

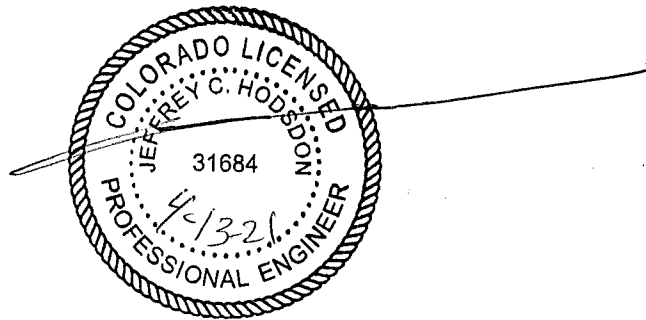


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Ridges at Lorson Ranch
Traffic Impact Analysis
(LSC #S214080)
April 6, 2021

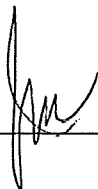
Traffic Engineer's Statement

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.



4/6/21
Date

Ridges at Lorson Ranch

Traffic Impact Analysis

Prepared for:

The Landhuis Company

212 North Wahsatch Avenue, Suite 301

Colorado Springs, CO 80903

Contact: Mr. Jeff Mark, President

APRIL 6, 2021

LSC Transportation Consultants

Prepared by: Kirstin D. Ferrin, P.E.

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

LSC #S214080



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April 6, 2021

Mr. Jeff Mark
President
The Landhuis Company
212 North Wahsatch Avenue, Suite 301
Colorado Springs, CO 80903

RE: Ridges at Lorson Ranch
El Paso County, CO
Traffic Impact Analysis
LSC #S214080

Dear Mr. Mark,

In response to your request, LSC Transportation Consultants, Inc. has prepared this traffic impact analysis for the proposed Ridges at Lorson Ranch residential development. As shown in Figure 1, the site is located within the Lorson Ranch development in El Paso County, Colorado.

REPORT CONTENTS

This report has been prepared to address the project's traffic impact at the proposed access points and adjacent intersections.

This report contains the following:

- The existing street and traffic conditions in the site's vicinity, including the street widths, lane geometries, and traffic controls;
- The projected future background traffic volumes, which include estimates of traffic from other area development projects;
- The estimated average weekday and peak-hour trip generation;
- The estimated directional distribution of site-generated trips and the projected site-generated traffic volumes;
- Estimates of the resulting total traffic volumes on the adjacent streets and intersections; and
- The projected levels of service at the site access points and key area intersections;

RECENT AREA TRAFFIC STUDIES

Appendix Table 1 includes a list of other recent traffic studies conducted by LSC within the Lorson Ranch development and in the vicinity.

This site was previously included in *The Hills at Lorson Ranch Full Traffic Impact and Access Analysis* (TIA) by LSC Transportation Consultants, Inc. dated October 27, 2020 as traffic analysis zone 45. That TIA assumed this zone would be developed with 993 single-family homes.

LAND USE AND ACCESS

Land Use

The Ridges at Lorson Ranch is planned to include 994 lots for single-family homes. This is one more single-family home than was assumed in the Hills at Lorson Ranch TIA. Figure 2 shows the proposed site plan.

Street Connections

Fontaine Boulevard and Lorson Boulevard are planned to be extended east to a new north-south collector (Walleye Drive) as part of The Hills at Lorson Ranch. These streets are planned to be further extended to the east boundary of Lorson Ranch as part of the currently-proposed Ridges at Lorson Ranch development. A new east-west collector (Grayling Drive) is planned to be constructed between Lamprey Drive and the future Walleye Drive as part of The Hills at Lorson Ranch. Access for the Ridges at Lorson Ranch is proposed to Walleye Drive, Grayling Drive, Fontaine Boulevard, and Lorson Boulevard, as shown in Figure 2. The proposed access points to Walleye Drive, Grayling Drive and Lorson Boulevard all meet the spacing criteria set by the *El Paso County Engineering Criteria Manual* (ECM). The proposed access to Fontaine Boulevard (Buckner Way) is located about 1,127 feet east of Walleye Drive. This spacing is adequate, based on the interim/Lorson Buildout 2-Lane Urban Non-Residential Collector classification, but does not meet the ½-mile spacing requirement, based on the ultimate 4-Lane Principal Arterial classification. If and when this section of Fontaine Boulevard is upgraded to a Principal Arterial cross section, this access may need to be restricted to three-quarter movement (left-in/right-in/right-out) or right-in/right-out only.

Pedestrian and Bicycle Route Analysis

Grand Mountain K-8 School is located west of the site. The subdivision streets will include sidewalks and connecting streets within Lorson Ranch also have sidewalks. Trail corridors are planned along the powerline easement, the East Fork of Jimmy Camp Creek, and along Jimmy Camp Creek. Also, Marksheffel Road and Fontaine Boulevard have paved shoulders to accommodate cyclists. Lorson Boulevard has been constructed with wider travel lanes (and a striped left-turn median) to allow for shared lane use with experienced cyclists (the adjacent sidewalk will accommodate children and families, as well as cyclists less experienced at cycling in traffic).

Sight Distance Analysis

Figures 3a through 3f show sight-distance analysis at the proposed Collector and Arterial intersection.

Figure 3a shows the sight distance analysis for the proposed intersection of Scrub Jay Trail/Grayling Drive. Based on a design speed of 40 miles per hour (mph) and the criteria contained in Table 2-21 of the *ECM*, the required intersection sight distance at the access points is 445 feet. This intersection is located about 391 feet west of Walleye Drive and the available stopping sight distance from the start of the pavement on the west leg of Walleye/ Grayling to the centerline of Scrub Jay/Grayling is about 356 feet. This is about 89 feet less than the *ECM* requirement. However, as Grayling/Walleye is a "T" intersection, all westbound traffic on Grayling Drive approaching Scrub Jay Trail will have either just turned right or left from Walleye Drive. The required stopping sight distance from *ECM* Table 2-17 is 305 feet. As shown in Figure 3a, this requirement can be met by the proposed spacing.

Figure 3b shows the sight distance analysis for the proposed intersection of Sanderling Street/Walleye Drive. Based on a design speed of 40 miles per hour (mph) and the criteria contained in Table 2-21 of the *ECM*, the required intersection sight distance at this intersection is 445 feet. As shown in Figure 3b, the intersection sight distance and stopping sight distance requirements can be met by the proposed spacing.

Figure 3c shows the sight distance analysis for the proposed access to Fontaine Boulevard (Buckner Way). Based on a design speed of 50 miles per hour (mph) for the ultimate Principal Arterial classification and the criteria contained in Table 2-21 of the *ECM*, the required intersection sight distance at this intersection is 555 feet. As shown in Figure 3c, the intersection sight distance and stopping sight distance requirements can be met at the proposed intersection.

Figure 3d shows the sight distance analysis for the proposed intersections of Lake Trout Drive/Walleye Drive and Splake Street/Walleye Drive. Based on a design speed of 40 miles per hour (mph) and the criteria contained in Table 2-21 of the *ECM*, the required intersection sight distance at this intersection is 445 feet. As shown in Figure 3b, the intersection sight requirements can be met at both intersections.

Figure 3e shows the sight distance analysis for the proposed access points to Lorson Boulevard (Split Mountain Drive and Kingston Peak). Based on a design speed of 25 miles per hour (mph) and the criteria contained in Table 2-21 of the *ECM*, the required intersection sight distance for Local/Local intersections is 280 feet. As Lorson Boulevard does not have lots fronting it like a typical Local street, Figure 3e also shows the analysis based on a design speed of 35 mph (although the future plan for development on the south side of the street may show lots fronting this section of Lorson Boulevard). A required distance of 390 feet was extrapolated from the values given in Table 2-21 of the *ECM*, based on design speeds of 30 and 40 mph. As shown in this figure, the required intersection sight distance can be met at both site access points.

STREET AND TRAFFIC CONDITIONS

Area Streets

The key area streets are shown in Figure 1 and are described below. Copies of the *2016 El Paso County Major Transportation Corridors Plan (MTCP) 2040 Roadway Plan* and *2016 MTCP 2060 Corridor Preservation Plan*, with the site location identified on them, have been attached to this report.

- **Fontaine Boulevard** is designated as a four-lane Urban Principal Arterial east of Marksheffel Road and has been constructed as such from Marksheffel Road east to Old Glory Drive/Stingray Lane. Fontaine Boulevard has recently been constructed east of Old Glory Drive/Stingray Lane adjacent to the Lorson Ranch East development as an interim Urban Non-Residential Collector Street within 100 feet of right-of-way. As part of this development, Fontaine Boulevard will be extended east from its current terminus adjacent to the site with the same interim cross section and right-of-way. The posted speed limit on Fontaine Boulevard is 35 mph just east of (and a short distance west of) Marksheffel Road. The speed limit increases to 45 mph just east of the bridge over Jimmy Camp Creek and then decreases back to 35 mph just east of Old Glory (east)/Stingray.
- **Lorson Boulevard** currently extends east from Marksheffel Road to Lamprey Drive. Lorson Boulevard is classified as an Urban Non-Residential Collector Street (modified for a 44-foot street width, rather than the standard 52-foot street width) with an 80-foot-wide right-of-way between Marksheffel Road and Stingray Lane and as an Urban Residential Collector Street (modified for a 44-foot street width, rather than the standard 52-foot street width) with a 64- to 72-foot-wide right-of-way between Stingray Lane and Lamprey Drive. As part of this development, Lorson Boulevard will be constructed east of Lamprey Drive adjacent to the site as a standard Urban Residential Collector with a 60-foot-wide right-of-way.

TRIP GENERATION

The site-generated vehicle trips were estimated using the nationally published trip-generation rates from *Trip Generation, 10th Edition, 2017* by the Institute of Transportation Engineers (ITE). Table 1 shows the average weekday and peak-hour trip-generation estimates. Table 2 also shows a comparison of the trip-generation estimate for this same area, assumed in *The Hills at Lorson Ranch Full Traffic Impact Analysis* by LSC dated October 27, 2020.

The site is projected to generate about 9,383 new vehicle trips on the average weekday, with about half entering and half exiting the site. During the morning peak hour, which generally occurs for one hour between 6:30 and 8:30 a.m., about 184 vehicles would enter and 552 vehicles would exit the site. During the afternoon peak hour, which generally occurs for one hour between 4:15 and 6:15 p.m., about 620 vehicles would enter and 364 vehicles would exit the site.

TRIP DISTRIBUTION AND ASSIGNMENT

The directional distribution of the site-generated traffic volumes on the street and roadway system serving the site is one of the most important factors in determining the site's traffic impacts. Figure 4 shows the external trip-distribution estimates (external to Lorson Ranch). The directional distribution estimates have been based on the location of the site with respect to the regional residential employment, commercial, and activity centers; the land use proposed; the access/roadway connections assumed; the roadway network; and the most recent traffic counts conducted at the intersection of Marksheffel/Fontaine. The number of external vehicle trips were based on the internal trip estimates shown in Appendix Table 2.

Figure 5 shows the site-generated traffic volume estimates. These volumes were determined by first assigning the internal vehicle trips to the street network, based on the location of the existing Grand Mountain School located northeast of the intersection of Fontaine Boulevard and Lamprey Drive and the future retail sites located near the intersection of Fontaine Boulevard and Carriage Meadows Drive.

The external vehicle trips were then assigned to the street network by applying the trip-distribution percentages (from Figure 4) to the external trip-generation estimates. The internal and external site-generated traffic volumes were then summed to determine the total site-generated traffic volumes.

BACKGROUND TRAFFIC

Background traffic is the traffic estimated to be on the roadways without the Ridge at Lorson Ranch traffic.

Short Term

The short-term (Year 2025) background traffic volumes are shown in Figure 6a. The short-term background traffic includes traffic projected to be generated by buildout of the approved Lorson Ranch subdivisions including Lorson Ranch East, Ponderosa at Lorson Ranch Filing 3, Creekside at Lorson Ranch, The Hills at Lorson Ranch, and Skyline at Lorson Ranch. Figure 6b shows the lane geometry assumed for the study-area intersections in the short-term analysis.

2040

Figure 7a shows the projected 2040 background traffic volumes. The 2040 background traffic volumes are based on estimates of traffic projected to be generated at buildout of the Lorson Ranch Sketch Plan (excluding the traffic projected to be generated by the Ridges at Lorson Ranch). Appendix Tables 2 and 3 show the trip-generation estimates for all existing and future land uses assumed to be built out by 2040 in the Lorson Ranch development. The 2040 background volumes also assume full buildout of the street network within Lorson Ranch, but assume

Meridian Road has not been extended south to Fontaine Boulevard. Figure 7b shows the lane geometry assumed for the study-area intersections in the 2040 analysis.

BUILDOUT TOTAL TRAFFIC

Figure 8a shows the short-term total traffic volumes. These volumes are the sum of the short-term background traffic volumes (from Figure 6a) plus the site-generated traffic volumes (from Figure 5). Figure 8b shows the lane geometry assumed for the study-area intersections in the short-term analysis.

Figure 9a shows the 2040 total traffic volumes. These volumes are the sum of the 2040 background traffic volumes (from Figure 7a) plus the site-generated traffic volumes (from Figure 5). Figure 9b shows the lane geometry assumed for the study-area intersections in the 2040 analysis.

PROJECTED LEVELS OF SERVICE

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection. Level of service is indicated on a scale from "A" to "F." LOS A represents control delay of less than 10 seconds for unsignalized and signalized intersections. LOS F represents control delay of more than 50 seconds for unsignalized intersections and more than 80 seconds for signalized intersections. Table 2 shows the level of service delay ranges.

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.		

The key area intersections have been analyzed to determine the projected levels of service for the short-term, 2040 background, and total traffic volumes, based on the unsignalized method of analysis procedures outlined in the *Highway Capacity Manual, 6th Edition* by the Transportation Research Board. The level of service reports are attached. The results of the analysis are shown in Figures 6b, 7b, 8b and 9b.

The future intersection of Fontaine/Walleye is projected to operate at LOS F for the northbound left-turn movement during the afternoon peak hour if it is signed as a two-way, stop-sign-controlled intersection with stop control on the north and south legs. If the stop control is instead placed on the east and west legs or if this intersection were to be signed for all-way, stop-sign control, all movements are projected to operate at LOS C or better, based on the projected 2040 total traffic volumes.

All of the other key area intersections analyzed are projected to projected to operate at LOS B or better during the peak hours for all movements as two-way, stop-sign-controlled intersections, based on the projected short-term and 2040 total traffic volumes.

ROADWAY CLASSIFICATIONS

Figure 10 shows the recommended street classifications for the key Lorson Ranch streets.

ROADWAY IMPROVEMENT FEE

This project will be required to participate in the El Paso County Road Improvement Fee Program. The Ridges at Lorson Ranch will join the ten-mil PID. The current ten-mil PID building permit fee portion associated with this option is \$1,221 per single-family dwelling unit. Based on 994 lots, the total building permit fee would be \$1,213,674. Note: This is based on the current rate, which is subject to change. El Paso County updates this rate periodically.

CONCLUSIONS AND RECOMMENDATIONS

Trip Generation

- The site is projected to generate about 9,383 new vehicle trips on the average weekday, with about half entering and half exiting the site. During the morning peak hour about 184 vehicles would enter and 552 vehicles would exit the site. During the afternoon peak hour about 620 vehicles would enter and 364 vehicles would exit the site.

Intersection Sight Distance

- All of the proposed site access points can meet the site-distance requirements. Please refer to the Sight Distance section of this report for details.

Projected Levels of Service & Intersection Traffic Control Recommendations

- The future intersection of Fontaine/Walleye is projected to operate at LOS F for the northbound left-turn movement during the afternoon peak hour, if it is signed as a two-way, stop-sign-controlled intersection with stop control on the north and south legs. If the stop signs are instead placed on the east and west legs or if this intersection were to

be signed for all-way, stop-sign control, all movements are projected to operate at LOS C or better, based on the projected 2040 total traffic volumes.

- All of the other key area intersections analyzed are projected to operate at LOS B or better during the peak hours for all movements as two-way, stop-sign-controlled intersections, based on the projected short-term and 2040 total traffic volumes.

Street Classifications

- All of the streets within the Ridges at Lorson Ranch should be classified as Urban Local. See Figure 10 for the recommended classifications of the adjacent roadways.

Street Classifications

- Based on the current ten-mil PID building permit fee, the total building permit fee would be \$1,213,674. Note: This is based on the current rate, which is subject to change. El Paso County updates this rate periodically.

Recommended Improvements

- A list of all improvements in the vicinity of the site is presented in Table 3.

* * * * *

We trust this traffic impact analysis will assist you in gaining approval of the proposed Ridges at Lorson Ranch residential development. Please contact me if you have any questions or need further assistance.

Sincerely,

LSC TRANSPORTATION CONSULTANTS, INC.

By Kirstin D. Ferrin, P.E.
Senior Transportation Engineer

JCH:KDF:jas

Enclosures: Tables 1 and 3
Figures 1-10
Level of Service Reports
Appendix Tables 1-3
MTCP Maps

Tables 1 and 3

**Table 1
Trip Generation Estimate
Ridges at Lorson Ranch**

Traffic Analysis Zone	Land Use Code	Land Use Description	Trip Generation Units	Trip Generation Rates ⁽¹⁾					Total Trips Generated				
				Average Weekday Traffic	Morning Peak Hour		Afternoon Peak Hour		Average Weekday Traffic	Morning Peak Hour		Afternoon Peak Hour	
					In	Out	In	Out		In	Out	In	Out
Trip Generation Estimate Based on the Currently Proposed Plan													
46	210	Single-Family Detached Housing	459 DU ⁽²⁾	9.44	0.19	0.56	0.62	0.37	4,333	85	255	286	168
35	210	Single-Family Detached Housing	535 DU	9.44	0.19	0.56	0.62	0.37	5,050	99	297	334	196
			994 DU						9,383	184	552	620	364
Trip Generation Estimate for the Same Area From the <i>The Hills at Lorson Ranch Full Traffic Impact Analysis</i> by LSC October 26, 2020													
46	210	Single-Family Detached Housing	461 DU	9.44	0.19	0.56	0.62	0.37	4,352	85	256	288	169
35	210	Single-Family Detached Housing	532 DU	9.44	0.19	0.56	0.62	0.37	5,022	98	295	332	195
			993 DU						9,374	184	551	619	364
									9	0	1	1	0
Notes:													
(1) Source: "Trip Generation, 10th Edition, 2017" by the Institute of Transportation Engineers (ITE)													
(2) DU = dwelling unit													
Source: LSC Transportation Consultants, Inc.													
Feb-21													

Table 3 Page 1 of 2 The Ridges at Lorson Ranch Roadway Improvements					
Item #	Improvement	Improvement Description With Details	Trigger	Timing	Responsibility
Roadway Segment Improvements					
1	Roadway Segment	Construct Fontaine Boulevard from its existing terminus to Walleye Drive as an interim 2-Lane Urban Non-Residential Collector in 100' right-of-way	With The Hills at Lorson Ranch	With The Hills at Lorson Ranch	Lorson Ranch
2	Roadway Segment	Construct Fontaine Boulevard from Walleye Drive to the east boundary of Lorson Ranch as an interim 2-Lane Urban Non-Residential Collector in 100' right-of-way	With The Ridges at Lorson Ranch	With The Ridges at Lorson Ranch	Lorson Ranch
3	Roadway Segment	Construct Lorson Boulevard from Lamprey Drive to-Walleye Drive as an Urban Residential Collector with 64' - 72' of right-of-way	With The Hills at Lorson Ranch	With The Hills at Lorson Ranch	Lorson Ranch
4	Roadway Segment	Construct Lorson Boulevard from Walleye Drive to its planned ultimate terminus as an Urban Residential Collector with 60' of right-of-way	With The Ridges at Lorson Ranch	With The Ridges at Lorson Ranch	Lorson Ranch
5	Roadway Segment	Construct-Walleye Drive from Lorson Boulevard to-Grayling Drive as an Urban Residential Collector with 64' to 72' of right-of-way	With The Hills at Lorson Ranch	With The Hills at Lorson Ranch	Lorson Ranch
6	Roadway Segment	Construct-Grayling Drive from Lamprey Drive to Walleye Drive as an Urban Residential Collector with 60' of right-of-way	With The Hills at Lorson Ranch	With The Hills at Lorson Ranch	Lorson Ranch
7	Roadway Segment	Construct-Grayling Drive from Walleye Drive to the north boundary of Lorson Ranch as an Urban Residential Collector with 64' to 72' of right-of-way	With The Skyline at Lorson Ranch	With The Skyline at Lorson Ranch	Lorson Ranch
Intersection #7 Grayling/Regan Ridge					
8	Southeastbound left-turn lane	Southeastbound left-turn lane on Grayling approaching Regan Ridge	left turn volume > 25 vehicles per hour	NOT REQUIRED	
9	Southeastbound right-turn deceleration lane	Southeastbound right-turn deceleration lane on Grayling approaching Regan Ridge	right turn volume > 50 vehicles per hour	NOT REQUIRED	
10	Northwestbound left-turn lane	Northwestbound left-turn lane on Grayling approaching Regan Ridge	left turn volume > 25 vehicles per hour	NOT REQUIRED	
11	Northwestbound right-turn deceleration lane	Northwestbound right-turn deceleration lane on Grayling approaching Regan Ridge	right turn volume > 50 vehicles per hour	NOT REQUIRED	
Intersection #8 Grayling/Walleye					
12	Southeastbound left-turn lane	Southeastbound left-turn lane on Grayling approaching Walleye	left turn volume > 25 vehicles per hour	NOT REQUIRED	
13	Northwestbound left-turn lane	Northeastbound left-turn lane on Walleye approaching Grayling	left turn volume > 25 vehicles per hour	NOT REQUIRED	
Intersection #9 Walleye/Sanderling					
14	Southbound left-turn lane	Southbound left-turn lane on Walleye approaching Sanderling (recommended length: 205' turn lane plus 160' taper)	left turn volume > 25 vehicles per hour	NOT REQUIRED short left-turn bay recommended to match the northbound left-turn lane (will be included with street construction/in the cross section)	Lorson Ranch
15	Southbound right-turn deceleration lane	Southbound right-turn deceleration lane on Walleye approaching Sanderling	right turn volume > 50 vehicles per hour	NOT REQUIRED	
16	Northbound left-turn lane	Northbound left-turn lane on Walleye approaching Sanderling (recommended length: 205' turn lane plus 160' taper)	left turn volume > 25 vehicles per hour	With The Hills at Lorson Ranch	Lorson Ranch
17	Northbound right-turn deceleration lane	Northbound right-turn deceleration lane on Walleye approaching Sanderling (recommended length: 155' turn lane plus 160' taper)	right turn volume > 50 vehicles per hour	With The Ridges at Lorson Ranch	Lorson Ranch
Intersection #10 Fontaine/Walleye					
18	Eastbound left-turn lane	Eastbound left-turn lane on Fontaine approaching Walleye (recommended length: 355' turn lane plus 160' taper)	left turn volume > 25 vehicles per hour	With The Hills at Lorson Ranch	Lorson Ranch
19	Eastbound right-turn deceleration lane	Eastbound right-turn deceleration lane on Fontaine approaching Walleye (recommended length: 155' turn lane plus 160' taper)	right turn volume > 50 vehicles per hour	With The Hills at Lorson Ranch	Lorson Ranch
20	Westbound left-turn lane	Westbound left-turn lane on Fontaine approaching Walleye (recommended length: 205' turn lane plus 160' taper)	left turn volume > 25 vehicles per hour	NOT REQUIRED A left-turn lane is included in the standard Urban Non-Residential Collector Cross Section	Lorson Ranch
21	Westbound right-turn deceleration lane	Wesbound right-turn deceleration lane on Fontaine approaching Walleye (recommended length: 155' turn lane plus 160' taper)	right turn volume > 50 vehicles per hour	NOT REQUIRED - but will be included	Lorson Ranch
22	Northbound left-turn lane	Northbound left-turn lane on Walleye approaching Fontaine (recommended length: 355' turn lane plus 160' taper)	left turn volume > 25 vehicles per hour	With The Hills at Lorson Ranch	Lorson Ranch
23	Northbound right-turn deceleration lane	Northbound right-turn deceleration lane on Walleye approaching Fontaine (recommended length: 155' turn lane plus 160' taper)	right turn volume > 50 vehicles per hour	NOT REQUIRED - but will be included	Lorson Ranch
24	Southbound left-turn lane	Southbound left-turn lane on Walleye approaching Fontaine (recommended length: 205' turn lane plus 160' taper)	left turn volume > 25 vehicles per hour	NOT REQUIRED recommended to match the northbound left-turn lane (will be included with street construction/in the cross section)	Lorson Ranch
25	Southbound right-turn deceleration lane	Southbound right-turn deceleration lane on Walleye approaching Fontaine (recommended length: 155' turn lane plus 160' taper)	right turn volume > 50 vehicles per hour	With The Hills at Lorson Ranch	Lorson Ranch
Intersection #11 Walleye/Lake Trout					
26	Southbound left-turn lane	Southbound left-turn lane on Walleye approaching Lake Trout (recommended length: 255' turn lane plus 160' taper)	left turn volume > 25 vehicles per hour	With The Ridges at Lorson Ranch	Lorson Ranch
27	Southbound right-turn deceleration lane	Southbound right-turn deceleration lane on Walleye approaching Lake Trout	right turn volume > 50 vehicles per hour	NOT REQUIRED	
28	Northbound left-turn lane	Northbound left-turn lane on Walleye approaching Lake Trout (recommended length: 205' turn lane plus 160' taper)	left turn volume > 25 vehicles per hour	With The Hills at Lorson Ranch	Lorson Ranch
29	Northbound right-turn deceleration lane	Northbound right-turn deceleration lane on Walleye approaching Lake Trout	right turn volume > 50 vehicles per hour	NOT REQUIRED	
Source: LSC Transportation Consultants, Inc. (March 2021)					

