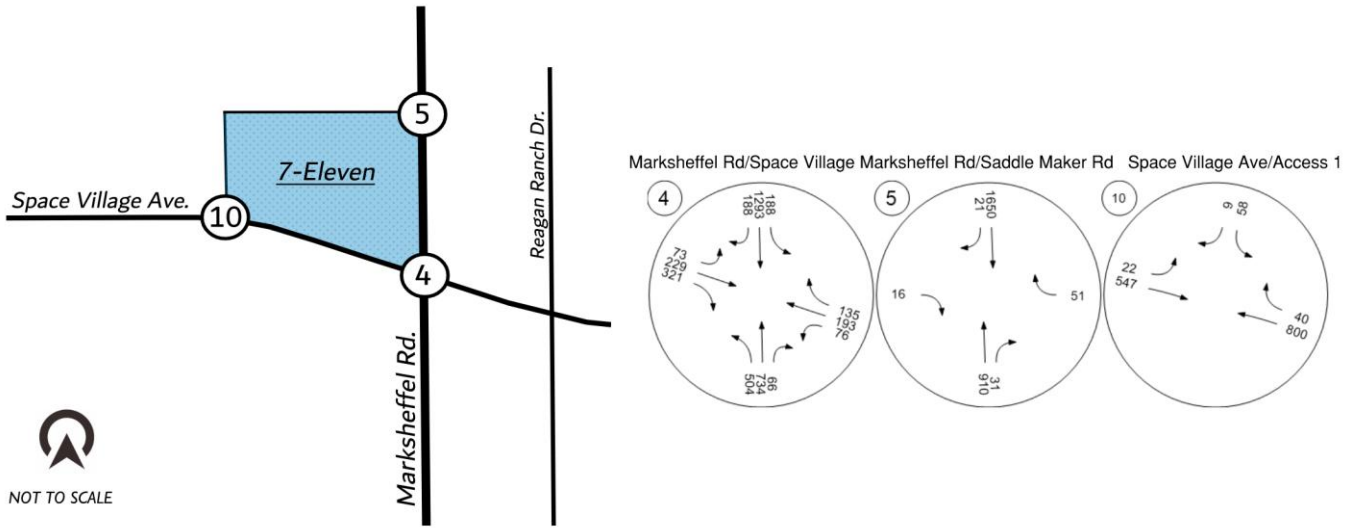


Figure 6 – Buildout (2030) Total Volumes (PM Peak Hour)

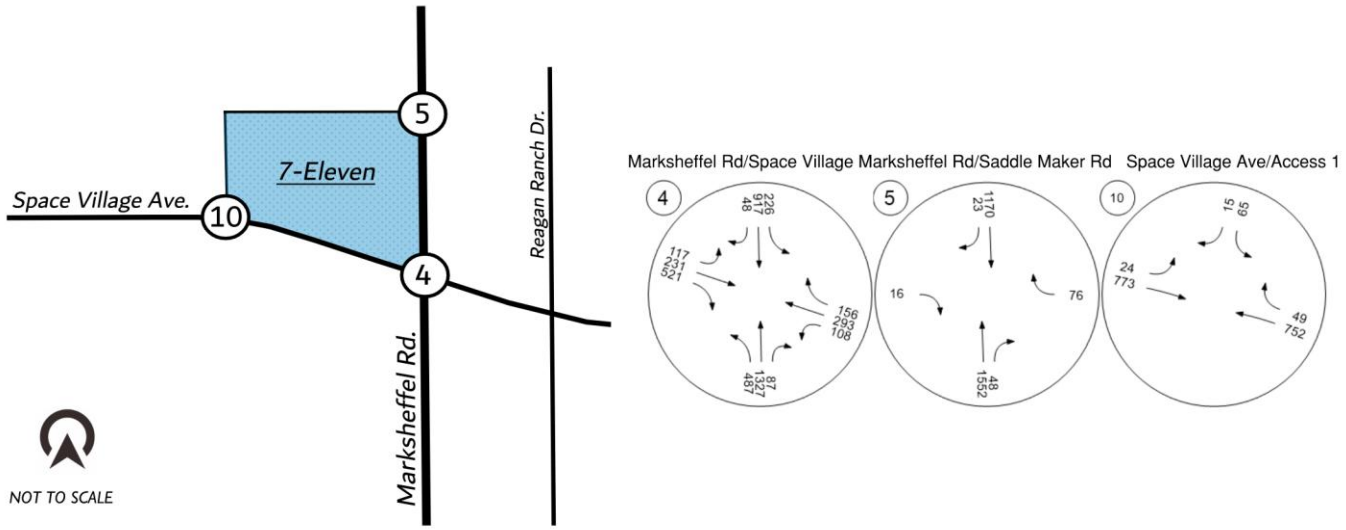


Table 2 – Buildout (2030) Intersection Operation Summary (AM Peak Hour)

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
4	Marksheffel Road/Space Village Ave	Signalized	HCM 7th Edition	NB Left	0.706	33.5	C
5	Marksheffel Rd/Saddle Maker Rd	Two-way stop	HCM 7th Edition	EB Right	0.061	18.8	C
10	Space Village Ave/Access 1	Two-way stop	HCM 7th Edition	SB Left	0.517	62.5	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

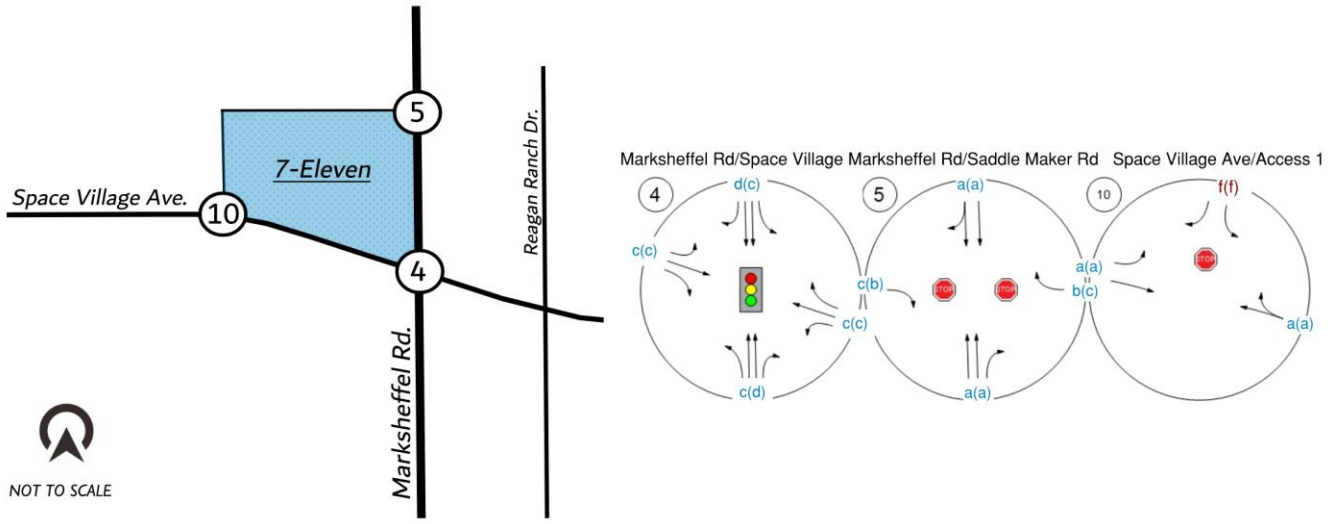
Table 3 – Buildout (2030) Intersection Operation Summary (PM Peak Hour)

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
4	Marksheffel Road/Space Village Ave	Signalized	HCM 7th Edition	NB Thru	0.661	34.9	C
5	Marksheffel Rd/Saddle Maker Rd	Two-way stop	HCM 7th Edition	WB Right	0.270	21.0	C
10	Space Village Ave/Access 1	Two-way stop	HCM 7th Edition	SB Left	0.777	121.8	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Figure 7 – Buildout (2030) Total Intersection Configurations and LOS



As shown in Table 2, Table 3, and Figure 7, the intersections of Marksheffel Road/Space Village Avenue (#4) and Marksheffel Road/Saddlemaker Road (#5) operate at an acceptable LOS (LOS D or better) in the buildout (2030) year with the addition of the 7-Eleven development. Similar to the TIA (November 2024), the intersection of Space Village Avenue/Access 1 operates at LOS F in the AM and PM peak hour.

