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Falcon U-Haul
Traffic Impact Study
EPC PCD File Nos. SF-22-40 & PPR-22-56
(LSC #S224140)
June 16, 2023

Traffic Engineer's Statement

This traffic report and supporting information were prepared under my responsible charge and they comport with the standard of care. So far as is consistent with the standard of care, said report was prepared in general conformance with the criteria established by the County for traffic reports.



Developer's Statement

I, the Developer, have read and will comply with all commitments made on my behalf within this report.

Date

Falcon U-Haul

Traffic Impact Analysis

Prepared for:

Jeff Gilley – Owner's Representative

Amerco Real Estate Company

2727 N Central Avenue

Phoenix, AZ 85004

JUNE 16, 2023

LSC Transportation Consultants

Prepared by: Jeffrey C. Hodsdon, P.E.

EPC PCD File Nos. SF-22-40 & PPR-22-56

LSC #S224140



CONTENTS

REPORT CONTENTS	1
SITE DEVELOPMENT AND LAND USE	2
ROADWAY AND TRAFFIC CONDITIONS	2
Area Roadways	2
Intersection Sight Distance	3
Existing Traffic Volumes	4
TRIP GENERATION	4
Phase 1	4
Phase 2	4
TRIP DISTRIBUTION AND ASSIGNMENT	5
Trip Directional Distribution	5
Site-Generated Traffic	5
Phase 1	5
Phase 2	5
Phase 1 (SHORT-TERM) TOTAL TRAFFIC	5
2042 BACKGROUND TRAFFIC	5
2042 TOTAL TRAFFIC	6
LEVEL OF SERVICE ANALYSIS	6
AUXILIARY TURN-LANE NEEDS ANALYSIS	7
Rolling Thunder Way/Foxtail Meadow Lane	7
Meridian Road/Rolling Thunder Way	8
Comparison to ECM Criteria	8
Back-to-Back Left-Turn-Lane Configuration on Rolling Thunder Way	9
Meridian Road/South Site Access (Right-in/Right-out)	9
CONFORMANCE WITH THE MTCP	9
COUNTY ROAD IMPROVEMENT FEE PROGRAM	9
MULTI-MODAL/Transportation Demand Management (TDM) OPPORTUNITIES	9
SUMMARY OF FINDINGS AND RECOMMENDATIONS	10
Trip Generation	10
Phase 1	10
Phases 1 & 2 – Buildout	10

Projected Levels of Service	10
Auxiliary Turn Lanes	10
Other Recommendations	11
Enclosures:	11
Table 1	
Figure 1 - Figure 9	
Traffic Count Reports	
Synchro Level of Service Reports	
Site Plan	
Appendix A	
Preliminary Traffic Control Signal Modification Plan Concept	



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Jeff Gilley – Owner’s Representative
Amerco Real Estate Company
2727 N Central Avenue
Phoenix, AZ 85004

RE: Falcon U-Haul
Traffic Impact Study
El Paso County, Colorado
EPC PCD File Nos. SF-22-40 & PPR-22-56
LSC #224140

Dear Mr. Gilley,

LSC Transportation Consultants, Inc. has prepared this traffic impact study (TIS) for the proposed U-Haul commercial development in the Falcon area of El Paso County, Colorado. The site is located southwest of the intersection of Rolling Thunder Way/Meridian Road. Two access points are proposed for the property. The main access would connect to the south leg of the existing intersection of Meridian Road/Foxtail Meadow Lane.

REPORT CONTENTS

- Inventory of the existing adjacent and nearby area road system. This included surface conditions, functional classifications, roadway widths, lane configurations, traffic control, posted speed limits, pavement markings, intersection and access spacing, roadway and intersection alignments, auxiliary left-turn and right-turn lanes, intersection sight distances, etc.;
- Existing morning and late-afternoon peak-hour turning-movement traffic counts at the following “study-area” intersection:
 - Meridian Road/Rolling Thunder Way
 - Meridian Road/Foxtail Meadow Lane
- Review of previously-completed traffic studies in the vicinity of this site for information and findings relative to this development. Other recent studies completed in the area and any applicable data/transferrable information/analysis etc. from previous LSC studies adjacent to the site were also utilized;
- Evaluation of intersection/access sight distance at the proposed access points based on current criteria in the County’s *Engineering Criteria Manual (ECM)*;

- Estimates of average weekday and peak-hour trip generation for the proposed development;
- Estimation of directional distribution of site-generated vehicle trips on the area road system, at the study-area intersections, and at the proposed site-access points;
- Projections of site-generated turning-movement traffic volumes at the following “study-area” intersections:
 - Rolling Thunder Way/Foxtail Meadow Lane
 - Meridian Road/Rolling Thunder Way
 - Meridian Road/South site access
- Estimates of short- and long-term background traffic volumes at the study-area intersections;
- Total traffic (site traffic plus background traffic) projections at the study-area intersections and site access points for the short term and long term;
- Level of service (LOS) analysis at the study-area intersections;
- Estimated average daily traffic (ADT) on the study-area streets;
- Evaluation of existing, short-term, and long-term projected intersection volumes to determine the potential need for any new auxiliary right-/left-turn lanes on Meridian Road, Rolling Thunder Way, and Foxtail Meadow Lane, based on the criteria in the *County’s Engineering Criteria Manual*;
- El Paso County Road Impact Fee Program requirement; and
- Summary of compiled data, analysis, findings, and recommendations.

SITE DEVELOPMENT AND LAND USE

Figure 2 shows the site plan. The site is planned to be developed in two phases. Ultimately, about 1,153 total storage units would be developed on the site, consisting of 1,090 interior storage units (phase 1) and 63 exterior storage units (phase 2). The 17,012-square-foot building will be a U-Box storage building where trucks deliver U-Boxes for storage within the building (phase 1). For Phase 2, 99 RV storage spaces may also be added to the site.

Located southwest of the intersection of Rolling Thunder Way/Meridian Road, two access points are proposed for the property. The main access would connect to the south leg of the existing intersection of Meridian Road/Foxtail Meadow Lane (signalized intersection). A right-in/right-out access to Meridian Road is also proposed as a secondary access point.

ROADWAY AND TRAFFIC CONDITIONS

Area Roadways

Figure 1 shows the roadways in the vicinity of the site. Major roadways are identified below, followed by a brief description.

Meridian Road is shown on the *Major Transportation Corridors Plan (MTCP)* as a four-lane north/south Principal Arterial north of US Highway (Hwy) 24 and a two-lane Minor Arterial south of US Hwy 24. Auxiliary left- and right-turn lanes currently exist on all approaches at the signalized intersection of Meridian Road/Rolling Thunder Way. Adjacent to the site, Meridian Road has a 40-foot-wide raised median and a posted speed limit of 35 miles per hour (mph).

Rolling Thunder Way is shown on the *MTCP* as a two-lane Collector. Extending east/west for 1.3 miles between Golden Sage Road and McLaughlin Road/Old Meridian Road, Rolling Thunder Way primarily serves the Falcon Highlands commercial area, the residential area to the west, and the business park in the vicinity of Golden Sage Road. Adjacent to the site, Rolling Thunder Way has a posted speed limit of 35 mph. Auxiliary turn lanes currently exist on all approaches at the signalized intersection of Rolling Thunder Way/Foxtail Meadow Lane.

Foxtail Meadow Lane is an Urban Non-Residential Collector street that extends north/south for one-quarter mile between the right-in/right-out (RIRO) access at Woodmen Road and Rolling Thunder Way. Auxiliary turn lanes currently exist on all approaches at the signalized intersection of Rolling Thunder Way/Foxtail Meadow Lane. There is no posted speed limit on Foxtail Meadow Lane adjacent to the site, but 35 mph is generally the posted limit based on the classification.

Tamlin Road – Historically, Tamlin Road provided a road connection northeast from Marksheffel Road just north of Barnes Road to the Falcon area. However, several segments of the roadway have been removed and ROW vacated – notably within the Oakwood Banning Lewis Ranch development. Tamlin right-of-way exists along the south side of this site. The recently submitted Falcon Highlands PUDSP plan for the land to the southwest of this site shows a regional trail corridor replacing the Tamlin Road right-of-way. Therefore, it appears that the Tamlin Road right-of-way adjacent to this site will not be used as a road connection. The Falcon Highlands PUDSP plan does not show use of the Tamlin ROW for a future street.

INTERSECTION SIGHT DISTANCE

The south leg of the existing intersection of Rolling Thunder Way/Foxtail Meadow Lane would provide access to the site and must meet El Paso County's *Engineering Criteria Manual (ECM)* standards for sight distance.

Sight distance on Rolling Thunder Way is unimpeded to the west to Antelope Meadows Circle (approximately 1,000 feet) and to the east to the signal at Meridian Road (approximately 650 feet). Therefore, entering sight distance at all proposed site-access connections is acceptable. Rolling Thunder has a curved horizontal alignment adjacent to the site and no vertical curves within the 350-foot passenger-vehicle and 455-foot single-unit truck requirements for *ECM*-standard sight distance. Site landscaping, signs, buildings, and any other features should not be placed within the *ECM*-required line of sight "triangles" east and west of the access point.

Lines of sight to/from the north at the proposed access to Meridian Road must also be maintained.

Existing Traffic Volumes

Existing traffic volumes at the following intersections are shown on Figure 3. Detailed traffic count reports are attached.

- Rolling Thunder Way/Foxtail Meadow Lane
 - Thursday, April 7, 2022 from 6:30 a.m. to 8:30 a.m.
 - Thursday, April 7, 2022 from 4:00 p.m. to 6:00 p.m.
- New Meridian Road/Rolling Thunder Way
 - Wednesday, July 21, 2021 from 6:30 a.m. to 8:30 a.m.
 - Wednesday, July 21, 2021 from 4:00 p.m. to 6:00 p.m.

TRIP GENERATION

Estimates of the existing and projected vehicle trips to be generated by the site have been made using the following nationally-published average trip-generation land use codes in *Trip Generation, 11th Edition, 2017* by the Institute of Transportation Engineers (ITE):

- 150 – Warehouse
- 151 – Mini Warehouse
- RV/Vehicle Storage – Please refer to Appendix A for the derivation of rates for this land use, which is not included in the *ITE Trip Generation Manual*.

Phase 1

Land uses for Phase 1 will include a 17,012-square-foot warehouse building and 1,090 “interior” storage units. **Error! Reference source not found.** (attached) presents the estimated vehicle trip generation for the development.

The site is projected to generate about 230 vehicle-trips on the average weekday during Phase 1, with about 115 vehicles entering and 115 vehicles exiting the site in a 24-hour period. During the morning peak hour, about 12 vehicles would enter and 9 vehicles would exit the site. Approximately 12 vehicles would enter and 15 vehicles would exit the site during the afternoon peak hour.

Phase 2

The property is planned to be rezoned in the future to allow for 99 RV storage spaces on the property. An additional 63 “exterior” storage units would also be constructed during Phase 2 of development. Table 1 also presents the estimated site trip generation for Phase 1 and Phase 2 combined.

At buildout, the site is projected to generate about 255 vehicle-trips on the average weekday, with about 128 vehicles entering and 128 vehicles exiting the site in a 24-hour period. During the morning peak hour, about 14 vehicles would enter and 11 vehicles would exit the site. Approximately 14 vehicles would enter and 17 vehicles would exit the site during the afternoon peak hour. Note: a new TIS report will likely be required with Phase 2 of the development.

TRIP DISTRIBUTION AND ASSIGNMENT

Trip Directional Distribution

Estimating the directional distribution of site-generated vehicle trips to the study-area roads and intersections is a necessary component in determining the site's traffic impacts. Figure 4 shows the percentages of the site-generated vehicle trips projected to be oriented to and from the site's major approaches. Estimates have been based on the following factors: the proposed new land use, the area street and road system serving the site, and the site's geographic location relative to the balance of the City of Colorado Springs and the Pikes Peak region.

Site-Generated Traffic

Phase 1

Figure 5 shows the projected Phase 1 site-generated traffic volumes for the weekday morning and evening peak hours. Phase 1 site-generated traffic volumes have been calculated by applying directional-distribution percentages estimated by LSC (from Figure 4) to the Phase 1 trip-generation estimates (from Table 1).

Phase 2

Figure 6 shows the projected Phase 2 site-generated traffic volumes for the weekday morning and evening peak hours. Phase 2 site-generated traffic volumes have been calculated by applying directional-distribution percentages estimated by LSC (from Figure 4) to the Phase 2 trip-generation estimates (from Table 1).

PHASE 1 (SHORT-TERM) TOTAL TRAFFIC

Figure 7 shows the projected short-term total traffic volumes, which are the sum of existing traffic volumes (from Figure 3) plus the estimated U-Haul commercial development Phase 1 site-generated traffic (from Figure 5).

2042 BACKGROUND TRAFFIC

Figure 8 shows the background traffic volumes for the year 2042. Background traffic is the traffic estimated to be on the adjacent roadway system without consideration of the proposed development. Background traffic includes the through traffic and the traffic generated by adjacent developments (existing and anticipated future) but assumes zero traffic generated by the site.

Long-term background traffic-volume estimates have also been based on existing and previous traffic-count data and previous work completed in the area by LSC. Several undeveloped parcels remain within the Falcon Highlands shopping plaza to the north.

Long-term background traffic for the intersection of Rolling Thunder Way/Fox Tail Meadow Lane was originally estimated by URS in the report *“Traffic Impact Technical Report for the Falcon Highland Sketch Plan Amendment and Regency Center - revised September 2005.”* That report projected a relatively high southbound left-turn volume at this intersection – one typically/generally requiring dual left-turn lanes.

More recently, LSC prepared a TIS report for a stand-alone deviation request for a potential Falcon Highlands Taco Bell restaurant development. That study included this subject intersection and included estimated trip generation and traffic volumes to be generated by all the area potential development on vacant parcels north of Rolling Thunder way. The report projected a southbound left-turn volume significantly lower than the 2005 URS report – a volume below the level requiring dual left-turn capability. The current background traffic estimates also take into account the current traffic-count data.

2042 TOTAL TRAFFIC

Figure 9 shows the total traffic volumes for the year 2042 at the study-area intersections, which are the sum of the 2042 background traffic volumes (from Figure 8) plus the Phases 1 & 2 site-generated traffic volumes (from Figure 6).

LEVEL OF SERVICE ANALYSIS

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection and is indicated on a scale from “A” to “F.” LOS A is indicative of little congestion or delay. LOS F indicates a high level of congestion or delay. Table 2 shows the level of service delay ranges for signalized and unsignalized intersections.

Table 2: Intersection Levels of Service Delay Ranges

Level of Service	Signalized Intersections	Unsignalized Intersections
	Average Control Delay (seconds per vehicle)	Average Control Delay (seconds per vehicle) ⁽¹⁾
A	10.0 sec or less	10.0 sec or less
B	10.1-20.0 sec	10.1-15.0 sec
C	20.1-35.0 sec	15.1-25.0 sec
D	35.1-55.0 sec	25.1-35.0 sec
E	55.1-80.0 sec	35.1-50.0 sec
F	80.1 sec or more	50.1 sec or more
(1) For unsignalized intersections, if V/C ratio is greater than 1.0 the level of service is LOS F, regardless of the projected average control delay per vehicle.		

Detailed Synchro reports are attached. A summary of LOS during the weekday morning and evening peak hours for the following unsignalized intersections is shown in the following figures:

- Figure 3: Existing Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 7: Existing + Site Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 8: 2042 Background Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 9: 2042 Background + Site Traffic, Lane Geometry, Traffic Control, and LOS

All individual turning movements and single-lane approaches at the following study-area intersections currently operate at and are projected to remain at LOS D or better through the 20-year horizon, with or without the addition of site-generated traffic:

- Rolling Thunder Way/Foxtail Meadow Lane (proposed north access)
- Meridian Road/Rolling Thunder Way
- Meridian Road/proposed southeast access

AUXILIARY TURN-LANE NEEDS ANALYSIS

Based on the projected turning volumes for traffic turning into the site from the adjacent streets, no right- or left-turn lanes would be triggered, based on the turning-volume thresholds in the *ECM*.

Rolling Thunder Way/Foxtail Meadow Lane

Rolling Thunder Way is classified as a Collector with a posted speed limit of 35 mph in the vicinity of the site. Foxtail Meadow Lane is classified as a Non-Residential Collector without a posted speed limit (assumed to be 35 mph).

Eastbound left- and westbound right-turn lanes currently exist at this signalized intersection. Although a left-turn lane is not required by the *ECM*, the center median should be restriped for an abbreviated westbound-left turn bay for traffic turning left into the site. The turn bay is essentially already there, it is just currently striped out because this site has yet to be developed.

The southbound approach to the Rolling Thunder Way/Foxtail Meadow Lane intersection should be restriped so this through lane is not “striped out.” This would involve the removal of a relatively short segment of striping. Please refer to the striping plan by Kiowa Engineering for details. LSC coordinated with Kiowa Engineering on this.

It appears that the north leg of the intersection was constructed to the standard Non-Residential Collector cross section (which allows for single left-turn lanes) plus an added southbound right-turn lane. It does not appear that the intersection was constructed to accommodate exclusive dual southbound left-turn lanes. Granted, the southbound approach was previously striped for dual left-turn lanes. We suspect that the dual left-turn lanes may have been striped, previously, because the south leg was not in operation and there was no conflicting northbound traffic.

Without conflicting northbound traffic, the southbound approach was able to operate with dual lefts with simple permissive phasing. Also, since the original traffic study by URS indicated a high volume in the “dual left-turn range” the intersection may have been striped accordingly. The intersection has since been restriped for a single southbound left and a southbound right, with the pavement between striped out with a painted separator. LSC recommends simply removing the tapered segment of 8” white striping which currently directs traffic into the right-turn lane. This would effectively open the striped-out area for a southbound through movement (likely as originally intended for use once the south leg of the intersection opened to traffic).

It is unlikely, but conceivable, that in the future (depending on the level of development on the north side of Rolling Thunder Way) that a southbound dual left-turn lane capability may become necessary. While unlikely, should dual lefts become necessary, the southbound right-turn lane could be striped for a shared through/right lane. The through movement is projected to be minor with only traffic generated by this project as through traffic. The lateral offset across the intersection for a through movement from the far-right lane would be sufficient. given the low volume and south-north width across the intersection to the receiving lane on the south side.

The southbound left-turn lane appears to be approximately 165 feet plus a 100-foot taper. Foxtail Meadow is not currently posted for speed limit. However, assuming a 40-mile-per-hour design speed based on a Non-Residential Collector roadway, the *ECM*-standard left-turn lane length would be 155 feet plus a 160-foot taper plus storage. Based on the projected volumes, and the HCM analysis 95th percentile queue length, the stacking required would be 64 feet. The existing lane does not meet the general *ECM* standards for a left-turn lane. However, given the site-specific condition with almost all approach traffic continuing to slow to turn left or right at this intersection (given the low projected through traffic volumes into this site), the lane length provides sufficient stacking distance within the existing turn bays. Basically, the southbound left- and right-turn lanes will not be used by site-generated traffic, and the southbound through traffic to be added by this site is not sufficiently high to create the need for a change to the existing southbound left-/right-turn lane lengths.

Meridian Road/Rolling Thunder Way

Meridian Road is classified as a Principal Arterial with a posted speed limit of 35 mph adjacent to the site. Auxiliary left- and right-turn lanes currently exist on all approaches at this signalized intersection.

Comparison to ECM Criteria

The northbound left-turn lane is about 340 feet plus about a 125-foot taper. This existing length meets the *ECM* requirement for deceleration length plus storage distance (200'). The taper is slightly shorter than the criteria, but that is preferable because the entry to the lane is on the outside of a horizontal curve. A shorter taper helps to prevent through traffic from drifting into the turn lane.

The southbound right-turn lane is continuous back to the access point to the north (390'). The length exceeds the *ECM* criteria for deceleration length plus taper length.