Table 3
Page 2 of 2
The Ridges at Lorson Ranch
Roadway Improvements

Item #	Improvement	Improvement Description With Details	Trigger	Timing	Responsibility
Intersection #12 Walleye/Splake					
30	Southbound left-turn lane	Southbound left-turn lane on Walleye approaching Splake (recommended length: 205' turn lane plus 160' taper)	left turn volume > 25 vehicles per hour	With The Ridges at Lorson Ranch	Lorson Ranch
31	Southbound right-turn deceleration lane	Southbound right-turn deceleration lane on Walleye approaching Splake	right turn volume > 50 vehicles per hour	NOT REQUIRED	
32	Northbound left-turn lane	Northbound left-turn lane on Walleye approaching Splake (recommended length: 205' turn lane plus 160' taper)	left turn volume > 25 vehicles per hour	NOT REQUIRED but needed to match southbound left-turn lane	Lorson Ranch
33	Northbound right-turn deceleration lane	Northbound right-turn deceleration lane on Walleye approaching Splake	right turn volume > 50 vehicles per hour	NOT REQUIRED	
Intersection #17 Lorson/Walleye					
34	Westbound right-turn deceleration lane	Westbound right-turn deceleration lane on Lorson approaching Walleye	right turn volume > 50 vehicles per hour	NOT REQUIRED	
35	Southbound left-turn lane	Southbound left-turn lane on Walleye approaching Lorson (recommended length: 205 plus 160' taper)	left turn volume > 25 vehicles per hour	NOT REQUIRED - but will be included	Lorson Ranch
36	Eastbound left-turn lane	Eastbound left-turn lane on Lorson approaching Walleye (recommended length: 355' turn lane plus 160' taper)	left turn volume > 25 vehicles per hour	With The Hills at Lorson Ranch	Lorson Ranch
Intersection #18 Lorson/Split Mountain					
37	Westbound right-turn deceleration lane	Westbound right-turn deceleration lane on Lorson approaching Split Mountain	right turn volume > 50 vehicles per hour	NOT REQUIRED	
38	Eastbound left-turn lane	Eastbound left-turn lane on Lorson approaching Split Mountain (recommended length: 205' turn lane plus 160' taper)	left turn volume > 25 vehicles per hour	With The Ridges at Lorson Ranch	Lorson Ranch
Intersection #19 Fontaine/Buckner Way					
39	Eastbound right-turn deceleration lane	Eastbound right-turn deceleration lane on Fontaine approaching Buckner	right turn volume > 50 vehicles per hour	NOT REQUIRED	
40	Eastbound left-turn lane	Eastbound left-turn lane on Fontaine approaching Buckner (recommended length: 205' turn lane plus 160' taper)	left turn volume > 25 vehicles per hour	With The Ridges at Lorson Ranch	Lorson Ranch
41	Westbound right-turn deceleration lane	Westbound right-turn deceleration lane on Fontaine approaching Buckner	right turn volume > 50 vehicles per hour	NOT REQUIRED	
42	Westbound left-turn lane	Eastbound left-turn lane on Fontaine approaching Buckner (recommended length: 205' turn lane plus 160' taper)	left turn volume > 25 vehicles per hour	NOT REQUIRED - but will be included	Lorson Ranch

Source: LSC Transportation Consultants, Inc. (April 2021)

Figures 1-10

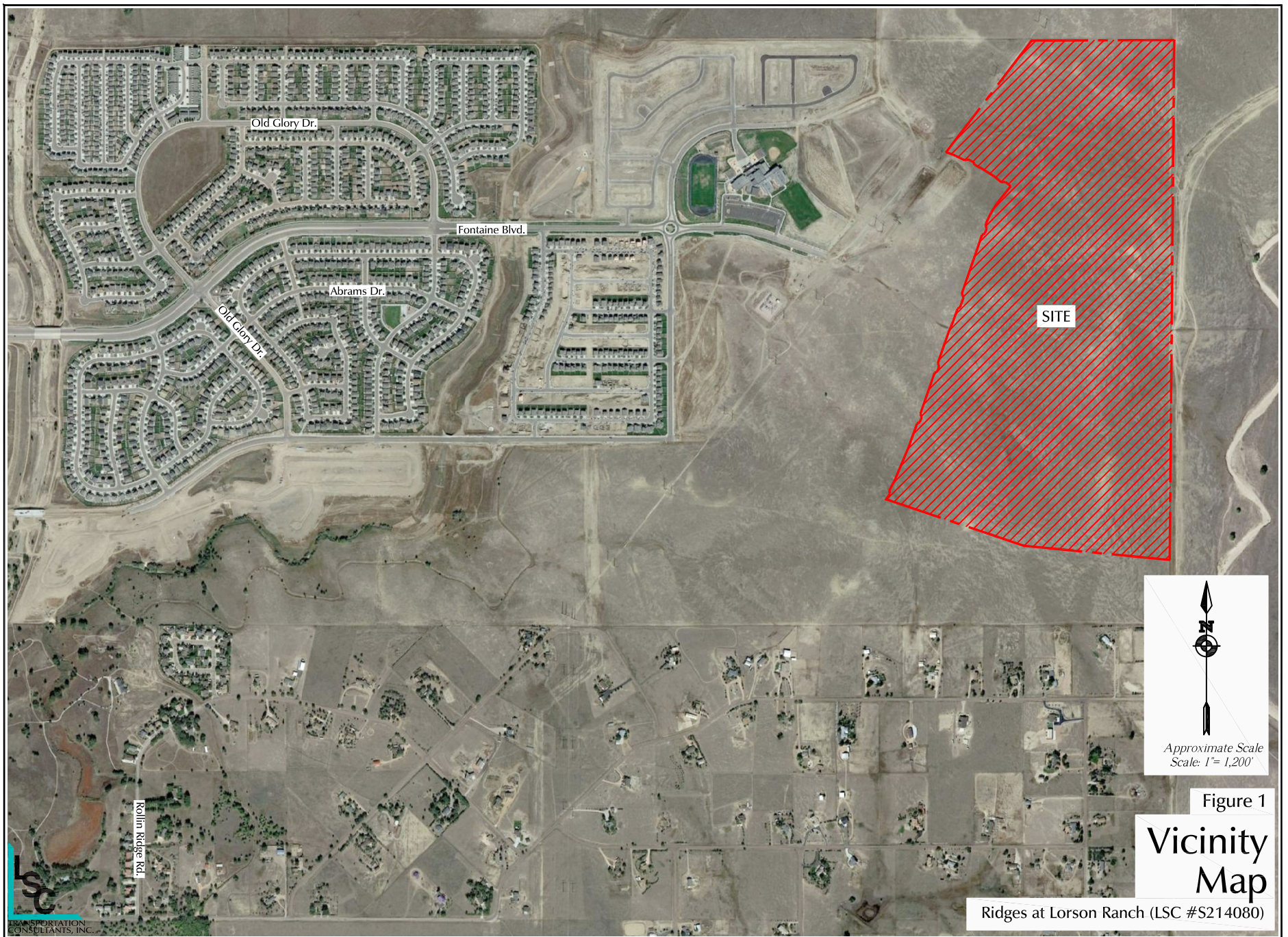


Figure 1

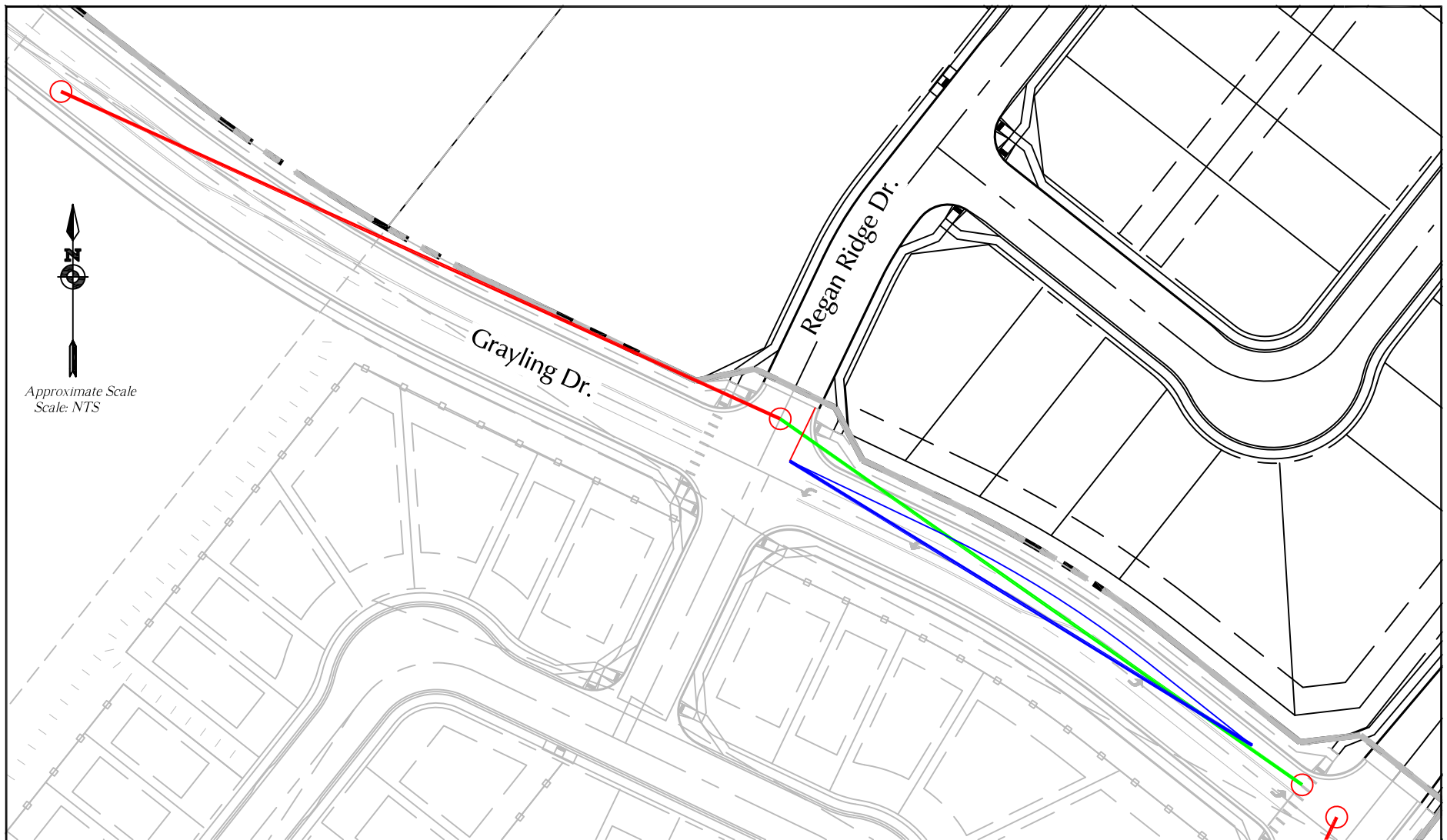
Vicinity Map

Ridges at Lorson Ranch (LSC #S214080)



Approximate Scale
NTS



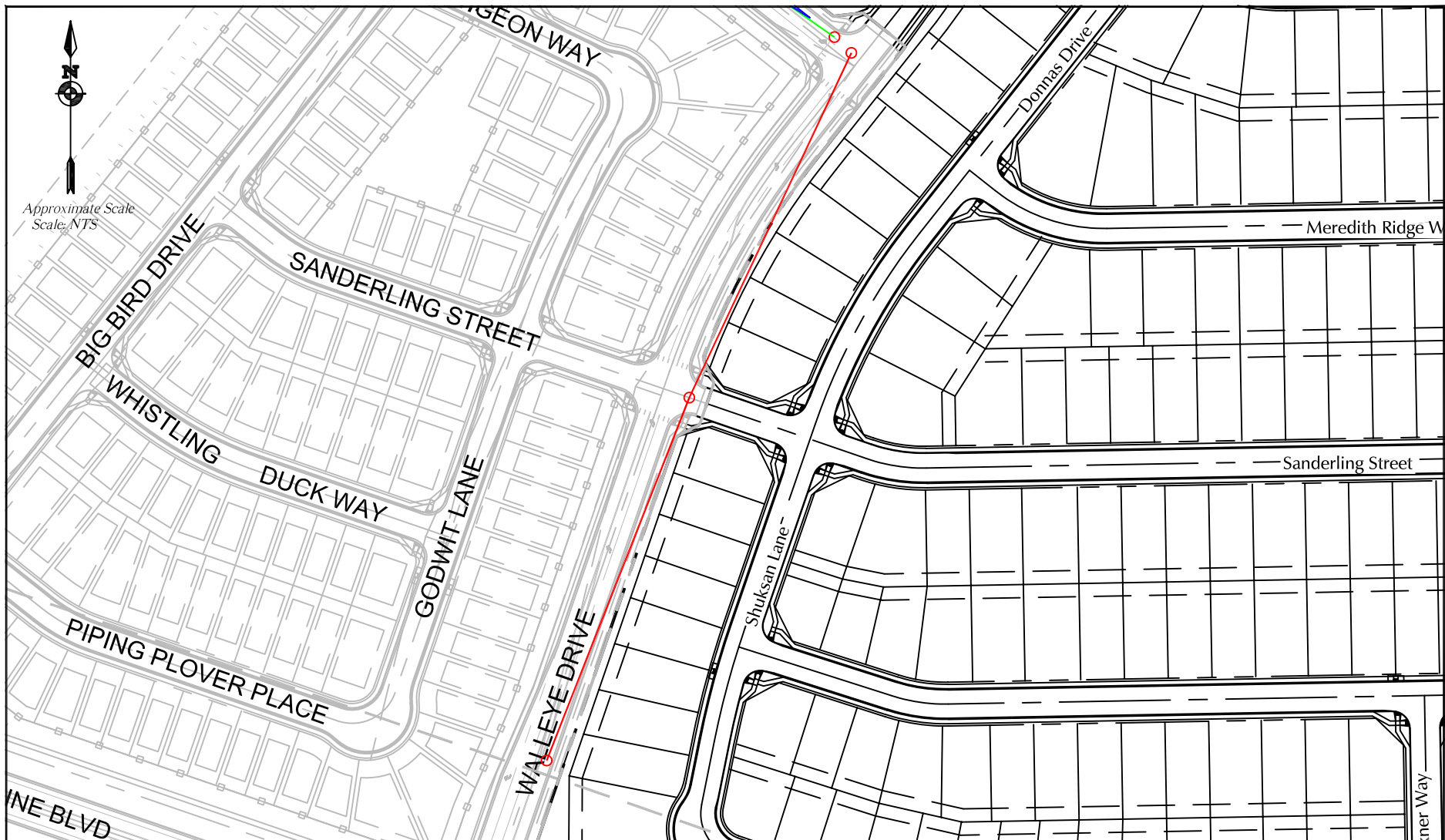


LEGEND:

- = ECM Required Intersection Sight Distance (445' based on a design speed of 40 mph from Table 2-21)
- = 356' available intersection sight distance
- = ECM Required Stopping Sight Distance (305' based on a design speed of 40 mph from Table 2-17)



Figure 3a
Sight Distance Analysis
Grayling/Regan Ridge Dr.
Ridges at Lorson Ranch (LSC #S214080)



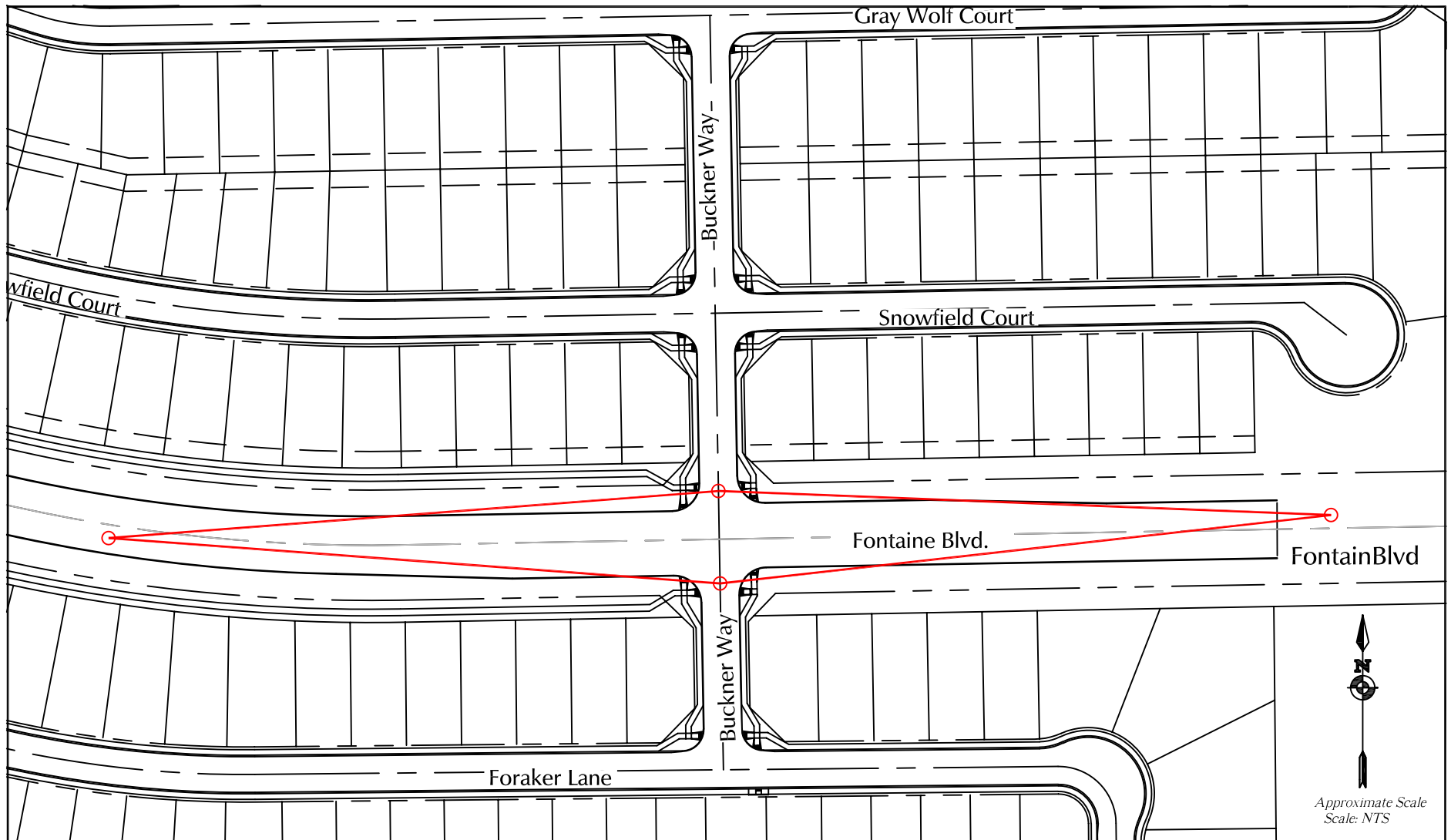
LEGEND:

— = ECM Required Intersection Sight Distance (445' based on a design speed of 40 mph from Table 2-21)



Figure 3b
Sight Distance Analysis
Sanderling/Walleye

Ridges at Lorson Ranch (LSC #S214080)



LEGEND:

— = ECM Required Intersection Sight Distance (555' based the ultimate design speed of 50 mph from Table 2-21)



Figure 3c
Sight Distance Analysis
Fontaine/Buckner

Ridges at Lorson Ranch (LSC #S214080)



Approximate Scale
Scale: NTS

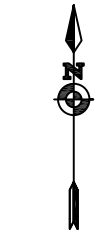
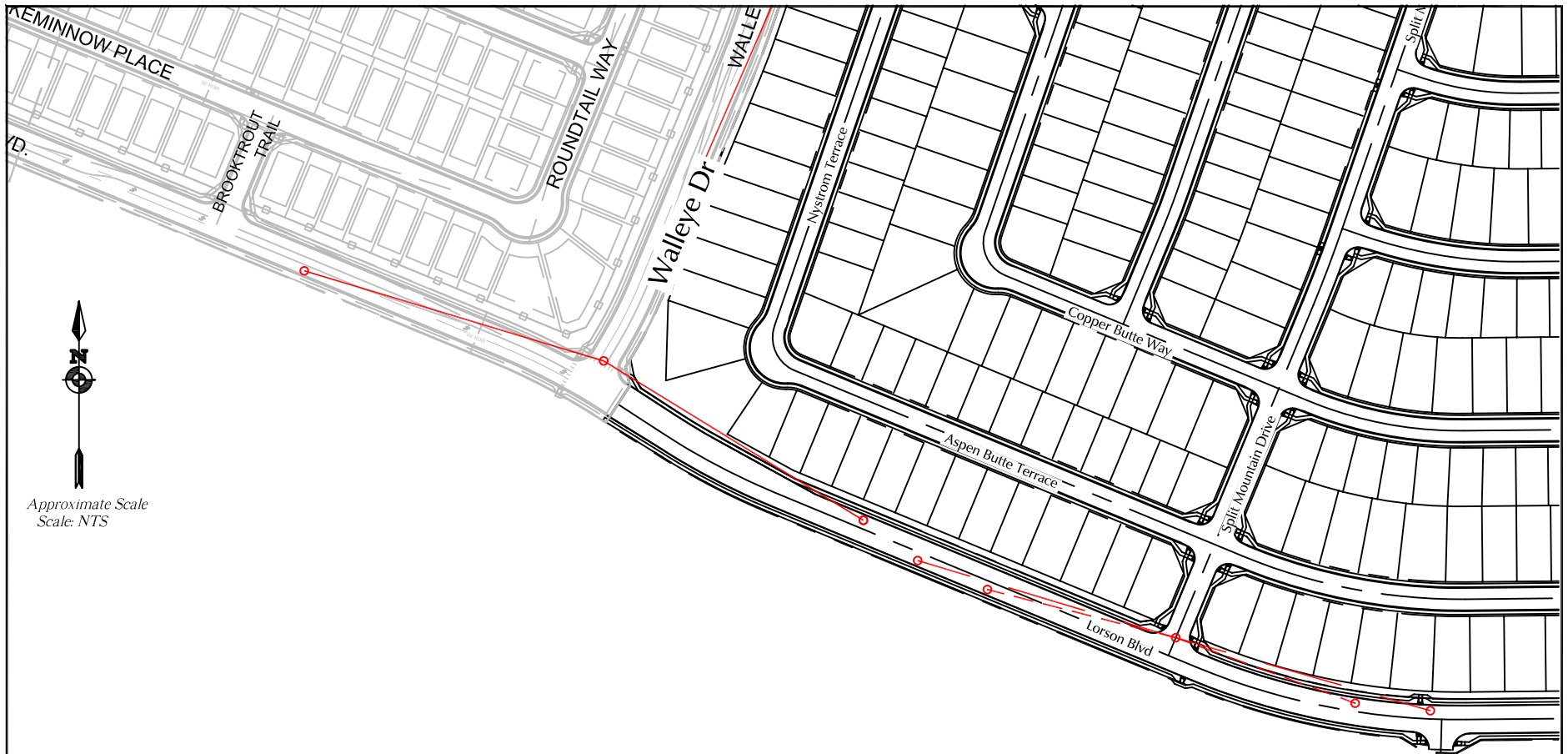
LEGEND:

— = ECM Required Intersection Sight Distance (445' based on a design speed of 40 mph from Table 2-21)

Figure 3d

Sight Distance Analysis Walleye/Lake Trout & Walleye/Splake

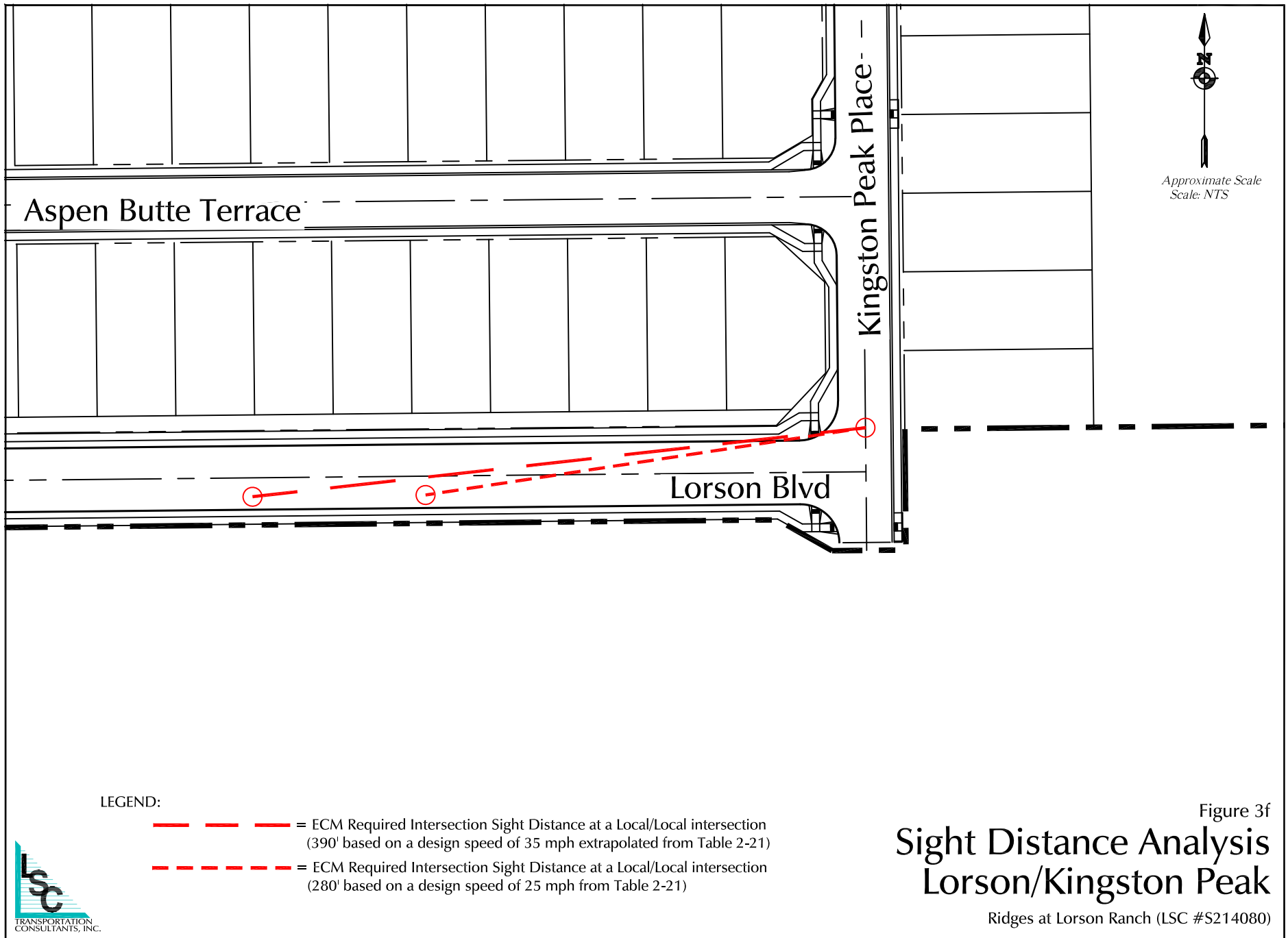
Ridges at Lorson Ranch (LSC #S214080)



Approximate Scale
Scale: NTS

LEGEND:

- = ECM Required Intersection Sight Distance (445' based on a design speed of 40 mph from Table 2-21)
- - - - - = ECM Required Intersection Sight Distance at a Local/Local intersection (390' based on a design speed of 35 mph extrapolated from Table 2-21)
- - - - - = ECM Required Intersection Sight Distance at a Local/Local intersection (280' based on a design speed of 25 mph from Table 2-21)





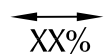
* Assumes no trip distribution east or north of the greater Lorson Ranch boundary within the 20-year horizon.