Specifically, the southbound left-turn movement operates at LOS F during both the AM and PM peak hour. The estimated queue lengths for the southbound left-turn movement are approximately two vehicles during the AM peak hour and four vehicles during the PM peak hour. It should also be noted that, for stop-controlled intersections, the Highway Capacity Manual (HCM) LOS is determined by the worst-performing movement. Consequently, it is not uncommon for motorists on the minor street to experience relatively high delays during the peak hour, even when the overall intersection continues to function acceptably.

However, as shown in Figure 3 and Figure 4, the projects outbound left-turn trips have been heavily weighted toward this driveway, while in practice, motorists may adjust their travel paths based on the peak hour congestion at the two site driveways. For example, if a queue develops in the southbound left-turn lane at the western driveway, some drivers may instead exit via the eastern driveway.

Also, the existing striped median along Space Village Avenue allows drivers to complete the left-turn by accepting two successive gaps in opposing traffic rather than waiting for a single acceptable gap across both directions of travel. Under two-stage gap acceptance conditions, the southbound left-turn movement is projected to improve to LOS C (23.56 seconds per vehicle delay) during the AM peak hour and LOS D (28.43 seconds per vehicle delay) during the PM peak hour. The mitigated scenarios are included in the attachment and are labeled as "Mitigated". In addition, an exclusive eastbound left-turn lane on Space Village Avenue at the western driveway is recommended to facilitate two-stage gap acceptance for southbound left-turning vehicles. The project will provide sufficient storage to accommodate the expected southbound left-turn queues at this driveway.

Conclusion:
Based on the results of this analysis, the incremental traffic generated by the proposed 7-Eleven development is not expected to adversely affect the surrounding transportation network, provided the recommendations outlined in this letter are implemented. Furthermore, the turn lane recommendations presented in the 2024 TIA Addendum for the intersections evaluated in this letter remain valid and appropriate. Any future development beyond the scope of this analysis should be supported by a separate traffic letter to evaluate its potential transportation impacts. The following improvements are recommended:

Space Village Avenue/Access 1 (#5)

- An exclusive eastbound left-turn lane. Include 140-ft of taper and 120-ft of deceleration lane.
- A southbound left-turn lane. The project will provide adequate storage to accommodate the vehicles in the queue.

Please feel free to contact me at (719) 575-0100 or at mariaangelica.deeb@matrixdesigngroup.com if you have any questions.

Sincerely,

MaríaAngélica Deeb, PE, PTOE, RSP1, PTP, ENV SP
Regional Director (Interim)
Matrix Design Group, Inc.

Attachments:
7-Eleven Trip Generation
Buildout (2030) Total AM Intersection LOS Report
Buildout (2030) Total PM Intersection LOS Report
7-Eleven at Reagan Ranch Concept Plan
Trip Generation Excerpt from TIA Addendum (November 2024)

PROJECT DETAILS

Project Name:	7-Eleven at Reagan Ranch	Type of Project:	
Project No:		City:	
Country:		Built-up Area(Sq.ft):	
Analyst Name:	Timothy Cason	Clients Name:	
Date:	6/28/2026	ZIP/Postal Code:	
State/Province:		No. of Scenarios:	3
Analysis Region:			

SCENARIO SUMMARY

Scenarios	Name	No. of Land Uses	Phases of Development	No. of Years to Project Traffic	User Group	Estimated New Vehicle Trips		
						Entry	Exit	Total
Scenario - 1	PM Peak Hour	1	1	0		36	36	72
Scenario - 1	AM Peak Hour	1	1	0		31	31	62
Scenario - 1	Weekday	1	1	0		1218	1218	2436

Scenario - 1

Scenario Name: PM Peak Hour
User Group:
Dev. phase: 1
No. of Years to Project Traffic : 0
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method	Entry	Exit	Total
					Rate/Equation	Split%	Split%	
945(1) - Convenience Store/Gas Station - GFA (2-4k)	General Urban/Suburban	Vehicle Fueling Positions	12	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Average	95	95	190
Data Source: Trip Generation Manual, 12th Ed					15.85	50%	50%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
945(1) - Convenience Store/Gas Station - GFA (2-4k)	100	100	1	1	50	50

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
945(1) - Convenience Store/Gas Station - GFA (2-4k)	95	95	0	0	95	95
	190		0		190	

INTERNAL VEHICLE TRIP REDUCTION

LAND USE GROUP ASSIGNMENT:

Land Use	Land Use Group
945(1) - Convenience Store/Gas Station - GFA (2-4k)	Resturant

BALANCED PERSON TRIPS:

INTERNAL PERSON TRIPS:

945(1) - Convenience Store/Gas Station-GFA (2-4k)

Internal Person Trips From	Entry	Exit	Total
Total Internal Person Trips	**0**	**0**	**0**

INTERNAL VEHICLE TRIPS AND CAPTURE:

945(1) - Convenience Store/Gas Station-GFA (2-4k)

Total Internal Person Trips	0	0	0
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**0**	**0**	**0**
Total External Vehicle Trips	95	95	190
Internal Vehicle Trip Capture	**0%**	**0%**	**0%**

PASS-BY VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Pass-by Vehicle Trip %		Pass-by Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
945(1) - Convenience Store/Gas Station - GFA (2-4k)	95	95	62.00%	62.00%	59	59

DIVERTED VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Diverted Vehicle Trip %		Diverted Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
945(1) - Convenience Store/Gas Station - GFA (2-4k)	95	95	0.00%	0.00%	0	0

EXTRA VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Diverted Vehicle Trip %		Diverted Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
945(1) - Convenience Store/Gas Station - GFA (2-4k)	36	36	0.00%	0.00%	0	0

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
945(1) - Convenience Store/Gas Station - GFA (2-4k)	36	36	72

RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	95	95	190
Internal Vehicle Trips	0	0	0
External Vehicle Trips	95	95	190
Internal Vehicle Trip Capture	0%	0%	0%
Pass-by Vehicle Trips	59	59	118
Diverted Vehicle Trips	0	0	0
Extra Reduced Vehicle Trips	0	0	0
New Vehicle Trips	36	36	72

Scenario - 2

Scenario Name: AM Peak Hour
User Group:
Dev. phase: 1
No. of Years to Project Traffic : 0
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method	Entry	Exit	Total
					Rate/Equation	Split%	Split%	
945(1) - Convenience Store/Gas Station - GFA (2-4k)	**General Urban/Suburban**	**Vehicle Fueling Positions**	**12**	**Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.**	**Average**	**82**	**82**	**164**
Data Source: Trip Generation Manual, 12th Ed					13.65	50%	50%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
945(1) - Convenience Store/Gas Station - GFA (2-4k)	100	100	1	1	50	50

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
945(1) - Convenience Store/Gas Station - GFA (2-4k)	82	82	0	0	82	82
	164		0		164	

INTERNAL VEHICLE TRIP REDUCTION

LAND USE GROUP ASSIGNMENT:

Land Use	Land Use Group
945(1) - Convenience Store/Gas Station - GFA (2-4k)	Resturant

BALANCED PERSON TRIPS:

INTERNAL PERSON TRIPS:

945(1) - Convenience Store/Gas Station-GFA (2-4k)

Internal Person Trips From	Entry	Exit	Total
Total Internal Person Trips	**0**	**0**	**0**

INTERNAL VEHICLE TRIPS AND CAPTURE:

945(1) - Convenience Store/Gas Station-GFA (2-4k)

Total Internal Person Trips	0	0	0
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**0**	**0**	**0**
Total External Vehicle Trips	82	82	164
Internal Vehicle Trip Capture	**0%**	**0%**	**0%**

PASS-BY VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Pass-by Vehicle Trip %		Pass-by Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
945(1) - Convenience Store/Gas Station - GFA (2-4k)	82	82	62.20%	62.20%	51	51

DIVERTED VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Diverted Vehicle Trip %		Diverted Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
945(1) - Convenience Store/Gas Station - GFA (2-4k)	82	82	0.00%	0.00%	0	0

EXTRA VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Diverted Vehicle Trip %		Diverted Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
945(1) - Convenience Store/Gas Station - GFA (2-4k)	31	31	0.00%	0.00%	0	0

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
945(1) - Convenience Store/Gas Station - GFA (2-4k)	31	31	62

RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	82	82	164
Internal Vehicle Trips	0	0	0
External Vehicle Trips	82	82	164
Internal Vehicle Trip Capture	0%	0%	0%
Pass-by Vehicle Trips	51	51	102
Diverted Vehicle Trips	0	0	0
Extra Reduced Vehicle Trips	0	0	0
New Vehicle Trips	31	31	62

Scenario - 3

Scenario Name: Weekday
User Group:
Dev. phase: 1
No. of Years to Project Traffic : 0
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method	Entry	Exit	Total
					Rate/Equation	Split%	Split%	
945(1) - Convenience Store/Gas Station - GFA	**General**	**Vehicle Fueling Positions**	**12**	**Weekday**	**Best Fit (LIN)**	**1218**	**1218**	**2436**
Data Source: Trip Generation Manual, 12th Ed	**Urban/Suburban**				T = 173.51(X) + 353.51	50%	50%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
945(1) - Convenience Store/Gas Station - GFA (2-4k)	100	100	1	1	50	50

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
945(1) - Convenience Store/Gas Station - GFA (2-4k)	1218	1218	0	0	1218	1218
	2436		0		2436	

INTERNAL VEHICLE TRIP REDUCTION

LAND USE GROUP ASSIGNMENT:

Land Use	Land Use Group
945(1) - Convenience Store/Gas Station - GFA (2-4k)	Resturant

BALANCED PERSON TRIPS:

INTERNAL PERSON TRIPS:

945(1) - Convenience Store/Gas Station-GFA (2-4k)

Internal Person Trips From	Entry	Exit	Total
Total Internal Person Trips	**0**	**0**	**0**

INTERNAL VEHICLE TRIPS AND CAPTURE:

945(1) - Convenience Store/Gas Station-GFA (2-4k)

Total Internal Person Trips	0	0	0
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**0**	**0**	**0**
Total External Vehicle Trips	1218	1218	2436
Internal Vehicle Trip Capture	**0%**	**0%**	**0%**

PASS-BY VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Pass-by Vehicle Trip %		Pass-by Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
945(1) - Convenience Store/Gas Station - GFA (2-4k)	1218	1218	0.00%	0.00%	0	0

DIVERTED VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Diverted Vehicle Trip %		Diverted Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
945(1) - Convenience Store/Gas Station - GFA (2-4k)	1218	1218	0.00%	0.00%	0	0

EXTRA VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Diverted Vehicle Trip %		Diverted Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
945(1) - Convenience Store/Gas Station - GFA (2-4k)	1218	1218	0.00%	0.00%	0	0

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
945(1) - Convenience Store/Gas Station - GFA (2-4k)	1218	1218	2436

RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	1218	1218	2436
Internal Vehicle Trips	0	0	0
External Vehicle Trips	1218	1218	2436
Internal Vehicle Trip Capture	0%	0%	0%
Pass-by Vehicle Trips	0	0	0
Diverted Vehicle Trips	0	0	0
Extra Reduced Vehicle Trips	0	0	0
New Vehicle Trips	1218	1218	2436

Table of Contents

Intersection Level Of Service Report
Intersection 4: Marksheffel Road/Space Village Ave

Control Type:	Signalized	Delay (sec / veh):	33.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.706

Intersection Setup

Name	Marksheffel Rd			Marksheffel Rd			Space Village Ave			Space Village Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	400.00	100.00	425.00	425.00	100.00	425.00	225.00	100.00	250.00	300.00	100.00	200.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			55.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name	Marksheffel Rd			Marksheffel Rd			Space Village Ave			Space Village Avenue		
Base Volume Input [veh/h]	295	560	15	10	975	130	10	50	125	10	15	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	161	135	49	177	225	39	42	174	172	67	172	131
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	18	-18	0	0	-6	6	20	0	11	-2	4	-2
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	33	0	0	94	0	0	161	0	0	68
Total Hourly Volume [veh/h]	504	734	33	188	1293	94	73	229	160	76	193	67
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	137	199	9	51	351	26	20	62	43	21	52	18
Total Analysis Volume [veh/h]	548	798	36	204	1405	102	79	249	174	83	210	73
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow	No			No			No			No		
Signal Group	1	6	0	5	2	0	3	8	1	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	19	0	5	19	0	5	28	5	5	28	0
Amber [s]	3.0	4.5	0.0	3.0	4.5	0.0	3.0	3.4	3.0	3.0	3.4	0.0
All red [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	10.0	0.0	0.0	21.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	4.5	0.0	3.0	4.5	0.0	3.0	3.4	3.0	3.0	3.4	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	18.0	42.0	0.0	10.0	34.0	0.0	75.0	18.0	18.0	75.0	18.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	5	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	Yes		No	Yes			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	6.50	6.50	6.50	6.50	6.50	6.50	5.40	5.40	5.40	5.40	5.40	5.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	4.50	4.50	0.00	4.50	4.50	3.40	3.40	3.40	3.40	3.40	3.40
g_i, Effective Green Time [s]	45.5	35.5	35.5	45.5	27.5	27.5	12.6	12.6	12.6	12.6	12.6	12.6
g / C, Green / Cycle	0.65	0.51	0.51	0.65	0.39	0.39	0.18	0.18	0.18	0.18	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.64	0.22	0.02	0.24	0.39	0.06	0.07	0.13	0.11	0.09	0.11	0.05
s, saturation flow rate [veh/h]	852	3560	1589	856	3560	1589	1096	1870	1589	964	1870	1589
c, Capacity [veh/h]	572	1806	806	617	1399	624	155	337	286	127	337	286
d1, Uniform Delay [s]	22.08	10.96	8.70	5.85	21.25	13.79	33.90	27.15	26.43	34.74	26.51	24.67
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.17	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	28.65	0.79	0.10	1.43	25.15	0.56	2.57	5.04	2.09	5.51	1.90	0.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.96	0.44	0.04	0.33	1.00	0.16	0.51	0.74	0.61	0.65	0.62	0.26
d, Delay for Lane Group [s/veh]	50.73	11.74	8.80	7.29	46.40	14.35	36.47	32.18	28.51	40.25	28.41	25.13
Lane Group LOS	D	B	A	A	F	B	D	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	6.75	3.06	0.23	0.89	13.85	0.95	1.40	4.16	2.67	1.55	3.21	1.02
50th-Percentile Queue Length [ft/ln]	168.87	76.45	5.71	22.19	346.31	23.65	35.03	103.93	66.83	38.77	80.33	25.47
95th-Percentile Queue Length [veh/ln]	11.02	5.50	0.41	1.60	20.02	1.70	2.52	7.48	4.81	2.79	5.78	1.83
95th-Percentile Queue Length [ft/ln]	275.43	137.61	10.27	39.93	500.43	42.57	63.05	187.08	120.30	69.78	144.60	45.85