Back-to-Back Left-Turn-Lane Configuration on Rolling Thunder Way

The left-turn lanes on Rolling Thunder Way between the site access/Foxtail Meadow Lane and Meridian Road are in a back-to-back configuration with a fixed distance between these intersections. The existing configuration, assuming restriping for the left-turn bay into the site (similar to the eastbound approach left-turn median striping on the west side of the intersection), will be sufficient to accommodate the queuing at these intersections. Please refer to the striping plan by Kiowa Engineering.

Meridian Road/South Site Access (Right-in/Right-out)

Although not required based on projected site-generated right-turning volume, there is an existing southbound right-turn deceleration lane (currently striped out/not in use). This lane is about 245 feet long with a 140-foot taper. This would exceed the *ECM* required length.

CONFORMANCE WITH THE MTCP

No reimbursable roadway improvement projects have been identified as being needed by the year 2040, per Map 13 and Table 4 of El Paso County's 2016 *MTCP*.

See the attached *MTCP* maps for reference.

COUNTY ROAD IMPROVEMENT FEE PROGRAM

The applicant will be required to participate in this program. the PID Option (or option to pay the full fee up front) will be provided prior to final plat approval."

MULTI-MODAL/TRANSPORTATION DEMAND MANAGEMENT (TDM) OPPORTUNITIES

No multi-modal/transportation demand management (TDM) roadway improvement projects have been identified as being needed by the year 2040 per Map 15 and Table 5 of El Paso County's 2016 *MTCP*.

There is a park-and-ride lot to the southeast at the intersection of US Hwy 24/Meridian Road in Falcon.

SUMMARY OF FINDINGS AND RECOMMENDATIONS

Trip Generation

Phase 1

- The site is projected to generate about 230 vehicle-trips on the average weekday, with about 115 vehicles entering and 115 vehicles exiting the site in a 24-hour period.
- During the morning peak hour, about 12 vehicles would enter and 9 vehicles would exit the site.
- Approximately 12 vehicles would enter and 15 vehicles would exit the site during the afternoon peak hour.

Phases 1 & 2 – Buildout

- At buildout, the site is projected to generate about 255 vehicle-trips on the average weekday, with about 128 vehicles entering and 128 vehicles exiting the site in a 24-hour period.
- During the morning peak hour, about 14 vehicles would enter and 11 vehicles would exit the site.
- Approximately 14 vehicles would enter and 17 vehicles would exit the site during the afternoon peak hour.

Projected Levels of Service

- All individual turning movements and single-lane approaches at the following study-area intersections currently operate at and are projected to remain at LOS D or better through the 20-year horizon, with or without the addition of site-generated traffic:
 - Rolling Thunder Way/Foxtail Meadow Lane (proposed north access)
 - Meridian Road/Rolling Thunder Way
 - Meridian Road/proposed southeast access

Auxiliary Turn Lanes

- Please refer to the “Auxiliary Turn-Lane Analysis” section for more detail regarding the adequacy of existing auxiliary turn lanes at the study-area intersections which may be utilized by traffic entering and exiting this site.
- LSC recommends restriping to “open” existing turn bays which are currently “striped out.” These include the southbound right-turn lane at the south site access on Meridian and the westbound left-turn bay on Rolling Thunder Way at the site access.
- The site access should be striped for a northbound left-turn bay which will need to align with the southbound left-turn lane across the intersection.

- The remaining width on the northbound approach may be such that a separate through and right-turn bay should be striped to avoid an excessively wide through/right shared lane.

Other Recommendations

- The southbound approach to the Rolling Thunder Way/Foxtail Meadow Lane intersection should be restriped so that this through lane is not “striped out.”
- The traffic signal at the Rolling Thunder Way/Foxtail Meadow Lane intersection will need to be modified to convert operation to a four-leg intersection with the opening of the site access/south leg of the intersection. Please refer to the attached *Preliminary Traffic Control Signal Modification Plan Concept*.
- Please refer to the signing and striping plan prepared by Kiowa Engineering. The Kiowa plan is the result of coordination between LSC and Kiowa.

* * * * *

Please contact me if you have any questions regarding this report.

Respectfully Submitted,

LSC TRANSPORTATION CONSULTANTS, INC.

By: Jeffrey C. Hodsdon, P.E.
Principal

JCH/JAB:jas

Enclosures: Table 1
Figure 1 - Figure 9
Traffic Count Reports
Synchro Level of Service Reports
Site Plan
Appendix A
Preliminary Traffic Control Signal Modification Plan Concept

Table 1

Table 1: Detailed Trip-Generation Estimate

ITE		Value	Units ¹	Trip Generation Rates ^{2 3}					Driveway Trips Generated				
				Average	A.M.		P.M.		Average	A.M.		P.M.	
Code	Description			Weekday	In	Out	In	Out	Weekday	In	Out	In	Out
Phase 1													
150	Warehouse	17.012	KSF	1.96	0.27	0.08	0.11	0.28	34	5	2	2	5
151	Mini-Warehouse	10.90	SU (100s)	17.96	0.62	0.59	0.84	0.84	196	7	7	10	10
							Sub-Total		230	12	9	12	15
Phase 2													
-	RV/Vehicle/Boat Storage	0.99	100 Parking Spaces	12.94	0.50	0.47	0.65	0.80	13	1	1	1	1
151	Mini-Warehouse	0.63	SU (100s)	17.96	0.62	0.59	0.84	0.84	12	1	1	1	1
							Sub-Total		25	2	2	2	2
							Phase 1 Only		230	12	9	12	15
							Phase 2 Only		25	2	2	2	2
							Buildout Total		255	14	11	14	17

¹ 100 Parking Spaces = the independent variable is the number of anticipated RV and boat storage space expressed as a multiple of 100.
SU (100s) is the number of storage units expressed as a multiple of 100.

² Source: Trip Generation , 11th Edition, 2021, by the Institute of Transportation Engineers (ITE)

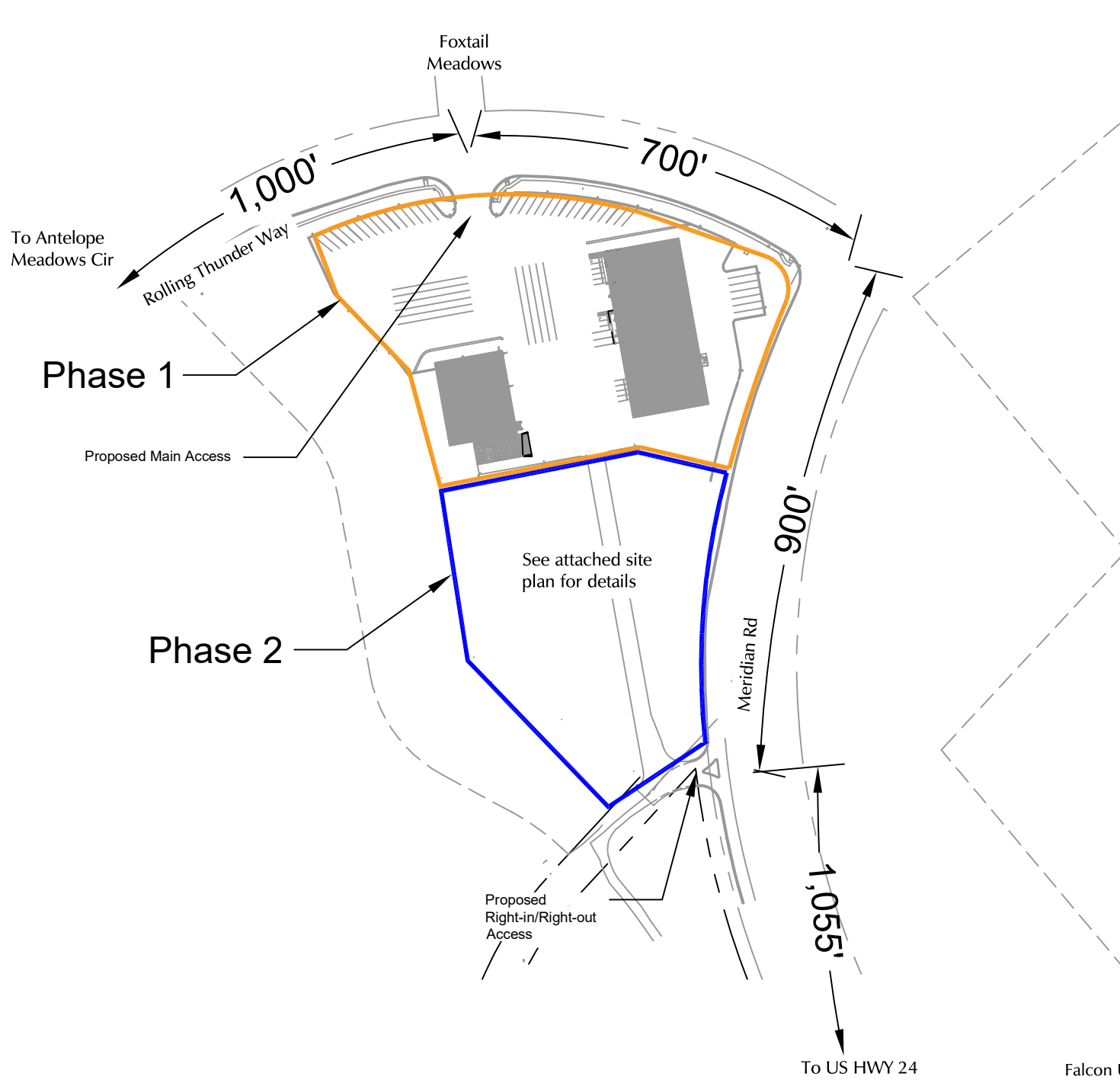
³ "RV/Vehicle Storage" rates: Please refer to Appendix A

Rev. 6/15/2023

Figures 1-9



1" = 1,000'
scale



Approximate
Scale
1" = 250'

Figure 2
Site Plan

Falcon U-Haul (LSC#S224140)

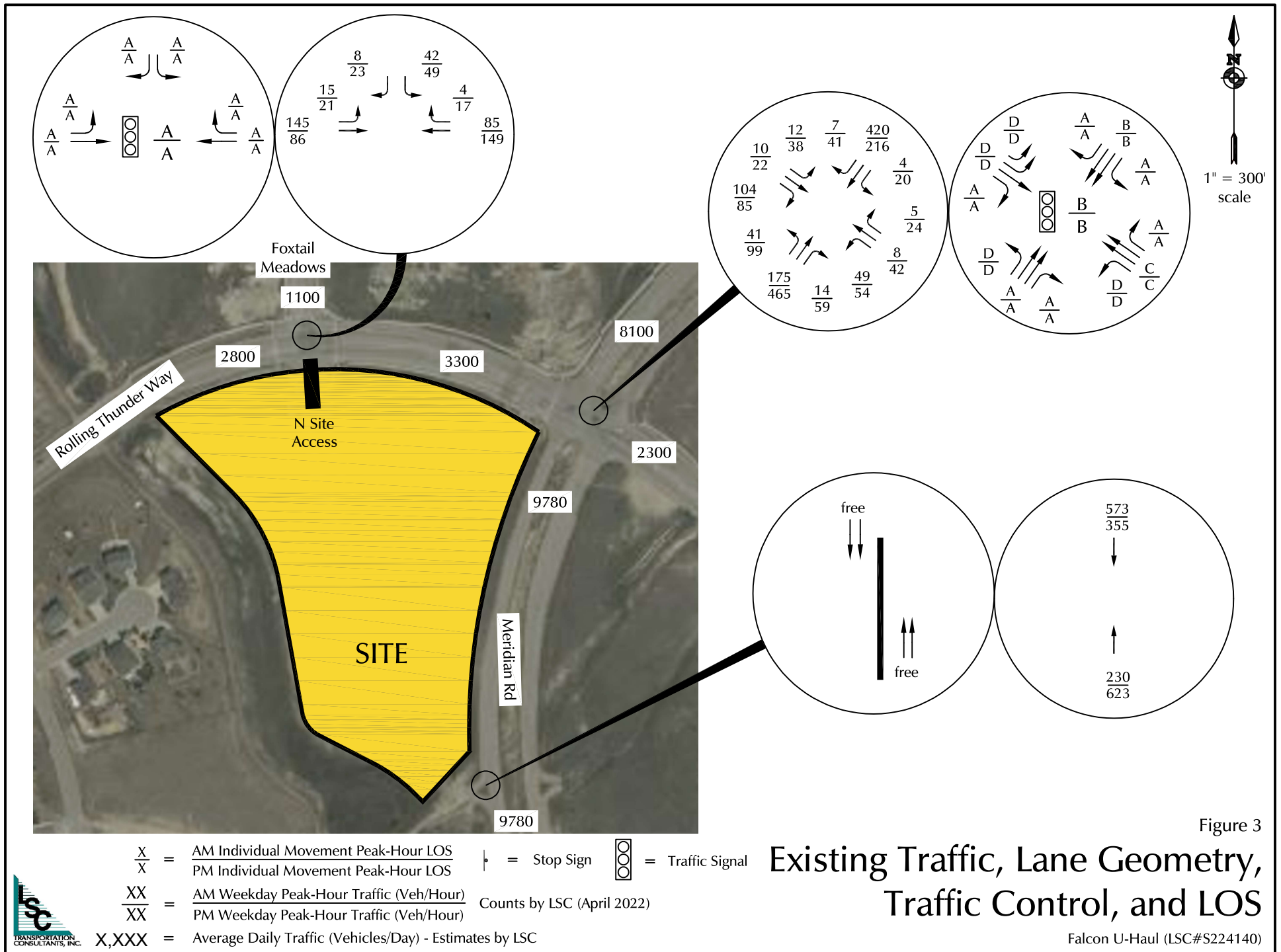
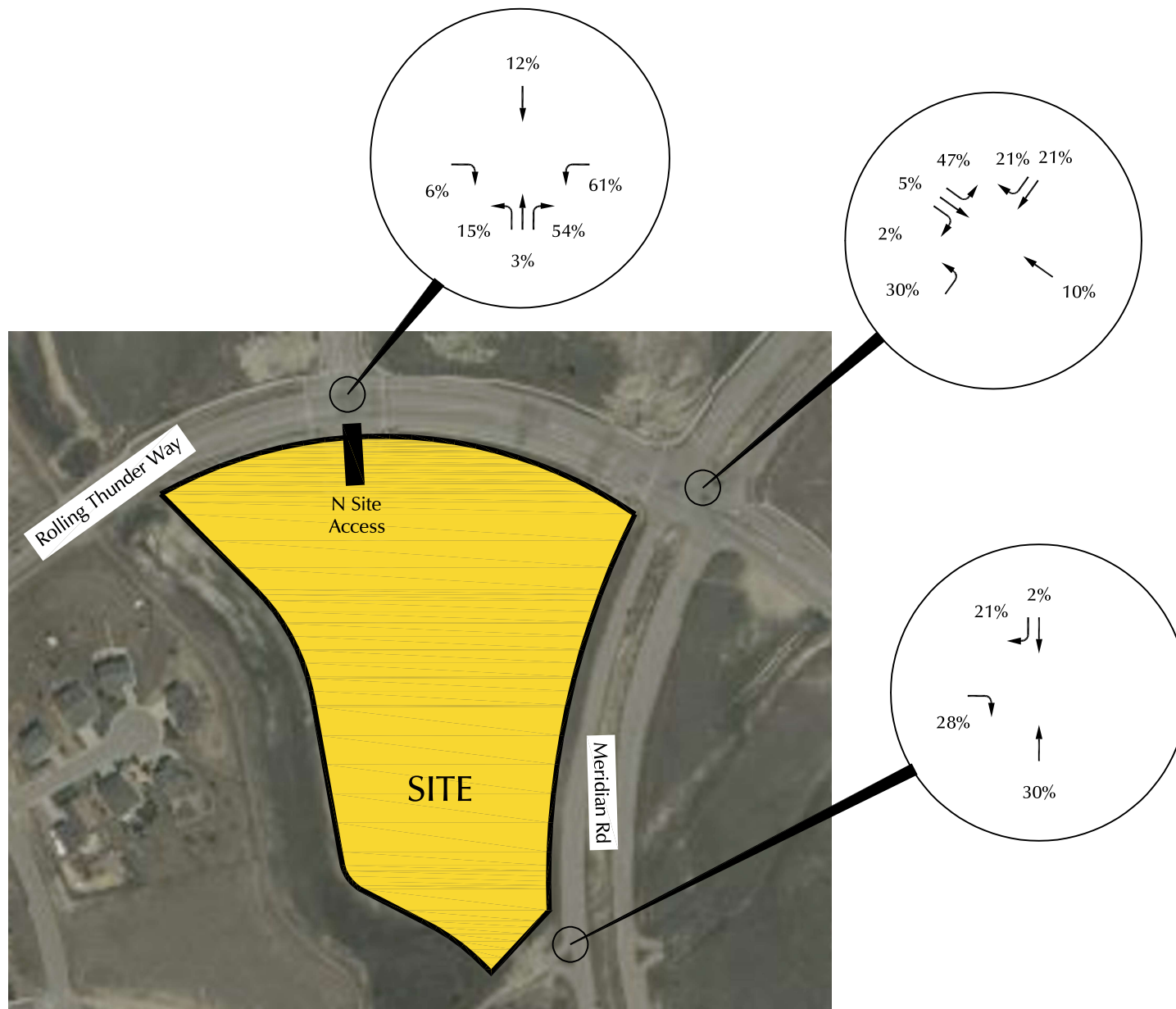