Directional Distribution of Site-Generated Traffic

Ridges at Lorson Ranch (LSC #S214080)

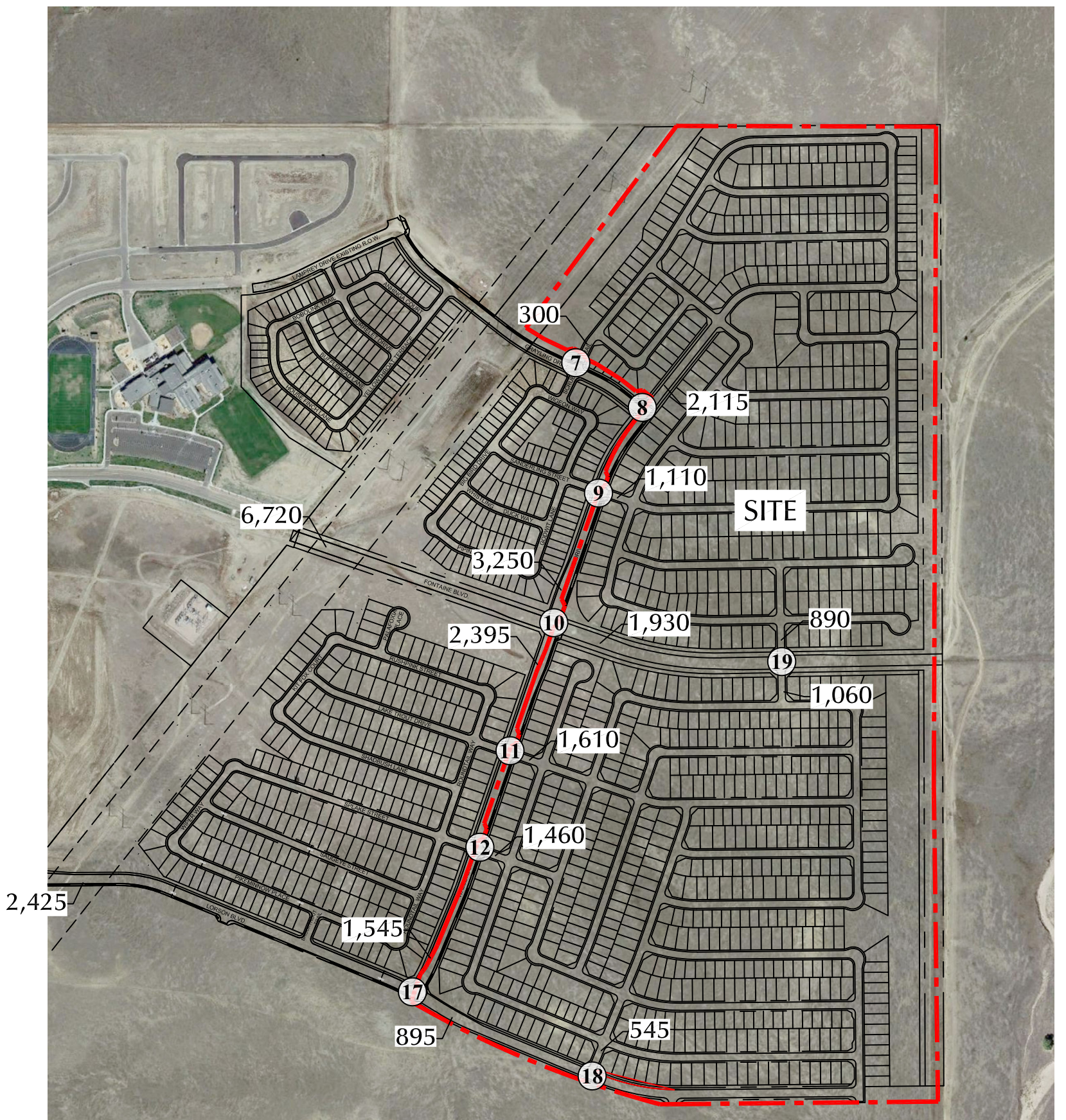
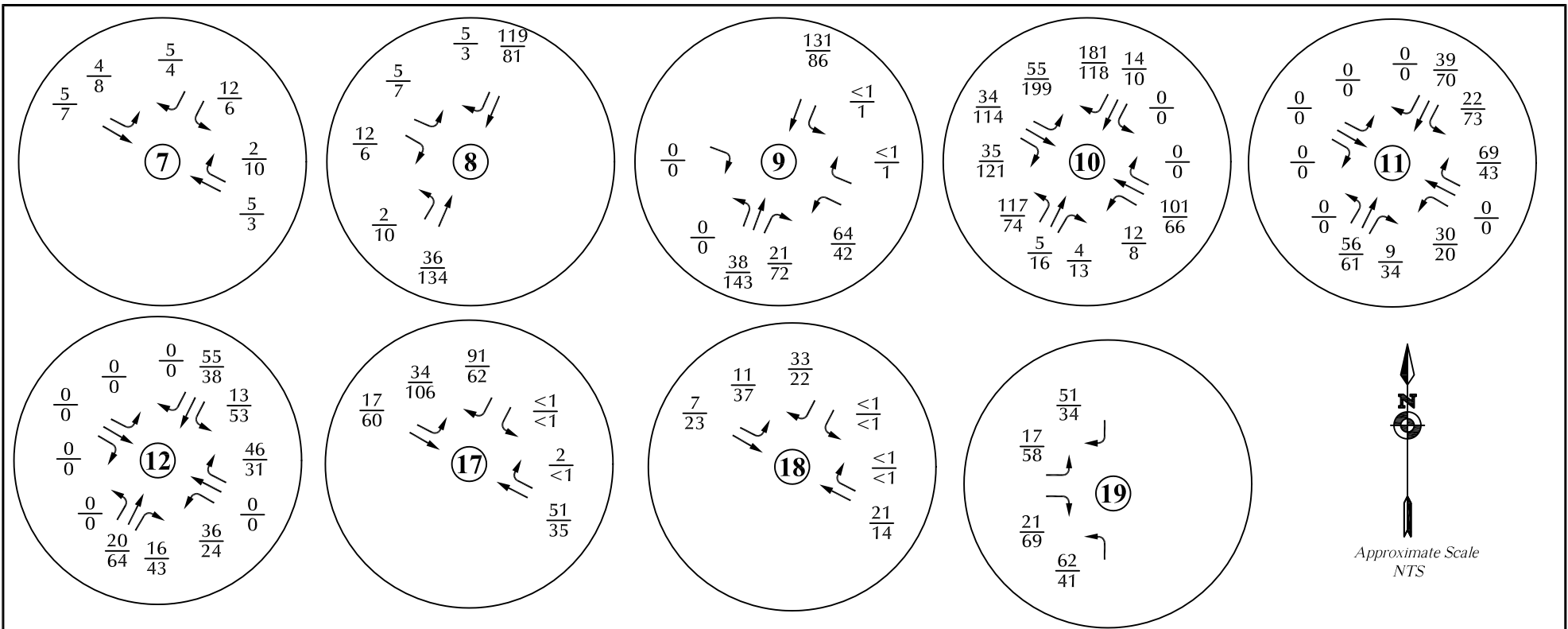


LEGEND:



= Percent Directional Distribution

Figure 4



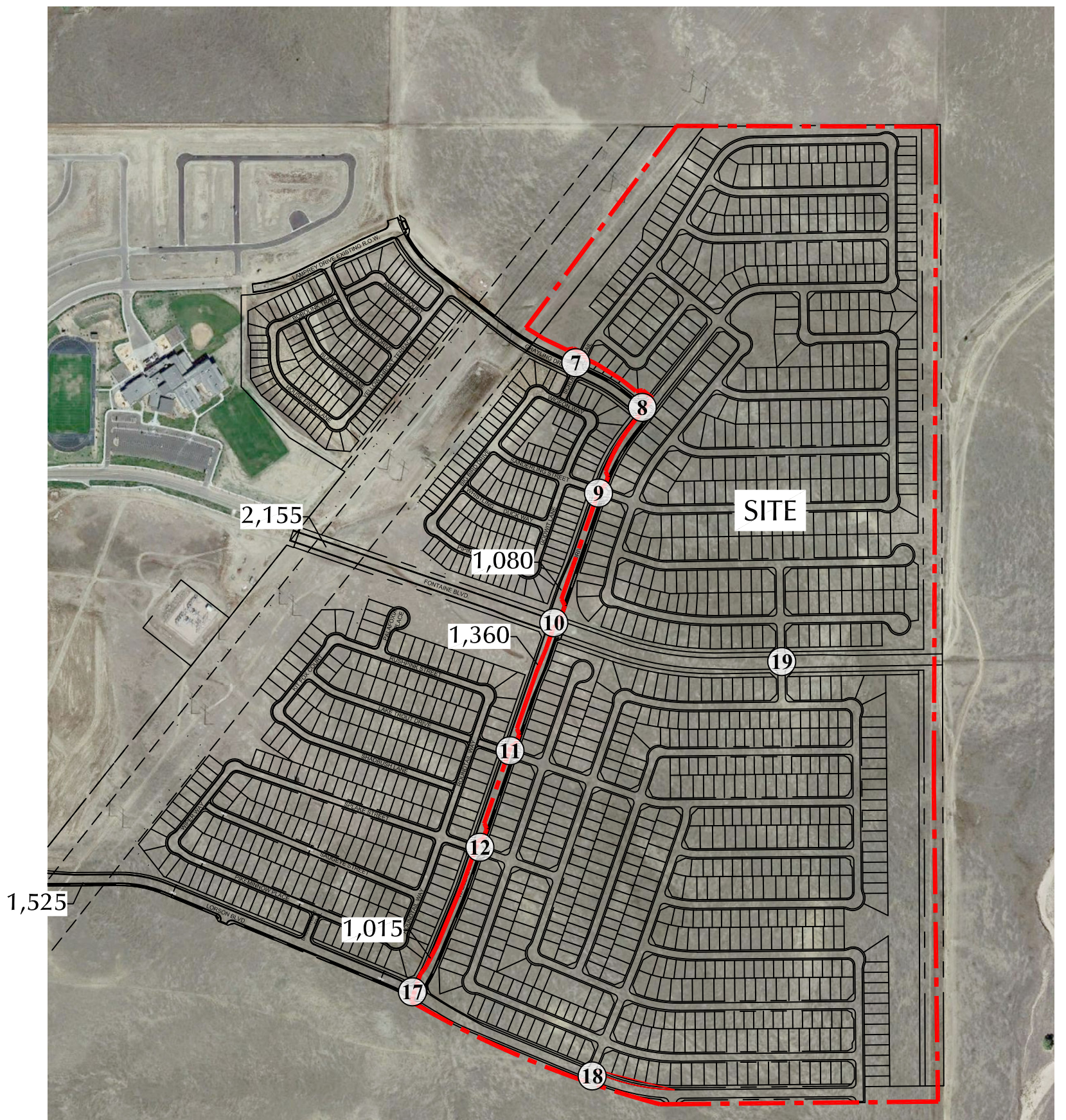
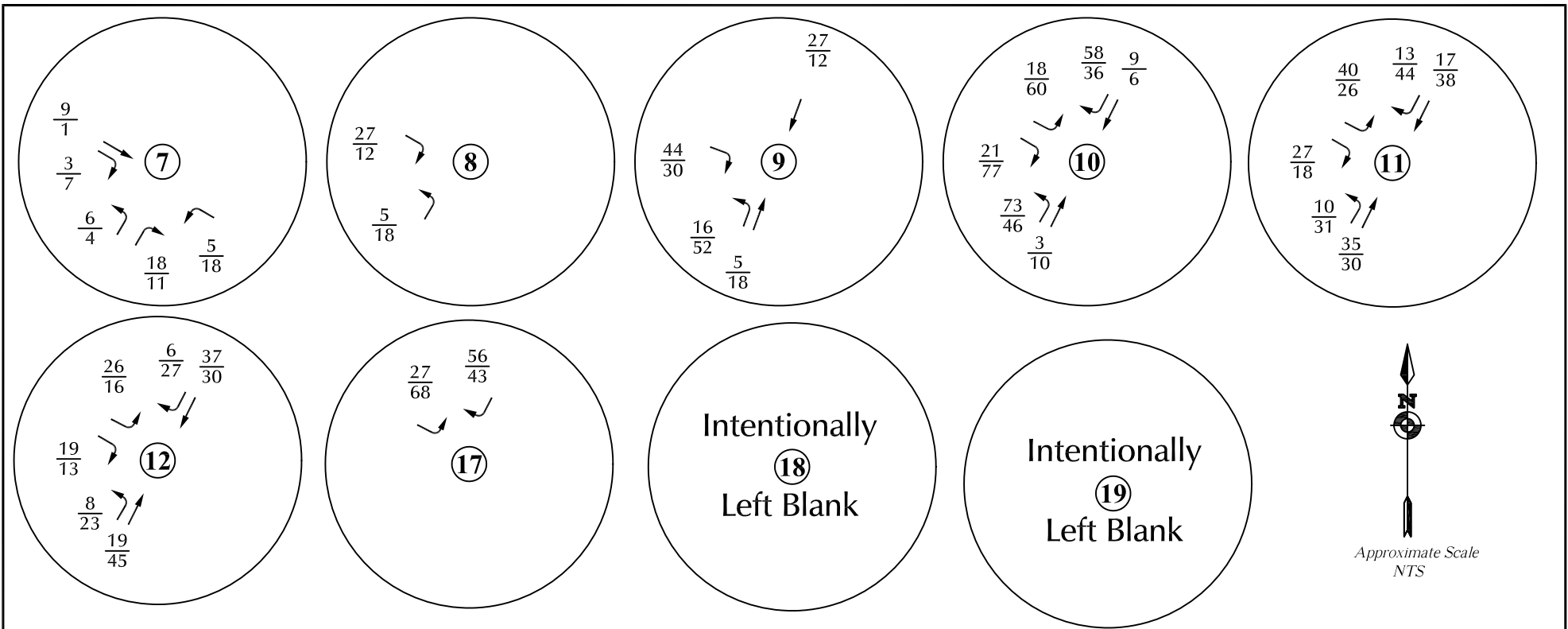
LEGEND:

- (#) = Intersection Number
- XX = AM Weekday Peak-Hour Traffic (vehicles per hour)
- XX = PM Weekday Peak-Hour Traffic (vehicles per hour)
- X,XXX = Average Weekday Traffic (vehicles per day)

Figure 5

Assignment of Site-Generated Traffic

Ridges at Lorson Ranch (LSC #S214080)



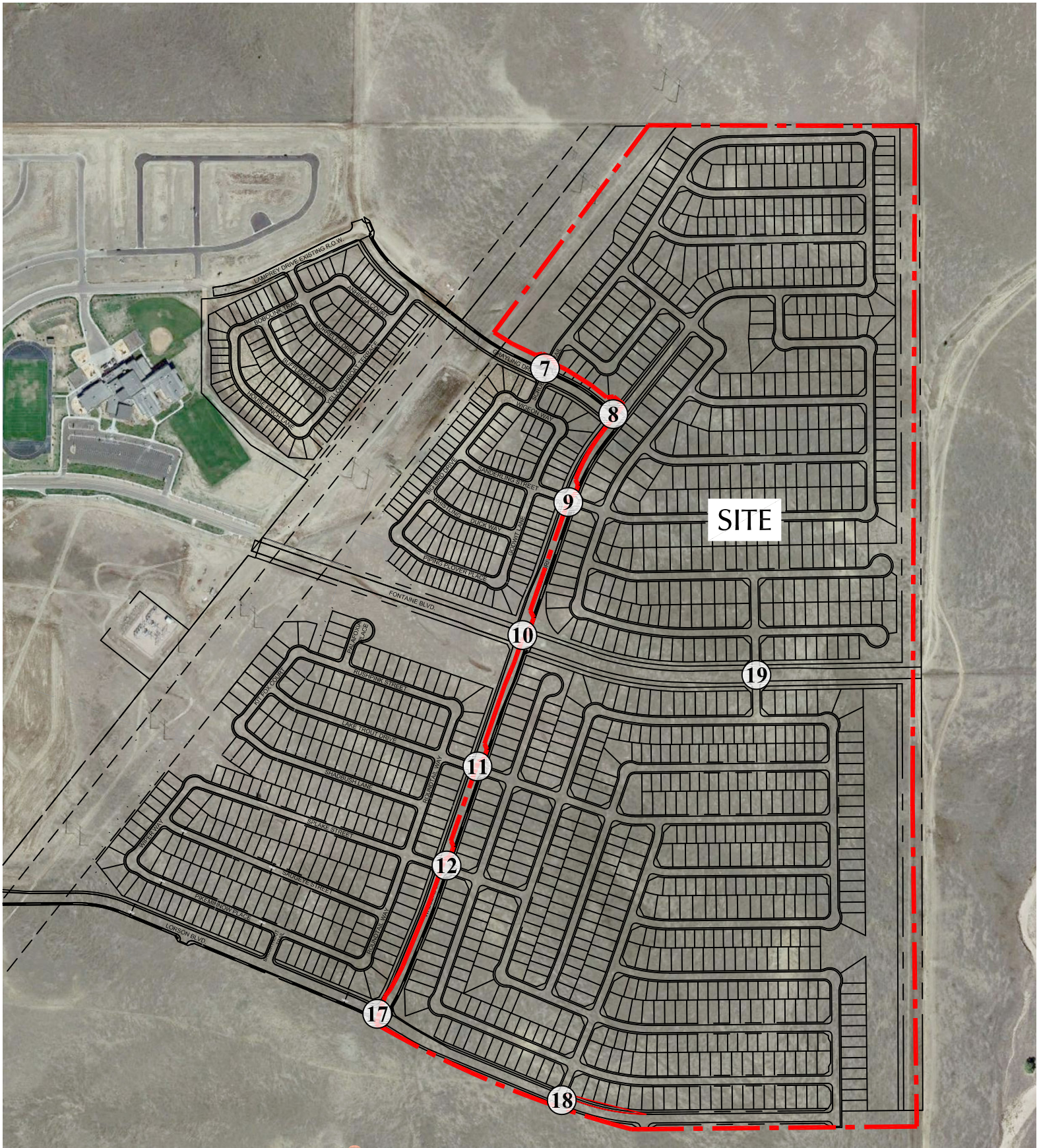
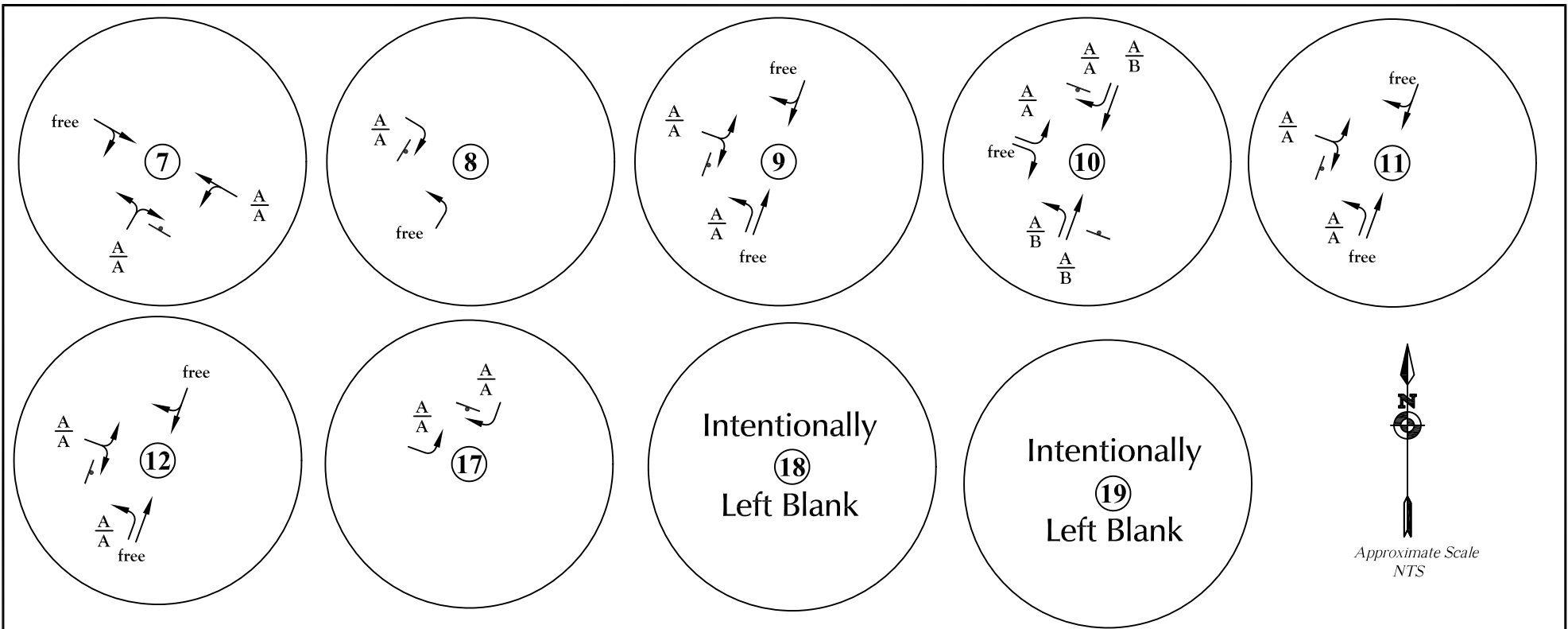
LEGEND:

- $\textcircled{\#}$ = Intersection Number
- $\frac{XX}{XX}$ = AM Weekday Peak-Hour Traffic (vehicles per hour)
PM Weekday Peak-Hour Traffic (vehicles per hour)
- X,XXX = Average Weekday Traffic (vehicles per day)

Figure 6a

Short-Term Background Traffic

Ridges at Lorson Ranch (LSC #S214080)



LEGEND:

= Intersection Number

└ = Stop Sign

A/A = AM Individual Movement Peak-Hour Level of Service

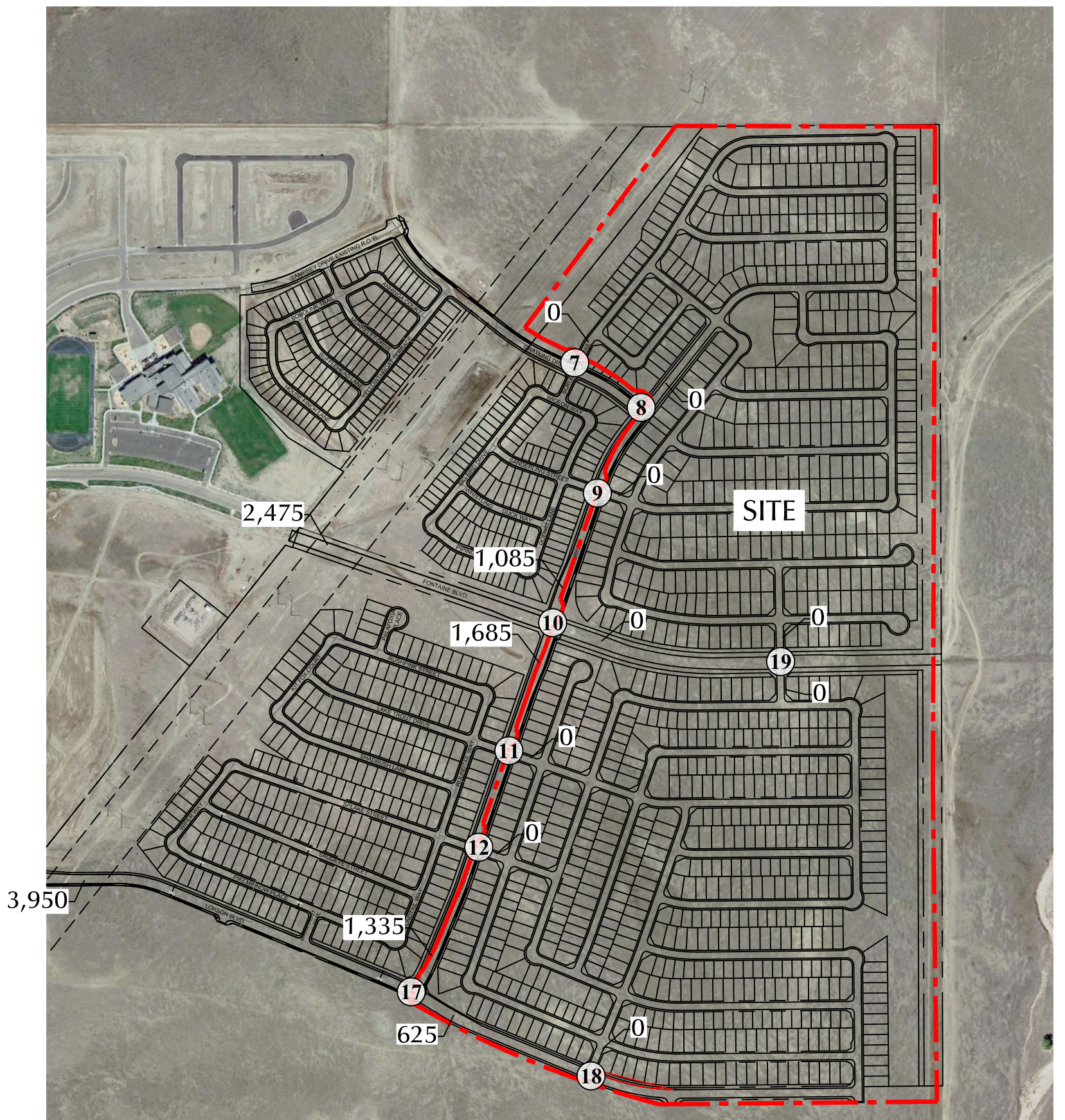
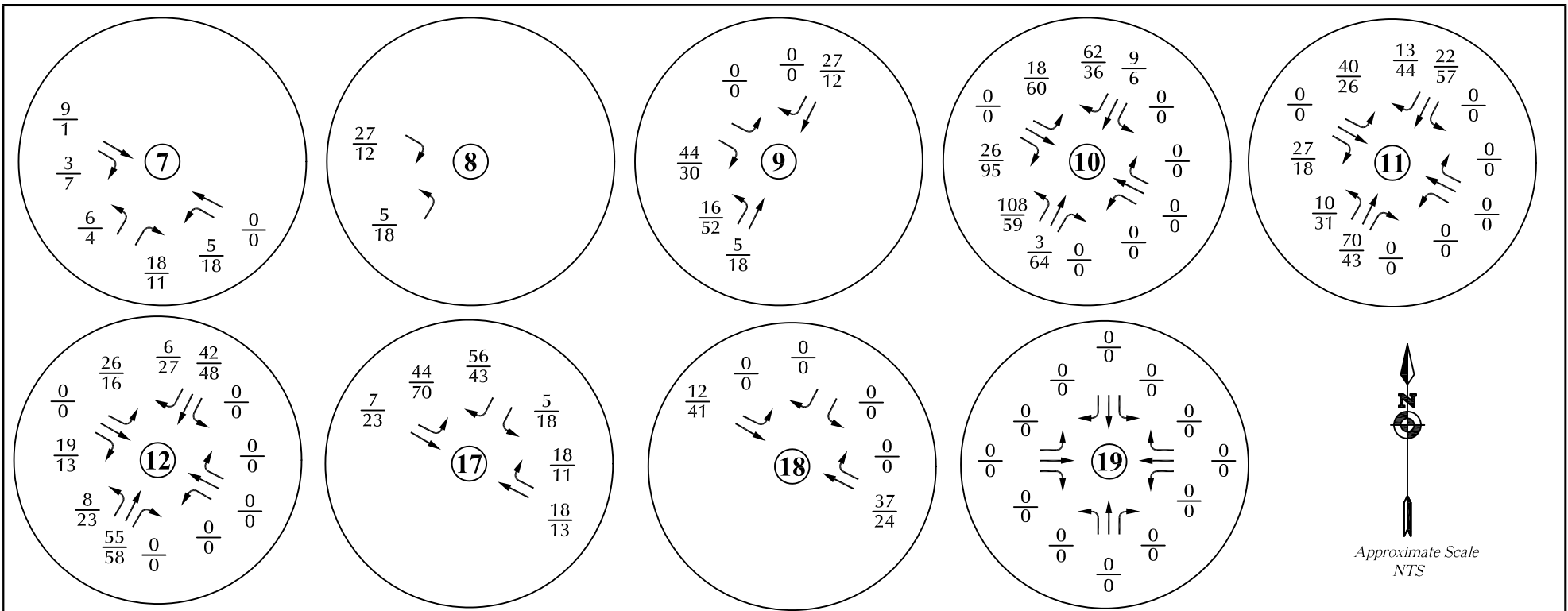
B = PM Individual Movement Peak-Hour Level of Service