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.73	11.74	8.80	7.29	46.40	14.35	36.47	32.18	28.51	40.25	28.41	25.13
Movement LOS	D	B	A	A	F	B	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	27.13			39.82			31.59			30.44		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	33.48											
Intersection LOS	C											
Intersection V/C	0.706											

Emissions

Vehicle Miles Traveled [mph]	118.72	172.88	7.80	22.05	151.88	11.03	7.94	25.02	17.48	10.23	25.89	9.00
Stops [stops/h]	347.39	314.53	11.74	45.64	1424.81	48.65	72.06	213.80	137.48	79.75	165.25	52.40
Fuel consumption [US gal/h]	16.08	13.53	0.54	1.89	44.81	1.57	1.43	4.19	2.71	1.67	3.44	1.11
CO [g/h]	1124.01	945.96	37.99	131.98	3132.26	109.77	100.01	293.06	189.43	116.71	240.71	77.62
NOx [g/h]	218.69	184.05	7.39	25.68	609.42	21.36	19.46	57.02	36.86	22.71	46.83	15.10
VOC [g/h]	260.50	219.23	8.80	30.59	725.93	25.44	23.18	67.92	43.90	27.05	55.79	17.99

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	24.86	0.00	24.86
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.526	0.000	2.641
Crosswalk LOS	F	D	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1014	786	360	360
d_b, Bicycle Delay [s]	8.50	12.90	23.53	23.53
l_b,int, Bicycle LOS Score for Intersection	2.727	3.049	2.654	2.276
Bicycle LOS	B	C	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 5: Marksheffel Rd/Saddle Maker Rd

Control Type:	Two-way stop	Delay (sec / veh):	19.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.062

Intersection Setup

Name	Marksheffel Rd			Marksheffel Rd			Saddle Maker Rd			Saddle Maker Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			55.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Marksheffel Rd			Marksheffel Rd			Saddle Maker Rd			Saddle Maker Rd		
Base Volume Input [veh/h]	0	575	0	0	1115	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	5.00	2.00	2.00	5.00	2.00	2.00	2.00
Growth Factor	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	277	31	0	434	9	0	0	7	0	0	25
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	26
Pass-by Trips [veh/h]	0	0	0	0	-12	12	0	0	9	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	910	31	0	1650	21	0	0	16	0	0	51
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	247	8	0	448	6	0	0	4	0	0	14
Total Analysis Volume [veh/h]	0	989	34	0	1793	23	0	0	17	0	0	55
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.02	0.00	0.00	0.00	0.06	0.00	0.00	0.11
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.10	0.00	0.00	12.73
Movement LOS		A	A		A	A			C			B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.35
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.96	0.00	0.00	8.81
d_A, Approach Delay [s/veh]	0.00			0.00			19.10			12.73		
Approach LOS	A			A			C			B		
d_I, Intersection Delay [s/veh]	0.35											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 10: Space Village Ave/Access 1

Control Type:	Two-way stop	Delay (sec / veh):	62.6
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.517

Intersection Setup

Name	Access 1		Space Village Ave		Space Village Ave	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Access 1		Space Village Ave		Space Village Ave	
Base Volume Input [veh/h]	0	0	0	185	440	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	5.00	5.00	2.00	2.00	5.00
Growth Factor	1.1014	1.0000	1.0000	1.0000	1.0000	1.1014
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	8	12	372	361	11
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	41	1	10	-10	-1	29
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	58	9	22	547	800	40
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	2	6	149	217	11
Total Analysis Volume [veh/h]	63	10	24	595	870	43
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.52	0.03	0.03	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	62.57	16.02	10.07	0.00	0.00	0.00
Movement LOS	F	C	B	A	A	A
95th-Percentile Queue Length [veh/ln]	2.42	0.09	0.10	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	60.44	2.29	2.53	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	56.19		0.39		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	2.71					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 10: Space Village Ave/Access 1

Control Type:	Two-way stop	Delay (sec / veh):	23.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.246

Intersection Setup

Name	Access 1		Space Village Ave		Space Village Ave	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Access 1		Space Village Ave		Space Village Ave	
Base Volume Input [veh/h]	0	0	0	185	440	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	5.00	5.00	2.00	2.00	5.00
Growth Factor	1.1014	1.0000	1.0000	1.0000	1.0000	1.1014
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	8	12	372	361	11
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	41	1	10	-10	-1	29
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	58	9	22	547	800	40
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	2	6	149	217	11
Total Analysis Volume [veh/h]	63	10	24	595	870	43
Pedestrian Volume [ped/h]	0		0		0	

MITIGATED

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.25	0.03	0.03	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	23.56	16.02	10.07	0.00	0.00	0.00
Movement LOS	C	C	B	A	A	A
95th-Percentile Queue Length [veh/ln]	0.94	0.09	0.10	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	23.52	2.29	2.53	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	22.53		0.39		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.18					
Intersection LOS	C					

MITIGATED

Table of Contents

Intersection Level Of Service Report
Intersection 4: Marksheffel Road/Space Village Ave

Control Type:	Signalized	Delay (sec / veh):	34.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.661

Intersection Setup

Name	Marksheffel Rd			Marksheffel Rd			Space Village Ave			Space Village Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	400.00	100.00	425.00	425.00	100.00	425.00	225.00	100.00	250.00	300.00	100.00	200.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			55.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name	Marksheffel Rd			Marksheffel Rd			Space Village Ave			Space Village Avenue		
Base Volume Input [veh/h]	220	1030	20	5	610	25	10	35	245	35	15	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	220	218	65	220	247	18	78	192	243	71	271	153
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	25	-25	0	0	-2	2	28	0	8	-2	5	-3
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	44	0	0	24	0	0	261	0	0	78
Total Hourly Volume [veh/h]	487	1327	43	226	917	24	117	231	260	108	293	78
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	132	361	12	61	249	7	32	63	71	29	80	21
Total Analysis Volume [veh/h]	529	1442	47	246	997	26	127	251	283	117	318	85
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow	No			No			No			No		
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	19	0	5	19	0	5	28	0	5	28	0
Amber [s]	3.0	4.5	0.0	3.0	4.5	0.0	3.0	3.4	0.0	3.0	3.4	0.0
All red [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	10.0	0.0	0.0	21.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	4.5	0.0	3.0	4.5	0.0	3.0	3.4	0.0	3.0	3.4	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	17.0	35.0	0.0	10.0	28.0	0.0	75.0	25.0	0.0	75.0	25.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	6.50	6.50	6.50	6.50	6.50	6.50	5.40	5.40	5.40	5.40	5.40	5.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	4.50	4.50	0.00	4.50	4.50	3.40	3.40	3.40	3.40	3.40	3.40
g_i, Effective Green Time [s]	38.5	28.5	28.5	38.5	21.5	21.5	19.6	19.6	19.6	19.6	19.6	19.6
g / C, Green / Cycle	0.55	0.41	0.41	0.55	0.31	0.31	0.28	0.28	0.28	0.28	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.51	0.41	0.03	0.38	0.28	0.02	0.13	0.13	0.18	0.13	0.17	0.05
s, saturation flow rate [veh/h]	1030	3560	1589	650	3560	1589	982	1870	1589	870	1870	1589
c, Capacity [veh/h]	573	1450	647	370	1094	488	205	524	445	225	524	445
d1, Uniform Delay [s]	17.36	20.68	12.68	14.80	23.34	17.08	32.08	20.96	22.07	29.92	21.86	19.17
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.14	0.11	0.12	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	22.74	22.42	0.22	9.10	12.84	0.21	3.04	0.68	1.97	1.87	1.29	0.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.92	0.99	0.07	0.66	0.91	0.05	0.62	0.48	0.64	0.52	0.61	0.19
d, Delay for Lane Group [s/veh]	40.11	43.10	12.89	23.90	36.18	17.29	35.12	21.64	24.04	31.79	23.15	19.38
Lane Group LOS	D	D	B	C	D	B	D	C	C	C	C	B
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	7.18	13.61	0.40	2.29	8.49	0.28	2.25	3.26	3.99	1.96	4.36	1.00
50th-Percentile Queue Length [ft/ln]	179.48	340.29	10.07	57.13	212.37	6.95	56.19	81.40	99.81	48.93	108.98	25.08
95th-Percentile Queue Length [veh/ln]	11.57	19.66	0.72	4.11	13.27	0.50	4.05	5.86	7.19	3.52	7.78	1.81
95th-Percentile Queue Length [ft/ln]	289.34	491.56	18.12	102.83	331.86	12.51	101.14	146.53	179.65	88.07	194.59	45.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	40.11	43.10	12.89	23.90	36.18	17.29	35.12	21.64	24.04	31.79	23.15	19.38
Movement LOS	D	D	B	C	D	B	D	C	C	C	C	B
d_A, Approach Delay [s/veh]	41.61			33.41			25.26			24.48		
Approach LOS	D			C			C			C		
d_I, Intersection Delay [s/veh]	34.87											
Intersection LOS	C											
Intersection V/C	0.661											