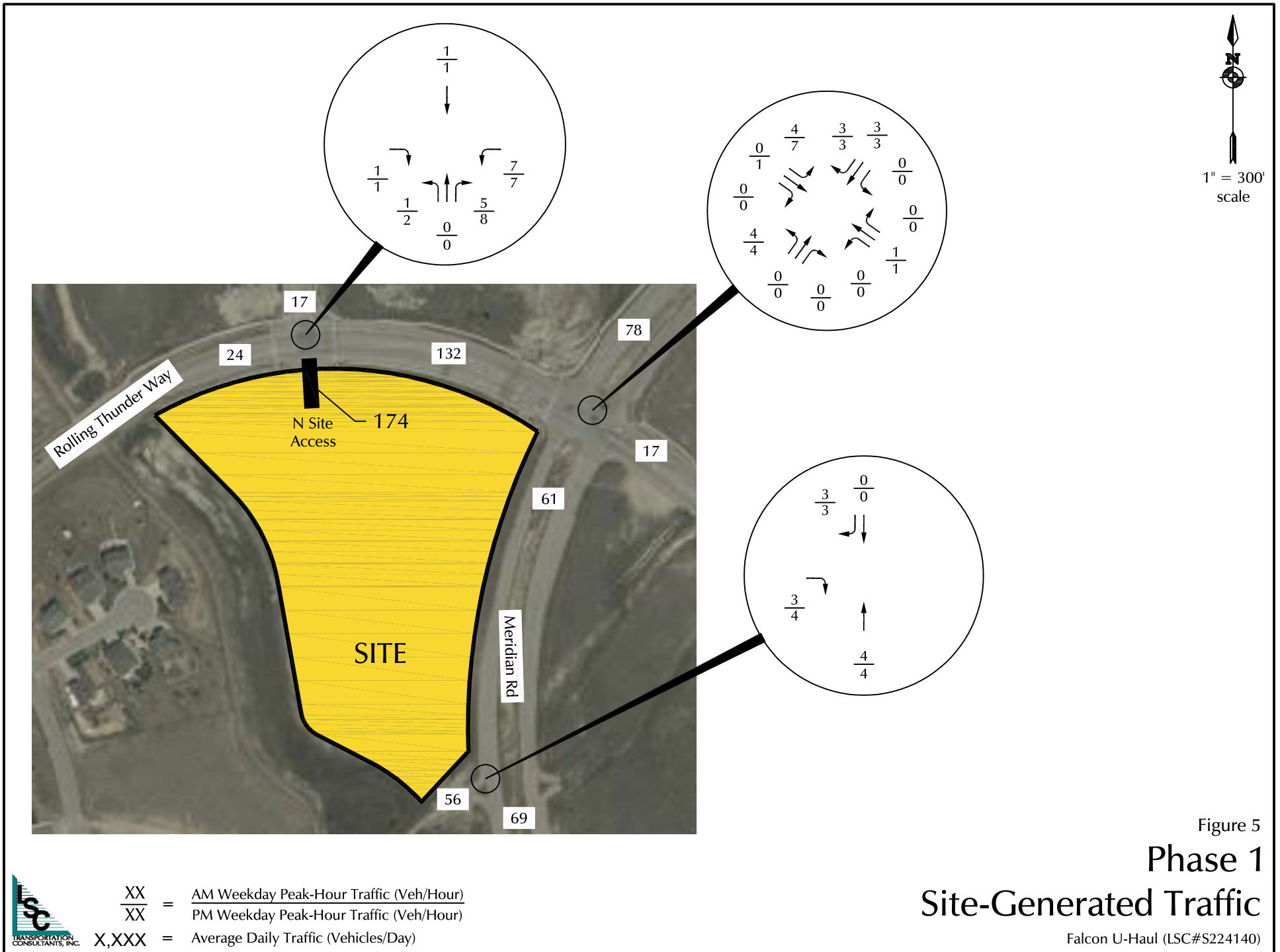
Figure 3

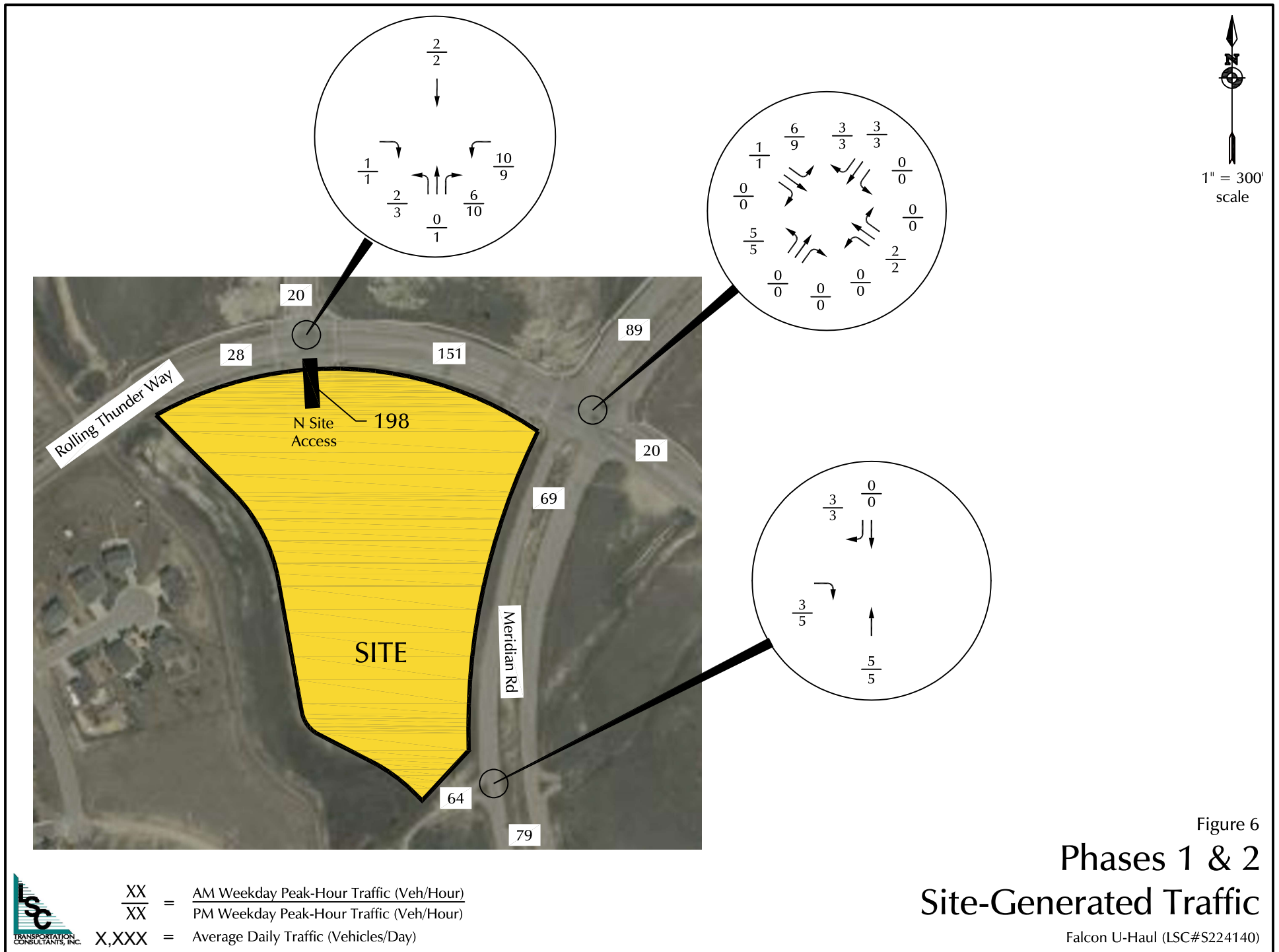


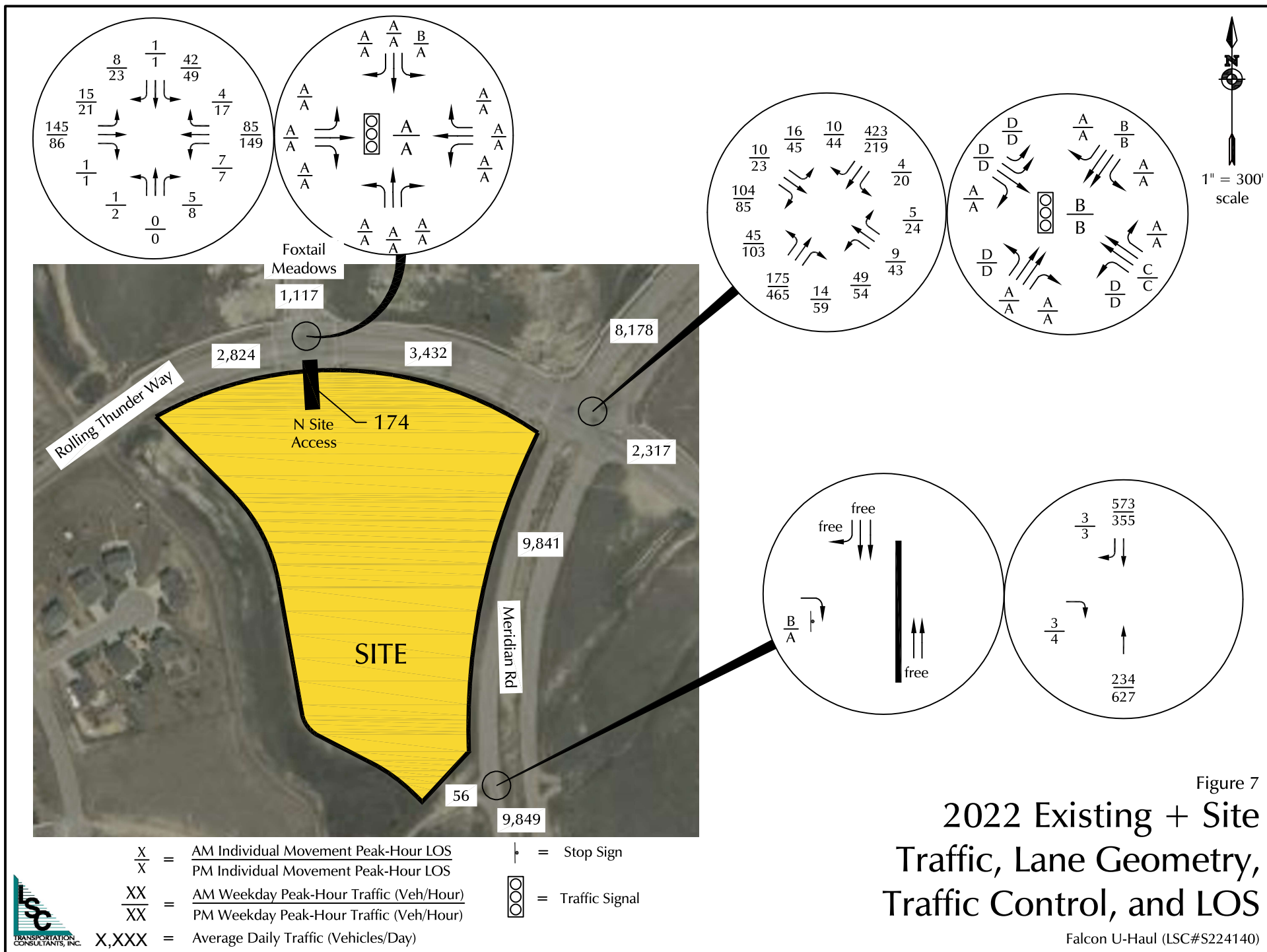
1" = 300'
scale

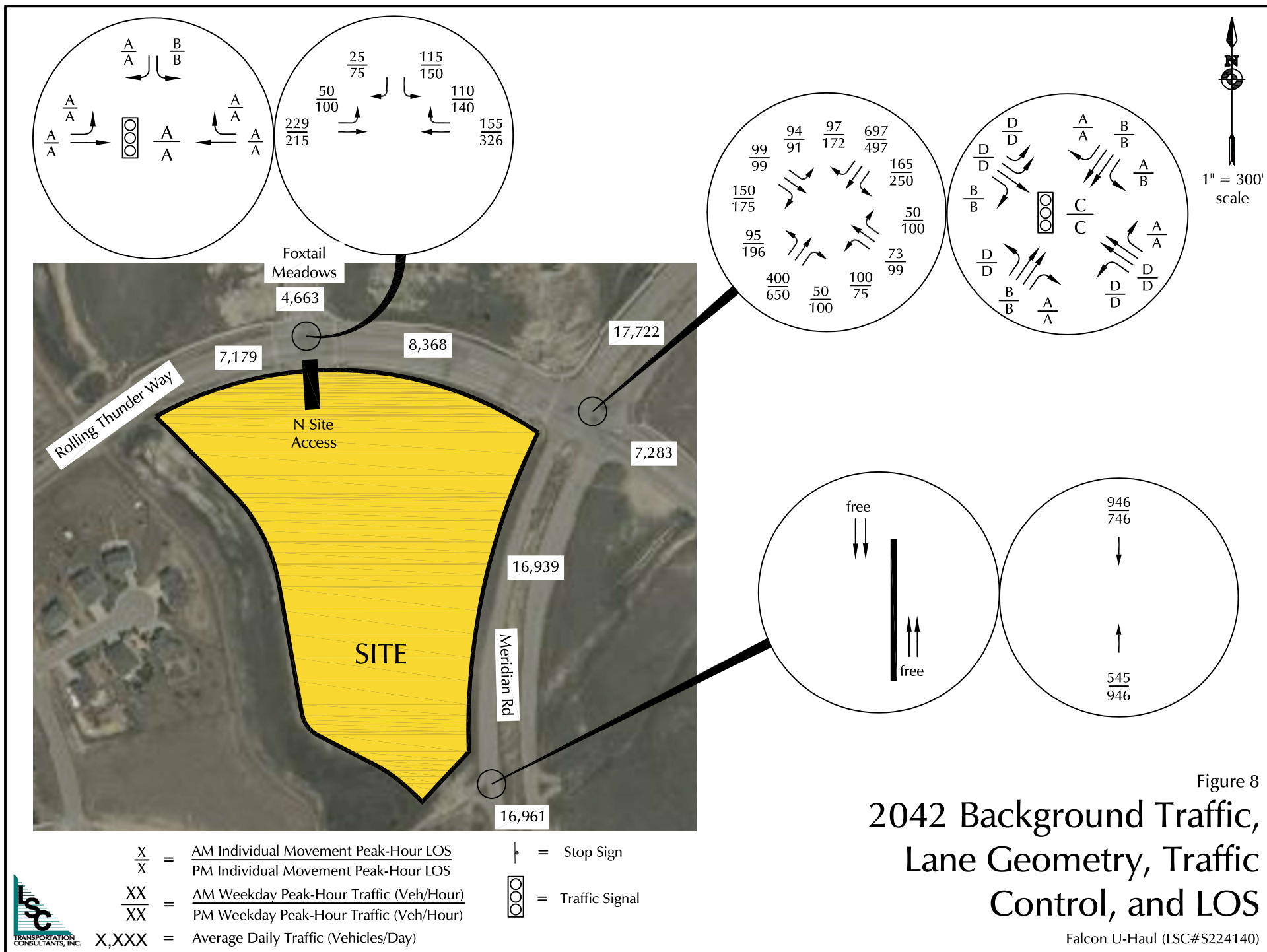
Figure 4
Directional Distribution
Estimate

XX = Estimated % Distribution of Site-Generated Trips









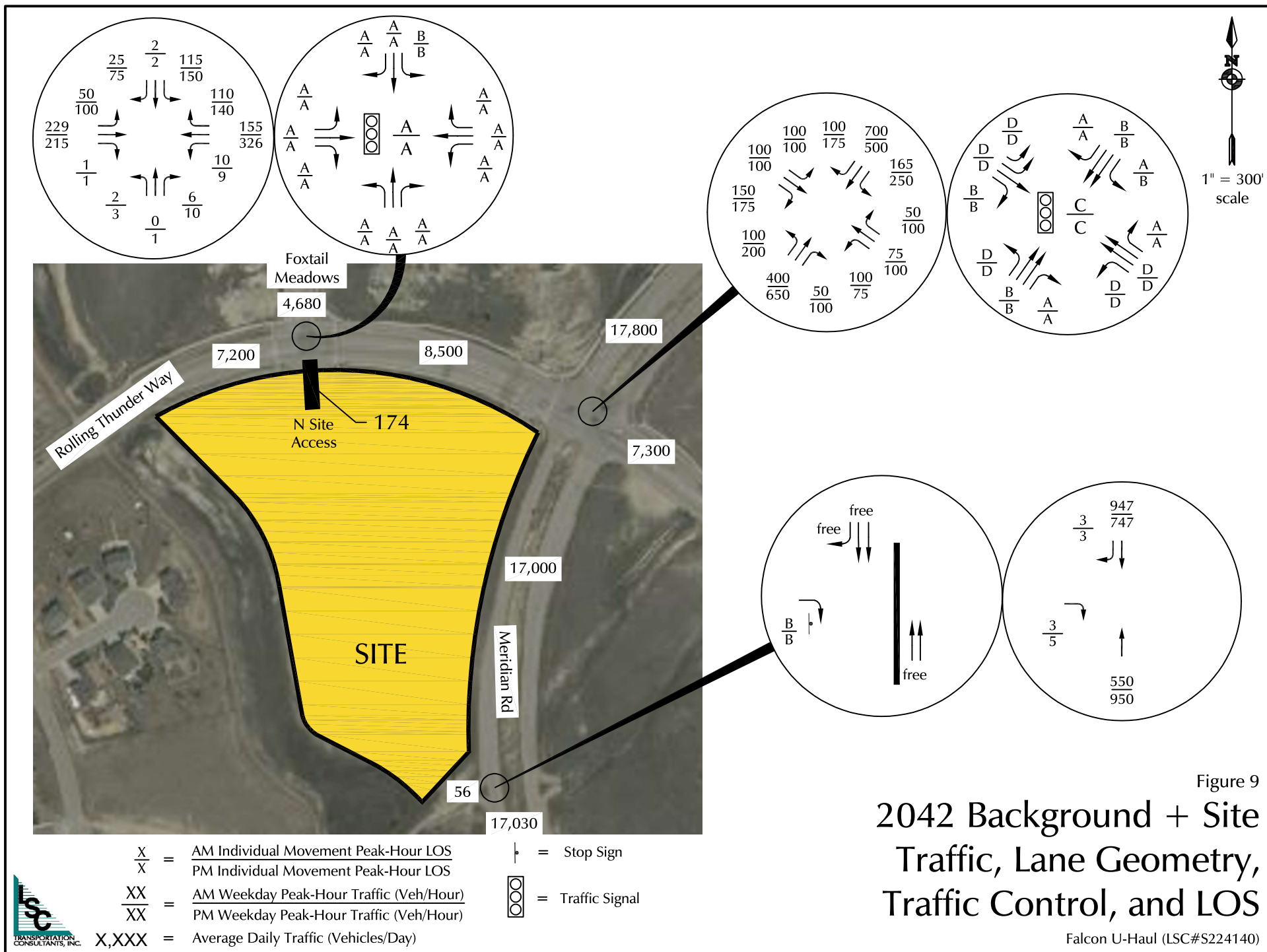


Figure 9
2042 Background + Site
Traffic, Lane Geometry,
Traffic Control, and LOS

Falcon U-Haul (LSC#S224140)

Traffic Counts

LSC Transportation Consultants, Inc.

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Colorado Springs, CO 80909
719-633-2868

Default Comments

Change These in The Preferences Window

Select File/Preference in the Main Scree

Then Click the Comments Tab

Groups Printed- Unshifted

Start Time	Foxtail Meadow Dr Southbound					Rolling Thunder Way Westbound					Northbound					Rolling Thunder Way Eastbound					Int. Total
	Right	T	L	U	App. Total	Right	T	L	U	App. Total	Right	T	L	U	App. Total	Right	T	L	U	App. Total	
06:30 AM	0	0	1	0	1	2	4	0	0	6	0	0	0	0	0	0	5	1	0	6	13
06:35 AM	0	0	3	0	3	1	1	0	0	2	0	0	0	0	0	0	9	0	0	9	14
06:40 AM	1	0	2	0	3	0	7	0	0	7	0	0	0	0	0	0	7	0	0	7	17
06:45 AM	0	0	3	0	3	0	4	0	0	4	0	0	0	0	0	0	11	2	0	13	20
06:50 AM	1	0	2	0	3	1	9	0	0	10	0	0	0	0	0	0	6	0	0	6	19
06:55 AM	0	0	0	0	0	1	6	0	0	7	0	0	0	0	0	0	10	0	0	10	17
Total	2	0	11	0	13	5	31	0	0	36	0	0	0	0	0	0	48	3	0	51	100
07:00 AM	0	0	4	0	4	0	5	0	0	5	0	0	0	0	0	0	10	2	0	12	21
07:05 AM	2	0	5	0	7	2	3	0	0	5	0	0	0	0	0	0	23	2	0	25	37
07:10 AM	2	0	4	0	6	0	3	0	0	3	0	0	0	0	0	0	14	3	0	17	26
07:15 AM	0	0	7	0	7	0	13	0	0	13	0	0	0	0	0	0	11	0	0	11	31
07:20 AM	1	0	3	0	4	0	8	0	0	8	0	0	0	0	0	0	11	1	0	12	24
07:25 AM	0	0	4	0	4	0	6	0	0	6	0	0	0	0	0	0	15	2	0	17	27
07:30 AM	1	0	3	0	4	0	11	0	0	11	0	0	0	0	0	0	11	1	1	13	28
07:35 AM	0	0	5	0	5	0	8	0	0	8	0	0	0	0	0	0	14	0	0	14	27
07:40 AM	1	0	2	0	3	0	9	0	0	9	0	0	0	0	0	0	9	2	0	11	23
07:45 AM	1	0	7	0	8	1	6	0	0	7	0	0	0	0	0	0	10	1	0	11	26
07:50 AM	1	0	2	0	3	2	4	0	0	6	0	0	0	0	0	0	8	1	0	9	18
07:55 AM	2	0	3	0	5	1	6	0	0	7	0	0	0	0	0	0	4	0	0	4	16
Total	11	0	49	0	60	6	82	0	0	88	0	0	0	0	0	0	140	15	1	156	304
08:00 AM	1	0	8	0	9	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	16
08:05 AM	0	0	2	0	2	0	6	0	0	6	0	0	0	0	0	0	10	0	0	10	18
08:10 AM	0	0	3	0	3	1	10	0	0	11	0	0	0	0	0	0	6	0	0	6	20
08:15 AM	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	0	11	1	0	12	15
08:20 AM	0	0	2	0	2	1	5	0	0	6	0	0	0	0	0	0	11	0	0	11	19
08:25 AM	1	0	5	0	6	1	5	0	0	6	0	0	0	0	0	0	5	0	0	5	17