Figure 6b

Short-Term Background Lane Geometry and Traffic Control

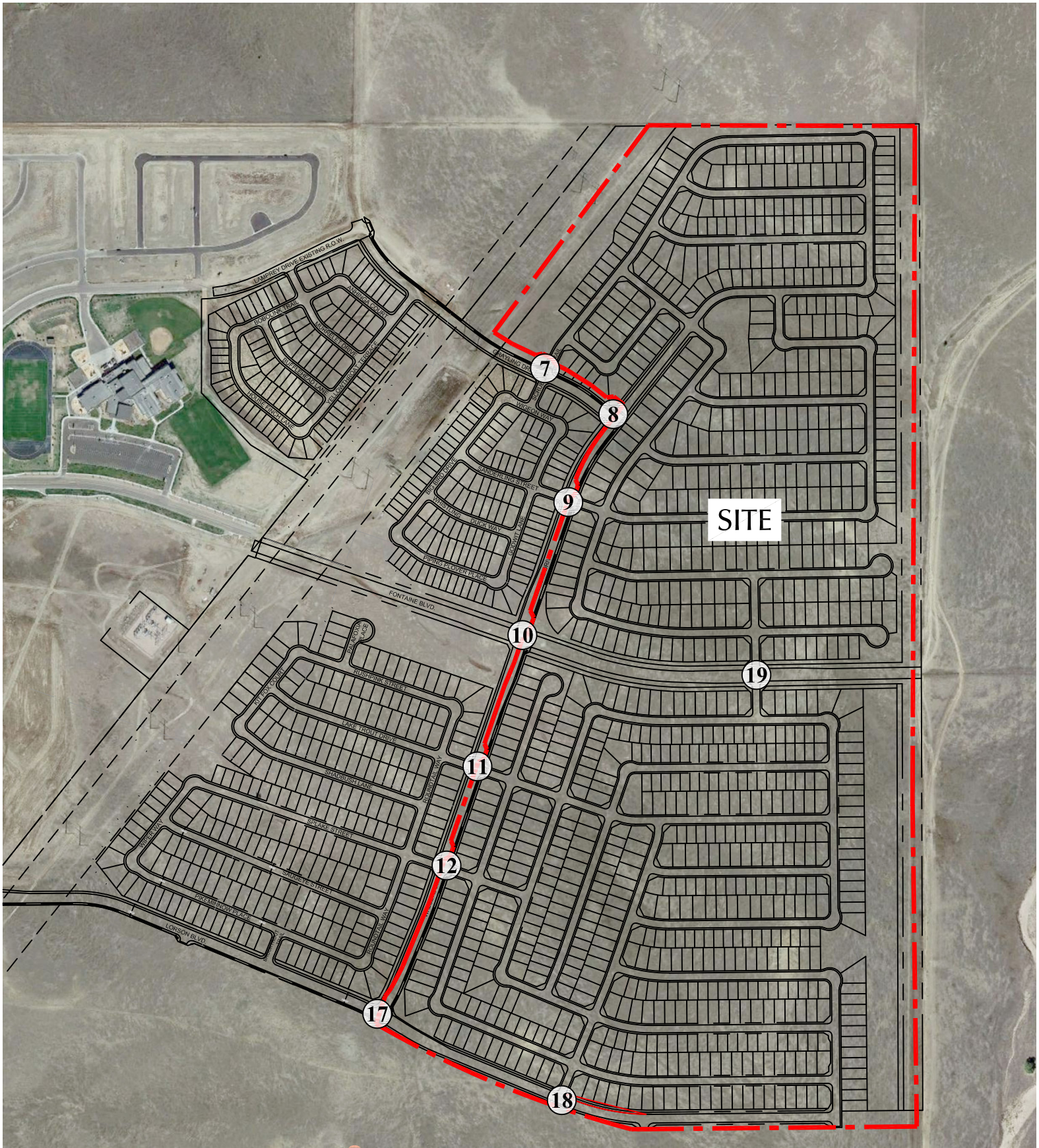
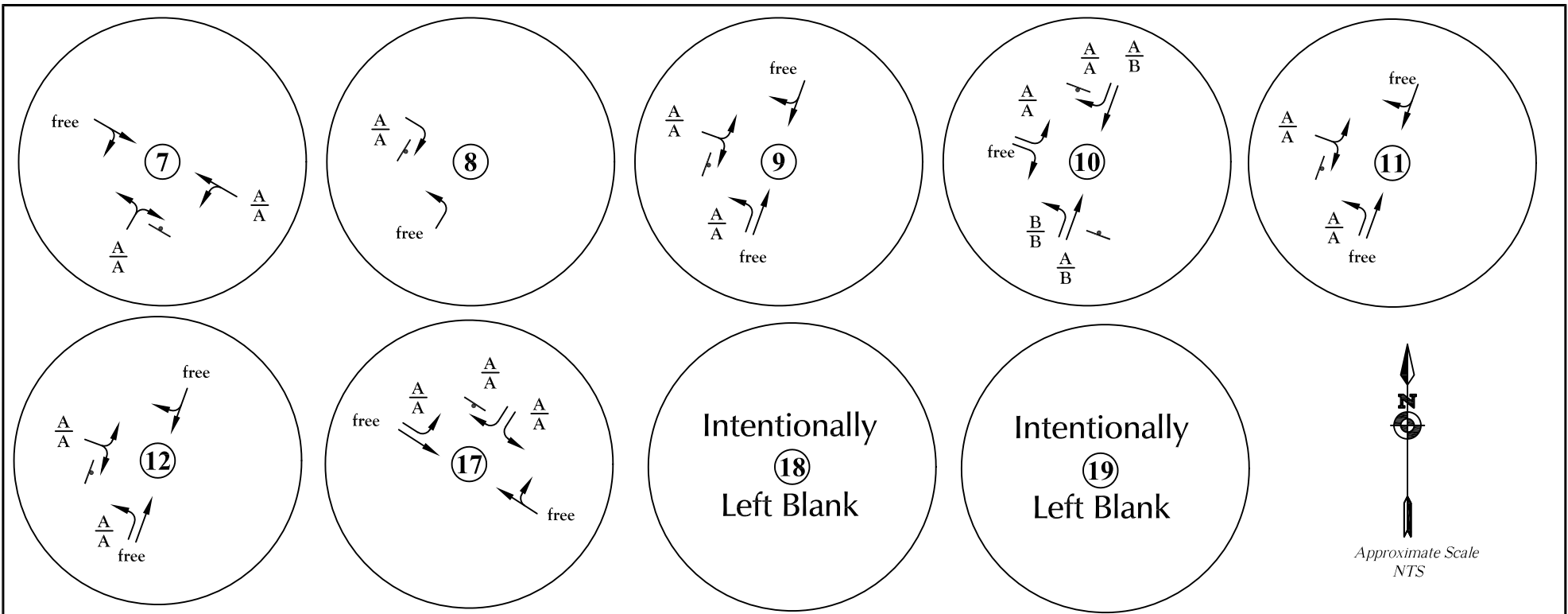
Ridges at Lorson Ranch (LSC #S214080)





LEGEND:

- (#) = Intersection Number
- $\frac{XX}{XX}$ = AM Weekday Peak-Hour Traffic (vehicles per hour)
PM Weekday Peak-Hour Traffic (vehicles per hour)
- X,XXX = Average Weekday Traffic (vehicles per day)



LEGEND:

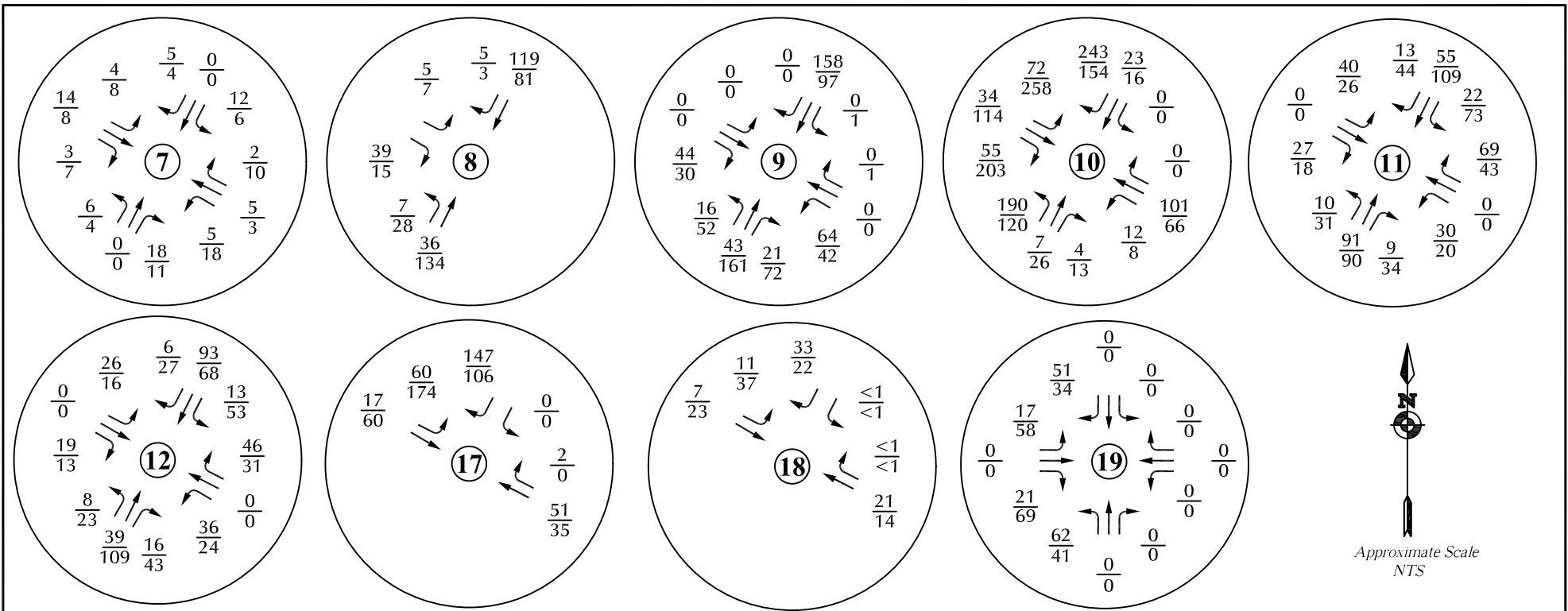
= Intersection Number

└ = Stop Sign

$\frac{A}{B}$ = $\frac{\text{AM Individual Movement Peak-Hour Level of Service}}{\text{PM Individual Movement Peak-Hour Level of Service}}$

Figure 7b

Year 2040 Background
Lane Geometry and Traffic Control
Ridges at Lorson Ranch (LSC #S214080)



LEGEND:

(#) = Intersection Number

$\frac{XX}{XX}$ = $\frac{\text{AM Weekday Peak-Hour Traffic (vehicles per hour)}}{\text{PM Weekday Peak-Hour Traffic (vehicles per hour)}}$

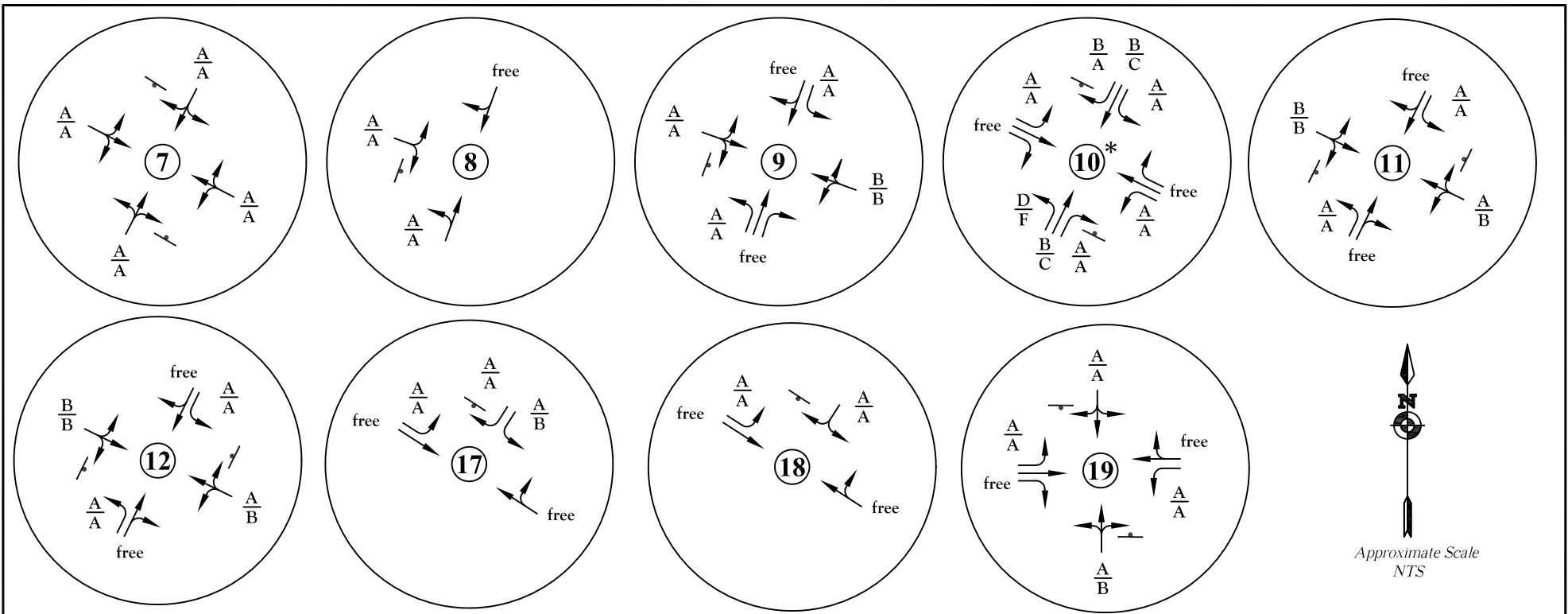
X,XXX = Average Weekday Traffic (vehicles per day)

Figure 8a

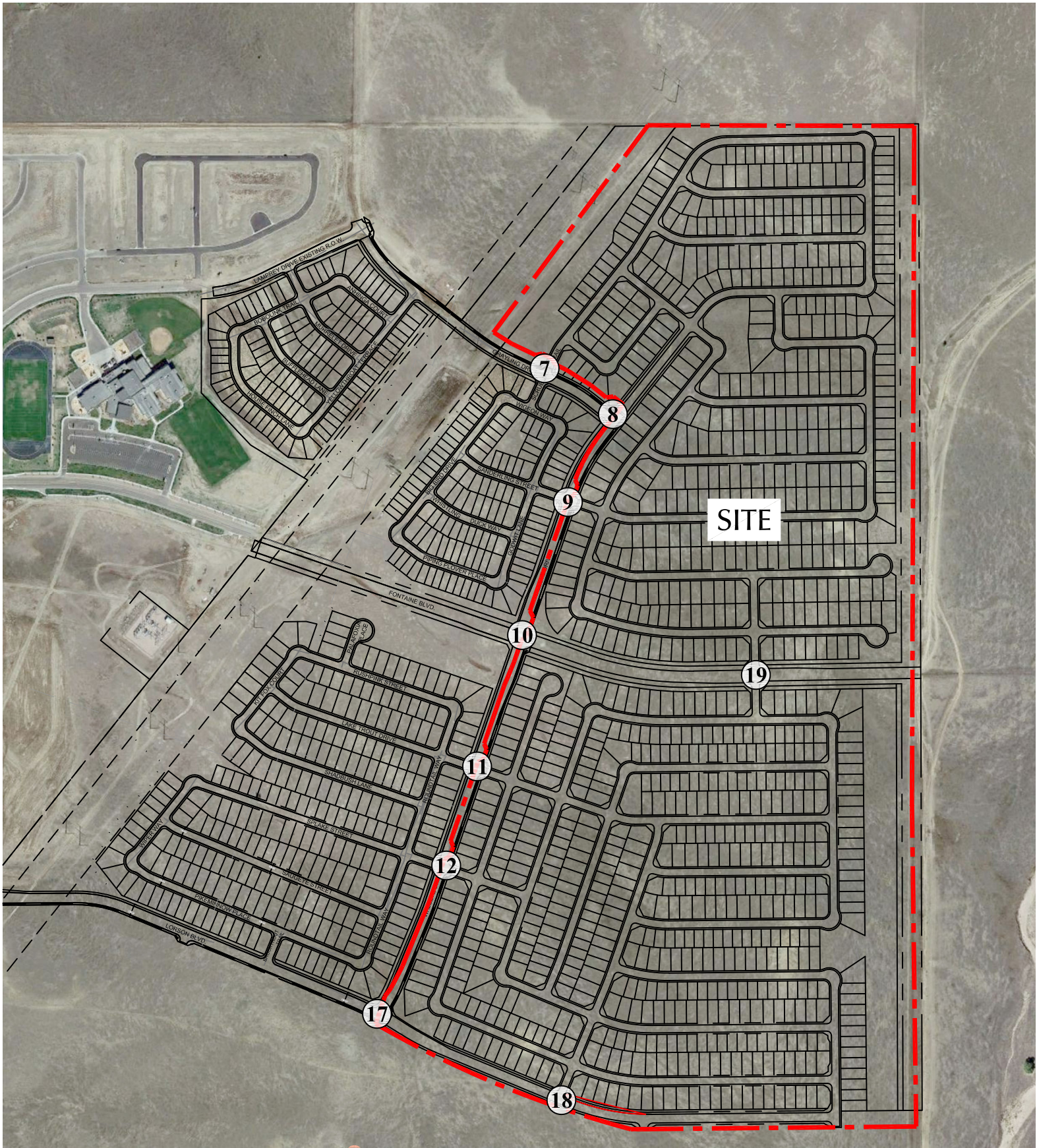
**Short-Term
Total Traffic**

Ridges at Lorson Ranch (LSC #S214080)





*See Figure 8c for alternate traffic options.



LEGEND:

= Intersection Number

⊥ = Stop Sign

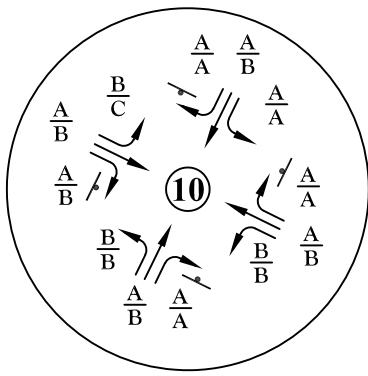
$\frac{A}{B}$ = $\frac{\text{AM Individual Movement Peak-Hour Level of Service}}{\text{PM Individual Movement Peak-Hour Level of Service}}$



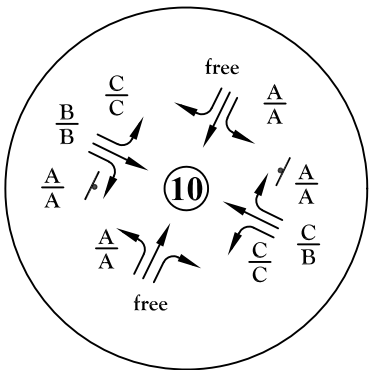
Figure 8b

Short-Term Total Lane Geometry and Traffic Control

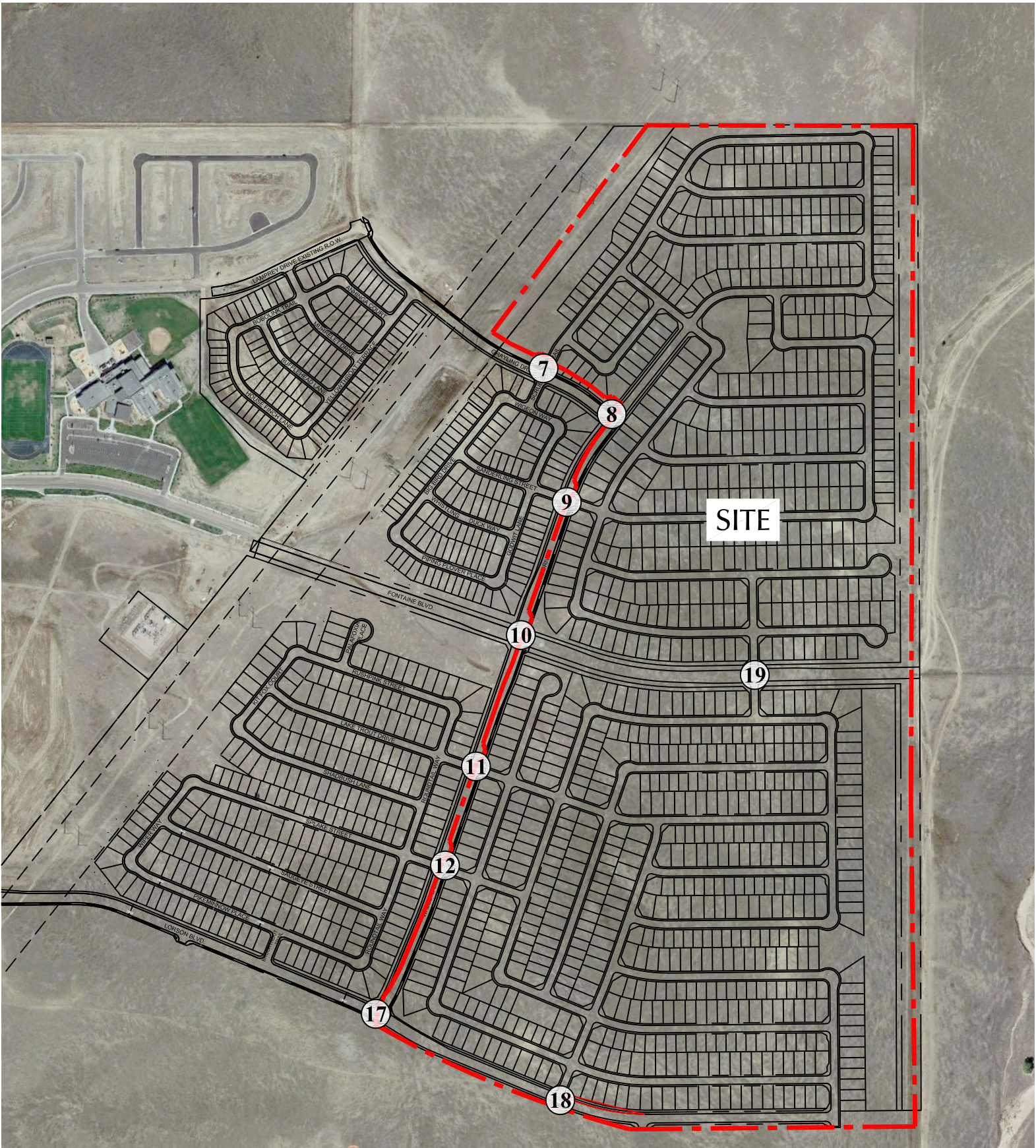
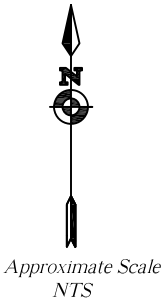
Ridges at Lorson Ranch (LSC #S214080)



All-Way Stop Control



Two-Way Stop Control - with stop signs on east and west legs



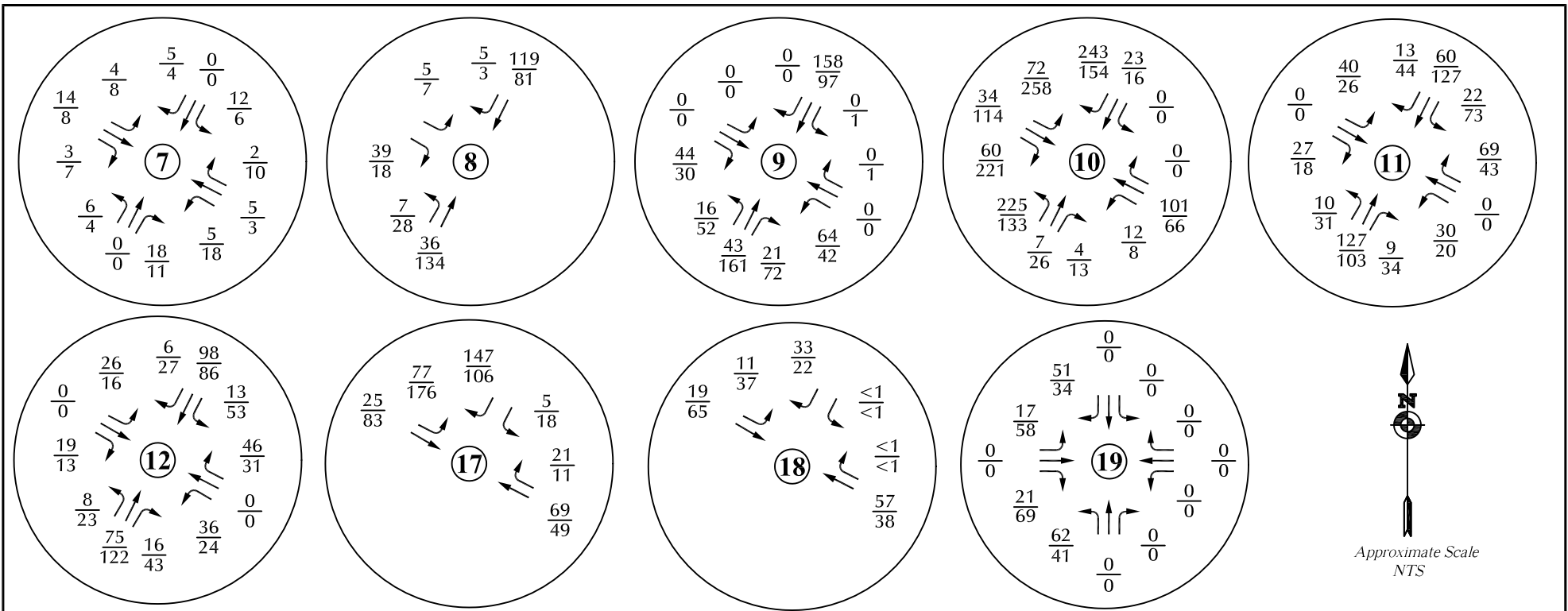
- LEGEND:
- $\textcircled{\#}$ = Intersection Number
 - $\text{---}|---$ = Stop Sign
 - $\frac{A}{B}$ = $\frac{\text{AM Individual Movement Peak-Hour Level of Service}}{\text{PM Individual Movement Peak-Hour Level of Service}}$