Emissions

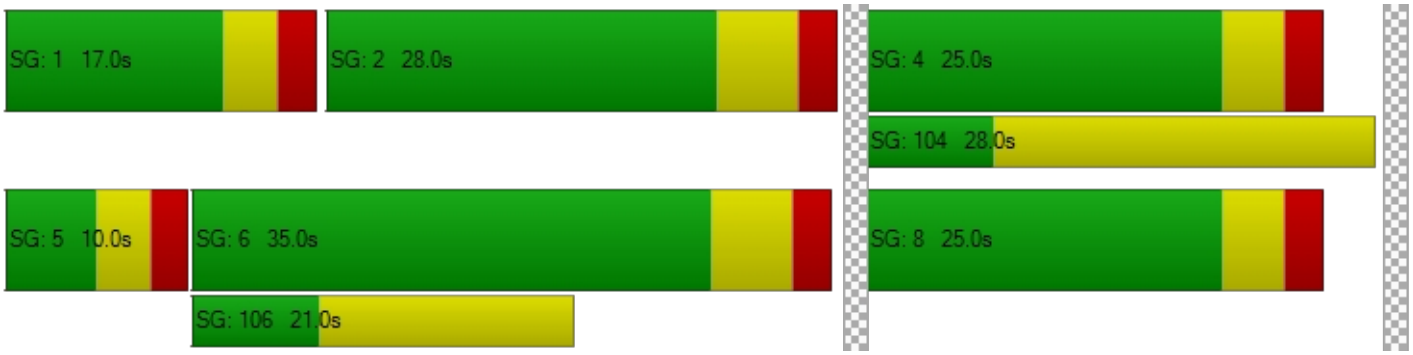
Vehicle Miles Traveled [mph]	114.61	312.40	10.18	26.59	107.78	2.81	12.76	25.22	28.44	14.42	39.20	10.48
Stops [stops/h]	369.22	1400.06	20.71	117.52	873.74	14.29	115.59	167.46	205.32	100.65	224.19	51.60
Fuel consumption [US gal/h]	15.01	49.10	0.85	4.27	27.18	0.45	2.26	3.33	4.01	2.06	4.68	1.12
CO [g/h]	1049.13	3432.31	59.32	298.39	1899.54	31.53	158.21	232.50	280.48	144.25	327.02	78.47
NOx [g/h]	204.12	667.80	11.54	58.06	369.58	6.13	30.78	45.24	54.57	28.07	63.63	15.27
VOC [g/h]	243.15	795.47	13.75	69.15	440.24	7.31	36.67	53.88	65.00	33.43	75.79	18.19

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	24.86	0.00	24.86
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.555	0.000	2.718
Crosswalk LOS	F	D	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	814	614	560	560
d_b, Bicycle Delay [s]	12.30	16.80	18.14	18.14
l_b,int, Bicycle LOS Score for Intersection	3.261	2.626	3.081	2.546
Bicycle LOS	C	B	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 5: Marksheffel Rd/Saddle Maker Rd

Control Type:	Two-way stop	Delay (sec / veh):	21.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.270

Intersection Setup

Name	Marksheffel Rd			Marksheffel Rd			Saddle Maker Rd			Saddle Maker Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			55.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Marksheffel Rd			Marksheffel Rd			Saddle Maker Rd			Saddle Maker Rd		
Base Volume Input [veh/h]	0	1045	0	0	640	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	5.00	2.00	2.00	5.00	2.00	2.00	2.00
Growth Factor	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014	1.1014
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	401	48	0	477	11	0	0	8	0	0	65
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	11
Pass-by Trips [veh/h]	0	0	0	0	-12	12	0	0	8	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1552	48	0	1170	23	0	0	16	0	0	76
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	422	13	0	318	6	0	0	4	0	0	21
Total Analysis Volume [veh/h]	0	1687	52	0	1272	25	0	0	17	0	0	83
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.00	0.00	0.01	0.00	0.00	0.00	0.04	0.00	0.00	0.27
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.26	0.00	0.00	21.02
Movement LOS		A	A		A	A			B			C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	1.07
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.27	0.00	0.00	26.78
d_A, Approach Delay [s/veh]	0.00			0.00			14.26			21.02		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	0.63											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 10: Space Village Ave/Access 1

Control Type:	Two-way stop	Delay (sec / veh):	122.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.777

Intersection Setup

Name	Access 1		Space Village Ave		Space Village Ave	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Access 1		Space Village Ave		Space Village Ave	
Base Volume Input [veh/h]	0	0	0	290	260	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	5.00	5.00	2.00	2.00	5.00
Growth Factor	1.1014	1.0000	1.0000	1.0000	1.0000	1.1014
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	19	10	14	493	497	12
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	46	5	10	-10	-5	37
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	65	15	24	773	752	49
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	4	7	210	204	13
Total Analysis Volume [veh/h]	71	16	26	840	817	53
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.78	0.04	0.03	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	121.98	15.50	9.89	0.00	0.00	0.00
Movement LOS	F	C	A	A	A	A
95th-Percentile Queue Length [veh/ln]	4.04	0.14	0.11	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	101.08	3.49	2.65	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	102.40		0.30		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	5.03					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 10: Space Village Ave/Access 1

Control Type:	Two-way stop	Delay (sec / veh):	28.4
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.318

Intersection Setup

Name	Access 1		Space Village Ave		Space Village Ave	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Access 1		Space Village Ave		Space Village Ave	
Base Volume Input [veh/h]	0	0	0	290	260	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	5.00	5.00	2.00	2.00	5.00
Growth Factor	1.1014	1.0000	1.0000	1.0000	1.0000	1.1014
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	19	10	14	493	497	12
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	46	5	10	-10	-5	37
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	65	15	24	773	752	49
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	4	7	210	204	13
Total Analysis Volume [veh/h]	71	16	26	840	817	53
Pedestrian Volume [ped/h]	0		0		0	