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2504 E. Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

Default Comments

Change These in The Preferences Window

Select File/Preference in the Main Scree

Then Click the Comments Tab

Groups Printed- Unshifted

Start Time	Foxtail Meadow Dr Southbound					Rolling Thunder Way Westbound					Northbound					Rolling Thunder Way Eastbound					Int. Total
	Right	T	L	U	App. Total	Right	T	L	U	App. Total	Right	T	L	U	App. Total	Right	T	L	U	App. Total	
04:00 PM	0	0	2	0	2	2	13	0	0	15	0	0	0	0	0	0	6	1	0	7	24
04:05 PM	3	0	7	0	10	1	11	0	0	12	0	0	0	0	0	0	8	2	0	10	32
04:10 PM	3	0	4	0	7	1	18	0	0	19	0	0	0	0	0	0	6	2	0	8	34
04:15 PM	5	0	4	0	9	1	13	0	0	14	0	0	0	0	0	0	9	2	0	11	34
04:20 PM	1	0	2	0	3	1	12	0	0	13	0	0	0	0	0	0	9	3	0	12	28
04:25 PM	1	0	5	0	6	0	7	0	0	7	0	0	0	0	0	0	4	6	0	10	23
04:30 PM	2	0	3	0	5	1	17	0	0	18	0	0	0	0	0	0	2	1	0	3	26
04:35 PM	2	0	4	0	6	1	8	0	0	9	0	0	0	0	0	0	5	2	0	7	22
04:40 PM	3	0	7	0	10	1	15	0	0	16	0	0	0	0	0	0	8	1	0	9	35
04:45 PM	1	0	2	0	3	1	12	0	0	13	0	0	0	0	0	0	5	2	0	7	23
04:50 PM	4	0	4	0	8	1	12	0	0	13	0	0	0	0	0	0	7	1	0	8	29
04:55 PM	2	0	2	0	4	3	13	0	0	16	0	0	0	0	0	0	4	3	0	7	27
Total	27	0	46	0	73	14	151	0	0	165	0	0	0	0	0	0	73	26	0	99	337
05:00 PM	2	0	8	0	10	4	19	0	0	23	0	0	0	0	0	0	4	1	0	5	38
05:05 PM	0	0	0	0	0	1	11	0	0	12	0	0	0	0	0	0	14	2	0	16	28
05:10 PM	4	0	2	0	6	1	10	0	0	11	0	0	0	0	0	0	10	2	0	12	29
05:15 PM	1	0	7	0	8	1	18	0	0	19	0	0	0	0	0	0	7	1	0	8	35
05:20 PM	0	0	6	0	6	1	6	0	0	7	0	0	0	0	0	0	15	3	0	18	31
05:25 PM	2	0	4	0	6	1	8	0	0	9	0	0	0	0	0	0	5	2	0	7	22
05:30 PM	1	0	7	0	8	4	11	0	0	15	0	0	0	0	0	0	17	6	0	23	46
05:35 PM	1	0	11	0	12	4	9	0	0	13	0	0	0	0	0	0	11	2	0	13	38
05:40 PM	4	0	8	0	12	1	5	0	0	6	0	0	0	0	0	0	11	0	0	11	29
05:45 PM	2	0	2	0	4	0	17	0	0	17	0	0	0	0	0	0	5	2	0	7	28
05:50 PM	3	0	1	0	4	2	6	0	0	8	0	0	0	0	0	0	5	2	0	7	19
05:55 PM	3	0	2	0	5	0	7	0	0	7	0	0	0	0	0	0	8	0	0	8	20
Total	23	0	58	0	81	20	127	0	0	147	0	0	0	0	0	0	112	23	0	135	363

LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210
Colorado Springs, CO 80905
719-633-2868

File Name : New Meridian Rd - Rolling Thunder Wy AM
Site Code : S214620
Start Date : 7/21/2021
Page No : 1

Groups Printed- Unshifted

	New Meridian Rd Southbound					Rolling Thunder Wy Westbound					New Meridian Rd Northbound					Rolling Thunder Wy Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
06:30 AM	0	82	2	0	84	11	4	0	0	15	13	28	1	0	42	2	1	13	0	16	157
06:45 AM	2	107	1	0	110	11	3	1	0	15	14	46	2	0	62	1	1	27	0	29	216
Total	2	189	3	0	194	22	7	1	0	30	27	74	3	0	104	3	2	40	0	45	373
07:00 AM	1	113	3	0	117	10	1	3	0	14	14	41	5	0	60	6	1	33	0	40	231
07:15 AM	0	97	1	2	100	13	3	1	0	17	6	51	2	0	59	2	3	23	0	28	204
07:30 AM	1	103	2	1	107	15	1	0	0	16	7	37	5	0	49	3	5	21	0	29	201
07:45 AM	2	63	3	4	72	13	2	1	0	16	7	31	14	1	53	2	0	19	0	21	162
Total	4	376	9	7	396	51	7	5	0	63	34	160	26	1	221	13	9	96	0	118	798
08:00 AM	4	57	4	3	68	9	3	3	0	15	8	45	4	1	58	2	3	16	0	21	162
08:15 AM	0	78	5	0	83	6	2	6	0	14	7	42	2	0	51	2	0	8	0	10	158
Grand Total	10	700	21	10	741	88	19	15	0	122	76	321	35	2	434	20	14	160	0	194	1491
Apprch %	1.3	94.5	2.8	1.3		72.1	15.6	12.3	0		17.5	74	8.1	0.5		10.3	7.2	82.5	0		
Total %	0.7	46.9	1.4	0.7	49.7	5.9	1.3	1	0	8.2	5.1	21.5	2.3	0.1	29.1	1.3	0.9	10.7	0	13	

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545 E Pikes Peak Ave, Suite 210
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719-633-2868

File Name : New Meridian Rd - Rolling Thunder Wy AM
Site Code : S214620
Start Date : 7/21/2021
Page No : 2

	New Meridian Rd Southbound					Rolling Thunder Wy Westbound					New Meridian Rd Northbound					Rolling Thunder Wy Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 6:30:00 AM to 8:15:00 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 6:45:00 AM																					
6:45:00 AM	2	107	1	0	110	11	3	1	0	15	14	46	2	0	62	1	1	27	0	29	216
7:00:00 AM	1	113	3	0	117	10	1	3	0	14	14	41	5	0	60	6	1	33	0	40	231
7:15:00 AM	0	97	1	2	100	13	3	1	0	17	6	51	2	0	59	2	3	23	0	28	204
7:30:00 AM	1	103	2	1	107	15	1	0	0	16	7	37	5	0	49	3	5	21	0	29	201
Total Volume	4	420	7	3	434	49	8	5	0	62	41	175	14	0	230	12	10	104	0	126	852
% App. Total	0.9	96.8	1.6	0.7		79	12.9	8.1	0		17.8	76.1	6.1	0		9.5	7.9	82.5	0		
PHF	.500	.929	.583	.375	.927	.817	.667	.417	.000	.912	.732	.858	.700	.000	.927	.500	.500	.788	.000	.788	.922

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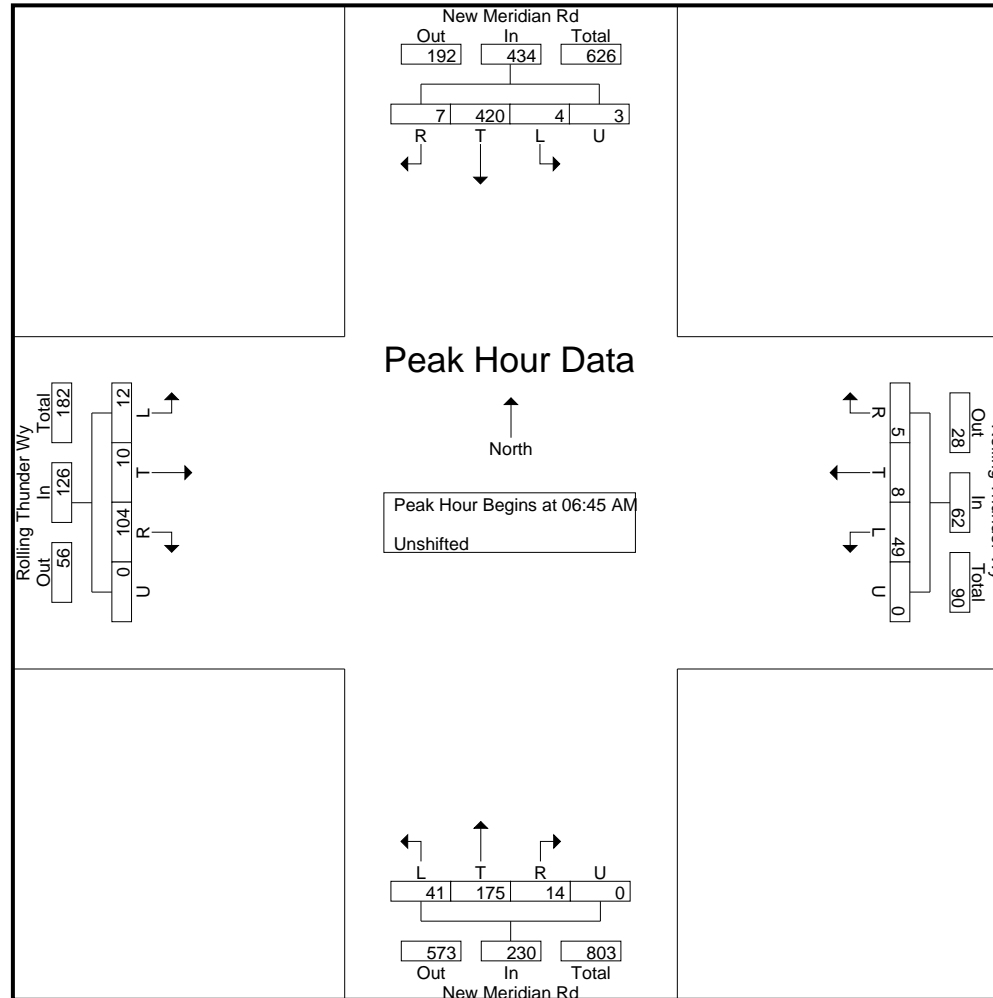
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719-633-2868

File Name : New Meridian Rd - Rolling Thunder Wy AM

Site Code : S214620

Start Date : 7/21/2021

Page No : 3



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719-633-2868

File Name : New Meridian Rd - Rolling Thunder Wy AM
Site Code : S214620
Start Date : 7/21/2021
Page No : 4

	New Meridian Rd Southbound					Rolling Thunder Wy Westbound					New Meridian Rd Northbound					Rolling Thunder Wy Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 6:30:00 AM to 8:15:00 AM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	6:45:00 AM					7:15:00 AM					6:45:00 AM					6:45:00 AM					
+0 mins.	2	107	1	0	110	13	3	1	0	17	14	46	2	0	62	1	1	27	0	29	
+5 mins.	1	113	3	0	117	15	1	0	0	16	14	41	5	0	60	6	1	33	0	40	
+10 mins.	0	97	1	2	100	13	2	1	0	16	6	51	2	0	59	2	3	23	0	28	
+15 mins.	1	103	2	1	107	9	3	3	0	15	7	37	5	0	49	3	5	21	0	29	
Total Volume	4	420	7	3	434	50	9	5	0	64	41	175	14	0	230	12	10	104	0	126	
% App. Total	0.9	96.8	1.6	0.7		78.1	14.1	7.8	0		17.8	76.1	6.1	0		9.5	7.9	82.5	0		
PHF	.500	.929	.583	.375	.927	.833	.750	.417	.000	.941	.732	.858	.700	.000	.927	.500	.500	.788	.000	.788	

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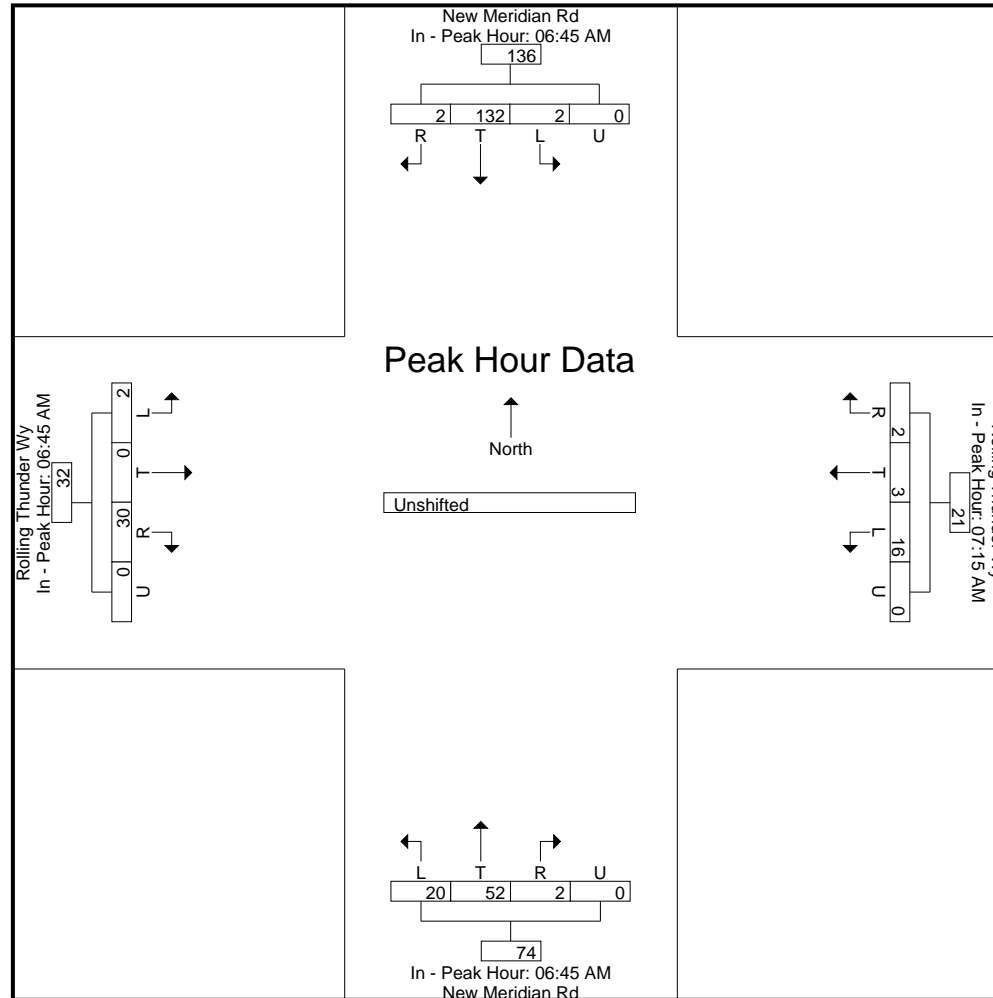
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Colorado Springs, CO 80905
719-633-2868

File Name : New Meridian Rd - Rolling Thunder Wy AM

Site Code : S214620

Start Date : 7/21/2021

Page No : 5



LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210
Colorado Springs, CO 80905
719-633-2868

File Name : New Meridian Rd - Rolling Thunder Wy PM
Site Code : S214620
Start Date : 7/21/2021
Page No : 1

Groups Printed- Unshifted

	New Meridian Rd Southbound					Rolling Thunder Wy Westbound					New Meridian Rd Northbound					Rolling Thunder Wy Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
04:00 PM	8	28	7	5	48	16	7	4	0	27	25	93	15	0	133	6	10	19	0	35	243
04:15 PM	3	53	5	4	65	18	8	9	0	35	25	89	13	0	127	8	7	22	0	37	264
04:30 PM	5	48	6	9	68	12	10	4	0	26	27	121	14	0	162	7	3	19	0	29	285
04:45 PM	7	64	9	8	88	15	7	4	0	26	17	112	15	1	145	5	3	20	0	28	287
Total	23	193	27	26	269	61	32	21	0	114	94	415	57	1	567	26	23	80	0	129	1079
05:00 PM	5	52	12	12	81	15	17	11	0	43	30	117	20	0	167	8	7	22	0	37	328
05:15 PM	3	52	14	13	82	12	8	5	0	25	25	115	10	0	150	18	9	24	0	51	308
05:30 PM	4	59	5	6	74	14	13	9	0	36	23	89	10	0	122	7	7	32	0	46	278
05:45 PM	4	44	11	4	63	15	9	6	0	30	19	93	14	0	126	10	3	16	0	29	248
Total	16	207	42	35	300	56	47	31	0	134	97	414	54	0	565	43	26	94	0	163	1162
Grand Total	39	400	69	61	569	117	79	52	0	248	191	829	111	1	1132	69	49	174	0	292	2241
Apprch %	6.9	70.3	12.1	10.7		47.2	31.9	21	0		16.9	73.2	9.8	0.1		23.6	16.8	59.6	0		
Total %	1.7	17.8	3.1	2.7	25.4	5.2	3.5	2.3	0	11.1	8.5	37	5	0	50.5	3.1	2.2	7.8	0	13	

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719-633-2868

File Name : New Meridian Rd - Rolling Thunder Wy PM
Site Code : S214620
Start Date : 7/21/2021
Page No : 2

	New Meridian Rd Southbound					Rolling Thunder Wy Westbound					New Meridian Rd Northbound					Rolling Thunder Wy Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 4:30:00 PM																					
4:30:00 PM	5	48	6	9	68	12	10	4	0	26	27	121	14	0	162	7	3	19	0	29	285
4:45:00 PM	7	64	9	8	88	15	7	4	0	26	17	112	15	1	145	5	3	20	0	28	287
5:00:00 PM	5	52	12	12	81	15	17	11	0	43	30	117	20	0	167	8	7	22	0	37	328
5:15:00 PM	3	52	14	13	82	12	8	5	0	25	25	115	10	0	150	18	9	24	0	51	308
Total Volume	20	216	41	42	319	54	42	24	0	120	99	465	59	1	624	38	22	85	0	145	1208
% App. Total	6.3	67.7	12.9	13.2		45	35	20	0		15.9	74.5	9.5	0.2		26.2	15.2	58.6	0		
PHF	.714	.844	.732	.808	.906	.900	.618	.545	.000	.698	.825	.961	.738	.250	.934	.528	.611	.885	.000	.711	.921

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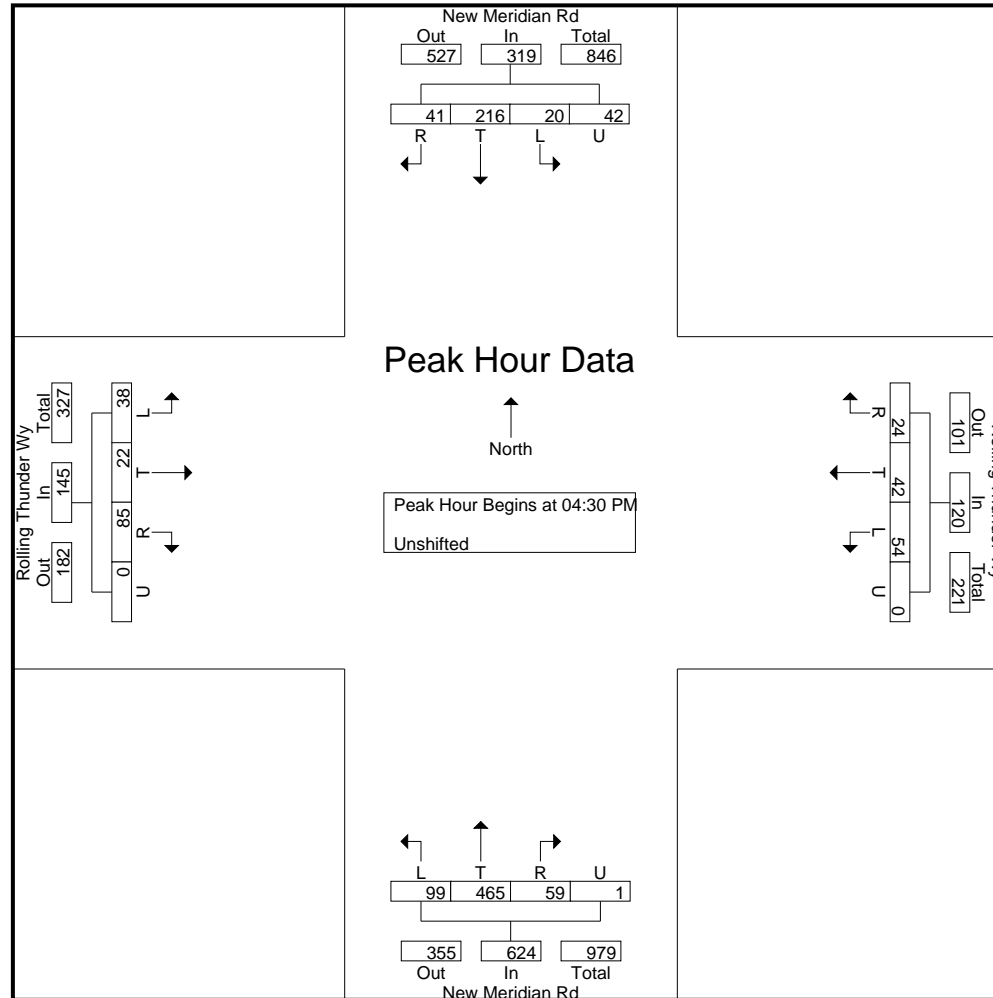
545 E Pikes Peak Ave, Suite 210
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719-633-2868

File Name : New Meridian Rd - Rolling Thunder Wy PM

Site Code : S214620

Start Date : 7/21/2021

Page No : 3



LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210
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719-633-2868

File Name : New Meridian Rd - Rolling Thunder Wy PM
Site Code : S214620
Start Date : 7/21/2021
Page No : 4

	New Meridian Rd Southbound					Rolling Thunder Wy Westbound					New Meridian Rd Northbound					Rolling Thunder Wy Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	4:45:00 PM					5:00:00 PM					4:30:00 PM					5:00:00 PM					
+0 mins.	7	64	9	8	88	15	17	11	0	43	27	121	14	0	162	8	7	22	0	37	
+5 mins.	5	52	12	12	81	12	8	5	0	25	17	112	15	1	145	18	9	24	0	51	
+10 mins.	3	52	14	13	82	14	13	9	0	36	30	117	20	0	167	7	7	32	0	46	
+15 mins.	4	59	5	6	74	15	9	6	0	30	25	115	10	0	150	10	3	16	0	29	
Total Volume	19	227	40	39	325	56	47	31	0	134	99	465	59	1	624	43	26	94	0	163	
% App. Total	5.8	69.8	12.3	12		41.8	35.1	23.1	0		15.9	74.5	9.5	0.2		26.4	16	57.7	0		
PHF	.679	.887	.714	.750	.923	.933	.691	.705	.000	.779	.825	.961	.738	.250	.934	.597	.722	.734	.000	.799	

LSC Transportation Consultants, Inc.