Figure 8c

Short-Term Total Lane Geometry and Alternate Traffic Control

Ridges at Lorson Ranch (LSC #S214080)





LEGEND:

(#) = Intersection Number

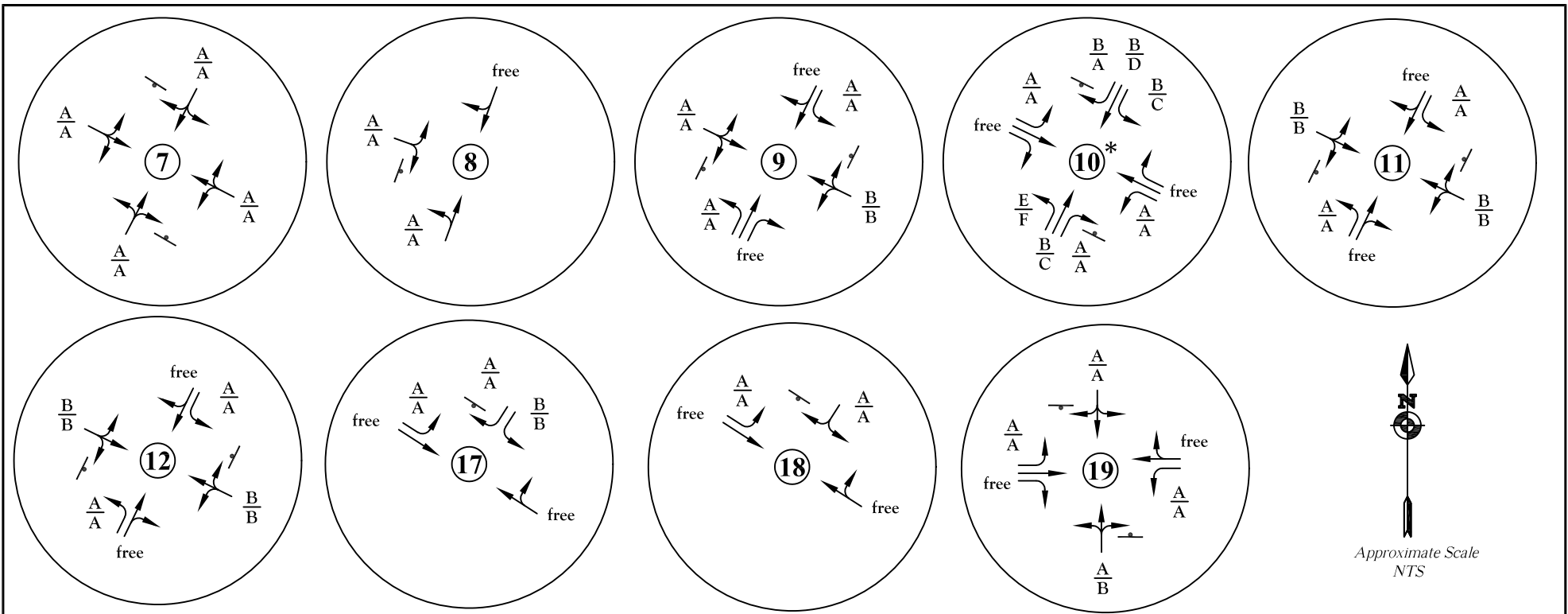
$\frac{XX}{XX}$ = $\frac{\text{AM Weekday Peak-Hour Traffic (vehicles per hour)}}{\text{PM Weekday Peak-Hour Traffic (vehicles per hour)}}$

X,XXX= Average Weekday Traffic (vehicles per day)

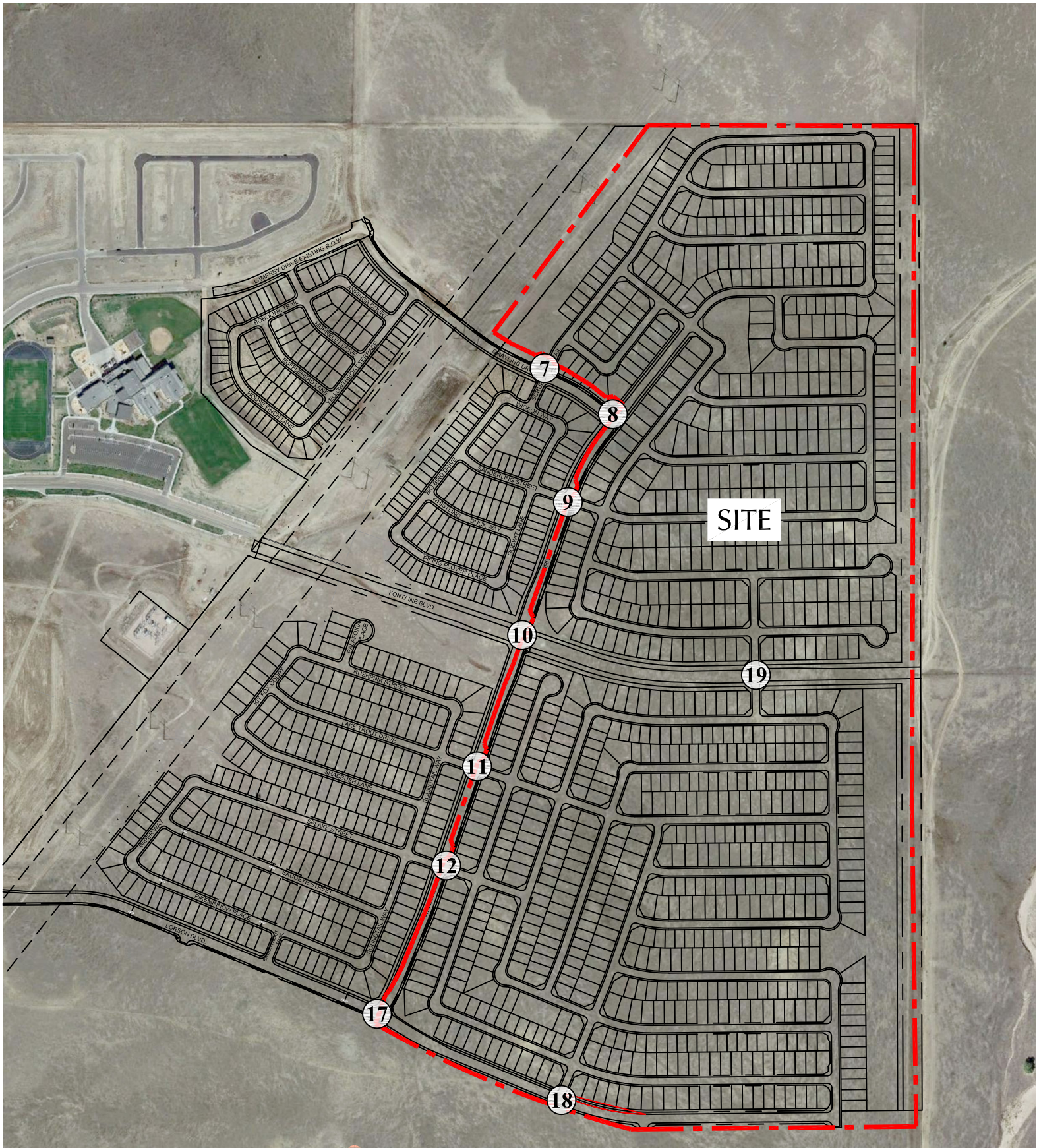
Figure 9a

**Year 2040
Total Traffic**

Ridges at Lorson Ranch (LSC #S214080)



*See Figure 9c for alternate traffic options.



LEGEND:

= Intersection Number

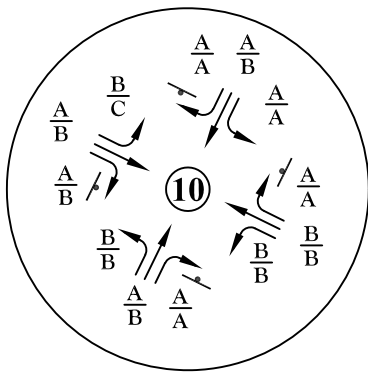
| = Stop Sign

$\frac{A}{B}$ = $\frac{\text{AM Individual Movement Peak-Hour Level of Service}}{\text{PM Individual Movement Peak-Hour Level of Service}}$

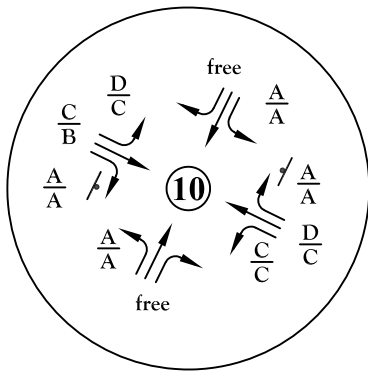


Figure 9b

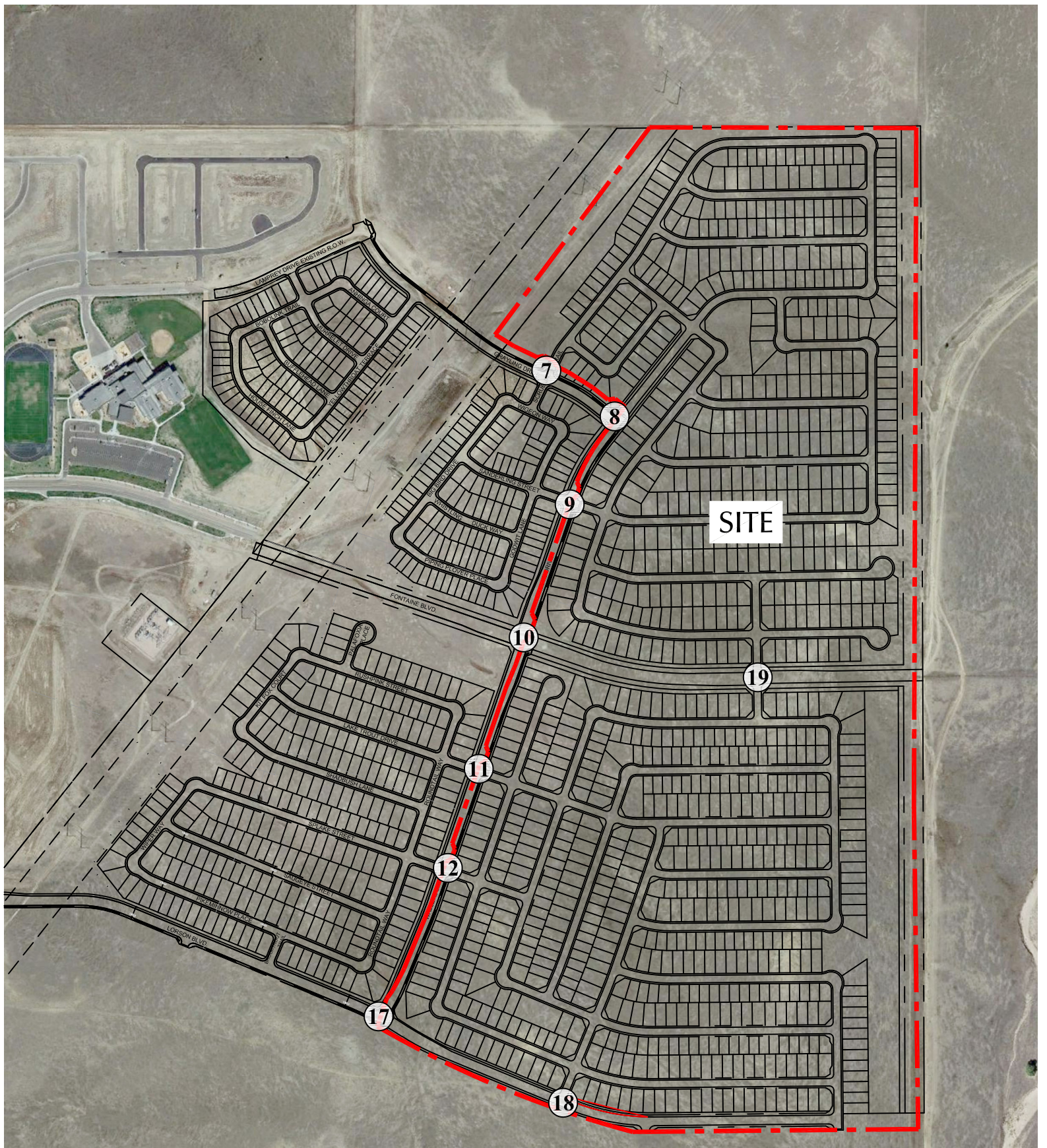
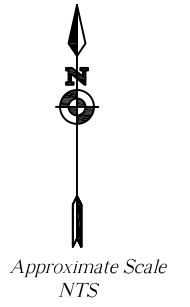
Year 2040 Total
Lane Geometry and Traffic Control
Ridges at Lorson Ranch (LSC #S214080)



All-Way Stop Control



Two-Way Stop Control - with stop signs on east and west legs



LEGEND:

= Intersection Number

| = Stop Sign

A/B = AM Individual Movement Peak-Hour Level of Service
PM Individual Movement Peak-Hour Level of Service

Year 2040 Total Lane Geometry and Alternate Traffic Control

Ridges at Lorson Ranch (LSC #S214080)

Figure 9c

LEGEND:

- = 4-Lane Principal Arterial (Ultimate Classification) Interim/Lorson Buildout 2-Lane Urban Non-Residential Collector in 100' R.O.W.
- = Urban Local
- = Urban Residential Collector (64'to 72' R.O.W.)
- = Urban Residential Collector (60' R.O.W.)

X,XXX = Projected Average Daily Traffic (veh/day)
(X,XXX) = Design Average Daily Traffic (veh/day)

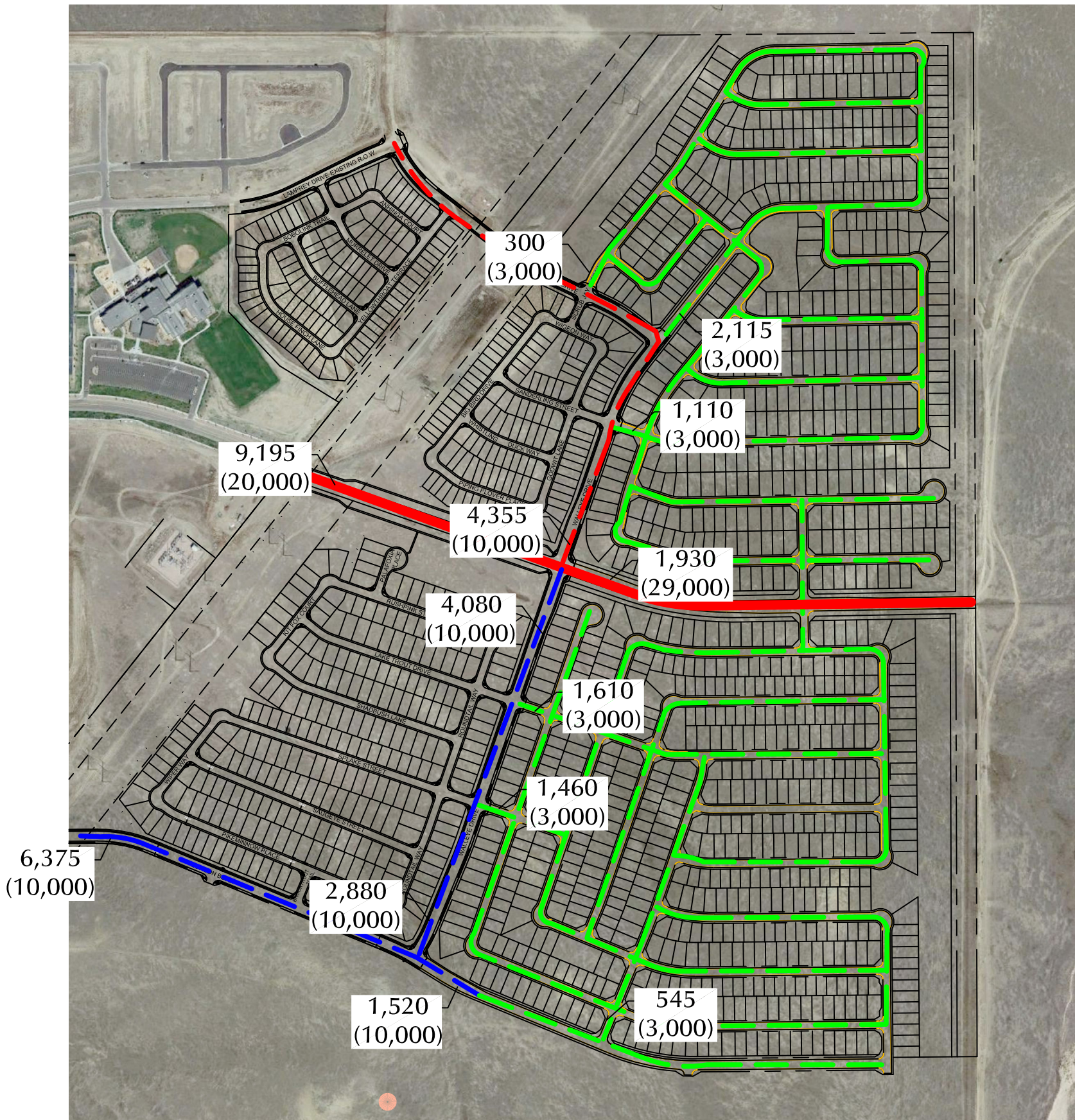
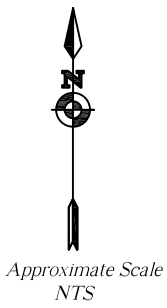








Figure 10
Street Classifications
Ridges at Lorson Ranch (LSC #S214080)






Levels of Service













Intersection						
Int Delay, s/veh	5.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	9	3	5	0	6	18
Future Vol, veh/h	9	3	5	0	6	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	4	6	0	7	21
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	15	0	25	13
Stage 1	-	-	-	-	13	-
Stage 2	-	-	-	-	12	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1603	-	991	1067
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	1011	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1603	-	987	1067
Mov Cap-2 Maneuver	-	-	-	-	911	-
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	1007	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		7.3		8.6	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	1023	-	-	1603	-	
HCM Lane V/C Ratio	0.028	-	-	0.004	-	
HCM Control Delay (s)	8.6	-	-	7.3	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	

HCM 6th TWSC
8: Walleye Dr & Grayling Dr

Short-Term Background Traffic
AM Peak Hour

Intersection						
Int Delay, s/veh	8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	27	5	0	0	0
Future Vol, veh/h	0	27	5	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	32	6	0	0	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	13	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	12	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1006	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	1011	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1002	1084	1622	-	-	-
Mov Cap-2 Maneuver	1002	-	-	-	-	-
Stage 1	1018	-	-	-	-	-
Stage 2	1011	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.4	7.2		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1622	-	1084	-	-	
HCM Lane V/C Ratio	0.004	-	0.029	-	-	
HCM Control Delay (s)	7.2	0	8.4	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection						
Int Delay, s/veh	5.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	44	16	5	27	0
Future Vol, veh/h	0	44	16	5	27	0
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	-	105	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	52	19	6	32	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	76	32	32	0	-	0
Stage 1	32	-	-	-	-	-
Stage 2	44	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	927	1042	1580	-	-	-
Stage 1	991	-	-	-	-	-
Stage 2	978	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	916	1042	1580	-	-	-
Mov Cap-2 Maneuver	865	-	-	-	-	-
Stage 1	979	-	-	-	-	-
Stage 2	978	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.6	5.6		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1580	-	1042	-	-	
HCM Lane V/C Ratio	0.012	-	0.05	-	-	
HCM Control Delay (s)	7.3	-	8.6	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.2	-	-	

Intersection												
Int Delay, s/veh	8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	0	21	0	0	0	73	3	0	0	9	62
Future Vol, veh/h	18	0	21	0	0	0	73	3	0	0	9	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	205	-	155	205	-	155	205	-	155	205	-	155
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	0	25	0	0	0	86	4	0	0	11	73






Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	25	0	0	85	43	0	58	68	1
Stage 1	-	-	-	-	-	-	42	42	-	1	1	-
Stage 2	-	-	-	-	-	-	43	1	-	57	67	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1589	-	-	901	849	-	939	823	1084
Stage 1	-	-	-	-	-	-	972	860	-	1022	895	-
Stage 2	-	-	-	-	-	-	971	895	-	955	839	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1622	-	-	1589	-	-	824	838	-	-	812	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	824	838	-	-	812	-
Stage 1	-	-	-	-	-	-	959	849	-	1009	895	-
Stage 2	-	-	-	-	-	-	895	895	-	939	828	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.3	0	9.9	8.7
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	824	838	-	1622	-	-	1589	-	-	-	812	1084
HCM Lane V/C Ratio	0.104	0.004	-	0.013	-	-	-	-	-	-	0.013	0.067
HCM Control Delay (s)	9.9	9.3	0	7.2	-	-	0	-	-	0	9.5	8.6
HCM Lane LOS	A	A	A	A	-	-	A	-	-	A	A	A
HCM 95th %tile Q(veh)	0.3	0	-	0	-	-	0	-	-	-	0	0.2

Intersection






Int Delay, s/veh 4.8






Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	27	10	35	17	13
Future Vol, veh/h	40	27	10	35	17	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	205	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	32	12	41	20	15




Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	93	28	35
Stage 1	28	-	-
Stage 2	65	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	907	1047	1576
Stage 1	995	-	-
Stage 2	958	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	900	1047	1576
Mov Cap-2 Maneuver	900	-	-
Stage 1	987	-	-
Stage 2	958	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	1.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1576	-	954	-	-
HCM Lane V/C Ratio	0.007	-	0.083	-	-
HCM Control Delay (s)	7.3	-	9.1	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-




Intersection						
Int Delay, s/veh	4.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	26	19	8	19	37	6
Future Vol, veh/h	26	19	8	19	37	6
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	-	205	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	22	9	22	44	7
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	88	48	51	0	-	0
Stage 1	48	-	-	-	-	-
Stage 2	40	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	913	1021	1555	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	982	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	908	1021	1555	-	-	-
Mov Cap-2 Maneuver	859	-	-	-	-	-
Stage 1	968	-	-	-	-	-
Stage 2	982	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.1	2.2		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1555	-	921	-	-	
HCM Lane V/C Ratio	0.006	-	0.057	-	-	
HCM Control Delay (s)	7.3	-	9.1	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.2	-	-	





Intersection						
Int Delay, s/veh	8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	27	0	0	0	0	56
Future Vol, veh/h	27	0	0	0	0	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	205	-	-	-	205	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	0	0	0	0	66
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	1	0	-	0	65	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	64	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1622	-	-	-	941	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	959	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1622	-	-	-	922	1084
Mov Cap-2 Maneuver	-	-	-	-	922	-
Stage 1	-	-	-	-	1002	-
Stage 2	-	-	-	-	959	-
Approach	EB	WB		SB		
HCM Control Delay, s	7.3	0		8.5		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1622	-	-	-	-	1084
HCM Lane V/C Ratio	0.02	-	-	-	-	0.061
HCM Control Delay (s)	7.3	-	-	-	0	8.5
HCM Lane LOS	A	-	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-	0.2













Intersection						
Int Delay, s/veh	6.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1	7	18	0	4	11
Future Vol, veh/h	1	7	18	0	4	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	8	21	0	5	13
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	9	0	47	5
Stage 1	-	-	-	-	5	-
Stage 2	-	-	-	-	42	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1611	-	963	1078
Stage 1	-	-	-	-	1018	-
Stage 2	-	-	-	-	980	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1611	-	950	1078
Mov Cap-2 Maneuver	-	-	-	-	880	-
Stage 1	-	-	-	-	1018	-
Stage 2	-	-	-	-	967	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		7.3		8.6	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	1017	-	-	1611	-	
HCM Lane V/C Ratio	0.017	-	-	0.013	-	
HCM Control Delay (s)	8.6	-	-	7.3	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	

HCM 6th TWSC
8: Walleye Dr & Grayling Dr

Short-Term Background Traffic
PM Peak Hour

Intersection						
Int Delay, s/veh	7.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	12	18	0	0	0
Future Vol, veh/h	0	12	18	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	14	21	0	0	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	43	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	42	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	968	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	980	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	955	1084	1622	-	-	-
Mov Cap-2 Maneuver	955	-	-	-	-	-
Stage 1	1009	-	-	-	-	-
Stage 2	980	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.4	7.2		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1622	-	1084	-	-	
HCM Lane V/C Ratio	0.013	-	0.013	-	-	
HCM Control Delay (s)	7.2	0	8.4	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	





Intersection						
Int Delay, s/veh	5.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	30	52	18	12	0
Future Vol, veh/h	0	30	52	18	12	0
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	-	105	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	35	61	21	14	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	157	14	14	0	-	0
Stage 1	14	-	-	-	-	-
Stage 2	143	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	834	1066	1604	-	-	-
Stage 1	1009	-	-	-	-	-
Stage 2	884	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	802	1066	1604	-	-	-
Mov Cap-2 Maneuver	782	-	-	-	-	-
Stage 1	971	-	-	-	-	-
Stage 2	884	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.5	5.4		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1604	-	1066	-	-	
HCM Lane V/C Ratio	0.038	-	0.033	-	-	
HCM Control Delay (s)	7.3	-	8.5	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

Intersection												
Int Delay, s/veh	5.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	60	0	77	0	0	0	46	10	0	0	6	36
Future Vol, veh/h	60	0	77	0	0	0	46	10	0	0	6	36
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	205	-	155	205	-	155	205	-	155	205	-	155
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	71	0	91	0	0	0	54	12	0	0	7	42
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	91	0	0	168	143	0	195	234	1
Stage 1	-	-	-	-	-	-	142	142	-	1	1	-
Stage 2	-	-	-	-	-	-	26	1	-	194	233	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1504	-	-	796	748	-	764	666	1084
Stage 1	-	-	-	-	-	-	861	779	-	1022	895	-
Stage 2	-	-	-	-	-	-	992	895	-	808	712	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1504	-	-	733	715	-	-	637	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	733	715	-	-	637	-
Stage 1	-	-	-	-	-	-	823	745	-	977	895	-
Stage 2	-	-	-	-	-	-	946	895	-	760	681	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	3.2			0			10.3			8.8		
HCM LOS							B			A		
Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	733	715	-	1622	-	-	1504	-	-	-	637	1084
HCM Lane V/C Ratio	0.074	0.016	-	0.044	-	-	-	-	-	-	0.011	0.039
HCM Control Delay (s)	10.3	10.1	0	7.3	-	-	0	-	-	0	10.7	8.5
HCM Lane LOS	B	B	A	A	-	-	A	-	-	A	B	A
HCM 95th %tile Q(veh)	0.2	0.1	-	0.1	-	-	0	-	-	-	0	0.1