MITIGATED

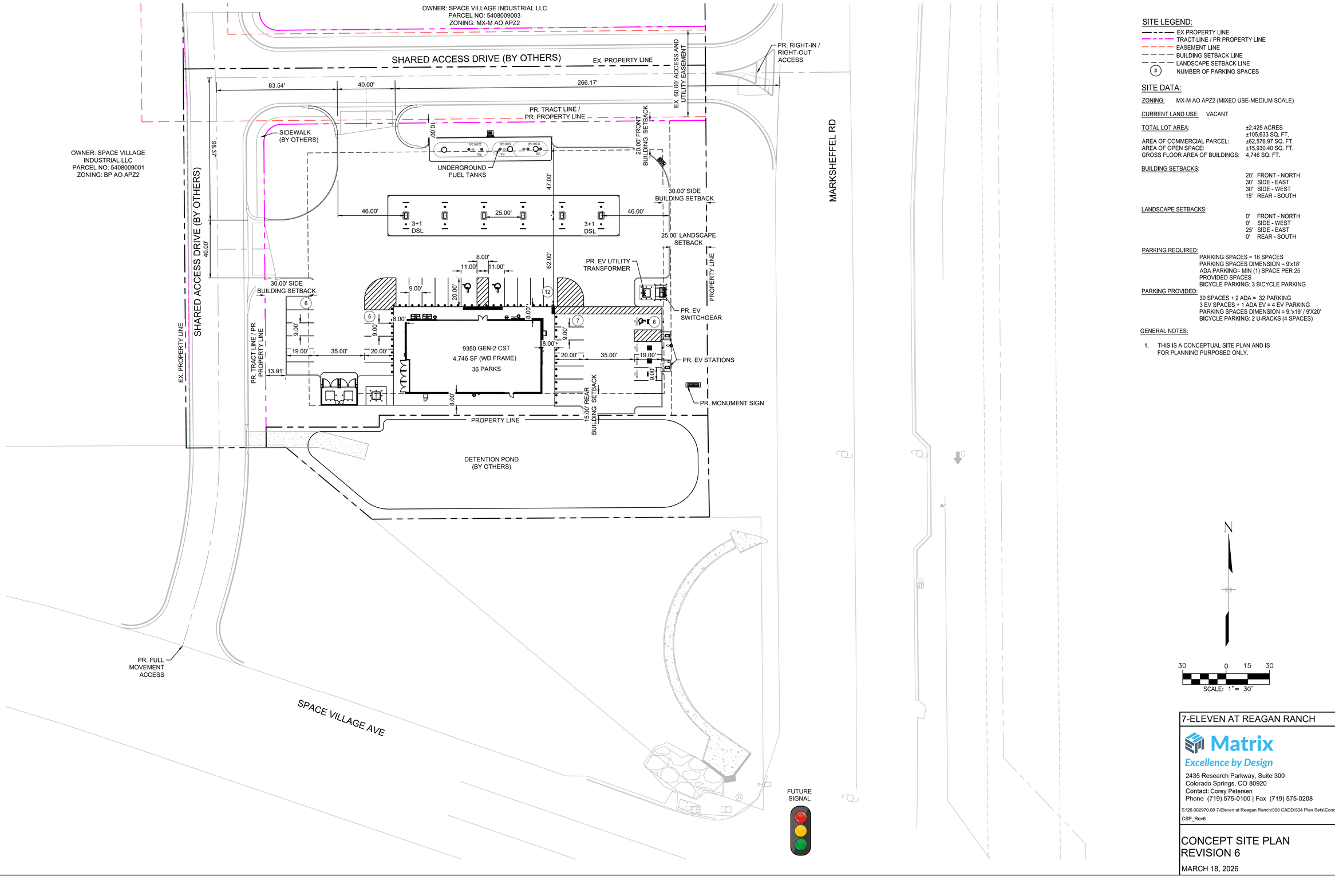
Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.32	0.04	0.03	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	28.43	15.50	9.89	0.00	0.00	0.00
Movement LOS	D	C	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.31	0.14	0.11	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	32.67	3.49	2.65	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	26.05		0.30		0.00	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	1.38					
Intersection LOS	D					

MITIGATED



SITE LEGEND:

- EX PROPERTY LINE
- TRACT LINE / PR PROPERTY LINE
- EASEMENT LINE
- BUILDING SETBACK LINE
- LANDSCAPE SETBACK LINE
- (#) NUMBER OF PARKING SPACES

SITE DATA:

ZONING: MX-M AO APZ2 (MIXED USE-MEDIUM SCALE)

CURRENT LAND USE: VACANT

TOTAL LOT AREA:	±2.425 ACRES ±105,633 SQ. FT.
AREA OF COMMERCIAL PARCEL:	±62,576.97 SQ. FT.
AREA OF OPEN SPACE:	±15,930.40 SQ. FT.
GROSS FLOOR AREA OF BUILDINGS:	4,746 SQ. FT.

BUILDING SETBACKS:

20'	FRONT - NORTH
30'	SIDE - EAST
30'	SIDE - WEST
15'	REAR - SOUTH

LANDSCAPE SETBACKS:

0'	FRONT - NORTH
0'	SIDE - WEST
25'	SIDE - EAST
0'	REAR - SOUTH

PARKING REQUIRED:
PARKING SPACES = 16 SPACES
PARKING SPACES DIMENSION = 9'x18'
ADA PARKING= MIN (1) SPACE PER 25 PROVIDED SPACES
BICYCLE PARKING: 3 BICYCLE PARKING

PARKING PROVIDED:
30 SPACES + 2 ADA = 32 PARKING
3 EV SPACES + 1 ADA EV = 4 EV PARKING
PARKING SPACES DIMENSION = 9.'x19' / 9'X20'
BICYCLE PARKING: 2 U-RACKS (4 SPACES)

GENERAL NOTES:

1. THIS IS A CONCEPTUAL SITE PLAN AND IS FOR PLANNING PURPOSED ONLY.

N

30 0 15 30
SCALE: 1"= 30'

7-ELEVEN AT REAGAN RANCH

Matrix
Excellence by Design
2435 Research Parkway, Suite 300
Colorado Springs, CO 80920
Contact: Corey Petersen
Phone (719) 575-0100 | Fax (719) 575-0208