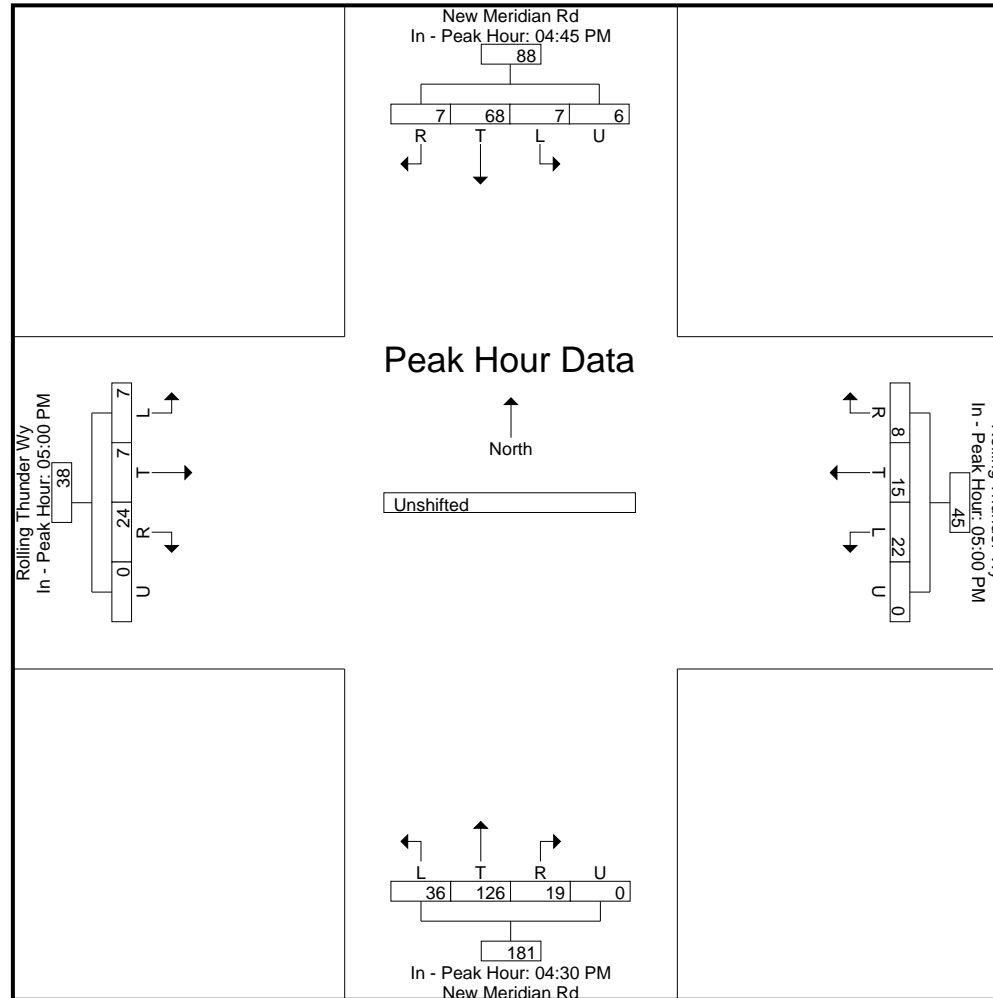
545 E Pikes Peak Ave, Suite 210
Colorado Springs, CO 80905
719-633-2868

File Name : New Meridian Rd - Rolling Thunder Wy PM

Site Code : S214620

Start Date : 7/21/2021

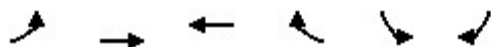
Page No : 5



Levels of Service

Lanes, Volumes, Timings
1: Rolling Thunder Way & Foxtail Meadow Ln

2022 Exiwtg
AM

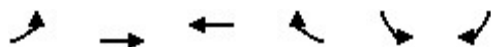


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	15	145	85	4	42	8
Future Volume (vph)	15	145	85	4	42	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130			0	165	165
Storage Lanes	1			1	1	0
Taper Length (ft)	95				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.691				0.950	
Satd. Flow (perm)	1287	1863	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				5		10
Link Speed (mph)		30	30		30	
Link Distance (ft)		481	726		430	
Travel Time (s)		10.9	16.5		9.8	
Peak Hour Factor	0.87	0.87	0.83	0.83	0.83	0.83
Adj. Flow (vph)	17	167	102	5	51	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	167	102	5	51	10
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	R NA	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		4	8			
Permitted Phases	4			8	6	6

Lanes, Volumes, Timings

1: Rolling Thunder Way & Foxtail Meadow Ln

2022 Exiwtng
AM

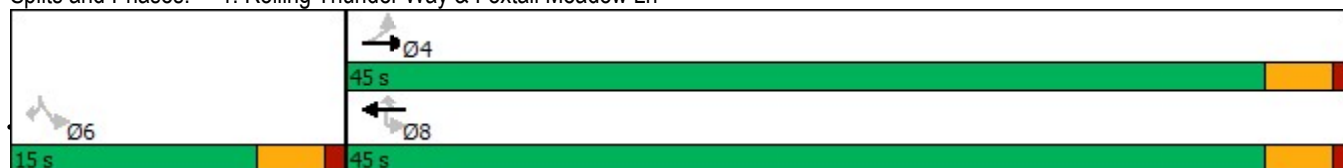


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	4	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	15.0	15.0	15.0	15.0	10.0	10.0
Minimum Split (s)	19.0	19.0	19.0	19.0	14.0	14.0
Total Split (s)	45.0	45.0	45.0	45.0	15.0	15.0
Total Split (%)	75.0%	75.0%	75.0%	75.0%	25.0%	25.0%
Maximum Green (s)	41.0	41.0	41.0	41.0	11.0	11.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	None	None
Act Effect Green (s)	27.4	27.4	27.4	27.4	10.0	10.0
Actuated g/C Ratio	0.79	0.79	0.79	0.79	0.29	0.29
v/c Ratio	0.02	0.11	0.07	0.00	0.10	0.02
Control Delay	4.3	3.8	3.8	3.5	9.6	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.3	3.8	3.8	3.5	9.6	5.8
LOS	A	A	A	A	A	A
Approach Delay		3.8	3.8		9.0	
Approach LOS		A	A		A	
Queue Length 50th (ft)	0	0	0	0	7	0
Queue Length 95th (ft)	6	32	20	2	17	5
Internal Link Dist (ft)		401	646		350	
Turn Bay Length (ft)	130				165	165
Base Capacity (vph)	1287	1863	1863	1583	565	512
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.09	0.05	0.00	0.09	0.02

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 34.5
 Natural Cycle: 40
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.11
 Intersection Signal Delay: 4.7
 Intersection LOS: A
 Intersection Capacity Utilization 31.7%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 1: Rolling Thunder Way & Foxtail Meadow Ln



























Lanes, Volumes, Timings

JAB













Lanes, Volumes, Timings
2: Meridian Rd/Meridian & Rolling Thunder/Rolling Thunder Way

2022 Exiwtng
AM

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	12	10	104	49	8	5	41	175	14	4	420	7
Future Volume (vph)	12	10	104	49	8	5	41	175	14	4	420	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	315		450	285		105	285		185	285		350
Storage Lanes	2		1	1		2	1		1	1		2
Taper Length (ft)	115			110			175			175		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.626		
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	1770	3539	1583	1166	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164			164			115			164
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		726			498			875			699	
Travel Time (s)		16.5			11.3			14.9			11.9	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.87	0.87	0.87	0.92	0.92	0.92
Adj. Flow (vph)	14	12	125	59	10	6	47	201	16	4	457	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	12	125	59	10	6	47	201	16	4	457	8
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			40			40	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (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
Detector 1 Queue (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
Detector 1 Delay (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
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2	6		6

Lanes, Volumes, Timings
2: Meridian Rd/Meridian & Rolling Thunder/Rolling Thunder Way

2022 Exiwtng
AM

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	16.0	16.0	16.0	16.0	16.0	16.0	26.0	53.0	53.0	15.0	42.0	42.0
Total Split (%)	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	26.0%	53.0%	53.0%	15.0%	42.0%	42.0%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5	11.5	21.5	48.5	48.5	10.5	37.5	37.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	None	None
Act Effect Green (s)	5.9	6.2	6.2	8.1	12.1	12.1	7.6	51.3	51.3	48.8	45.6	45.6
Actuated g/C Ratio	0.08	0.08	0.08	0.11	0.16	0.16	0.10	0.67	0.67	0.64	0.60	0.60
v/c Ratio	0.05	0.04	0.45	0.32	0.02	0.02	0.27	0.08	0.01	0.01	0.22	0.01
Control Delay	37.0	36.0	8.5	37.9	28.4	0.0	37.7	6.5	0.0	6.0	10.4	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	37.0	36.0	8.5	37.9	28.4	0.0	37.7	6.5	0.0	6.0	10.4	0.0
LOS	D	D	A	D	C	A	D	A	A	A	B	A
Approach Delay	13.3				33.6				11.7		10.2	
Approach LOS	B				C				B		B	
Queue Length 50th (ft)	3	2	0	26	2	0	21	16	0	1	63	0
Queue Length 95th (ft)	12	11	19	64	9	0	57	45	0	4	113	0
Internal Link Dist (ft)	646				418				795		619	
Turn Bay Length (ft)	315	450		285	105		285	185		285	350	
Base Capacity (vph)	526	542	381	271	689	440	507	2386	1104	873	2145	1024
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	0.03	0.02	0.33	0.22	0.01	0.01	0.09	0.08	0.01	0.00	0.21	0.01

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 76.1

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.45

Intersection Signal Delay: 12.9

Intersection LOS: B

Intersection Capacity Utilization 36.4%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: Meridian Rd/Meridian & Rolling Thunder/Rolling Thunder Way

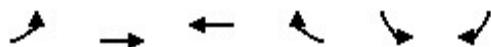


Lanes, Volumes, Timings

JAB

Lanes, Volumes, Timings
1: Rolling Thunder Way & Foxtail Meadow Ln

2022 Exiwtng
PM

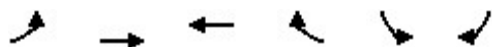


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	21	86	149	17	49	23
Future Volume (vph)	21	86	149	17	49	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130			0	165	165
Storage Lanes	1			1	1	0
Taper Length (ft)	95				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.649				0.950	
Satd. Flow (perm)	1209	1863	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				20		28
Link Speed (mph)		30	30		30	
Link Distance (ft)		481	726		430	
Travel Time (s)		10.9	16.5		9.8	
Peak Hour Factor	0.83	0.83	0.87	0.87	0.83	0.83
Adj. Flow (vph)	25	104	171	20	59	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	25	104	171	20	59	28
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	R NA	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		4	8			
Permitted Phases	4			8	6	6

Lanes, Volumes, Timings

1: Rolling Thunder Way & Foxtail Meadow Ln

2022 Exiwtng
PM

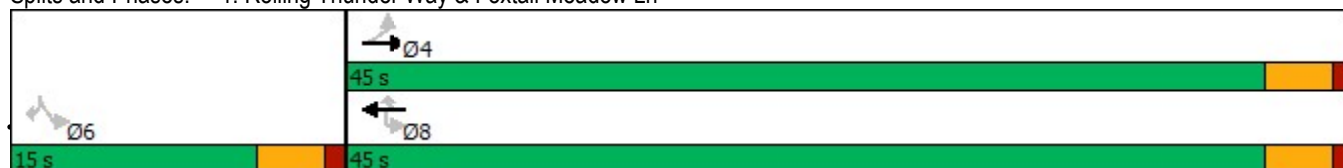


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	4	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	15.0	15.0	15.0	15.0	10.0	10.0
Minimum Split (s)	19.0	19.0	19.0	19.0	14.0	14.0
Total Split (s)	45.0	45.0	45.0	45.0	15.0	15.0
Total Split (%)	75.0%	75.0%	75.0%	75.0%	25.0%	25.0%
Maximum Green (s)	41.0	41.0	41.0	41.0	11.0	11.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	None	None
Act Effect Green (s)	24.5	24.5	24.5	24.5	10.1	10.1
Actuated g/C Ratio	0.70	0.70	0.70	0.70	0.29	0.29
v/c Ratio	0.03	0.08	0.13	0.02	0.12	0.06
Control Delay	5.1	4.8	4.9	2.8	9.8	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.1	4.8	4.9	2.8	9.8	4.5
LOS	A	A	A	A	A	A
Approach Delay		4.9	4.7		8.1	
Approach LOS		A	A		A	
Queue Length 50th (ft)	2	9	16	0	11	0
Queue Length 95th (ft)	8	21	33	5	19	8
Internal Link Dist (ft)		401	646		350	
Turn Bay Length (ft)	130				165	165
Base Capacity (vph)	1203	1854	1854	1575	557	518
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.06	0.09	0.01	0.11	0.05

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 35.2
 Natural Cycle: 40
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.13
 Intersection Signal Delay: 5.5
 Intersection LOS: A
 Intersection Capacity Utilization 32.5%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 1: Rolling Thunder Way & Foxtail Meadow Ln



























Lanes, Volumes, Timings

JAB













Lanes, Volumes, Timings
2: Meridian Rd/Meridian & Rolling Thunder/Rolling Thunder Way

2022 Exiwtg PM

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	38	22	85	54	42	24	99	465	59	20	216	41
Future Volume (vph)	38	22	85	54	42	24	99	465	59	20	216	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	315		450	285		105	285		185	285		350
Storage Lanes	2		1	1		2	1		1	1		2
Taper Length (ft)	115			110			175			175		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.469		
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	1770	3539	1583	874	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164			164			115			164
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		726			498			875			699	
Travel Time (s)		16.5			11.3			14.9			11.9	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.93	0.93	0.93	0.92	0.92	0.92
Adj. Flow (vph)	46	27	102	65	51	29	106	500	63	22	235	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	27	102	65	51	29	106	500	63	22	235	45
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			40			40	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (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
Detector 1 Queue (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
Detector 1 Delay (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
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2	6		6

Lanes, Volumes, Timings
2: Meridian Rd/Meridian & Rolling Thunder/Rolling Thunder Way

2022 Exiwtng
PM

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	16.0	16.0	16.0	16.0	16.0	16.0	26.0	53.0	53.0	15.0	42.0	42.0
Total Split (%)	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	26.0%	53.0%	53.0%	15.0%	42.0%	42.0%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5	11.5	21.5	48.5	48.5	10.5	37.5	37.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	None	None
Act Effect Green (s)	6.7	6.3	6.3	8.3	10.1	10.1	10.1	51.7	51.7	46.9	43.7	43.7
Actuated g/C Ratio	0.09	0.08	0.08	0.11	0.13	0.13	0.13	0.67	0.67	0.61	0.57	0.57
v/c Ratio	0.15	0.09	0.36	0.34	0.11	0.08	0.46	0.21	0.06	0.04	0.12	0.05
Control Delay	38.1	38.3	5.2	40.4	34.7	0.5	40.5	8.4	0.5	6.3	12.8	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	38.1	38.3	5.2	40.4	34.7	0.5	40.5	8.4	0.5	6.3	12.8	0.1
LOS	D	D	A	D	C	A	D	A	A	A	B	A
Approach Delay	19.0			30.4			12.7			10.4		
Approach LOS	B			C			B			B		
Queue Length 50th (ft)	10	6	0	29	11	0	47	45	0	3	33	0
Queue Length 95th (ft)	27	19	4	68	29	0	106	109	4	12	65	0
Internal Link Dist (ft)	646			418			795			619		
Turn Bay Length (ft)	315		450	285		105	285		185	285		350
Base Capacity (vph)	533	549	384	275	604	406	514	2378	1101	698	2060	990
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	0.05	0.27	0.24	0.08	0.07	0.21	0.21	0.06	0.03	0.11	0.05

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 76.9

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.46

Intersection Signal Delay: 15.0

Intersection LOS: B

Intersection Capacity Utilization 37.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: Meridian Rd/Meridian & Rolling Thunder/Rolling Thunder Way



























Lanes, Volumes, Timings

JAB

Lanes, Volumes, Timings
1: Foxtail Meadow Ln & Rolling Thunder Way













2022 Exiwtng + Site
AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	145	1	7	85	4	1	0	5	42	1	8
Future Volume (vph)	15	145	1	7	85	4	1	0	5	42	1	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		130	95		0	120		120	165		165
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	95			115			140			100		
Lane Util. 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
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.691			0.651			0.757			0.757		
Satd. Flow (perm)	1287	1863	1583	1213	1863	1583	1410	1863	1583	1410	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			16			16			769			16
Link Speed (mph)		30			30			15			30	
Link Distance (ft)		481			726			343			430	
Travel Time (s)		10.9			16.5			15.6			9.8	
Peak Hour Factor	0.87	0.87	0.87	0.83	0.83	0.83	0.78	0.78	0.78	0.83	0.83	0.83
Adj. Flow (vph)	17	167	1	8	102	5	1	0	6	51	1	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	17	167	1	8	102	5	1	0	6	51	1	10
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (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
Detector 1 Queue (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
Detector 1 Delay (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
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm		Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6