Intersection

Int Delay, s/veh 3.5

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations						
Traffic Vol, veh/h	26	18	31	30	38	44
Future Vol, veh/h	26	18	31	30	38	44
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	-	205	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	21	36	35	45	52

Major/Minor Minor2 Major1 Major2





Conflicting Flow All	178	71	97	0	-	0
Stage 1	71	-	-	-	-	-
Stage 2	107	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	812	991	1496	-	-	-
Stage 1	952	-	-	-	-	-
Stage 2	917	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	793	991	1496	-	-	-
Mov Cap-2 Maneuver	793	-	-	-	-	-
Stage 1	929	-	-	-	-	-
Stage 2	917	-	-	-	-	-

Approach EB NB SB

HCM Control Delay, s	9.4	3.8	0
HCM LOS	A		

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h)	1496	-	864	-	-
HCM Lane V/C Ratio	0.024	-	0.06	-	-
HCM Control Delay (s)	7.5	-	9.4	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection						
Int Delay, s/veh	2.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	13	23	45	30	27
Future Vol, veh/h	16	13	23	45	30	27
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	-	205	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	19	15	27	53	35	32






Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	158	51	67	0	-	0
Stage 1	51	-	-	-	-	-
Stage 2	107	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	833	1017	1535	-	-	-
Stage 1	971	-	-	-	-	-
Stage 2	917	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	818	1017	1535	-	-	-
Mov Cap-2 Maneuver	799	-	-	-	-	-
Stage 1	954	-	-	-	-	-
Stage 2	917	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.2	2.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1535	-	884	-	-
HCM Lane V/C Ratio	0.018	-	0.039	-	-
HCM Control Delay (s)	7.4	-	9.2	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection




Int Delay, s/veh 7.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	68	0	0	0	0	43
Future Vol, veh/h	68	0	0	0	0	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	205	-	-	-	205	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	80	0	0	0	0	51

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1	0	0 161 1
Stage 1	-	-	- 1 -
Stage 2	-	-	- 160 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1622	-	- 830 1084
Stage 1	-	-	- 1022 -
Stage 2	-	-	- 869 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1622	-	- 789 1084
Mov Cap-2 Maneuver	-	-	- 789 -
Stage 1	-	-	- 972 -
Stage 2	-	-	- 869 -




Approach	EB	WB	SB
HCM Control Delay, s	7.3	0	8.5
HCM LOS			A






Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1622	-	-	-	-	1084
HCM Lane V/C Ratio	0.049	-	-	-	-	0.047
HCM Control Delay (s)	7.3	-	-	-	0	8.5
HCM Lane LOS	A	-	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	-	-	0.1













Intersection						
Int Delay, s/veh	5.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	9	3	5	0	6	18
Future Vol, veh/h	9	3	5	0	6	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	3	5	0	7	20
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	13	0	22	12
Stage 1	-	-	-	-	12	-
Stage 2	-	-	-	-	10	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1606	-	995	1069
Stage 1	-	-	-	-	1011	-
Stage 2	-	-	-	-	1013	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1606	-	992	1069
Mov Cap-2 Maneuver	-	-	-	-	914	-
Stage 1	-	-	-	-	1011	-
Stage 2	-	-	-	-	1010	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		7.2		8.6	
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	1026	-	-	1606	-	
HCM Lane V/C Ratio	0.025	-	-	0.003	-	
HCM Control Delay (s)	8.6	-	-	7.2	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	






HCM 6th TWSC
8: Walleye Dr & Grayling Dr






2040 Background Traffic
AM Peak Hour






Intersection						
Int Delay, s/veh	8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	27	5	0	0	0
Future Vol, veh/h	0	27	5	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	29	5	0	0	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	11	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	10	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1009	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	1013	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1006	1084	1622	-	-	-
Mov Cap-2 Maneuver	922	-	-	-	-	-
Stage 1	1019	-	-	-	-	-
Stage 2	1013	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.4	7.2		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1622	-	1084	-	-	
HCM Lane V/C Ratio	0.003	-	0.027	-	-	
HCM Control Delay (s)	7.2	0	8.4	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	




Intersection						
Int Delay, s/veh	5.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	44	16	5	27	0
Future Vol, veh/h	0	44	16	5	27	0
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	-	105	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	48	17	5	29	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	68	29	29	0	-	0
Stage 1	29	-	-	-	-	-
Stage 2	39	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	937	1046	1584	-	-	-
Stage 1	994	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	927	1046	1584	-	-	-
Mov Cap-2 Maneuver	872	-	-	-	-	-
Stage 1	983	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.6	5.6		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1584	-	1046	-	-	
HCM Lane V/C Ratio	0.011	-	0.046	-	-	
HCM Control Delay (s)	7.3	-	8.6	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection												
Int Delay, s/veh	8.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	0	26	0	1	0	108	3	0	0	9	62
Future Vol, veh/h	18	0	26	0	1	0	108	3	0	0	9	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	205	-	155	205	-	155	205	-	155	205	-	155
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	0	28	0	1	0	117	3	0	0	10	67
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	28	0	0	80	41	0	57	69	1
Stage 1	-	-	-	-	-	-	40	40	-	1	1	-
Stage 2	-	-	-	-	-	-	40	1	-	56	68	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1585	-	-	908	851	-	940	822	1084
Stage 1	-	-	-	-	-	-	975	862	-	1022	895	-
Stage 2	-	-	-	-	-	-	975	895	-	956	838	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1622	-	-	1585	-	-	835	841	-	-	812	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	835	841	-	-	812	-
Stage 1	-	-	-	-	-	-	963	852	-	1010	895	-
Stage 2	-	-	-	-	-	-	904	895	-	941	828	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	3			0			10			8.6		
HCM LOS							B			A		
Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	835	841	-	1622	-	-	1585	-	-	-	812	1084
HCM Lane V/C Ratio	0.141	0.004	-	0.012	-	-	-	-	-	-	0.012	0.062
HCM Control Delay (s)	10	9.3	0	7.2	-	-	0	-	-	0	9.5	8.5
HCM Lane LOS	B	A	A	A	-	-	A	-	-	A	A	A
HCM 95th %tile Q(veh)	0.5	0	-	0	-	-	0	-	-	-	0	0.2

Intersection						
Int Delay, s/veh	3.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	27	10	70	22	13
Future Vol, veh/h	40	27	10	70	22	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	205	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	29	11	76	24	14
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	129	31	38	0	-	0
Stage 1	31	-	-	-	-	-
Stage 2	98	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	865	1043	1572	-	-	-
Stage 1	992	-	-	-	-	-
Stage 2	926	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	859	1043	1572	-	-	-
Mov Cap-2 Maneuver	824	-	-	-	-	-
Stage 1	985	-	-	-	-	-
Stage 2	926	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.4	0.9		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1572	-	900	-	-	
HCM Lane V/C Ratio	0.007	-	0.081	-	-	
HCM Control Delay (s)	7.3	-	9.4	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.3	-	-	

Intersection						
Int Delay, s/veh	3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	26	19	8	55	42	6
Future Vol, veh/h	26	19	8	55	42	6
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	-	205	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	21	9	60	46	7
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	128	50	53	0	-	0
Stage 1	50	-	-	-	-	-
Stage 2	78	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	866	1018	1553	-	-	-
Stage 1	972	-	-	-	-	-
Stage 2	945	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	861	1018	1553	-	-	-
Mov Cap-2 Maneuver	829	-	-	-	-	-
Stage 1	966	-	-	-	-	-
Stage 2	945	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.2	0.9		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1553	-	900	-	-	
HCM Lane V/C Ratio	0.006	-	0.054	-	-	
HCM Control Delay (s)	7.3	-	9.2	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.2	-	-	

Intersection						
Int Delay, s/veh	5.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	44	7	18	18	5	56
Future Vol, veh/h	44	7	18	18	5	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	205	-	-	-	205	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	8	20	20	5	61
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	40	0	-	0	134	30
Stage 1	-	-	-	-	30	-
Stage 2	-	-	-	-	104	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1570	-	-	-	860	1044
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	920	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1570	-	-	-	833	1044
Mov Cap-2 Maneuver	-	-	-	-	808	-
Stage 1	-	-	-	-	962	-
Stage 2	-	-	-	-	920	-
Approach	EB	WB		SB		
HCM Control Delay, s	6.4	0		8.8		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1570	-	-	-	808	1044
HCM Lane V/C Ratio	0.03	-	-	-	0.007	0.058
HCM Control Delay (s)	7.4	-	-	-	9.5	8.7
HCM Lane LOS	A	-	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0	0.2




Intersection						
Int Delay, s/veh	6.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1	7	18	0	4	11
Future Vol, veh/h	1	7	18	0	4	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	8	20	0	4	12
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	9	0	45	5
Stage 1	-	-	-	-	5	-
Stage 2	-	-	-	-	40	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1611	-	965	1078
Stage 1	-	-	-	-	1018	-
Stage 2	-	-	-	-	982	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1611	-	953	1078
Mov Cap-2 Maneuver	-	-	-	-	882	-
Stage 1	-	-	-	-	1018	-
Stage 2	-	-	-	-	970	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		7.3		8.6	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	1018	-	-	1611	-	
HCM Lane V/C Ratio	0.016	-	-	0.012	-	
HCM Control Delay (s)	8.6	-	-	7.3	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0	-	-	0	-	

HCM 6th TWSC
8: Walleye Dr & Grayling Dr

2040 Background Traffic
PM Peak Hour

Intersection






Int Delay, s/veh 7.4













Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	12	18	0	0	0
Future Vol, veh/h	0	12	18	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	13	20	0	0	0





Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	41	1	1
Stage 1	1	-	-
Stage 2	40	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	970	1084	1622
Stage 1	1022	-	-
Stage 2	982	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	958	1084	1622
Mov Cap-2 Maneuver	889	-	-
Stage 1	1010	-	-
Stage 2	982	-	-






Approach	EB	NB	SB
HCM Control Delay, s	8.4	7.2	0
HCM LOS	A		






Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	1084	-	-
HCM Lane V/C Ratio	0.012	-	0.012	-	-
HCM Control Delay (s)	7.2	0	8.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	5.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	30	52	18	12	0
Future Vol, veh/h	0	30	52	18	12	0
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	-	105	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	33	57	20	13	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	147	13	13	0	-	0
Stage 1	13	-	-	-	-	-
Stage 2	134	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	845	1067	1606	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	892	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	815	1067	1606	-	-	-
Mov Cap-2 Maneuver	791	-	-	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	892	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.5	5.4		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1606	-	1067	-	-	
HCM Lane V/C Ratio	0.035	-	0.031	-	-	
HCM Control Delay (s)	7.3	-	8.5	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

Intersection												
Int Delay, s/veh	5.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	60	0	95	0	0	0	59	10	0	0	6	36
Future Vol, veh/h	60	0	95	0	0	0	59	10	0	0	6	36
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	205	-	155	205	-	155	205	-	155	205	-	155
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	65	0	103	0	0	0	64	11	0	0	7	39
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	103	0	0	154	131	0	188	234	1
Stage 1	-	-	-	-	-	-	130	130	-	1	1	-
Stage 2	-	-	-	-	-	-	24	1	-	187	233	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1489	-	-	813	760	-	772	666	1084
Stage 1	-	-	-	-	-	-	874	789	-	1022	895	-
Stage 2	-	-	-	-	-	-	994	895	-	815	712	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1489	-	-	754	730	-	-	639	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	754	730	-	-	639	-
Stage 1	-	-	-	-	-	-	839	757	-	981	895	-
Stage 2	-	-	-	-	-	-	951	895	-	771	684	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.8			0			10.2			8.7		
HCM LOS							B			A		
Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	754	730	-	1622	-	-	1489	-	-	-	639	1084
HCM Lane V/C Ratio	0.085	0.015	-	0.04	-	-	-	-	-	-	0.01	0.036
HCM Control Delay (s)	10.2	10	0	7.3	-	-	0	-	-	0	10.7	8.4
HCM Lane LOS	B	B	A	A	-	-	A	-	-	A	B	A
HCM 95th %tile Q(veh)	0.3	0	-	0.1	-	-	0	-	-	-	0	0.1





Intersection						
Int Delay, s/veh	3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	26	18	31	43	57	44
Future Vol, veh/h	26	18	31	43	57	44
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	-	205	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	20	34	47	62	48
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	201	86	110	0	-	0
Stage 1	86	-	-	-	-	-
Stage 2	115	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	788	973	1480	-	-	-
Stage 1	937	-	-	-	-	-
Stage 2	910	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	770	973	1480	-	-	-
Mov Cap-2 Maneuver	768	-	-	-	-	-
Stage 1	915	-	-	-	-	-
Stage 2	910	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.5	3.1		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1480	-	840	-	-	
HCM Lane V/C Ratio	0.023	-	0.057	-	-	
HCM Control Delay (s)	7.5	-	9.5	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-	

Intersection						
Int Delay, s/veh	2.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	13	23	58	48	27
Future Vol, veh/h	16	13	23	58	48	27
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	-	205	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	14	25	63	52	29
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	180	67	81	0	-	0
Stage 1	67	-	-	-	-	-
Stage 2	113	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	810	997	1517	-	-	-
Stage 1	956	-	-	-	-	-
Stage 2	912	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	797	997	1517	-	-	-
Mov Cap-2 Maneuver	786	-	-	-	-	-
Stage 1	941	-	-	-	-	-
Stage 2	912	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.3	2.1		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1517	-	868	-	-	
HCM Lane V/C Ratio	0.016	-	0.036	-	-	
HCM Control Delay (s)	7.4	-	9.3	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

Intersection						
Int Delay, s/veh	6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	70	23	13	11	18	43
Future Vol, veh/h	70	23	13	11	18	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	205	-	-	-	205	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	76	25	14	12	20	47
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	26	0	-	0	197	20
Stage 1	-	-	-	-	20	-
Stage 2	-	-	-	-	177	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1588	-	-	-	792	1058
Stage 1	-	-	-	-	1003	-
Stage 2	-	-	-	-	854	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1588	-	-	-	754	1058
Mov Cap-2 Maneuver	-	-	-	-	749	-
Stage 1	-	-	-	-	955	-
Stage 2	-	-	-	-	854	-
Approach	EB	WB		SB		
HCM Control Delay, s	5.6	0		9		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1588	-	-	-	749	1058
HCM Lane V/C Ratio	0.048	-	-	-	0.026	0.044
HCM Control Delay (s)	7.4	-	-	-	9.9	8.6
HCM Lane LOS	A	-	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0.1	0.1

HCM 6th TWSC
7: Scrub Jay/Regan Ridge Dr & Grayling Dr

Short-Term Total Traffic
AM Peak Hour




Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	14	3	5	5	2	6	0	18	12	0	5
Future Vol, veh/h	4	14	3	5	5	2	6	0	18	12	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	15	3	5	5	2	7	0	20	13	0	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	7	0	0	18	0	0	44	42	17	51	42	6
Stage 1	-	-	-	-	-	-	25	25	-	16	16	-
Stage 2	-	-	-	-	-	-	19	17	-	35	26	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1614	-	-	1599	-	-	958	850	1062	948	850	1077
Stage 1	-	-	-	-	-	-	993	874	-	1004	882	-
Stage 2	-	-	-	-	-	-	1000	881	-	981	874	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1614	-	-	1599	-	-	948	845	1062	926	845	1077
Mov Cap-2 Maneuver	-	-	-	-	-	-	948	845	-	926	845	-
Stage 1	-	-	-	-	-	-	990	871	-	1001	879	-
Stage 2	-	-	-	-	-	-	992	878	-	960	871	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.4			3			8.6			8.8		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	1031	1614	-	-	1599	-	-	966				
HCM Lane V/C Ratio	0.025	0.003	-	-	0.003	-	-	0.019				
HCM Control Delay (s)	8.6	7.2	0	-	7.3	0	-	8.8				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

HCM 6th TWSC
8: Walleye Dr & Grayling Dr

Short-Term Total Traffic
AM Peak Hour

Intersection

Int Delay, s/veh 2.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	39	7	36	119	5
Future Vol, veh/h	5	39	7	36	119	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	42	8	39	129	5

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	187	132	134
Stage 1	132	-	-
Stage 2	55	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	802	917	1451
Stage 1	894	-	-
Stage 2	968	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	797	917	1451
Mov Cap-2 Maneuver	782	-	-
Stage 1	889	-	-
Stage 2	968	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.2	1.2	0
HCM LOS	A		













Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1451	-	899	-	-
HCM Lane V/C Ratio	0.005	-	0.053	-	-
HCM Control Delay (s)	7.5	0	9.2	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕	↕	↕	↕	
Traffic Vol, veh/h	0	0	44	64	0	0	16	43	21	0	158	0
Future Vol, veh/h	0	0	44	64	0	0	16	43	21	0	158	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	105	-	155	105	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	48	70	0	0	17	47	23	0	172	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	265	276	172	277	253	47	172	0	0	70	0	0
Stage 1	172	172	-	81	81	-	-	-	-	-	-	-
Stage 2	93	104	-	196	172	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	688	632	872	675	650	1022	1405	-	-	1531	-	-
Stage 1	830	756	-	927	828	-	-	-	-	-	-	-
Stage 2	914	809	-	806	756	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	682	624	872	632	642	1022	1405	-	-	1531	-	-
Mov Cap-2 Maneuver	682	624	-	632	642	-	-	-	-	-	-	-
Stage 1	820	756	-	916	818	-	-	-	-	-	-	-
Stage 2	903	799	-	762	756	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.4	11.4	1.5	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1405	-	-	872	632	1531	-
HCM Lane V/C Ratio	0.012	-	-	0.055	0.11	-	-
HCM Control Delay (s)	7.6	-	-	9.4	11.4	0	-
HCM Lane LOS	A	-	-	A	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.4	0	-

Intersection												
Int Delay, s/veh	13.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	72	34	55	12	101	0	190	7	4	0	23	243
Future Vol, veh/h	72	34	55	12	101	0	190	7	4	0	23	243
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	205	-	155	205	-	155	205	-	155	205	-	155
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	78	37	60	13	110	0	207	8	4	0	25	264
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	110	0	0	97	0	0	474	329	37	365	389	110
Stage 1	-	-	-	-	-	-	193	193	-	136	136	-
Stage 2	-	-	-	-	-	-	281	136	-	229	253	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1480	-	-	1496	-	-	501	590	1035	591	546	943
Stage 1	-	-	-	-	-	-	809	741	-	867	784	-
Stage 2	-	-	-	-	-	-	726	784	-	774	698	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1480	-	-	1496	-	-	331	553	1035	556	512	943
Mov Cap-2 Maneuver	-	-	-	-	-	-	331	553	-	556	512	-
Stage 1	-	-	-	-	-	-	766	702	-	821	777	-
Stage 2	-	-	-	-	-	-	501	777	-	722	661	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	3.4			0.8			31.1			10.5		
HCM LOS							D			B		
Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	331	553	1035	1480	-	-	1496	-	-	-	512	943
HCM Lane V/C Ratio	0.624	0.014	0.004	0.053	-	-	0.009	-	-	-	0.049	0.28
HCM Control Delay (s)	32.3	11.6	8.5	7.6	-	-	7.4	-	-	0	12.4	10.3
HCM Lane LOS	D	B	A	A	-	-	A	-	-	A	B	B
HCM 95th %tile Q(veh)	4	0	0	0.2	-	-	0	-	-	-	0.2	1.2

HCM 6th AWSC Short-Term Total Traffic
 10: Walleye Dr & Fontaine Blvd AM Peak Hour

Intersection
 Intersection Delay, s/veh 11.4
 Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Traffic Vol, veh/h	72	34	55	12	101	1	190	7	4	1	23	243
Future Vol, veh/h	72	34	55	12	101	1	190	7	4	1	23	243
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	78	37	60	13	110	1	207	8	4	1	25	264
Number of Lanes	1	1	1	1	1	1	1	1	1	1	1	1

Approach	EB		WB		NB		SB
Opposing Approach	WB		EB		SB		NB
Opposing Lanes	3		3		3		3
Conflicting Approach Left		SB		NB		EB	WB
Conflicting Lanes Left	3		3		3		3
Conflicting Approach Right		NB		SB		WB	EB
Conflicting Lanes Right		3		3		3	3
HCM Control Delay	9.9		10.7		13		11.3
HCM LOS	A		B		B		B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	190	7	4	72	34	55	12	101	1	1	23	243
LT Vol	190	0	0	72	0	0	12	0	0	1	0	0
Through Vol	0	7	0	0	34	0	0	101	0	0	23	0













RT Vol	0	0	4	0	0	55	0	0	1	0	0	243
Lane Flow Rate	207	8	4	78	37	60	13	110	1	1	25	264
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.379	0.013	0.007	0.149	0.065	0.094	0.025	0.197	0.002	0.002	0.042	0.393
Departure Headway (Hd)	6.608	6.108	5.408	6.863	6.363	5.663	6.965	6.465	5.765	6.561	6.061	5.361
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	545	586	661	523	562	632	514	554	620	546	591	671
Service Time	4.343	3.843	3.143	4.605	4.105	3.405	4.709	4.209	3.509	4.296	3.796	3.096
HCM Lane V/C Ratio	0.38	0.014	0.006	0.149	0.066	0.095	0.025	0.199	0.002	0.002	0.042	0.393
HCM Control Delay	13.3	8.9	8.2	10.8	9.5	9	9.9	10.8	8.5	9.3	9.1	11.5
HCM Lane LOS	B	A	A	B	A	A	A	B	A	A	A	B
HCM 95th-tile Q	1.8	0	0	0.5	0.2	0.3	0.1	0.7	0	0	0.1	1.9

Short-Term Total Traffic
AM Peak Hour Page 0

Synchro 10 Report

HCM 6th TWSC Stop Signs on E & W Legs
10: Walleye Dr & Fontaine Blvd

Short-Term Total Traffic
AM Peak Hour

Intersection												
Int Delay, s/veh	9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	72	34	55	12	101	0	190	7	4	0	23	243
Future Vol, veh/h	72	34	55	12	101	0	190	7	4	0	23	243
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	205	-	155	205	-	155	205	-	155	205	-	155
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	78	37	60	13	110	0	207	8	4	0	25	264
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	504	451	25	628	711	8	289	0	0	12	0	0
Stage 1	25	25	-	422	422	-	-	-	-	-	-	-
Stage 2	479	426	-	206	289	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	478	504	1051	395	358	1074	1273	-	-	1607	-	-
Stage 1	993	874	-	609	588	-	-	-	-	-	-	-
Stage 2	568	586	-	796	673	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	302	422	1051	305	300	1074	1273	-	-	1607	-	-
Mov Cap-2 Maneuver	302	422	-	305	300	-	-	-	-	-	-	-
Stage 1	831	874	-	510	492	-	-	-	-	-	-	-
Stage 2	370	490	-	719	673	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	15.3		23.1		7.9		0					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1273	-	-	302	422	1051	305	300	-	1607	-	-
HCM Lane V/C Ratio	0.162	-	-	0.259	0.088	0.057	0.043	0.366	-	-	-	-
HCM Control Delay (s)	8.4	-	-	21	14.3	8.6	17.3	23.8	0	0	-	-
HCM Lane LOS	A	-	-	C	B	A	C	C	A	A	-	-
HCM 95th %tile Q(veh)	0.6	-	-	1	0.3	0.2	0.1	1.6	-	0	-	-






Intersection												
Int Delay, s/veh	5.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↵	↵		↵	↵	
Traffic Vol, veh/h	40	0	27	30	0	69	10	91	9	22	55	13
Future Vol, veh/h	40	0	27	30	0	69	10	91	9	22	55	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	205	-	-	205	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	0	29	33	0	75	11	99	10	24	60	14
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	279	246	67	256	248	104	74	0	0	109	0	0
Stage 1	115	115	-	126	126	-	-	-	-	-	-	-
Stage 2	164	131	-	130	122	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	673	656	997	697	655	951	1526	-	-	1481	-	-
Stage 1	890	800	-	878	792	-	-	-	-	-	-	-
Stage 2	838	788	-	874	795	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	609	641	997	664	640	951	1526	-	-	1481	-	-
Mov Cap-2 Maneuver	609	641	-	664	640	-	-	-	-	-	-	-
Stage 1	884	787	-	872	786	-	-	-	-	-	-	-
Stage 2	766	782	-	835	782	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.5		9.9		0.7		1.8					
HCM LOS	B		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1526	-	-	722	841	1481	-	-				
HCM Lane V/C Ratio	0.007	-	-	0.101	0.128	0.016	-	-				
HCM Control Delay (s)	7.4	-	-	10.5	9.9	7.5	-	-				
HCM Lane LOS	A	-	-	B	A	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.3	0.4	0	-	-				

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	26	0	19	36	0	46	8	39	16	13	93	6
Future Vol, veh/h	26	0	19	36	0	46	8	39	16	13	93	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	205	-	-	205	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	0	21	39	0	50	9	42	17	14	101	7

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	227	210	105	212	205	51	108	0	0	59	0	0
Stage 1	133	133	-	69	69	-	-	-	-	-	-	-
Stage 2	94	77	-	143	136	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	728	687	949	745	691	1017	1483	-	-	1545	-	-
Stage 1	870	786	-	941	837	-	-	-	-	-	-	-
Stage 2	913	831	-	860	784	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	684	677	949	720	681	1017	1483	-	-	1545	-	-
Mov Cap-2 Maneuver	684	677	-	720	681	-	-	-	-	-	-	-
Stage 1	865	779	-	935	832	-	-	-	-	-	-	-
Stage 2	863	826	-	834	777	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10	9.7	0.9	0.9
HCM LOS	B	A		





Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1483	-	-	775 861	1545	-	-
HCM Lane V/C Ratio	0.006	-	-	0.063 0.104	0.009	-	-
HCM Control Delay (s)	7.4	-	-	10 9.7	7.4	-	-
HCM Lane LOS	A	-	-	B A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2 0.3	0	-	-

Intersection						
Int Delay, s/veh	6.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	60	17	51	2	0	147
Future Vol, veh/h	60	17	51	2	0	147
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	205	-	-	-	205	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	65	18	55	2	0	160
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	57	0	-	0	204	56
Stage 1	-	-	-	-	56	-
Stage 2	-	-	-	-	148	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1547	-	-	-	784	1011
Stage 1	-	-	-	-	967	-
Stage 2	-	-	-	-	880	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1547	-	-	-	751	1011
Mov Cap-2 Maneuver	-	-	-	-	753	-
Stage 1	-	-	-	-	926	-
Stage 2	-	-	-	-	880	-
Approach	EB	WB		SB		
HCM Control Delay, s	5.8	0		9.2		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1547	-	-	-	-	1011
HCM Lane V/C Ratio	0.042	-	-	-	-	0.158
HCM Control Delay (s)	7.4	-	-	-	0	9.2
HCM Lane LOS	A	-	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-	0.6