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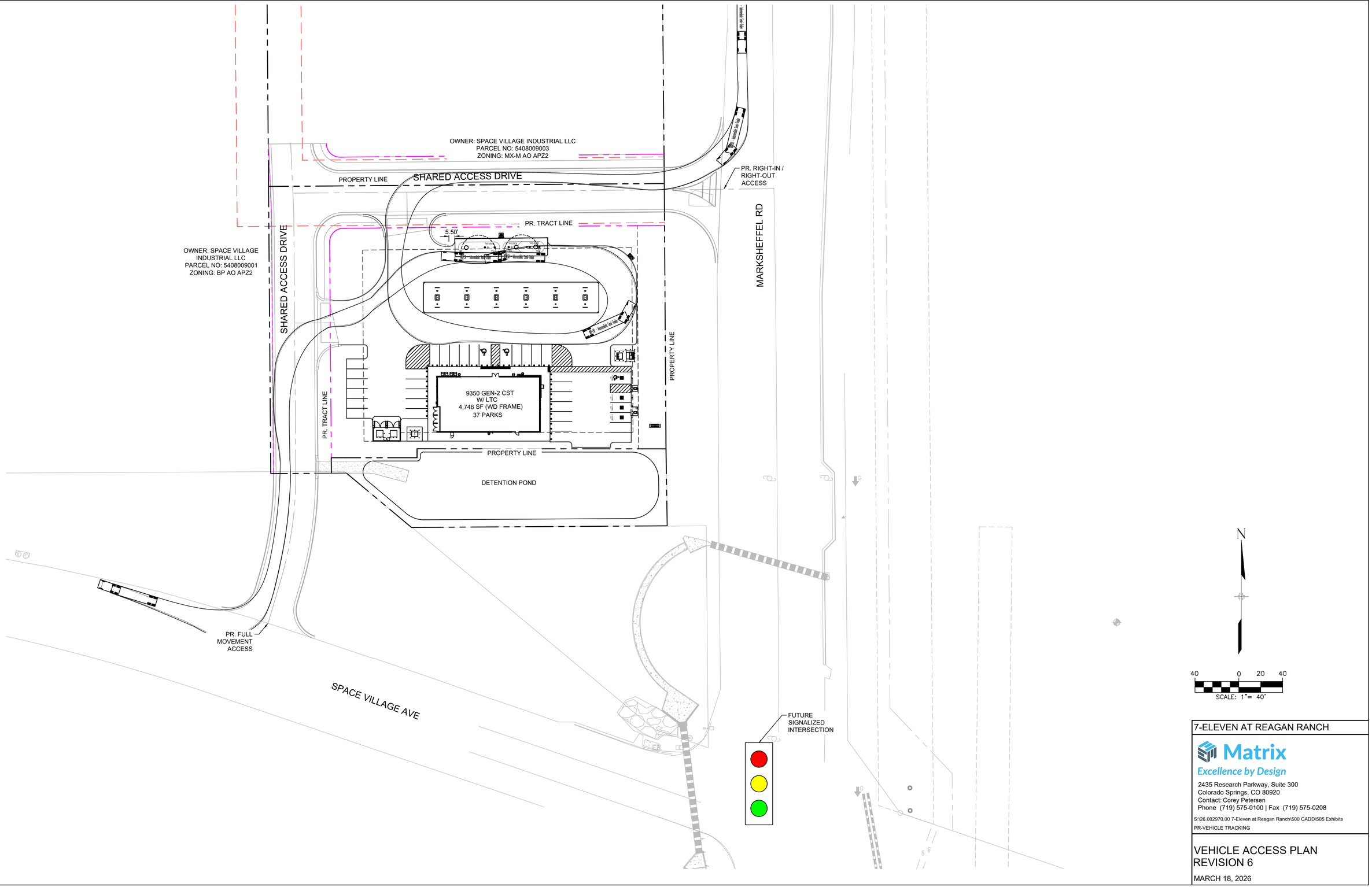
CONCEPT SITE PLAN
REVISION 6

MARCH 18, 2026



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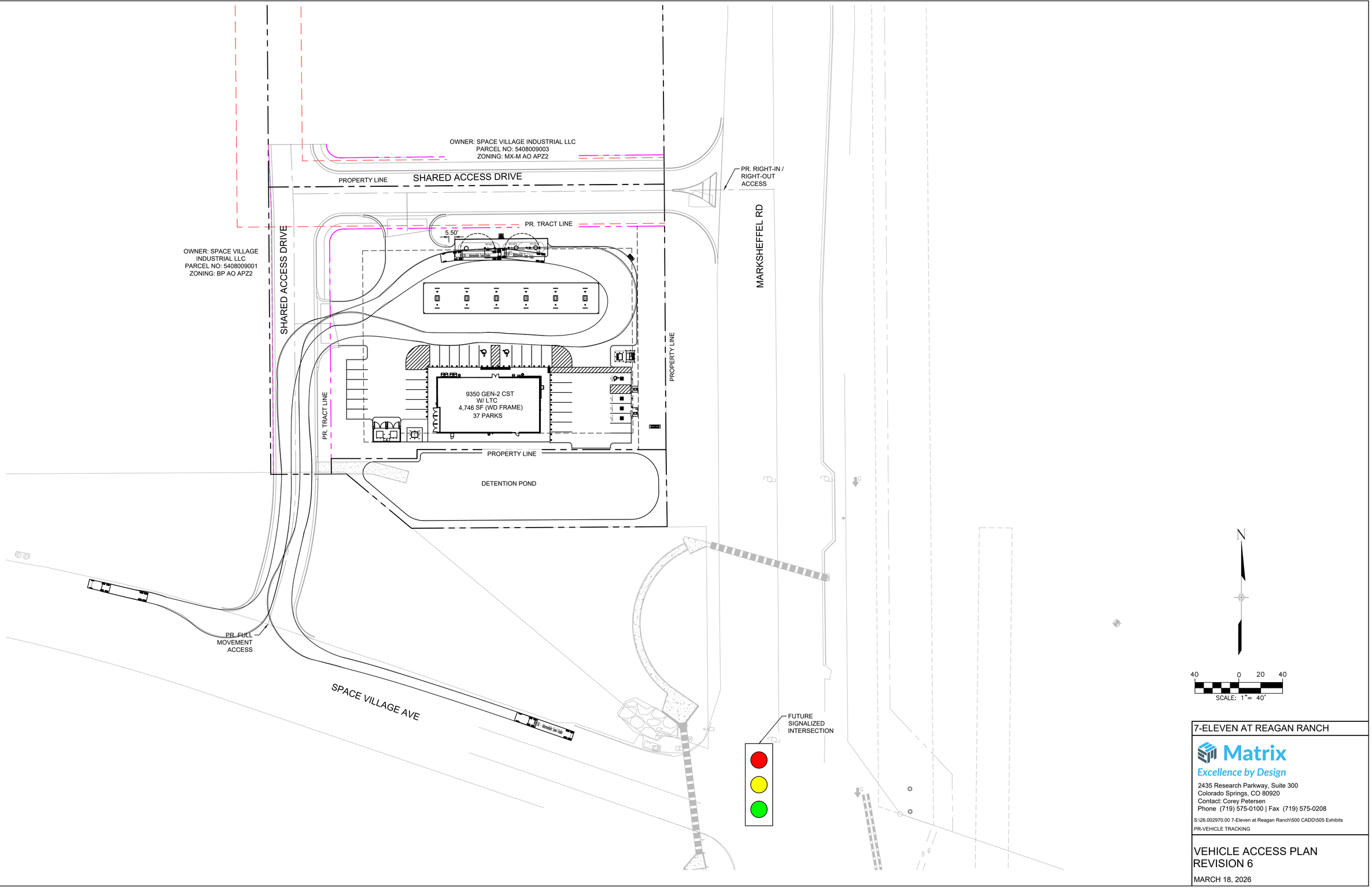