Lanes, Volumes, Timings

1: Foxtail Meadow Ln & Rolling Thunder Way

2022 Exiwing + Site
AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8	8	2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	5.0	5.0	5.0	10.0	10.0	10.0
Minimum Split (s)	19.0	19.0	19.0	19.0	19.0	19.0	9.0	9.0	9.0	14.0	14.0	14.0
Total Split (s)	45.0	45.0	45.0	45.0	45.0	45.0	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Maximum Green (s)	41.0	41.0	41.0	41.0	41.0	41.0	18.5	18.5	18.5	18.5	18.5	18.5
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None	None
Act Effect Green (s)	25.8	25.8	25.8	25.8	25.8	25.8	8.3		8.3	10.2	10.2	10.2
Actuated g/C Ratio	0.71	0.71	0.71	0.71	0.71	0.71	0.23		0.23	0.28	0.28	0.28
v/c Ratio	0.02	0.13	0.00	0.01	0.08	0.00	0.00		0.01	0.13	0.00	0.02
Control Delay	4.9	4.8	0.0	4.9	4.7	1.5	8.0		0.0	10.6	8.0	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay	4.9	4.8	0.0	4.9	4.7	1.5	8.0		0.0	10.6	8.0	4.1
LOS	A	A	A	A	A	A	A		A	B	A	A
Approach Delay		4.8			4.5			1.1			9.5	
Approach LOS		A			A			A			A	
Queue Length 50th (ft)	1	15	0	1	9	0	0		0	12	0	0
Queue Length 95th (ft)	6	32	0	4	20	1	2		0	18	2	4
Internal Link Dist (ft)		401			646			263			350	
Turn Bay Length (ft)	130		130	95			120		120	165		165
Base Capacity (vph)	1249	1809	1537	1178	1809	1537	730		1190	730	965	828
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0	0	0		0	0	0	0
Reduced v/c Ratio	0.01	0.09	0.00	0.01	0.06	0.00	0.00		0.01	0.07	0.00	0.01

Intersection Summary

Area Type: Other

Cycle Length: 67.5

Actuated Cycle Length: 36.4

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.13

Intersection Signal Delay: 5.4

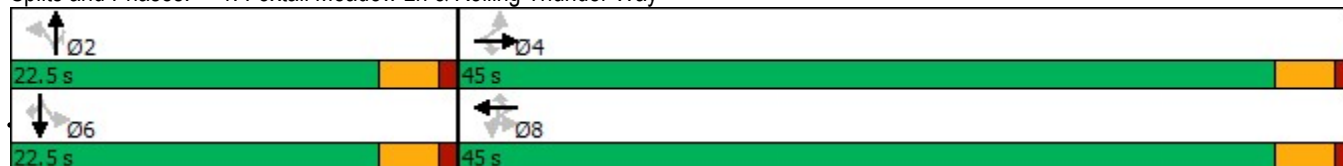
Intersection LOS: A

Intersection Capacity Utilization 43.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: Foxtail Meadow Ln & Rolling Thunder Way



























Lanes, Volumes, Timings

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



Lanes, Volumes, Timings
2: Meridian Rd/Meridian & Rolling Thunder/Rolling Thunder Way

2022 Exiwtng + Site
AM

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	16	10	104	49	9	5	45	175	14	4	423	10
Future Volume (vph)	16	10	104	49	9	5	45	175	14	4	423	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	315		450	285		105	285		185	285		350
Storage Lanes	2		0	1		2	1		1	1		2
Taper Length (ft)	115			110			175			175		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.626		
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	1770	3539	1583	1166	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164			164			115			164
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		726			498			875			699	
Travel Time (s)		16.5			11.3			14.9			11.9	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.87	0.87	0.87	0.92	0.92	0.92
Adj. Flow (vph)	19	12	125	59	11	6	52	201	16	4	460	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	19	12	125	59	11	6	52	201	16	4	460	11
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			40			40	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (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
Detector 1 Queue (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
Detector 1 Delay (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
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2	6		6

Lanes, Volumes, Timings
2: Meridian Rd/Meridian & Rolling Thunder/Rolling Thunder Way

2022 Exiwtng + Site
AM

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	16.0	16.0	16.0	16.0	16.0	16.0	26.0	53.0	53.0	15.0	42.0	42.0
Total Split (%)	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	26.0%	53.0%	53.0%	15.0%	42.0%	42.0%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5	11.5	21.5	48.5	48.5	10.5	37.5	37.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	None	None
Act Effect Green (s)	6.0	6.2	6.2	8.1	12.1	12.1	7.8	51.3	51.3	48.6	45.4	45.4
Actuated g/C Ratio	0.08	0.08	0.08	0.11	0.16	0.16	0.10	0.67	0.67	0.64	0.60	0.60
v/c Ratio	0.07	0.04	0.45	0.32	0.02	0.02	0.29	0.08	0.01	0.01	0.22	0.01
Control Delay	36.7	36.0	8.5	37.9	28.4	0.0	37.8	6.5	0.0	6.2	10.6	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	36.7	36.0	8.5	37.9	28.4	0.0	37.8	6.5	0.0	6.2	10.6	0.0
LOS	D	D	A	D	C	A	D	A	A	A	B	A
Approach Delay	14.0				33.5		12.2				10.3	
Approach LOS	B				C		B				B	
Queue Length 50th (ft)	4	2	0	26	2	0	23	16	0	1	64	0
Queue Length 95th (ft)	15	11	19	64	10	0	61	45	0	4	115	0
Internal Link Dist (ft)	646				418		795				619	
Turn Bay Length (ft)	315	450		285	105		285	185		285	350	
Base Capacity (vph)	526	542	381	271	687	439	507	2386	1104	871	2142	1022
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	0.04	0.02	0.33	0.22	0.02	0.01	0.10	0.08	0.01	0.00	0.21	0.01

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 76.1

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.45

Intersection Signal Delay: 13.2




Intersection LOS: B

Intersection Capacity Utilization 36.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: Meridian Rd/Meridian & Rolling Thunder/Rolling Thunder Way

			
15 s	53 s	16 s	16 s
			
26 s	42 s	16 s	16 s

























Lanes, Volumes, Timings

JAB

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	3	0	254	573	3
Future Vol, veh/h	0	3	0	254	573	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	92	92	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	0	276	616	3
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	310	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	686	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	686	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	10.3	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT EBLn1		SBT	SBR		
Capacity (veh/h)	- 686		-	-		
HCM Lane V/C Ratio	- 0.006		-	-		
HCM Control Delay (s)	- 10.3		-	-		
HCM Lane LOS	- B		-	-		
HCM 95th %tile Q(veh)	- 0		-	-		













Lanes, Volumes, Timings
1: Foxtail Meadow Ln & Rolling Thunder Way

2022 Exiwtng + Site
PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	86	1	7	149	17	2	0	8	49	1	23
Future Volume (vph)	21	86	1	7	149	17	2	0	8	49	1	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		130	95		0	120		120	165		165
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	95			115			140			100		
Lane Util. 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
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.649			0.690			0.757			0.757		
Satd. Flow (perm)	1209	1863	1583	1285	1863	1583	1410	1863	1583	1410	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			16			20			878			28
Link Speed (mph)		30			30			15			30	
Link Distance (ft)		481			726			343			430	
Travel Time (s)		10.9			16.5			15.6			9.8	
Peak Hour Factor	0.83	0.83	0.83	0.87	0.87	0.87	0.78	0.78	0.78	0.83	0.83	0.83
Adj. Flow (vph)	25	104	1	8	171	20	3	0	10	59	1	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	25	104	1	8	171	20	3	0	10	59	1	28
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (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
Detector 1 Queue (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
Detector 1 Delay (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
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm		Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6

Lanes, Volumes, Timings
1: Foxtail Meadow Ln & Rolling Thunder Way

2022 Exiwing + Site
PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8	8	2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	5.0	5.0	5.0	10.0	10.0	10.0
Minimum Split (s)	19.0	19.0	19.0	19.0	19.0	19.0	9.0	9.0	9.0	14.0	14.0	14.0
Total Split (s)	45.0	45.0	45.0	45.0	45.0	45.0	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Maximum Green (s)	41.0	41.0	41.0	41.0	41.0	41.0	18.5	18.5	18.5	18.5	18.5	18.5
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None	None
Act Effect Green (s)	23.6	23.6	23.6	23.6	23.6	23.6	8.2		8.2	10.0	10.0	10.0
Actuated g/C Ratio	0.69	0.69	0.69	0.69	0.69	0.69	0.24		0.24	0.29	0.29	0.29
v/c Ratio	0.03	0.08	0.00	0.01	0.13	0.02	0.01		0.01	0.14	0.00	0.06
Control Delay	5.1	4.9	0.0	5.0	5.0	2.8	8.5		0.0	9.9	8.0	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay	5.1	4.9	0.0	5.0	5.0	2.8	8.5		0.0	9.9	8.0	4.5
LOS	A	A	A	A	A	A	A		A	A	A	A
Approach Delay		4.9			4.8			2.0			8.1	
Approach LOS		A			A			A			A	
Queue Length 50th (ft)	2	9	0	1	16	0	1		0	9	0	0
Queue Length 95th (ft)	8	21	0	4	33	5	3		0	20	2	8
Internal Link Dist (ft)		401			646			263			350	
Turn Bay Length (ft)	130		130	95			120		120	165		165
Base Capacity (vph)	1209	1863	1583	1285	1863	1583	760		1258	760	1004	866
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0	0	0		0	0	0	0
Reduced v/c Ratio	0.02	0.06	0.00	0.01	0.09	0.01	0.00		0.01	0.08	0.00	0.03

Intersection Summary

Area Type: Other

Cycle Length: 67.5

Actuated Cycle Length: 34.4

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.14

Intersection Signal Delay: 5.4

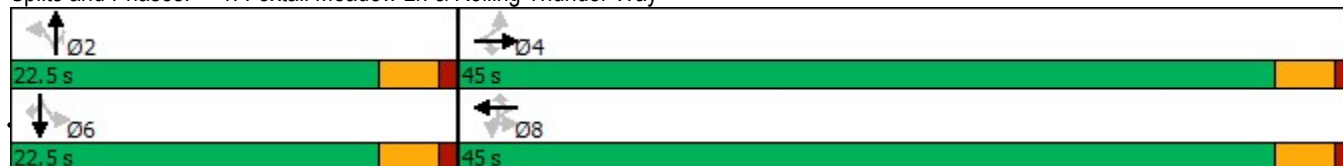
Intersection LOS: A

Intersection Capacity Utilization 43.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: Foxtail Meadow Ln & Rolling Thunder Way



























Lanes, Volumes, Timings

JAB













Lanes, Volumes, Timings
2: Meridian Rd/Meridian & Rolling Thunder/Rolling Thunder Way

2022 Exiwtng + Site
PM

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	45	23	85	54	43	24	103	465	59	20	219	44
Future Volume (vph)	45	23	85	54	43	24	103	465	59	20	219	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	315		450	285		105	285		185	285		350
Storage Lanes	2		0	1		2	1		1	1		2
Taper Length (ft)	115			110			175			175		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.469		
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	1770	3539	1583	874	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164			164			115			164
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		726			498			875			699	
Travel Time (s)		16.5			11.3			14.9			11.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.93	0.93	0.93	0.92	0.92	0.92
Adj. Flow (vph)	52	26	98	62	49	28	111	500	63	22	238	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	52	26	98	62	49	28	111	500	63	22	238	48
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			40			40	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (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
Detector 1 Queue (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
Detector 1 Delay (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
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2	6		6

Lanes, Volumes, Timings
2: Meridian Rd/Meridian & Rolling Thunder/Rolling Thunder Way

2022 Exiwtng + Site
PM

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	16.0	16.0	16.0	16.0	16.0	16.0	26.0	53.0	53.0	15.0	42.0	42.0
Total Split (%)	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	26.0%	53.0%	53.0%	15.0%	42.0%	42.0%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5	11.5	21.5	48.5	48.5	10.5	37.5	37.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	None	None
Act Effect Green (s)	6.8	6.3	6.3	8.2	9.9	9.9	10.3	51.7	51.7	46.7	43.5	43.5
Actuated g/C Ratio	0.09	0.08	0.08	0.11	0.13	0.13	0.13	0.67	0.67	0.61	0.57	0.57
v/c Ratio	0.17	0.09	0.35	0.33	0.11	0.08	0.47	0.21	0.06	0.04	0.12	0.05
Control Delay	38.0	38.3	4.6	40.1	34.9	0.5	40.5	8.3	0.5	6.3	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	38.0	38.3	4.6	40.1	34.9	0.5	40.5	8.3	0.5	6.3	12.9	0.1
LOS	D	D	A	D	C	A	D	A	A	A	B	A
Approach Delay	19.4			30.3			12.9			10.4		
Approach LOS	B			C			B			B		
Queue Length 50th (ft)	11	6	0	28	11	0	49	45	0	3	33	0
Queue Length 95th (ft)	31	20	6	69	30	0	109	109	4	12	66	0
Internal Link Dist (ft)	646			418			795			619		
Turn Bay Length (ft)	315		450	285		105	285		185	285		350
Base Capacity (vph)	533	550	384	275	603	405	514	2380	1102	696	2056	988
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	0.05	0.26	0.23	0.08	0.07	0.22	0.21	0.06	0.03	0.12	0.05

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 76.8

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.47

Intersection Signal Delay: 15.1

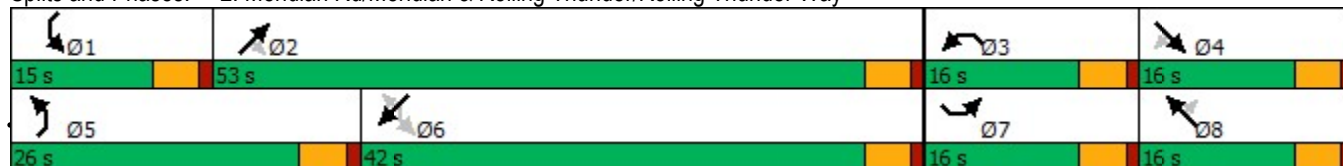
Intersection LOS: B

Intersection Capacity Utilization 37.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: Meridian Rd/Meridian & Rolling Thunder/Rolling Thunder Way



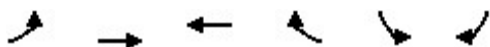
Lanes, Volumes, Timings

JAB

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	4	0	627	355	3
Future Vol, veh/h	0	4	0	627	355	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	93	93	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	5	0	674	386	3
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	195	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	814	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	814	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.5	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT EBLn1		SBT	SBR		
Capacity (veh/h)	- 814		-	-		
HCM Lane V/C Ratio	- 0.006		-	-		
HCM Control Delay (s)	- 9.5		-	-		
HCM Lane LOS	- A		-	-		
HCM 95th %tile Q(veh)	- 0		-	-		

Lanes, Volumes, Timings
1: Rolling Thunder Way & Foxtail Meadow Ln

2042 Background
AM

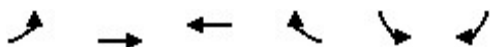


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	50	229	155	110	115	25
Future Volume (vph)	50	229	155	110	115	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130			0	165	165
Storage Lanes	1			1	1	0
Taper Length (ft)	95				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.651				0.950	
Satd. Flow (perm)	1213	1863	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				120		30
Link Speed (mph)		30	30		30	
Link Distance (ft)		481	726		430	
Travel Time (s)		10.9	16.5		9.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.83	0.83
Adj. Flow (vph)	54	249	168	120	139	30
Shared Lane Traffic (%)						
Lane Group Flow (vph)	54	249	168	120	139	30
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	R NA	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		4	8			
Permitted Phases	4			8	6	6

Lanes, Volumes, Timings

1: Rolling Thunder Way & Foxtail Meadow Ln

2042 Background
AM

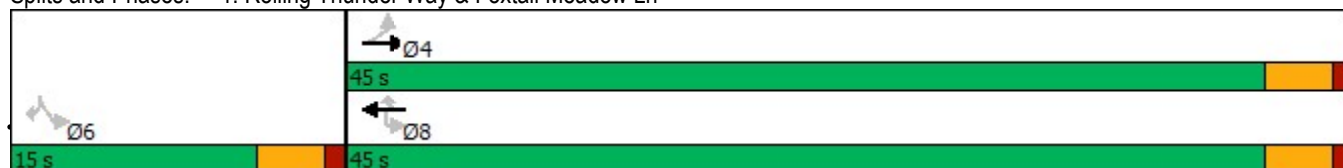


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	4	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	15.0	15.0	15.0	15.0	10.0	10.0
Minimum Split (s)	19.0	19.0	19.0	19.0	14.0	14.0
Total Split (s)	45.0	45.0	45.0	45.0	15.0	15.0
Total Split (%)	75.0%	75.0%	75.0%	75.0%	25.0%	25.0%
Maximum Green (s)	41.0	41.0	41.0	41.0	11.0	11.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	None	None
Act Effect Green (s)	19.9	19.9	19.9	19.9	10.0	10.0
Actuated g/C Ratio	0.58	0.58	0.58	0.58	0.29	0.29
v/c Ratio	0.08	0.23	0.16	0.12	0.27	0.06
Control Delay	5.5	6.1	5.8	1.9	10.6	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.5	6.1	5.8	1.9	10.6	4.4
LOS	A	A	A	A	B	A
Approach Delay		6.0	4.2		9.5	
Approach LOS		A	A		A	
Queue Length 50th (ft)	5	24	15	0	18	0
Queue Length 95th (ft)	15	49	34	13	37	8
Internal Link Dist (ft)		401	646		350	
Turn Bay Length (ft)	130				165	165
Base Capacity (vph)	1213	1863	1863	1583	569	529
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.13	0.09	0.08	0.24	0.06

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 34.3
 Natural Cycle: 40
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.27
 Intersection Signal Delay: 6.1
 Intersection LOS: A
 Intersection Capacity Utilization 43.3%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 1: Rolling Thunder Way & Foxtail Meadow Ln



Lanes, Volumes, Timings

























JAB

Lanes, Volumes, Timings

2042 Background

2: Meridian Rd/Meridian & Rolling Thunder/Rolling Thunder Way













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Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	94	99	150	100	73	50	95	400	50	165	497	97
Future Volume (vph)	94	99	150	100	73	50	95	400	50	165	497	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	315		450	285		105	285		185	285		350
Storage Lanes	2		1	1		2	1		1	1		2
Taper Length (ft)	115			110			175			175		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.483		
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	1770	3539	1583	900	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164			164			115			164
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		726			498			875			699	
Travel Time (s)		16.5			11.3			14.9			11.9	
Peak Hour Factor	0.92	0.92	0.92	0.87	0.87	0.87	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	102	108	163	115	84	57	102	430	54	177	534	104
Shared Lane Traffic (%)												
Lane Group Flow (vph)	102	108	163	115	84	57	102	430	54	177	534	104
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			40			40	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (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
Detector 1 Queue (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
Detector 1 Delay (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
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2	6		6

Lanes, Volumes, Timings
2: Meridian Rd/Meridian & Rolling Thunder/Rolling Thunder Way

2042 Background

AM

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	16.0	16.0	16.0	16.0	16.0	16.0	26.0	53.0	53.0	15.0	42.0	42.0
Total Split (%)	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	26.0%	53.0%	53.0%	15.0%	42.0%	42.0%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5	11.5	21.5	48.5	48.5	10.5	37.5	37.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	None	None
Act Effect Green (s)	8.2	8.4	8.4	10.1	12.7	12.7	10.8	48.6	48.6	56.6	49.2	49.2
Actuated g/C Ratio	0.09	0.09	0.09	0.11	0.13	0.13	0.11	0.52	0.52	0.60	0.52	0.52
v/c Ratio	0.34	0.34	0.56	0.61	0.18	0.16	0.50	0.24	0.06	0.28	0.29	0.11
Control Delay	44.4	43.9	14.7	54.8	39.5	1.0	48.3	13.6	0.1	8.2	15.1	0.8
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	44.4	43.9	14.7	54.8	39.5	1.0	48.3	13.6	0.1	8.2	15.1	0.8
LOS	D	D	B	D	D	A	D	B	A	A	B	A
Approach Delay	31.3				37.8		18.4				11.8	
Approach LOS	C				D		B				B	
Queue Length 50th (ft)	30	33	0	67	24	0	59	73	0	37	97	0
Queue Length 95th (ft)	57	60	59	123	46	0	111	113	0	70	156	7
Internal Link Dist (ft)	646				418		795				619	
Turn Bay Length (ft)	315	450		285	105		285	185		285	350	
Base Capacity (vph)	420	433	337	216	491	361	405	1829	873	646	1848	905
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	0.24	0.25	0.48	0.53	0.17	0.16	0.25	0.24	0.06	0.27	0.29	0.11