Intersection

Int Delay, s/veh 5

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations						
Traffic Vol, veh/h	11	7	21	0	0	33
Future Vol, veh/h	11	7	21	0	0	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	205	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	8	23	0	0	36

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	23	0	-	0	55	23
Stage 1	-	-	-	-	23	-
Stage 2	-	-	-	-	32	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1592	-	-	-	953	1054
Stage 1	-	-	-	-	1000	-
Stage 2	-	-	-	-	991	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1592	-	-	-	945	1054
Mov Cap-2 Maneuver	-	-	-	-	884	-
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	991	-

Approach EB WB SB








HCM Control Delay, s	4.4	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h)	1592	-	-	-	1054
HCM Lane V/C Ratio	0.008	-	-	-	0.034
HCM Control Delay (s)	7.3	-	-	-	8.5
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

HCM 6th TWSC
19: Buckner Way & Fontaine Blvd

Short-Term Total Traffic
AM Peak Hour

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	0	21	0	0	0	62	0	0	0	0	51
Future Vol, veh/h	17	0	21	0	0	0	62	0	0	0	0	51
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	205	-	155	205	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	0	23	0	0	0	67	0	0	0	0	55





Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	23	0	0	65	37	0	49	60	1
Stage 1	-	-	-	-	-	-	36	36	-	1	1	-
Stage 2	-	-	-	-	-	-	29	1	-	48	59	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1592	-	-	929	855	-	951	831	1084
Stage 1	-	-	-	-	-	-	980	865	-	1022	895	-
Stage 2	-	-	-	-	-	-	988	895	-	965	846	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1592	-	-	874	846	-	-	822	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	874	846	-	-	822	-
Stage 1	-	-	-	-	-	-	969	855	-	1011	895	-
Stage 2	-	-	-	-	-	-	937	895	-	954	837	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.2	0		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1592	-	-	-
HCM Lane V/C Ratio	-	0.011	-	-	-	-	-	-
HCM Control Delay (s)	-	7.2	-	-	0	-	-	-
HCM Lane LOS	-	A	-	-	A	-	-	-
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-




HCM 6th TWSC
7: Scrub Jay/Regan Ridge Dr & Grayling Dr

Short Term Total Traffic
PM Peak Hour

Intersection												
Int Delay, s/veh	5.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	8	7	18	3	10	4	0	11	6	0	4
Future Vol, veh/h	8	8	7	18	3	10	4	0	11	6	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	9	8	20	3	11	4	0	12	7	0	4
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	14	0	0	17	0	0	82	85	13	86	84	9
Stage 1	-	-	-	-	-	-	31	31	-	49	49	-
Stage 2	-	-	-	-	-	-	51	54	-	37	35	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1604	-	-	1600	-	-	905	805	1067	900	806	1073
Stage 1	-	-	-	-	-	-	986	869	-	964	854	-
Stage 2	-	-	-	-	-	-	962	850	-	978	866	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1604	-	-	1600	-	-	889	790	1067	878	791	1073
Mov Cap-2 Maneuver	-	-	-	-	-	-	889	790	-	878	791	-
Stage 1	-	-	-	-	-	-	980	864	-	958	843	-
Stage 2	-	-	-	-	-	-	946	839	-	961	861	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.5			4.2			8.6			8.8		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	1013	1604	-	-	1600	-	-	947				
HCM Lane V/C Ratio	0.016	0.005	-	-	0.012	-	-	0.011				
HCM Control Delay (s)	8.6	7.3	0	-	7.3	0	-	8.8				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0				

HCM 6th TWSC
8: Walleye Dr & Grayling Dr

Short Term Total Traffic
PM Peak Hour













Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	18	28	134	81	3
Future Vol, veh/h	7	18	28	134	81	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	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	20	30	146	88	3
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	296	90	91	0	-	0
Stage 1	90	-	-	-	-	-
Stage 2	206	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	695	968	1504	-	-	-
Stage 1	934	-	-	-	-	-
Stage 2	829	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	680	968	1504	-	-	-
Mov Cap-2 Maneuver	704	-	-	-	-	-
Stage 1	913	-	-	-	-	-
Stage 2	829	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.2	1.3		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1504	-	876	-	-	
HCM Lane V/C Ratio	0.02	-	0.031	-	-	
HCM Control Delay (s)	7.4	0	9.2	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↕	
Traffic Vol, veh/h	0	0	30	42	0	1	52	161	72	1	97	0
Future Vol, veh/h	0	0	30	42	0	1	52	161	72	1	97	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	105	-	155	105	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	33	46	0	1	57	175	78	1	105	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	436	474	105	413	396	175	105	0	0	253	0	0
Stage 1	107	107	-	289	289	-	-	-	-	-	-	-
Stage 2	329	367	-	124	107	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	531	489	949	549	541	868	1486	-	-	1312	-	-
Stage 1	898	807	-	719	673	-	-	-	-	-	-	-
Stage 2	684	622	-	880	807	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	515	470	949	514	520	868	1486	-	-	1312	-	-
Mov Cap-2 Maneuver	515	470	-	514	520	-	-	-	-	-	-	-
Stage 1	864	806	-	692	647	-	-	-	-	-	-	-
Stage 2	657	598	-	849	806	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	8.9		12.6		1.4		0.1	
HCM LOS	A		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1486	-	-	949	519	1312	-
HCM Lane V/C Ratio	0.038	-	-	0.034	0.09	0.001	-
HCM Control Delay (s)	7.5	-	-	8.9	12.6	7.7	-
HCM Lane LOS	A	-	-	A	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.3	0	-

Intersection												
Int Delay, s/veh	12.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	258	114	203	8	66	0	120	26	13	0	16	154
Future Vol, veh/h	258	114	203	8	66	0	120	26	13	0	16	154
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	205	-	155	205	-	155	205	-	155	205	-	155
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	280	124	221	9	72	0	130	28	14	0	17	167
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	72	0	0	345	0	0	866	774	124	906	995	72
Stage 1	-	-	-	-	-	-	684	684	-	90	90	-
Stage 2	-	-	-	-	-	-	182	90	-	816	905	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1528	-	-	1214	-	-	274	329	927	257	245	990
Stage 1	-	-	-	-	-	-	439	449	-	917	820	-
Stage 2	-	-	-	-	-	-	820	820	-	371	355	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1528	-	-	1214	-	-	182	267	927	199	199	990
Mov Cap-2 Maneuver	-	-	-	-	-	-	182	267	-	199	199	-
Stage 1	-	-	-	-	-	-	359	367	-	749	814	-
Stage 2	-	-	-	-	-	-	662	814	-	275	290	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	3.5			0.9			51.7			10.8		
HCM LOS							F			B		
Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	182	267	927	1528	-	-	1214	-	-	-	199	990
HCM Lane V/C Ratio	0.717	0.106	0.015	0.184	-	-	0.007	-	-	-	0.087	0.169
HCM Control Delay (s)	63.2	20.1	8.9	7.9	-	-	8	-	-	0	24.8	9.4
HCM Lane LOS	F	C	A	A	-	-	A	-	-	A	C	A
HCM 95th %tile Q(veh)	4.5	0.4	0	0.7	-	-	0	-	-	-	0.3	0.6

HCM 6th AWSC Short Term Total Traffic
 10: Walleye Dr & Fontaine Blvd PM Peak Hour

Intersection
 Intersection Delay, s/veh 12.2
 Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Traffic Vol, veh/h	258	114	203	8	66	1	120	26	13	1	16	154
Future Vol, veh/h	258	114	203	8	66	1	120	26	13	1	16	154
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	280	124	221	9	72	1	130	28	14	1	17	167
Number of Lanes	1	1	1	1	1	1	1	1	1	1	1	1

Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	3			3			3			3		
Conflicting Approach Left		SB			NB			EB			WB	
Conflicting Lanes Left	3			3			3			3		
Conflicting Approach Right		NB			SB			WB			EB	
Conflicting Lanes Right		3			3			3			3	
HCM Control Delay	12.7			10.8			12			11.3		
HCM LOS	B			B			B			B		

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	120	26	13	258	114	203	8	66	1	1	16	154
LT Vol	120	0	0	258	0	0	8	0	0	1	0	0
Through Vol	0	26	0	0	114	0	0	66	0	0	16	0













RT Vol	0	0	13	0	0	203	0	0	1	0	0	154
Lane Flow Rate	130	28	14	280	124	221	9	72	1	1	17	167
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.267	0.054	0.024	0.503	0.205	0.323	0.018	0.139	0.002	0.002	0.033	0.287
Departure Headway (Hd)	7.359	6.859	6.159	6.463	5.963	5.263	7.483	6.983	6.283	7.383	6.883	6.183
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	488	521	579	558	601	682	477	512	567	484	519	579
Service Time	5.114	4.614	3.914	4.206	3.706	3.006	5.247	4.747	4.047	5.139	4.639	3.939
HCM Lane V/C Ratio	0.266	0.054	0.024	0.502	0.206	0.324	0.019	0.141	0.002	0.002	0.033	0.288
HCM Control Delay	12.8	10	9.1	15.6	10.2	10.5	10.4	10.9	9.1	10.2	9.9	11.4
HCM Lane LOS	B	A	A	C	B	B	B	B	A	B	A	B
HCM 95th-tile Q	1.1	0.2	0.1	2.8	0.8	1.4	0.1	0.5	0	0	0.1	1.2

Short Term Total Traffic
PM Peak Hour Page 0

Synchro 10 Report

HCM 6th TWSC Stop Signs on E & W Legs
10: Collector A & Fontaine Blvd

Short Term Total Traffic
PM Peak Hour

Intersection												
Int Delay, s/veh	11.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	258	114	203	8	66	0	120	26	13	0	16	154
Future Vol, veh/h	258	114	203	8	66	0	120	26	13	0	16	154
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	205	-	155	205	-	155	205	-	155	205	-	155
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	280	124	221	9	72	0	130	28	14	0	17	167

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	348	319	17	561	472	28	184	0	0	42	0	0
Stage 1	17	17	-	288	288	-	-	-	-	-	-	-
Stage 2	331	302	-	273	184	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	607	598	1062	438	490	1047	1391	-	-	1567	-	-
Stage 1	1002	881	-	720	674	-	-	-	-	-	-	-
Stage 2	682	664	-	733	747	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	495	542	1062	266	444	1047	1391	-	-	1567	-	-
Mov Cap-2 Maneuver	495	542	-	266	444	-	-	-	-	-	-	-
Stage 1	909	881	-	653	611	-	-	-	-	-	-	-
Stage 2	546	602	-	499	747	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.6	15.2	5.9	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1391	-	-	495	542	1062	266	444	-	1567	-	-
HCM Lane V/C Ratio	0.094	-	-	0.567	0.229	0.208	0.033	0.162	-	-	-	-
HCM Control Delay (s)	7.9	-	-	21.4	13.6	9.3	19	14.7	0	0	-	-
HCM Lane LOS	A	-	-	C	B	A	C	B	A	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	3.5	0.9	0.8	0.1	0.6	-	0	-	-

Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	26	0	18	20	0	43	31	90	34	73	109	44
Future Vol, veh/h	26	0	18	20	0	43	31	90	34	73	109	44
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	205	-	-	205	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	0	20	22	0	47	34	98	37	79	118	48

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	508	503	142	495	509	117	166	0	0	135	0	0
Stage 1	300	300	-	185	185	-	-	-	-	-	-	-
Stage 2	208	203	-	310	324	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	475	471	906	485	467	935	1412	-	-	1449	-	-
Stage 1	709	666	-	817	747	-	-	-	-	-	-	-
Stage 2	794	733	-	700	650	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	425	434	906	447	431	935	1412	-	-	1449	-	-
Mov Cap-2 Maneuver	425	434	-	447	431	-	-	-	-	-	-	-
Stage 1	692	629	-	797	729	-	-	-	-	-	-	-
Stage 2	736	715	-	648	614	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.3		10.8		1.5		2.5	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1412	-	-	543 694	1449	-	-
HCM Lane V/C Ratio	0.024	-	-	0.088 0.099	0.055	-	-
HCM Control Delay (s)	7.6	-	-	12.3 10.8	7.6	-	-
HCM Lane LOS	A	-	-	B B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3 0.3	0.2	-	-

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	16	0	13	24	0	31	23	109	43	53	68	27
Future Vol, veh/h	16	0	13	24	0	31	23	109	43	53	68	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	205	-	-	205	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	0	14	26	0	34	25	118	47	58	74	29

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	414	420	89	404	411	142	103	0	0	165	0	0
Stage 1	205	205	-	192	192	-	-	-	-	-	-	-
Stage 2	209	215	-	212	219	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	549	525	969	557	531	906	1489	-	-	1413	-	-
Stage 1	797	732	-	810	742	-	-	-	-	-	-	-
Stage 2	793	725	-	790	722	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	506	495	969	525	501	906	1489	-	-	1413	-	-
Mov Cap-2 Maneuver	506	495	-	525	501	-	-	-	-	-	-	-
Stage 1	783	702	-	796	729	-	-	-	-	-	-	-
Stage 2	751	713	-	747	692	-	-	-	-	-	-	-






Approach	EB		WB		NB			SB				
HCM Control Delay, s	10.9		10.7		1			2.7				
HCM LOS	B		B									

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1489	-	-	644 688	1413	-	-
HCM Lane V/C Ratio	0.017	-	-	0.049 0.087	0.041	-	-
HCM Control Delay (s)	7.5	-	-	10.9 10.7	7.7	-	-
HCM Lane LOS	A	-	-	B B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2 0.3	0.1	-	-

Intersection

Int Delay, s/veh 6.1

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations						
Traffic Vol, veh/h	174	60	35	0	0	106
Future Vol, veh/h	174	60	35	0	0	106
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	205	-	-	-	205	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	189	65	38	0	0	115

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	38	0	-	0	481	38
Stage 1	-	-	-	-	38	-
Stage 2	-	-	-	-	443	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1572	-	-	-	544	1034
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	647	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1572	-	-	-	479	1034
Mov Cap-2 Maneuver	-	-	-	-	544	-
Stage 1	-	-	-	-	866	-
Stage 2	-	-	-	-	647	-

Approach EB WB SB

HCM Control Delay, s	5.7	0	8.9
HCM LOS			A





Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1 SBLn2

Capacity (veh/h)	1572	-	-	-	-	1034
HCM Lane V/C Ratio	0.12	-	-	-	-	0.111
HCM Control Delay (s)	7.6	-	-	-	0	8.9
HCM Lane LOS	A	-	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	-	-	0.4

Intersection

Int Delay, s/veh 4.8

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations						
Traffic Vol, veh/h	37	23	14	0	0	22
Future Vol, veh/h	37	23	14	0	0	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	205	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	25	15	0	0	24

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	15	0	-	0	120	15
Stage 1	-	-	-	-	15	-
Stage 2	-	-	-	-	105	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1603	-	-	-	876	1065
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	919	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1603	-	-	-	854	1065
Mov Cap-2 Maneuver	-	-	-	-	819	-
Stage 1	-	-	-	-	983	-
Stage 2	-	-	-	-	919	-

Approach EB WB SB








HCM Control Delay, s	4.5	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h)	1603	-	-	-	1065
HCM Lane V/C Ratio	0.025	-	-	-	0.022
HCM Control Delay (s)	7.3	-	-	-	8.5
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

HCM 6th TWSC
19: Buckner Way & Fontaine Blvd

Short Term Total Traffic
PM Peak Hour

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	58	0	69	0	0	0	41	0	0	0	0	34
Future Vol, veh/h	58	0	69	0	0	0	41	0	0	0	0	34
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	205	-	155	205	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	63	0	75	0	0	0	45	0	0	0	0	37





Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	75	0	0	146	127	0	165	202	1
Stage 1	-	-	-	-	-	-	126	126	-	1	1	-
Stage 2	-	-	-	-	-	-	20	1	-	164	201	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1524	-	-	823	764	-	800	694	1084
Stage 1	-	-	-	-	-	-	878	792	-	1022	895	-
Stage 2	-	-	-	-	-	-	999	895	-	838	735	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1622	-	-	1524	-	-	771	734	-	-	667	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	771	734	-	-	667	-
Stage 1	-	-	-	-	-	-	844	761	-	982	895	-
Stage 2	-	-	-	-	-	-	965	895	-	805	706	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.3	0		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	1524	-	-	-
HCM Lane V/C Ratio	-	0.039	-	-	-	-	-	-
HCM Control Delay (s)	-	7.3	-	-	0	-	-	-
HCM Lane LOS	-	A	-	-	A	-	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	-




HCM 6th TWSC
7: Scrub Jay/Regan Ridge Dr & Grayling Dr








2040 Total Traffic
AM Peak Hour













Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	14	3	5	5	2	6	0	18	12	0	5
Future Vol, veh/h	4	14	3	5	5	2	6	0	18	12	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	15	3	5	5	2	7	0	20	13	0	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	7	0	0	18	0	0	44	42	17	51	42	6
Stage 1	-	-	-	-	-	-	25	25	-	16	16	-
Stage 2	-	-	-	-	-	-	19	17	-	35	26	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1614	-	-	1599	-	-	958	850	1062	948	850	1077
Stage 1	-	-	-	-	-	-	993	874	-	1004	882	-
Stage 2	-	-	-	-	-	-	1000	881	-	981	874	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1614	-	-	1599	-	-	948	845	1062	926	845	1077
Mov Cap-2 Maneuver	-	-	-	-	-	-	948	845	-	926	845	-
Stage 1	-	-	-	-	-	-	990	871	-	1001	879	-
Stage 2	-	-	-	-	-	-	992	878	-	960	871	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.4			3			8.6			8.8		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	1031	1614	-	-	1599	-	-	966				
HCM Lane V/C Ratio	0.025	0.003	-	-	0.003	-	-	0.019				
HCM Control Delay (s)	8.6	7.2	0	-	7.3	0	-	8.8				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

HCM 6th TWSC
8: Walleye Dr & Grayling Dr

2040 Total Traffic
AM Peak Hour

Intersection						
Int Delay, s/veh	2.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	39	7	36	119	5
Future Vol, veh/h	5	39	7	36	119	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	42	8	39	129	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	187	132	134	0	-	0
Stage 1	132	-	-	-	-	-
Stage 2	55	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	802	917	1451	-	-	-
Stage 1	894	-	-	-	-	-
Stage 2	968	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	797	917	1451	-	-	-
Mov Cap-2 Maneuver	782	-	-	-	-	-
Stage 1	889	-	-	-	-	-
Stage 2	968	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.2	1.2		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1451	-	899	-	-	
HCM Lane V/C Ratio	0.005	-	0.053	-	-	
HCM Control Delay (s)	7.5	0	9.2	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.2	-	-	

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	44	64	0	0	16	43	21	0	158	0
Future Vol, veh/h	0	0	44	64	0	0	16	43	21	0	158	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	105	-	155	105	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	48	70	0	0	17	47	23	0	172	0
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	265	276	172	277	253	47	172	0	0	70	0	0
Stage 1	172	172	-	81	81	-	-	-	-	-	-	-
Stage 2	93	104	-	196	172	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	688	632	872	675	650	1022	1405	-	-	1531	-	-
Stage 1	830	756	-	927	828	-	-	-	-	-	-	-
Stage 2	914	809	-	806	756	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	682	624	872	632	642	1022	1405	-	-	1531	-	-
Mov Cap-2 Maneuver	682	624	-	632	642	-	-	-	-	-	-	-
Stage 1	820	756	-	916	818	-	-	-	-	-	-	-
Stage 2	903	799	-	762	756	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	9.4		11.4		1.5		0					
HCM LOS	A		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1405	-	-	872	632	1531	-	-				
HCM Lane V/C Ratio	0.012	-	-	0.055	0.11	-	-	-				
HCM Control Delay (s)	7.6	-	-	9.4	11.4	0	-	-				
HCM Lane LOS	A	-	-	A	B	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.2	0.4	0	-	-				

Intersection												
Int Delay, s/veh	16.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	72	34	60	12	101	1	225	7	4	1	23	243
Future Vol, veh/h	72	34	60	12	101	1	225	7	4	1	23	243
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	205	-	155	205	-	155	205	-	155	205	-	155
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	78	37	65	13	110	1	245	8	4	1	25	264
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	111	0	0	102	0	0	474	330	37	368	394	110
Stage 1	-	-	-	-	-	-	193	193	-	136	136	-
Stage 2	-	-	-	-	-	-	281	137	-	232	258	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1479	-	-	1490	-	-	501	589	1035	588	542	943
Stage 1	-	-	-	-	-	-	809	741	-	867	784	-
Stage 2	-	-	-	-	-	-	726	783	-	771	694	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1479	-	-	1490	-	-	331	552	1035	552	508	943
Mov Cap-2 Maneuver	-	-	-	-	-	-	331	552	-	552	508	-
Stage 1	-	-	-	-	-	-	766	702	-	821	777	-
Stage 2	-	-	-	-	-	-	501	776	-	719	657	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	3.3			0.8			39.8			10.5		
HCM LOS							E			B		
Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	331	552	1035	1479	-	-	1490	-	-	552	508	943
HCM Lane V/C Ratio	0.739	0.014	0.004	0.053	-	-	0.009	-	-	0.002	0.049	0.28
HCM Control Delay (s)	41.2	11.6	8.5	7.6	-	-	7.4	-	-	11.5	12.5	10.3
HCM Lane LOS	E	B	A	A	-	-	A	-	-	B	B	B
HCM 95th %tile Q(veh)	5.6	0	0	0.2	-	-	0	-	-	0	0.2	1.2

HCM 6th AWSC 2040 Total Traffic
 10: Walleye Dr & Fontaine Blvd AM Peak Hour

Intersection
 Intersection Delay, s/veh 12.1
 Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Traffic Vol, veh/h	72	34	60	12	101	1	225	7	4	1	23	243
Future Vol, veh/h	72	34	60	12	101	1	225	7	4	1	23	243
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	78	37	65	13	110	1	245	8	4	1	25	264
Number of Lanes	1	1	1	1	1	1	1	1	1	1	1	1

Approach	EB		WB		NB		SB
Opposing Approach	WB		EB		SB		NB
Opposing Lanes	3		3		3		3
Conflicting Approach Left		SB		NB		EB	WB
Conflicting Lanes Left	3		3		3		3
Conflicting Approach Right		NB		SB		WB	EB
Conflicting Lanes Right		3		3		3	3
HCM Control Delay	10.1		11		14.5		11.7
HCM LOS	B		B		B		B













Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	225	7	4	72	34	60	12	101	1	1	23	243
LT Vol	225	0	0	72	0	0	12	0	0	1	0	0
Through Vol	0	7	0	0	34	0	0	101	0	0	23	0

RT Vol	0	0	4	0	0	60	0	0	1	0	0	243
Lane Flow Rate	245	8	4	78	37	65	13	110	1	1	25	264
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.452	0.013	0.007	0.152	0.067	0.105	0.026	0.202	0.002	0.002	0.043	0.403
Departure Headway (Hd)	6.65	6.15	5.45	7.005	6.505	5.805	7.119	6.619	5.919	6.69	6.19	5.49
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	540	581	655	511	550	616	502	541	603	535	578	655
Service Time	4.395	3.895	3.195	4.758	4.258	3.558	4.874	4.374	3.674	4.435	3.935	3.235
HCM Lane V/C Ratio	0.454	0.014	0.006	0.153	0.067	0.106	0.026	0.203	0.002	0.002	0.043	0.403
HCM Control Delay	14.8	9	8.2	11	9.7	9.2	10.1	11.1	8.7	9.4	9.2	11.9
HCM Lane LOS	B	A	A	B	A	A	B	B	A	A	A	B
HCM 95th-tile Q	2.3	0	0	0.5	0.2	0.4	0.1	0.7	0	0	0.1	1.9

2040 Total Traffic Synchro 10 Report
AM Peak Hour Page 0

HCM 6th TWSC Stop Signs on E & W Legs
10: Walleye Dr & Fontaine Blvd

2040 Total Traffic
AM Peak Hour

Intersection												
Int Delay, s/veh	10.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	72	34	60	12	101	1	225	7	4	1	23	243
Future Vol, veh/h	72	34	60	12	101	1	225	7	4	1	23	243
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	205	-	155	205	-	155	205	-	155	205	-	155
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	78	37	65	13	110	1	245	8	4	1	25	264

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	583	529	25	708	789	8	289	0	0	12	0	0
Stage 1	27	27	-	498	498	-	-	-	-	-	-	-
Stage 2	556	502	-	210	291	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	424	455	1051	350	323	1074	1273	-	-	1607	-	-
Stage 1	990	873	-	554	544	-	-	-	-	-	-	-
Stage 2	515	542	-	792	672	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	245	367	1051	259	261	1074	1273	-	-	1607	-	-
Mov Cap-2 Maneuver	245	367	-	259	261	-	-	-	-	-	-	-
Stage 1	800	872	-	448	440	-	-	-	-	-	-	-
Stage 2	312	438	-	711	671	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.9	27.3	8.1	0
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1273	-	-	245	367	1051	259	261	1074	1607	-	-
HCM Lane V/C Ratio	0.192	-	-	0.319	0.101	0.062	0.05	0.421	0.001	0.001	-	-
HCM Control Delay (s)	8.5	-	-	26.4	15.9	8.7	19.6	28.4	8.4	7.2	-	-
HCM Lane LOS	A	-	-	D	C	A	C	D	A	A	-	-
HCM 95th %tile Q(veh)	0.7	-	-	1.3	0.3	0.2	0.2	2	0	0	-	-

HCM 6th TWSC
11: Walleye Dr & Lake Trout Dr

2040 Total Traffic
AM Peak Hour

Intersection												
Int Delay, s/veh	4.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↖		↗	↖	
Traffic Vol, veh/h	40	0	27	30	0	69	10	127	9	22	60	13
Future Vol, veh/h	40	0	27	30	0	69	10	127	9	22	60	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	205	-	-	205	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	0	29	33	0	75	11	138	10	24	65	14

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	323	290	72	300	292	143	79	0	0	148	0	0
Stage 1	120	120	-	165	165	-	-	-	-	-	-	-
Stage 2	203	170	-	135	127	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	630	620	990	652	619	905	1519	-	-	1434	-	-
Stage 1	884	796	-	837	762	-	-	-	-	-	-	-
Stage 2	799	758	-	868	791	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	567	605	990	621	604	905	1519	-	-	1434	-	-
Mov Cap-2 Maneuver	567	605	-	621	604	-	-	-	-	-	-	-
Stage 1	878	782	-	831	757	-	-	-	-	-	-	-
Stage 2	727	753	-	828	778	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.9		10.2		0.5		1.7	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1519	-	-	685 795	1434	-	-
HCM Lane V/C Ratio	0.007	-	-	0.106 0.135	0.017	-	-
HCM Control Delay (s)	7.4	-	-	10.9 10.2	7.6	-	-
HCM Lane LOS	A	-	-	B B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4 0.5	0.1	-	-