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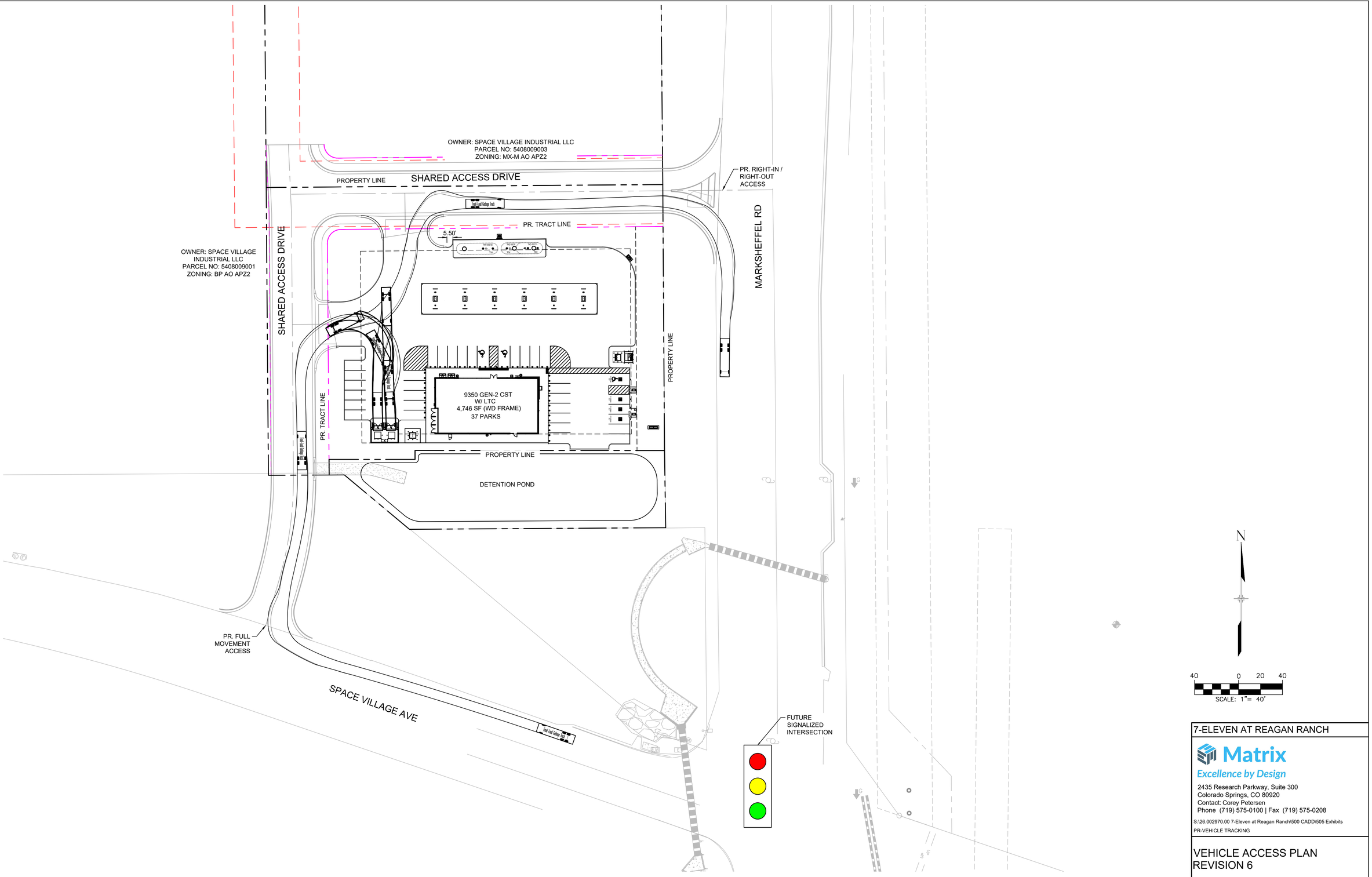

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PR-VEHICLE TRACKING

VEHICLE ACCESS PLAN
REVISION 6

MARCH 18, 2026

Table 1. Reagan Ranch Trip Generation

Development	Code - Land Use - Units	AM			PM			DAILY
		IN	OUT	TOTAL	IN	OUT	TOTAL	TOTAL
Before Trip Reduction								
Eastern Sky	210 - Single Family Detached - 228 DU	39	118	**157**	136	80	**216**	**2,154**
Powers Dairy	210 - Single Family Detached - 187 DU	33	99	**132**	113	66	**179**	**1,794**
	210 - Single Family Detached - 47 DU	9	28	**37**	31	18	**49**	**504**
Coral Bluffs	215 - Single Family Atttached - 171 DU	21	62	**83**	58	40	**98**	**1,252**
	220 - Multifamily Housing - 378 DU	34	106	**140**	115	68	**183**	**2,498**
High Plains	220 - Multifamily Housing - 324 DU	30	94	**124**	101	59	**160**	**2152**
	210 - Single Family Detached - 148 DU	27	80	**107**	90	53	**143**	**1,448**
Commercial	821 - Shopping Plaza - 96,750 Sq. Ft.	104	64	**168**	246	256	**502**	**6,532**
Commercial / Office	20 - Medical-Dental Offic Building - 108,500 Sq. F	205	54	**259**	132	307	**439**	**4,554**
	710 - General Office Building - 70,000 Sq. Ft.	108	15	**123**	21	103	**124**	**850**
Commercia l/ Office	821 - Shopping Plaza - 106,000 Sq. Ft.	114	70	**184**	270	281	**551**	**7,158**
	710 - General Office Building - 106,000 Sq. Ft.	155	21	**176**	30	145	**175**	**1,220**
Commercial / Retail	821 - Shopping Plaza - 33,400 Sq. Ft.	36	22	**58**	85	88	**173**	**2,256**
	710 - General Office Building - 33,400 Sq. Ft.	57	8	**65**	11	55	**66**	**446**
Commercial / Retail	821 - Shopping Plaza - 40,750 Sq. Ft.	44	27	**71**	104	108	**212**	**2,752**
	710 - General Office Building - 40,750 Sq. Ft.	68	9	**77**	13	65	**78**	**532**
United Properties Industrial	130 - Industrial Park - 294,800 Sq. Ft.	81	19	**100**	22	78	**100**	**1648**
Commercial	821 - Shopping Plaza - 12,500 Sq. Ft.	13	8	**21**	32	33	**65**	**844**
	710 - General Office Building - 12,500 Sq. Ft.	25	3	**28**	5	25	**30**	**190**
Total Project Trips		1,203	907	**2,110**	1,615	1,928	**3,543**	**40,784**
After Trip Reduction								
Eastern Sky	210 - Single Family Detached - 228 DU	39	118	**157**	130	78	**208**	**2,154**
Powers Dairy	210 - Single Family Detached - 187 DU	33	99	**132**	109	64	**173**	**1,794**
	210 - Single Family Detached - 47 DU	9	28	**37**	31	18	**49**	**504**
Coral Bluffs	215 - Single Family Atttached - 171 DU	21	62	**83**	54	40	**94**	**1,252**
	220 - Multifamily Housing - 378 DU	34	106	**140**	109	66	**175**	**2,498**
High Plains	220 - Multifamily Housing - 324 DU	30	94	**124**	97	57	**154**	**2152**
	210 - Single Family Detached - 148 DU	27	80	**107**	86	51	**137**	**1,448**
Commercial	821 - Shopping Plaza - 96,750 Sq. Ft.	103	64	**167**	157	164	**321**	**6,532**
Commercial / Office	20 - Medical-Dental Offic Building - 108,500 Sq. F	205	52	**257**	132	305	**437**	**4,554**
	710 - General Office Building - 70,000 Sq. Ft.	108	15	**123**	21	101	**122**	**850**
Commercia l/ Office	821 - Shopping Plaza - 106,000 Sq. Ft.	113	70	**183**	173	180	**353**	**7,158**
	710 - General Office Building - 106,000 Sq. Ft.	155	21	**176**	30	143	**173**	**1,220**
Commercial / Retail	821 - Shopping Plaza - 33,400 Sq. Ft.	36	22	**58**	56	54	**110**	**2,256**
	710 - General Office Building - 33,400 Sq. Ft.	57	8	**65**	11	55	**66**	**446**
Commercial / Retail	821 - Shopping Plaza - 40,750 Sq. Ft.	44	27	**71**	69	67	**136**	**2,752**
	710 - General Office Building - 40,750 Sq. Ft.	68	9	**77**	13	65	**78**	**532**
United Properties Industrial	130 - Industrial Park - 294,800 Sq. Ft.	81	19	**100**	22	78	**100**	**1648**
Commercial	821 - Shopping Plaza - 12,500 Sq. Ft.	13	8	**21**	21	22	**43**	**844**
	710 - General Office Building - 12,500 Sq. Ft.	25	3	**28**	5	25	**30**	**190**
Total Project Trips		1,201	905	**2,106**	1,326	1,633	**2,959**	**40,784**