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 94.1

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 20.5

Intersection LOS: C

Intersection Capacity Utilization 43.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: Meridian Rd/Meridian & Rolling Thunder/Rolling Thunder Way

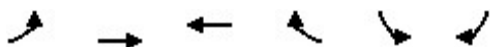


Lanes, Volumes, Timings

JAB

Lanes, Volumes, Timings
1: Rolling Thunder Way & Foxtail Meadow Ln

2042 Background
PM

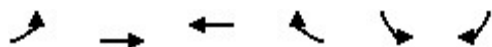


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	100	215	326	140	150	75
Future Volume (vph)	100	215	326	140	150	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130			0	165	165
Storage Lanes	1			1	1	0
Taper Length (ft)	95				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.549				0.950	
Satd. Flow (perm)	1023	1863	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				152		86
Link Speed (mph)		30	30		30	
Link Distance (ft)		481	726		430	
Travel Time (s)		10.9	16.5		9.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.87	0.87
Adj. Flow (vph)	109	234	354	152	172	86
Shared Lane Traffic (%)						
Lane Group Flow (vph)	109	234	354	152	172	86
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	R NA	Left	Right
Median Width(ft)		24	24		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		4	8			
Permitted Phases	4			8	6	6

Lanes, Volumes, Timings

1: Rolling Thunder Way & Foxtail Meadow Ln

2042 Background
PM



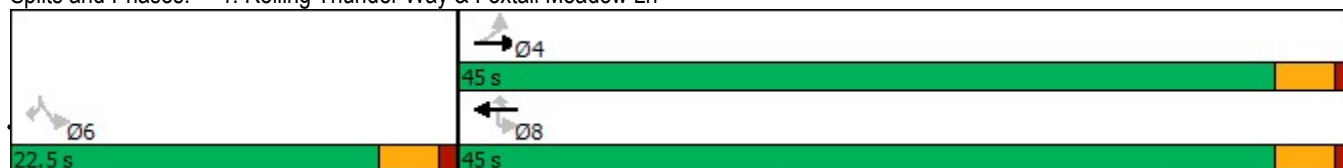
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	4	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	15.0	15.0	15.0	15.0	10.0	10.0
Minimum Split (s)	19.0	19.0	19.0	19.0	14.0	14.0
Total Split (s)	45.0	45.0	45.0	45.0	22.5	22.5
Total Split (%)	66.7%	66.7%	66.7%	66.7%	33.3%	33.3%
Maximum Green (s)	41.0	41.0	41.0	41.0	18.5	18.5
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	None	None
Act Effect Green (s)	19.6	19.6	19.6	19.6	10.3	10.3
Actuated g/C Ratio	0.57	0.57	0.57	0.57	0.30	0.30
v/c Ratio	0.19	0.22	0.33	0.16	0.32	0.16
Control Delay	6.7	6.2	6.9	1.9	11.6	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.7	6.2	6.9	1.9	11.6	4.0
LOS	A	A	A	A	B	A
Approach Delay		6.3	5.4		9.0	
Approach LOS		A	A		A	
Queue Length 50th (ft)	10	22	37	0	23	0
Queue Length 95th (ft)	31	52	80	17	58	18
Internal Link Dist (ft)		401	646		350	
Turn Bay Length (ft)	130				165	165
Base Capacity (vph)	1023	1863	1863	1583	958	896
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.13	0.19	0.10	0.18	0.10

Intersection Summary

Area Type: Other
Cycle Length: 67.5
Actuated Cycle Length: 34.3
Natural Cycle: 40
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.33
Intersection Signal Delay: 6.5
Intersection Capacity Utilization 48.0%
Analysis Period (min) 15

Intersection LOS: A
ICU Level of Service A

Splits and Phases: 1: Rolling Thunder Way & Foxtail Meadow Ln



Lanes, Volumes, Timings

























JAB

Lanes, Volumes, Timings

2042 Background

2: Meridian Rd/Meridian & Rolling Thunder/Rolling Thunder Way













PM

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	91	99	175	75	99	100	196	650	100	250	497	172
Future Volume (vph)	91	99	175	75	99	100	196	650	100	250	497	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	315		450	285		105	285		185	285		350
Storage Lanes	2		1	1		2	1		1	1		2
Taper Length (ft)	115			110			175			175		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.382		
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	1770	3539	1583	712	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			190			164			115			185
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		726			498			875			699	
Travel Time (s)		16.5			11.3			14.9			11.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	99	108	190	82	108	109	211	699	108	269	534	185
Shared Lane Traffic (%)												
Lane Group Flow (vph)	99	108	190	82	108	109	211	699	108	269	534	185
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			40			40	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (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
Detector 1 Queue (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
Detector 1 Delay (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
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2	6		6

Lanes, Volumes, Timings
2: Meridian Rd/Meridian & Rolling Thunder/Rolling Thunder Way

2042 Background

PM

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	16.0	16.0	16.0	16.0	16.0	16.0	26.0	53.0	53.0	15.0	42.0	42.0
Total Split (%)	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	26.0%	53.0%	53.0%	15.0%	42.0%	42.0%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5	11.5	21.5	48.5	48.5	10.5	37.5	37.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	None	None
Act Effect Green (s)	8.1	8.4	8.4	9.2	9.5	9.5	15.8	49.0	49.0	52.2	42.7	42.7
Actuated g/C Ratio	0.09	0.09	0.09	0.10	0.10	0.10	0.17	0.53	0.53	0.57	0.47	0.47
v/c Ratio	0.33	0.33	0.60	0.46	0.29	0.35	0.69	0.37	0.12	0.52	0.32	0.22
Control Delay	44.2	43.5	14.9	49.6	41.4	4.9	48.6	14.5	2.8	11.9	18.5	3.9
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	44.2	43.5	14.9	49.6	41.4	4.9	48.6	14.5	2.8	11.9	18.5	3.9
LOS	D	D	B	D	D	A	D	B	A	B	B	A
Approach Delay	30.0				30.3		20.3				14.0	
Approach LOS	C				C		C				B	
Queue Length 50th (ft)	29	32	0	47	32	0	121	128	0	56	106	0
Queue Length 95th (ft)	55	60	63	97	60	16	196	190	25	105	175	43
Internal Link Dist (ft)	646				418		795				619	
Turn Bay Length (ft)	315	450		285	105		285	185		285	350	
Base Capacity (vph)	434	448	366	224	456	347	418	1890	899	535	1646	835
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	0.23	0.24	0.52	0.37	0.24	0.31	0.50	0.37	0.12	0.50	0.32	0.22

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 91.8

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 20.5

Intersection LOS: C

Intersection Capacity Utilization 53.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: Meridian Rd/Meridian & Rolling Thunder/Rolling Thunder Way

























			
15 s	53 s	16 s	16 s
			
26 s	42 s	16 s	16 s

Lanes, Volumes, Timings

JAB

Lanes, Volumes, Timings
1: Foxtail Meadow Ln & Rolling Thunder Way

2042 Background + Site
AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	229	1	10	155	110	2	0	6	115	2	25
Future Volume (vph)	50	229	1	10	155	110	2	0	6	115	2	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		130	95		0	120		120	165		165
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	95			115			140			100		
Lane Util. 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
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.651			0.605			0.757			0.757		
Satd. Flow (perm)	1213	1863	1583	1127	1863	1583	1410	1863	1583	1410	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			16			120			646			29
Link Speed (mph)		30			30			15			30	
Link Distance (ft)		481			726			343			430	
Travel Time (s)		10.9			16.5			15.6			9.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.78	0.78	0.78	0.87	0.87	0.87
Adj. Flow (vph)	54	249	1	11	168	120	3	0	8	132	2	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	249	1	11	168	120	3	0	8	132	2	29
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (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
Detector 1 Queue (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
Detector 1 Delay (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
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm		Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6

Lanes, Volumes, Timings

1: Foxtail Meadow Ln & Rolling Thunder Way

2042 Background + Site

AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8	8	2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	5.0	5.0	5.0	10.0	10.0	10.0
Minimum Split (s)	19.0	19.0	19.0	19.0	19.0	19.0	9.0	9.0	9.0	14.0	14.0	14.0
Total Split (s)	45.0	45.0	45.0	45.0	45.0	45.0	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Maximum Green (s)	41.0	41.0	41.0	41.0	41.0	41.0	18.5	18.5	18.5	18.5	18.5	18.5
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None	None
Act Effect Green (s)	20.0	20.0	20.0	20.0	20.0	20.0	9.3		9.3	10.2	10.2	10.2
Actuated g/C Ratio	0.58	0.58	0.58	0.58	0.58	0.58	0.27		0.27	0.29	0.29	0.29
v/c Ratio	0.08	0.23	0.00	0.02	0.16	0.12	0.01		0.01	0.32	0.00	0.06
Control Delay	5.7	6.2	0.0	5.3	5.9	2.0	8.0		0.0	11.6	8.0	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay	5.7	6.2	0.0	5.3	5.9	2.0	8.0		0.0	11.6	8.0	4.4
LOS	A	A	A	A	A	A	A		A	B	A	A
Approach Delay		6.1			4.3			2.2			10.3	
Approach LOS		A			A			A			B	
Queue Length 50th (ft)	5	24	0	1	15	0	0		0	17	0	0
Queue Length 95th (ft)	15	52	0	5	36	14	3		0	40	3	9
Internal Link Dist (ft)		401			646			263			350	
Turn Bay Length (ft)	130		130	95			120		120	165		165
Base Capacity (vph)	1213	1863	1583	1127	1863	1583	757		1149	757	1000	863
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0	0	0		0	0	0	0
Reduced v/c Ratio	0.04	0.13	0.00	0.01	0.09	0.08	0.00		0.01	0.17	0.00	0.03

Intersection Summary

Area Type: Other

Cycle Length: 67.5

Actuated Cycle Length: 34.6

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.32

Intersection Signal Delay: 6.2

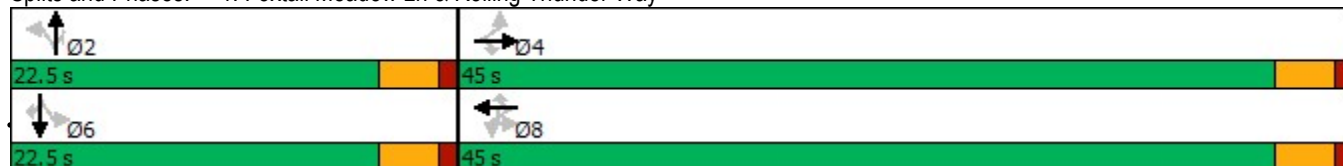
Intersection LOS: A

Intersection Capacity Utilization 50.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: Foxtail Meadow Ln & Rolling Thunder Way



























Lanes, Volumes, Timings

JAB













Lanes, Volumes, Timings
2: Meridian Rd/Meridian & Rolling Thunder/Rolling Thunder Way

2042 Background + Site
AM

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	100	100	150	100	75	50	100	400	50	165	700	100
Future Volume (vph)	100	100	150	100	75	50	100	400	50	165	700	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	315		450	285		105	285		185	285		350
Storage Lanes	2		0	1		2	1		1	1		2
Taper Length (ft)	115			110			175			175		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.486		
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	1770	3539	1583	905	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164			164			115			164
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		726			498			875			699	
Travel Time (s)		16.5			11.3			14.9			11.9	
Peak Hour Factor	0.92	0.92	0.92	0.87	0.87	0.87	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	109	109	163	115	86	57	108	430	54	177	753	108
Shared Lane Traffic (%)												
Lane Group Flow (vph)	109	109	163	115	86	57	108	430	54	177	753	108
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			40			40	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (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
Detector 1 Queue (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
Detector 1 Delay (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
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2	6		6

Lanes, Volumes, Timings
2: Meridian Rd/Meridian & Rolling Thunder/Rolling Thunder Way

2042 Background + Site
AM

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	16.0	16.0	16.0	16.0	16.0	16.0	26.0	53.0	53.0	15.0	42.0	42.0
Total Split (%)	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	26.0%	53.0%	53.0%	15.0%	42.0%	42.0%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5	11.5	21.5	48.5	48.5	10.5	37.5	37.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	None	None
Act Effect Green (s)	8.4	8.4	8.4	10.1	12.5	12.5	11.0	48.6	48.6	56.3	48.9	48.9
Actuated g/C Ratio	0.09	0.09	0.09	0.11	0.13	0.13	0.12	0.52	0.52	0.60	0.52	0.52
v/c Ratio	0.36	0.34	0.56	0.61	0.18	0.16	0.52	0.24	0.06	0.28	0.41	0.12
Control Delay	44.4	43.8	14.7	54.8	39.7	1.0	48.5	13.7	0.1	8.2	16.6	1.0
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	44.4	43.8	14.7	54.8	39.7	1.0	48.5	13.7	0.1	8.2	16.6	1.0
LOS	D	D	B	D	D	A	D	B	A	A	B	A
Approach Delay	31.5				37.9		18.8				13.6	
Approach LOS	C				D		B				B	
Queue Length 50th (ft)	32	33	0	67	25	0	63	73	0	37	150	0
Queue Length 95th (ft)	60	61	59	123	48	0	116	113	0	70	231	9
Internal Link Dist (ft)	646				418		795				619	
Turn Bay Length (ft)	315	450		285	105		285	185		285	350	
Base Capacity (vph)	420	433	337	216	488	359	405	1828	873	646	1838	901
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	0.26	0.25	0.48	0.53	0.18	0.16	0.27	0.24	0.06	0.27	0.41	0.12

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 94.1

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 20.7

Intersection LOS: C

Intersection Capacity Utilization 48.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: Meridian Rd/Meridian & Rolling Thunder/Rolling Thunder Way

 Ø1	 Ø2	 Ø3	 Ø4
15 s	53 s	16 s	16 s
 Ø5	 Ø6	 Ø7	 Ø8
26 s	42 s	16 s	16 s

























Lanes, Volumes, Timings

JAB

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	3	0	550	947	3
Future Vol, veh/h	0	3	0	550	947	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	0	591	1018	3
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	511	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	508	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	508	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	12.1	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT EBLn1		SBT	SBR		
Capacity (veh/h)	- 508		-	-		
HCM Lane V/C Ratio	- 0.008		-	-		
HCM Control Delay (s)	- 12.1		-	-		
HCM Lane LOS	- B		-	-		
HCM 95th %tile Q(veh)	- 0		-	-		

Lanes, Volumes, Timings
1: Foxtail Meadow Ln & Rolling Thunder Way

2042 Background + Site
PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	215	1	9	326	140	3	1	10	150	2	75
Future Volume (vph)	100	215	1	9	326	140	3	1	10	150	2	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		130	95		0	120		120	165		165
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	95			115			140			100		
Lane Util. 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
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.545			0.613			0.757			0.757		
Satd. Flow (perm)	1015	1863	1583	1142	1863	1583	1410	1863	1583	1410	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			16			152			16			86
Link Speed (mph)		30			30			15			30	
Link Distance (ft)		481			726			343			430	
Travel Time (s)		10.9			16.5			15.6			9.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.78	0.78	0.78	0.87	0.87	0.87
Adj. Flow (vph)	109	234	1	10	354	152	4	1	13	172	2	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	109	234	1	10	354	152	4	1	13	172	2	86
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (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
Detector 1 Queue (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
Detector 1 Delay (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
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6

Lanes, Volumes, Timings

1: Foxtail Meadow Ln & Rolling Thunder Way

2042 Background + Site

PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8	8	2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	5.0	5.0	5.0	10.0	10.0	10.0
Minimum Split (s)	19.0	19.0	19.0	19.0	19.0	19.0	9.0	9.0	9.0	14.0	14.0	14.0
Total Split (s)	45.0	45.0	45.0	45.0	45.0	45.0	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Maximum Green (s)	41.0	41.0	41.0	41.0	41.0	41.0	18.5	18.5	18.5	18.5	18.5	18.5
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None	None
Act Effect Green (s)	19.9	19.9	19.9	19.9	19.9	19.9	10.0	10.0	10.0	10.9	10.9	10.9
Actuated g/C Ratio	0.57	0.57	0.57	0.57	0.57	0.57	0.28	0.28	0.28	0.31	0.31	0.31
v/c Ratio	0.19	0.22	0.00	0.02	0.34	0.16	0.01	0.00	0.03	0.39	0.00	0.16
Control Delay	7.3	6.7	0.0	5.8	7.4	2.0	9.0	9.0	5.1	12.9	9.0	3.8
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	7.3	6.7	0.0	5.8	7.4	2.0	9.0	9.0	5.1	12.9	9.0	3.8
LOS	A	A	A	A	A	A	A	A	A	B	A	A
Approach Delay		6.8			5.8			6.2			9.9	
Approach LOS		A			A			A			A	
Queue Length 50th (ft)	10	22	0	1	37	0	1	0	0	23	0	0
Queue Length 95th (ft)	36	62	0	6	96	19	4	2	6	64	3	18
Internal Link Dist (ft)		401			646			263			350	
Turn Bay Length (ft)	130		130	95			120		120	165		165
Base Capacity (vph)	1008	1850	1572	1134	1850	1573	748	988	847	748	988	880
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	0.13	0.00	0.01	0.19	0.10	0.01	0.00	0.02	0.23	0.00	0.10

Intersection Summary

Area Type: Other

Cycle Length: 67.5

Actuated Cycle Length: 35.2

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.39

Intersection Signal Delay: 7.1

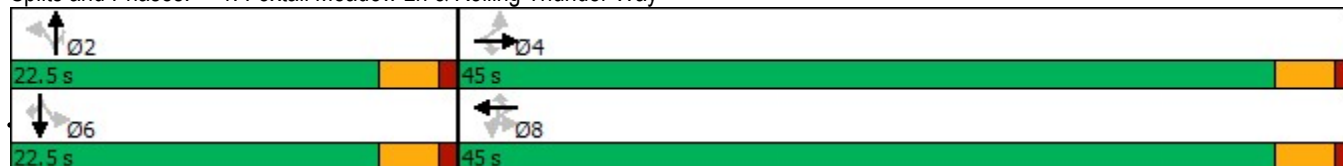
Intersection LOS: A

Intersection Capacity Utilization 54.6%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: Foxtail Meadow Ln & Rolling Thunder Way



























Lanes, Volumes, Timings

JAB













Lanes, Volumes, Timings
2: Meridian Rd/Meridian & Rolling Thunder/Rolling Thunder Way

2042 Background + Site
PM

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	100	100	175	75	100	100	200	650	100	250	500	175
Future Volume (vph)	100	100	175	75	100	100	200	650	100	250	500	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	315		450	285		105	285		185	285		350
Storage Lanes	2		0	1		2	1		1	1		2
Taper Length (ft)	115			110			175			175		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.383		
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	1770	3539	1583	713	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			190			164			115			188
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		726			498			875			699	
Travel Time (s)		16.5			11.3			14.9			11.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	109	109	190	82	109	109	215	699	108	269	538	188
Shared Lane Traffic (%)												
Lane Group Flow (vph)	109	109	190	82	109	109	215	699	108	269	538	188
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			40			40	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (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
Detector 1 Queue (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
Detector 1 Delay (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
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2	6		6

Lanes, Volumes, Timings
2: Meridian Rd/Meridian & Rolling Thunder/Rolling Thunder Way

2042 Background + Site
PM

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	16.0	16.0	16.0	16.0	16.0	16.0	26.0	53.0	53.0	15.0	42.0	42.0
Total Split (%)	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	26.0%	53.0%	53.0%	15.0%	42.0%	42.0%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5	11.5	21.5	48.5	48.5	10.5	37.5	37.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	None	None
Act Effect Green (s)	8.4	8.4	8.4	9.2	9.3	9.3	16.2	49.0	49.0	52.3	42.5	42.5
Actuated g/C Ratio	0.09	0.09	0.09	0.10	0.10	0.10	0.18	0.53	0.53	0.57	0.46	0.46
v/c Ratio	0.35	0.34	0.60	0.46	0.30	0.35	0.69	0.37	0.12	0.52	0.33	0.23
Control Delay	44.1	43.5	14.9	49.6	41.9	5.0	48.5	14.6	2.8	11.8	18.7	3.9
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	44.1	43.5	14.9	49.6	41.9	5.0	48.5	14.6	2.8	11.8	18.7	3.9
LOS	D	D	B	D	D	A	D	B	A	B	B	A
Approach Delay	30.3				30.6		20.5				14.0	
Approach LOS	C				C		C				B	
Queue Length 50th (ft)	32	33	0	47	32	0	123	128	0	56	108	0
Queue Length 95th (ft)	60	61	63	97	60	16	200	190	25	105	177	43
Internal Link Dist (ft)	646				418		795				619	
Turn Bay Length (ft)	315	450		285	105		285	185		285	350	
Base Capacity (vph)	433	446	365	223	451	345	417	1883	896	533	1636	833
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	0.25	0.24	0.52	0.37	0.24	0.32	0.52	0.37	0.12	0.50	0.33	0.23

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 92

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 20.7

Intersection LOS: C

Intersection Capacity Utilization 53.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: Meridian Rd/Meridian & Rolling Thunder/Rolling Thunder Way

 Ø1	 Ø2	 Ø3	 Ø4
15 s	53 s	16 s	16 s
 Ø5	 Ø6	 Ø7	 Ø8
26 s	42 s	16 s	16 s

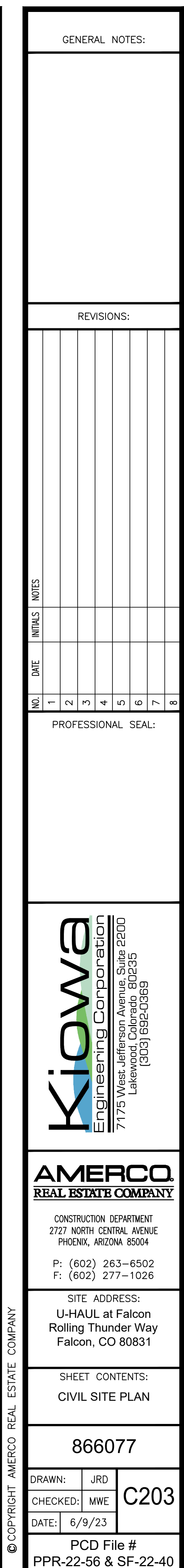
Lanes, Volumes, Timings

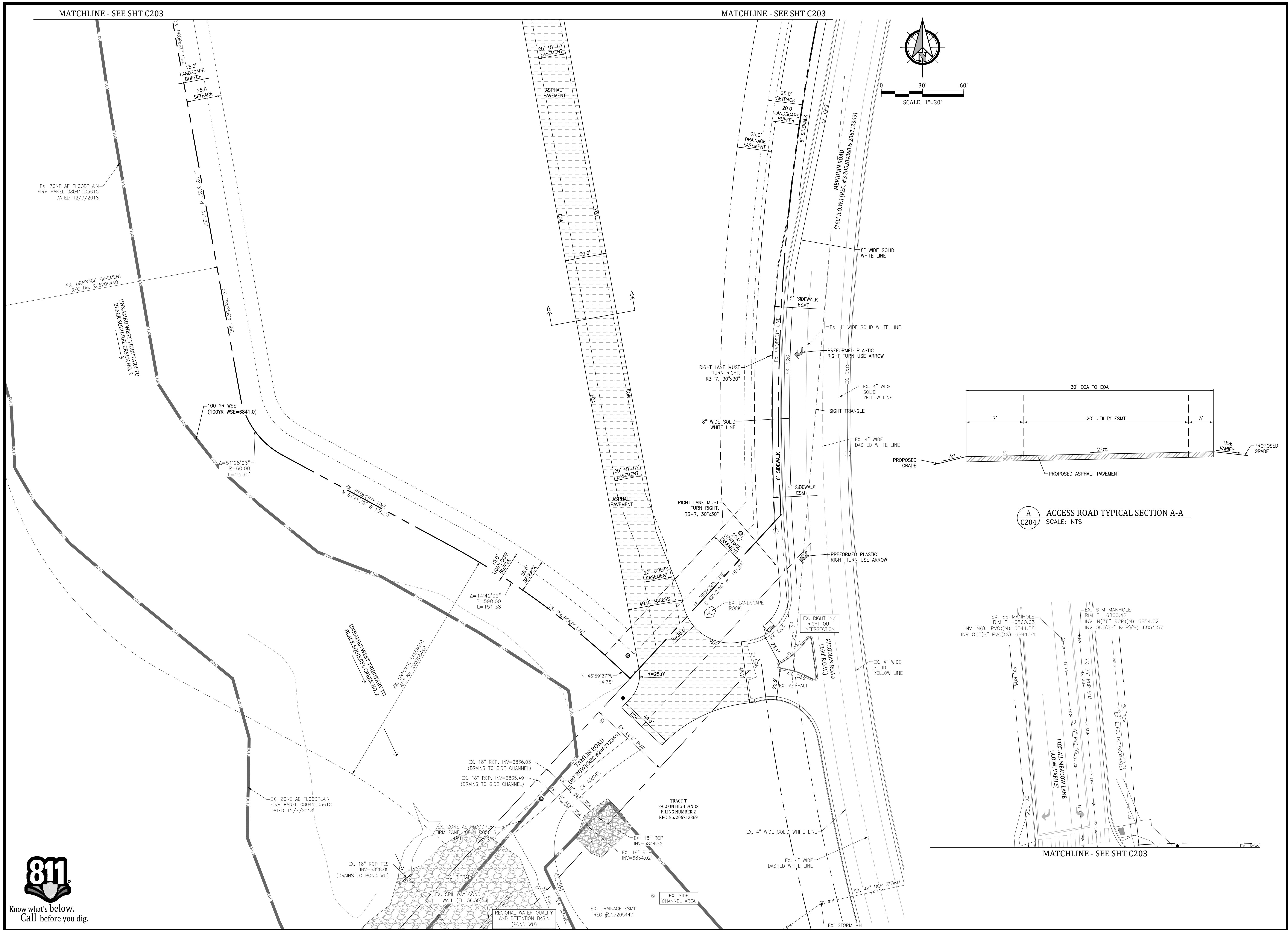
JAB

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	5	0	950	747	3
Future Vol, veh/h	0	5	0	950	747	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	6	0	1022	803	3
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	403	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	597	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	597	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.1	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT EBLn1		SBT	SBR		
Capacity (veh/h)	- 597		-	-		
HCM Lane V/C Ratio	- 0.011		-	-		
HCM Control Delay (s)	- 11.1		-	-		
HCM Lane LOS	- B		-	-		
HCM 95th %tile Q(veh)	- 0		-	-		

Site Plan







GENERAL NOTES:

REVISIONS:

NO.	DATE	INITIALS	NOTES
1			
2			
3			
4			
5			
6			
7			
8			

PROFESSIONAL SEAL:

Kiowa

Engineering Corporation

7775 West Jefferson Avenue, Suite 2500

Lakewood, Colorado 80226

(303) 692-0369

AMERCO

REAL ESTATE COMPANY

CONSTRUCTION DEPARTMENT

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PHOENIX, ARIZONA 85004

P: (602) 263-6502

F: (602) 277-1026

SITE ADDRESS:

U-HAUL at Falcon

Rolling Thunder Way

Falcon, CO 80831

SHEET CONTENTS:

CIVIL SITE PLAN

866077

DRAWN: JRD	C204
CHECKED: MWE	
DATE: 6/9/23	

PCD File #

PPR-22-56 & SF-22-40

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Appendix A

LSC estimates of trip-generation rates shown in the table above and used to estimate the trip generation for the proposed RV & Boat Storage land use for this project have been based on averages of rates from the following studies:

Route 52 RV Traffic Impact Study 8/28/2017 by Sustainable Traffic Solutions, Inc.

Outdoor RV Storage Trip Generation

Trip Generation Summary								Data Summary							
Location	Area (100 Spaces)	Peak Hour Volume						Recreational Storage Solutions				Brighton Outdoor Storage			
		Weekday Evening			Sunday Afternoon			Weekday				Weekday			
		Total	In	Out	Total	In	Out	Interval	In	Out	Total	Interval	In	Out	Total
Recreational Storage Solutions	6.52	9	3	6	19	9	10	1	1	2		1	0	0	
Brighton Outdoor Storage	9.67	5	3	2	36	25	16	2	0	2		2	2	0	
Total	16.59	14	6	8	55	29	26	3	2	2		3	0	1	
Average	8.30	7	3	4	28	15	13	4	0	0	3	4	0	1	4
Percentage	---	100%	43%	57%	100%	52%	47%	5	1	1	8	5	1	0	5
Rates (trips/100 spaces)	---	0.84	0.36	0.48	3.32	1.75	1.57	6	1	0	7	6	0	1	4
								7	0	1	4	7	1	0	4
								8	1	1	6	8	0	1	4
								Total	6	3	---	Total	4	4	---
								Sunday				Sunday			
								Interval	In	Out	Total	Interval	In	Out	Total
								1	2	3		1	5	0	
								2	2	2		2	5	3	
								3	2	2		3	6	6	
								4	3	3	13	4	4	7	36
								5	1	3	18	5	3	2	36
								6	1	2	17	6	4	3	35
								7	1	4	18	7	2	2	37
								8	4	0	16	8	3	3	22
								Total	16	19	---	Total	32	26	---

***Trip-Generation Analysis for the Proposed Self-Storage and RV Storage Facility
at 3701 Pacific Place, Long Beach, California, 2/27/2020 by LSA Associates***

Table B: Project Trip Generation (Gate Trip Rates)

Land Use	Size	Unit	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Rates ¹									
Self-Storage		100 storage units	12.90	0.53	0.40	0.93	0.93	0.79	1.72
RV Storage		100 RV spaces	17.23	0.50	0.47	0.97	0.93	1.12	2.05
Project Trip Generation									
Self-Storage	11.00	100 storage units	142	6	4	10	10	9	19
RV Storage	5.80	100 RV spaces	100	3	3	6	5	7	12
Total			242	9	7	16	15	16	31

¹ Trip rates developed from gate data for the Moreno Valley Self Storage and Desert Hot Springs Self Storage and RV Storage facilities (November 2019 to January 2020).

ADT = average daily traffic

RV = recreational vehicle

***RV Storage Trip Generation Report - Valley Park, St. Louis, MO, for the RV storage
facility to be located at 802 Forest Avenue 1/6/2022 by The Traffic Group***

Source/Land Use		Daily
ITE -151 (Trip Generation Manual, 11th Ed.)		
Trip Rates	Rate per 100 spaces	17.96
RV Storage	265 RV Spaces	48
Fort Collins - 60% Reduction		
Trip Rates	Rate per 100 spaces	10.78
RV Storage	265 RV Spaces	29
McBride Traffic Study		
Trip Rates	Rate per 100 spaces	10.80
RV Storage	265 RV Spaces	29
Long Beach, CA		
Trip Rates	Rate per 100 spaces	17.23
RV Storage	265 RV Spaces	46
Average Trips for 265 RV Spaces		38

Preliminary Traffic Control Signal Modification Plan Concept



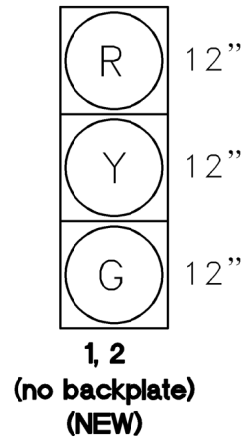
STREET NAME SIGNS

A Rolling Thunder Wy
(NEW)

LEGEND

ITEM	NEW	EXISTING
TRAFFIC SIGNAL HEAD		
TRAFFIC SIGNAL HEAD WITH BACKPLATE		
SPAN WIRE SIGNAL POLE		
PEDESTRIAN SIGNAL POLE OR POST		
ELECTRIC CONDUIT RUN		
PEDESTRIAN PUSH BUTTON		
POWER DROP		
PULL BOX		
LUMINAIRE W/ MAST ARM		
CONTROLLER CABINET		
16" LED PED SIGNAL HEAD		
MAST ARM MOUNTED SIGN		
VIDEO IMAGE VEHICLE DETECTOR (CAMERA)		
VIDEO DETECTION ZONE (TYPICAL)		

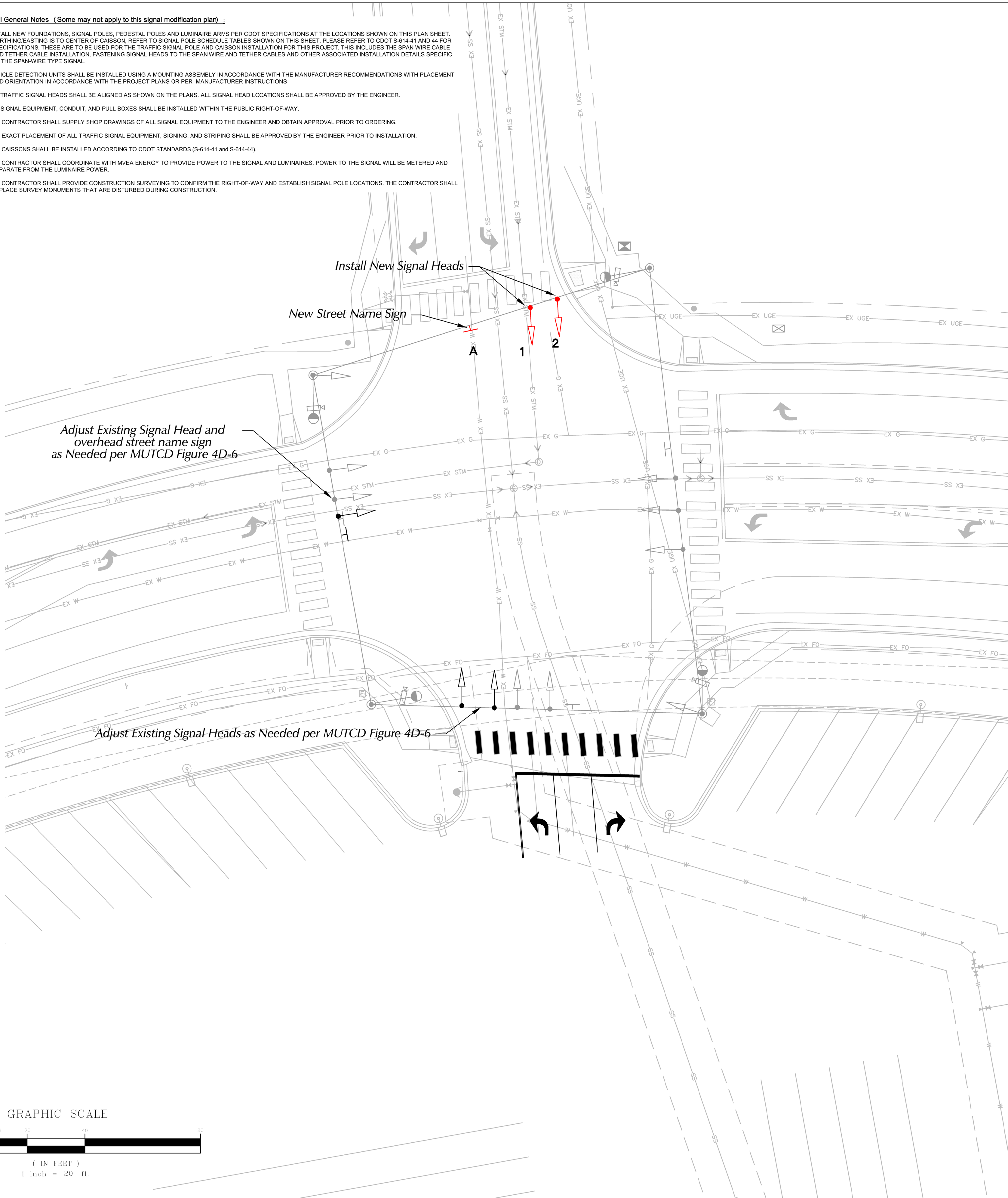
SIGNAL FACES



NEW MATERIALS LIST			
ITEM #	ITEM	UNIT	QUANTITY
614-70336	TRAFFIC SIGNAL FACE (LED) (12/12/12) - Black Aluminum Signal Heads (McCain)	EACH	2
614-10130	STREET NAME SIGN, SPAN-WIRE MOUNTED	EACH	1

Signal General Notes (Some may not apply to this signal modification plan):

1. INSTALL NEW FOUNDATIONS, SIGNAL POLES, PEDESTAL POLES AND LUMINAIRE ARMS PER CDOT SPECIFICATIONS AT THE LOCATIONS SHOWN ON THIS PLAN SHEET. NORTHING/EASTING IS TO CENTER OF CAISSON. REFER TO SIGNAL POLE SCHEDULE TABLES SHOWN ON THIS SHEET. PLEASE REFER TO CDOT S-614-41 AND 44 FOR SPECIFICATIONS. THESE ARE TO BE USED FOR THE TRAFFIC SIGNAL POLE AND CAISSON INSTALLATION FOR THIS PROJECT. THIS INCLUDES THE SPAN WIRE CABLE AND TETHER CABLE INSTALLATION, FASTENING SIGNAL HEADS TO THE SPAN WIRE AND TETHER CABLES AND OTHER ASSOCIATED INSTALLATION DETAILS SPECIFIC TO THE SPAN-WIRE TYPE SIGNAL.
2. VEHICLE DETECTION UNITS SHALL BE INSTALLED USING A MOUNTING ASSEMBLY IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS WITH PLACEMENT AND ORIENTATION IN ACCORDANCE WITH THE PROJECT PLANS OR PER MANUFACTURER INSTRUCTIONS.
3. ALL TRAFFIC SIGNAL HEADS SHALL BE ALIGNED AS SHOWN ON THE PLANS. ALL SIGNAL HEAD LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
4. ALL SIGNAL EQUIPMENT, CONDUIT, AND PULL BOXES SHALL BE INSTALLED WITHIN THE PUBLIC RIGHT-OF-WAY.
5. THE CONTRACTOR SHALL SUPPLY SHOP DRAWINGS OF ALL SIGNAL EQUIPMENT TO THE ENGINEER AND OBTAIN APPROVAL PRIOR TO ORDERING.
6. THE EXACT PLACEMENT OF ALL TRAFFIC SIGNAL EQUIPMENT, SIGNING, AND STRIPING SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
7. THE CAISSONS SHALL BE INSTALLED ACCORDING TO CDOT STANDARDS (S-614-41 and S-614-44).
8. THE CONTRACTOR SHALL COORDINATE WITH MYEA ENERGY TO PROVIDE POWER TO THE SIGNAL AND LUMINAIRES. POWER TO THE SIGNAL WILL BE METERED AND SEPARATE FROM THE LUMINAIRE POWER.
9. THE CONTRACTOR SHALL PROVIDE CONSTRUCTION SURVEYING TO CONFIRM THE RIGHT-OF-WAY AND ESTABLISH SIGNAL POLE LOCATIONS. THE CONTRACTOR SHALL REPLACE SURVEY MONUMENTS THAT ARE DISTURBED DURING CONSTRUCTION.



PRELIMINARY

TRAFFIC SIGNAL MODIFICATION PLAN
Rolling Thunder Way/Fox Tail Meadows Dr

LSC
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Prepared By:
JEFFREY C. HUDSON, PE

REVISIONS	DATE
DATE:	6/16/2023
SCALE:	1" = 20'
DRAWN BY:	MW
JOB NO.:	S224140
DWG:	Signal Plan Sheets.dwg

SHT NO. :
OF