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	26	0	19	36	0	46	8	75	16	13	98	6
Future Vol, veh/h	26	0	19	36	0	46	8	75	16	13	98	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	205	-	-	205	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	0	21	39	0	50	9	82	17	14	107	7

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	273	256	111	258	251	91	114	0	0	99	0	0
Stage 1	139	139	-	109	109	-	-	-	-	-	-	-
Stage 2	134	117	-	149	142	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	679	648	942	695	652	967	1475	-	-	1494	-	-
Stage 1	864	782	-	896	805	-	-	-	-	-	-	-
Stage 2	869	799	-	854	779	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	636	638	942	672	642	967	1475	-	-	1494	-	-
Mov Cap-2 Maneuver	636	638	-	672	642	-	-	-	-	-	-	-
Stage 1	859	775	-	891	800	-	-	-	-	-	-	-
Stage 2	819	794	-	827	772	-	-	-	-	-	-	-






Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.2		10		0.6		0.8	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1475	-	-	737	811	1494	-
HCM Lane V/C Ratio	0.006	-	-	0.066	0.11	0.009	-
HCM Control Delay (s)	7.5	-	-	10.2	10	7.4	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.4	0	-

Intersection

Int Delay, s/veh 5.8

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations						
Traffic Vol, veh/h	77	25	69	21	5	147
Future Vol, veh/h	77	25	69	21	5	147
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	205	-	-	-	205	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	84	27	75	23	5	160

Major/Minor Major1 Major2 Minor2





Conflicting Flow All	98	0	-	0	282	87
Stage 1	-	-	-	-	87	-
Stage 2	-	-	-	-	195	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1495	-	-	-	708	971
Stage 1	-	-	-	-	936	-
Stage 2	-	-	-	-	838	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1495	-	-	-	668	971
Mov Cap-2 Maneuver	-	-	-	-	697	-
Stage 1	-	-	-	-	884	-
Stage 2	-	-	-	-	838	-

Approach EB WB SB

HCM Control Delay, s	5.7	0	9.4
HCM LOS			A








Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1 SBLn2

Capacity (veh/h)	1495	-	-	-	697	971
HCM Lane V/C Ratio	0.056	-	-	-	0.008	0.165
HCM Control Delay (s)	7.6	-	-	-	10.2	9.4
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0	0.6

Intersection						
Int Delay, s/veh	3.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	19	57	0	0	33
Future Vol, veh/h	11	19	57	0	0	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	205	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	21	62	0	0	36
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	62	0	-	0	107	62
Stage 1	-	-	-	-	62	-
Stage 2	-	-	-	-	45	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1541	-	-	-	891	1003
Stage 1	-	-	-	-	961	-
Stage 2	-	-	-	-	977	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1541	-	-	-	884	1003
Mov Cap-2 Maneuver	-	-	-	-	843	-
Stage 1	-	-	-	-	953	-
Stage 2	-	-	-	-	977	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.7	0		8.7		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1541	-	-	-	1003	
HCM Lane V/C Ratio	0.008	-	-	-	0.036	
HCM Control Delay (s)	7.4	-	-	-	8.7	
HCM Lane LOS	A	-	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

HCM 6th TWSC
19: Buckner Way & Fontaine Blvd

2040 Total Traffic
AM Peak Hour

Intersection												
Int Delay, s/veh	7.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	1	21	1	1	0	62	0	0	0	0	51
Future Vol, veh/h	17	1	21	1	1	0	62	0	0	0	0	51
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	205	-	155	205	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	1	23	1	1	0	67	0	0	0	0	55
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	24	0	0	68	40	1	52	63	1
Stage 1	-	-	-	-	-	-	37	37	-	3	3	-
Stage 2	-	-	-	-	-	-	31	3	-	49	60	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1591	-	-	925	852	1084	947	828	1084
Stage 1	-	-	-	-	-	-	978	864	-	1020	893	-
Stage 2	-	-	-	-	-	-	986	893	-	964	845	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1591	-	-	870	842	1084	938	818	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	870	842	-	938	818	-
Stage 1	-	-	-	-	-	-	967	854	-	1009	892	-
Stage 2	-	-	-	-	-	-	935	892	-	953	836	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	3.2			3.6			9.5			8.5		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	870	1622	-	-	1591	-	-	1084				
HCM Lane V/C Ratio	0.077	0.011	-	-	0.001	-	-	0.051				
HCM Control Delay (s)	9.5	7.2	-	-	7.3	-	-	8.5				
HCM Lane LOS	A	A	-	-	A	-	-	A				
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.2				

HCM 6th TWSC
7: Scrub Jay/Regan Ridge Dr & Grayling Dr

2040 Total Traffic
PM Peak Hour




Intersection												
Int Delay, s/veh	5.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	8	7	18	3	10	4	0	11	6	0	4
Future Vol, veh/h	8	8	7	18	3	10	4	0	11	6	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	9	8	20	3	11	4	0	12	7	0	4
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	14	0	0	17	0	0	82	85	13	86	84	9
Stage 1	-	-	-	-	-	-	31	31	-	49	49	-
Stage 2	-	-	-	-	-	-	51	54	-	37	35	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1604	-	-	1600	-	-	905	805	1067	900	806	1073
Stage 1	-	-	-	-	-	-	986	869	-	964	854	-
Stage 2	-	-	-	-	-	-	962	850	-	978	866	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1604	-	-	1600	-	-	889	790	1067	878	791	1073
Mov Cap-2 Maneuver	-	-	-	-	-	-	889	790	-	878	791	-
Stage 1	-	-	-	-	-	-	980	864	-	958	843	-
Stage 2	-	-	-	-	-	-	946	839	-	961	861	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.5			4.2			8.6			8.8		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	1013	1604	-	-	1600	-	-	947				
HCM Lane V/C Ratio	0.016	0.005	-	-	0.012	-	-	0.011				
HCM Control Delay (s)	8.6	7.3	0	-	7.3	0	-	8.8				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0				

HCM 6th TWSC
8: Walleye Dr & Grayling Dr

2040 Total Traffic
PM Peak Hour

Intersection








Int Delay, s/veh 1.6













Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	18	28	134	81	3
Future Vol, veh/h	7	18	28	134	81	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	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	20	30	146	88	3

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	296	90	91
Stage 1	90	-	-
Stage 2	206	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	695	968	1504
Stage 1	934	-	-
Stage 2	829	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	680	968	1504
Mov Cap-2 Maneuver	704	-	-
Stage 1	913	-	-
Stage 2	829	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.2	1.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1504	-	876	-	-
HCM Lane V/C Ratio	0.02	-	0.031	-	-
HCM Control Delay (s)	7.4	0	9.2	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	30	42	0	1	52	161	72	1	97	0
Future Vol, veh/h	0	0	30	42	0	1	52	161	72	1	97	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	105	-	155	105	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	33	46	0	1	57	175	78	1	105	0
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	436	474	105	413	396	175	105	0	0	253	0	0
Stage 1	107	107	-	289	289	-	-	-	-	-	-	-
Stage 2	329	367	-	124	107	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	531	489	949	549	541	868	1486	-	-	1312	-	-
Stage 1	898	807	-	719	673	-	-	-	-	-	-	-
Stage 2	684	622	-	880	807	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	515	470	949	514	520	868	1486	-	-	1312	-	-
Mov Cap-2 Maneuver	515	470	-	514	520	-	-	-	-	-	-	-
Stage 1	864	806	-	692	647	-	-	-	-	-	-	-
Stage 2	657	598	-	849	806	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	8.9		12.6		1.4		0.1					
HCM LOS	A		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1486	-	-	949	519	1312	-	-				
HCM Lane V/C Ratio	0.038	-	-	0.034	0.09	0.001	-	-				
HCM Control Delay (s)	7.5	-	-	8.9	12.6	7.7	-	-				
HCM Lane LOS	A	-	-	A	B	A	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.3	0	-	-				

Intersection												
Int Delay, s/veh	14.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	258	114	221	8	66	1	133	26	13	1	16	154
Future Vol, veh/h	258	114	221	8	66	1	133	26	13	1	16	154
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	205	-	155	205	-	155	205	-	155	205	-	155
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	280	124	240	9	72	1	145	28	14	1	17	167
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	73	0	0	364	0	0	867	775	124	915	1014	72
Stage 1	-	-	-	-	-	-	684	684	-	90	90	-
Stage 2	-	-	-	-	-	-	183	91	-	825	924	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1527	-	-	1195	-	-	273	329	927	253	239	990
Stage 1	-	-	-	-	-	-	439	449	-	917	820	-
Stage 2	-	-	-	-	-	-	819	820	-	367	348	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1527	-	-	1195	-	-	181	266	927	196	194	990
Mov Cap-2 Maneuver	-	-	-	-	-	-	181	266	-	196	194	-
Stage 1	-	-	-	-	-	-	359	367	-	749	813	-
Stage 2	-	-	-	-	-	-	661	813	-	272	284	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	3.4			0.9			62.1			11		
HCM LOS							F			B		
Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	181	266	927	1527	-	-	1195	-	-	196	194	990
HCM Lane V/C Ratio	0.799	0.106	0.015	0.184	-	-	0.007	-	-	0.006	0.09	0.169
HCM Control Delay (s)	75.5	20.1	8.9	7.9	-	-	8	-	-	23.5	25.4	9.4
HCM Lane LOS	F	C	A	A	-	-	A	-	-	C	D	A
HCM 95th %tile Q(veh)	5.4	0.4	0	0.7	-	-	0	-	-	0	0.3	0.6

HCM 6th AWSC 2040 Total Traffic
 10: Walleye Dr & Fontaine Blvd PM Peak Hour

Intersection
 Intersection Delay, s/veh 12.5
 Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Traffic Vol, veh/h	258	114	221	8	66	1	133	26	13	1	16	154
Future Vol, veh/h	258	114	221	8	66	1	133	26	13	1	16	154
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	280	124	240	9	72	1	145	28	14	1	17	167
Number of Lanes	1	1	1	1	1	1	1	1	1	1	1	1













Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	3			3			3			3		
Conflicting Approach Left		SB			NB			EB			WB	
Conflicting Lanes Left	3			3			3			3		
Conflicting Approach Right		NB			SB			WB			EB	
Conflicting Lanes Right		3			3			3			3	
HCM Control Delay	13			10.9			12.5			11.4		
HCM LOS	B			B			B			B		

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	133	26	13	258	114	221	8	66	1	1	16	154
LT Vol	133	0	0	258	0	0	8	0	0	1	0	0
Through Vol	0	26	0	0	114	0	0	66	0	0	16	0

RT Vol	0	0	13	0	0	221	0	0	1	0	0	154
Lane Flow Rate	145	28	14	280	124	240	9	72	1	1	17	167
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.298	0.054	0.024	0.509	0.208	0.356	0.018	0.141	0.002	0.002	0.034	0.292
Departure Headway (Hd)	7.413	6.913	6.213	6.529	6.029	5.329	7.584	7.084	6.384	7.474	6.974	6.274
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	484	517	574	552	595	673	471	504	558	478	512	571
Service Time	5.175	4.675	3.975	4.272	3.772	3.072	5.353	4.853	4.153	5.234	4.734	4.034
HCM Lane V/C Ratio	0.3	0.054	0.024	0.507	0.208	0.357	0.019	0.143	0.002	0.002	0.033	0.292
HCM Control Delay	13.3	10.1	9.1	15.9	10.4	11	10.5	11	9.2	10.2	10	11.6
HCM Lane LOS	B	B	A	C	B	B	B	B	A	B	A	B
HCM 95th-tile Q	1.2	0.2	0.1	2.9	0.8	1.6	0.1	0.5	0	0	0.1	1.2

HCM 6th TWSC Stop Signs on E & W Legs
10: Walleye Dr & Fontaine Blvd

2040 Total Traffic
PM Peak Hour

Intersection												
Int Delay, s/veh	12											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	258	114	221	8	66	1	133	26	13	1	16	154
Future Vol, veh/h	258	114	221	8	66	1	133	26	13	1	16	154
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	205	-	155	205	-	155	205	-	155	205	-	155
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	280	124	240	9	72	1	145	28	14	1	17	167

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	381	351	17	603	504	28	184	0	0	42	0	0
Stage 1	19	19	-	318	318	-	-	-	-	-	-	-
Stage 2	362	332	-	285	186	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	577	573	1062	411	470	1047	1391	-	-	1567	-	-
Stage 1	1000	880	-	693	654	-	-	-	-	-	-	-
Stage 2	657	644	-	722	746	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	462	513	1062	239	421	1047	1391	-	-	1567	-	-
Mov Cap-2 Maneuver	462	513	-	239	421	-	-	-	-	-	-	-
Stage 1	896	879	-	621	586	-	-	-	-	-	-	-
Stage 2	516	577	-	480	745	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB				
HCM Control Delay, s	16.7		15.8		6.1			0				
HCM LOS	C		C									

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1391	-	-	462	513	1062	239	421	1047	1567	-	-
HCM Lane V/C Ratio	0.104	-	-	0.607	0.242	0.226	0.036	0.17	0.001	0.001	-	-
HCM Control Delay (s)	7.9	-	-	24.1	14.2	9.4	20.6	15.3	8.4	7.3	-	-
HCM Lane LOS	A	-	-	C	B	A	C	C	A	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	3.9	0.9	0.9	0.1	0.6	0	0	-	-

Intersection												
Int Delay, s/veh	3.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	26	0	18	20	0	43	31	103	34	73	127	44
Future Vol, veh/h	26	0	18	20	0	43	31	103	34	73	127	44
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	205	-	-	205	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	0	20	22	0	47	34	112	37	79	138	48







Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	542	537	162	529	543	131	186	0	0	149	0	0
Stage 1	320	320	-	199	199	-	-	-	-	-	-	-
Stage 2	222	217	-	330	344	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	451	450	883	460	447	919	1388	-	-	1432	-	-
Stage 1	692	652	-	803	736	-	-	-	-	-	-	-
Stage 2	780	723	-	683	637	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	402	415	883	423	412	919	1388	-	-	1432	-	-
Mov Cap-2 Maneuver	402	415	-	423	412	-	-	-	-	-	-	-
Stage 1	675	616	-	784	718	-	-	-	-	-	-	-
Stage 2	722	706	-	631	602	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.7		11		1.4		2.3	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1388	-	-	517 670	1432	-	-
HCM Lane V/C Ratio	0.024	-	-	0.093 0.102	0.055	-	-
HCM Control Delay (s)	7.7	-	-	12.7 11	7.7	-	-
HCM Lane LOS	A	-	-	B B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3 0.3	0.2	-	-

HCM 6th TWSC
12: Walleye Dr & Splake St






2040 Total Traffic
PM Peak Hour

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	0	13	24	0	31	23	122	43	53	86	27
Future Vol, veh/h	16	0	13	24	0	31	23	122	43	53	86	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	205	-	-	205	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	0	14	26	0	34	25	133	47	58	93	29
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	448	454	108	438	445	157	122	0	0	180	0	0
Stage 1	224	224	-	207	207	-	-	-	-	-	-	-
Stage 2	224	230	-	231	238	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	521	502	946	529	508	889	1465	-	-	1396	-	-
Stage 1	779	718	-	795	731	-	-	-	-	-	-	-
Stage 2	779	714	-	772	708	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	479	473	946	498	479	889	1465	-	-	1396	-	-
Mov Cap-2 Maneuver	479	473	-	498	479	-	-	-	-	-	-	-
Stage 1	766	688	-	781	719	-	-	-	-	-	-	-
Stage 2	737	702	-	729	678	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	11.2		11		0.9		2.5					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1465	-	-	615	662	1396	-	-				
HCM Lane V/C Ratio	0.017	-	-	0.051	0.09	0.041	-	-				
HCM Control Delay (s)	7.5	-	-	11.2	11	7.7	-	-				
HCM Lane LOS	A	-	-	B	B	A	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.3	0.1	-	-				

Intersection

Int Delay, s/veh 5.7

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations						
Traffic Vol, veh/h	176	83	49	11	18	106
Future Vol, veh/h	176	83	49	11	18	106
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	205	-	-	-	205	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	191	90	53	12	20	115

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	65	0	-	0	531	59
Stage 1	-	-	-	-	59	-
Stage 2	-	-	-	-	472	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1537	-	-	-	509	1007
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	628	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1537	-	-	-	446	1007
Mov Cap-2 Maneuver	-	-	-	-	521	-
Stage 1	-	-	-	-	844	-
Stage 2	-	-	-	-	628	-

Approach EB WB SB





HCM Control Delay, s	5.2	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1 SBLn2

Capacity (veh/h)	1537	-	-	-	521	1007
HCM Lane V/C Ratio	0.124	-	-	-	0.038	0.114
HCM Control Delay (s)	7.7	-	-	-	12.2	9
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0.4	-	-	-	0.1	0.4

Intersection

Int Delay, s/veh 2.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	37	65	38	0	0	22
Future Vol, veh/h	37	65	38	0	0	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	205	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	71	41	0	0	24








Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	41	0	0 192 41
Stage 1	-	-	- 41 -
Stage 2	-	-	- 151 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1568	-	- 797 1030
Stage 1	-	-	- 981 -
Stage 2	-	-	- 877 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1568	-	- 776 1030
Mov Cap-2 Maneuver	-	-	- 767 -
Stage 1	-	-	- 955 -
Stage 2	-	-	- 877 -

Approach	EB	WB	SB
HCM Control Delay, s	2.7	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1568	-	-	-	1030
HCM Lane V/C Ratio	0.026	-	-	-	0.023
HCM Control Delay (s)	7.4	-	-	-	8.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

HCM 6th TWSC
19: Buckner Way & Fontaine Blvd

2040 Total Traffic
PM Peak Hour

Intersection												
Int Delay, s/veh	5.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	58	1	69	0	1	0	41	0	0	0	0	34
Future Vol, veh/h	58	1	69	0	1	0	41	0	0	0	0	34
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	205	-	155	205	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	63	1	75	0	1	0	45	0	0	0	0	37

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	76	0	0	147	128	1	166	203	1
Stage 1	-	-	-	-	-	-	127	127	-	1	1	-
Stage 2	-	-	-	-	-	-	20	1	-	165	202	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1523	-	-	821	763	1084	798	693	1084
Stage 1	-	-	-	-	-	-	877	791	-	1022	895	-
Stage 2	-	-	-	-	-	-	999	895	-	837	734	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1622	-	-	1523	-	-	769	733	1084	774	666	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	769	733	-	774	666	-
Stage 1	-	-	-	-	-	-	843	760	-	982	895	-
Stage 2	-	-	-	-	-	-	965	895	-	804	705	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.3	0	10	8.4
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	769	1622	-	-	1523	-	-	1084
HCM Lane V/C Ratio	0.058	0.039	-	-	-	-	-	0.034
HCM Control Delay (s)	10	7.3	-	-	0	-	-	8.4
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.1

Appendix Tables 1-3

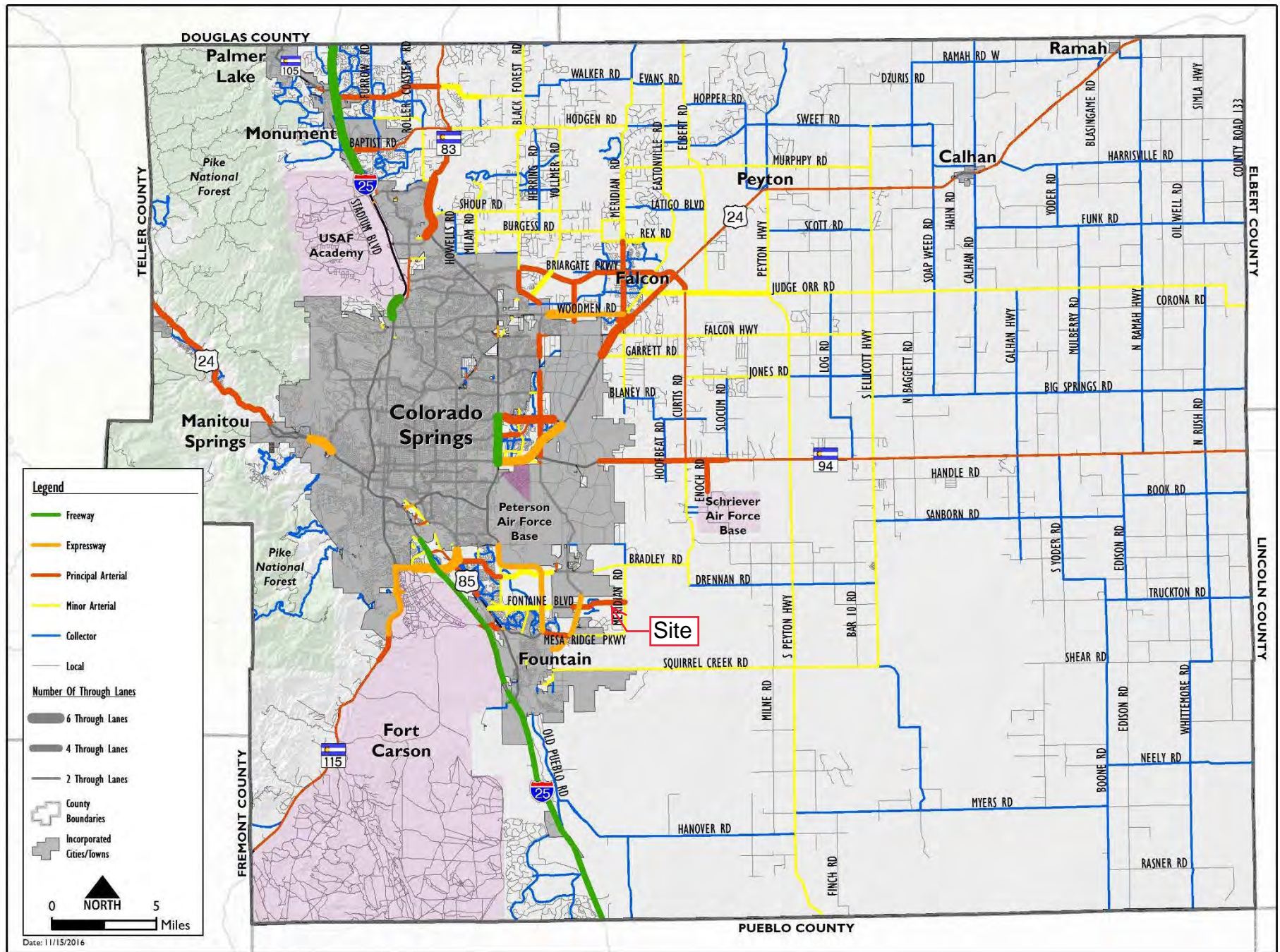
Appendix Table 1 Area Traffic Impact Studies by LSC Ridges at Lorson Ranch	
Study	Date
Lorson Ranch Sketch Plan Amendment 2 Traffic Impact and Access Analysis	December 17, 2018
Carriage Meadows South at Lorson Ranch Filing No. 1 Updated Traffic Impact Analysis	August 14, 2017
Carriage Meadows North at Lorson Ranch Filing No. 1 Updated Traffic Impact Analysis	January 29, 2017
Lorson Ranch East Updated Traffic Impact and Access Analysis	November 9, 2017
Lorson Ranch East Filing No. 1 Transportation Memorandum	May 2, 2018
Lorson Ranch East Filing No. 2 Transportation Memorandum	September 24, 2018
Lorson Ranch East Filing No. 3 Transportation Memorandum	January 22, 2019
Lorson Ranch East Filing No. 4 Transportation Memorandum	March 12, 2019
Lorson Ranch PK-8 School Traffic Impact and Access Analysis	October 4, 2018
Creekside at Lorson Ranch Filing No. 1 Traffic Impact and Access Analysis	October 28, 2018
Creekside at Lorson Ranch Filing No. 1 Transportation Memorandum	April 26, 2019
Carriage Meadows Townhomes Traffic Impact Analysis	February 25, 2020
Fontaine/Old Glory Intersection Analysis	February 27, 2020
Ponderosa at Lorson Ranch Filing No. 3 Transportation Memorandum	September 2, 2020
Creekside South at Lorson Ranch Updated Transportation Memorandum	May 5, 2020
The Hills at Lorson Ranch Full Traffic Impact Analysis	October 26, 2020
Skyline at Lorson Ranch Traffic Impact Analysis	January 21, 2021
<i>Source: LSC Transportation Consultants, Inc. (February 2021)</i>	

Appendix Table 2 Ridges at Lorson Ranch Lorson Ranch Trip Generation Estimate																																								
Land Use Data						Trip Generation Rates ⁽¹⁾				Raw ITE Trip Generation (Individual Driveway Trips)					School Internal Trips ⁽²⁾					Retail Internal Trips ⁽²⁾					Pass-by ⁽³⁾ (%)	Pass-by Trips					Total New External Trips									
Traffic Zone	Name	ITE Land Use	ITE Code	Quantity	Unit	Daily	AM Peak Hour	In	Out	PM Peak Hour	In	Out	Daily	AM Peak Hour	In	Out	PM Peak Hour	In	Out	Daily	AM Peak Hour	In	Out	PM Peak Hour		In	Out	Daily	AM Peak Hour	In	Out	PM Peak Hour	In	Out	Daily	AM Peak Hour	In	Out	PM Peak Hour	In
RESIDENTIAL																																								
All Residential North of Lorson Boulevard "Between the Creeks"																																								
8	Ponderosa	Single-Family Detached Housing	210	102	DU ⁽⁴⁾	9.44	0.19	0.56	0.62	0.37	963	19	57	64	37	26	2	5	1	1	99	0	2	5	2	0%	0	0	0	0	0	0	838	17	50	58	34			
9	Ponderosa	Single-Family Detached Housing	210	102	DU	9.44	0.19	0.56	0.62	0.37	963	19	57	64	37	26	2	5	1	1	99	0	2	5	2	0%	0	0	0	0	0	0	838	17	50	58	34			
10	Meadows Fil 1	Single-Family Detached Housing	210	97	DU	9.44	0.19	0.56	0.62	0.37	916	18	54	60	36	25	2	4	1	1	94	0	1	5	2	0%	0	0	0	0	0	0	797	16	49	54	33			
11	Meadows Fil 3	Single-Family Detached Housing	210	51	DU	9.44	0.19	0.56	0.62	0.37	481	9	28	32	19	13	1	2	1	0	50	0	1	2	1	0%	0	0	0	0	0	0	418	8	25	29	18			
12	Meadows Fil 3	Single-Family Detached Housing	210	87	DU	9.44	0.19	0.56	0.62	0.37	821	16	48	54	32	22	2	4	1	0	85	0	1	4	2	0%	0	0	0	0	0	0	714	14	43	49	30			
3	The Meadows Fil 2	Single-Family Detached Housing	210	109	DU	9.44	0.19	0.56	0.62	0.37	1,029	20	60	68	40	28	2	5	1	1	106	1	2	5	2	0%	0	0	0	0	0	0	895	17	53	62	37			
13	Allegiant Fil 1	Single-Family Detached Housing	210	97	DU	9.44	0.19	0.56	0.62	0.37	916	18	54	60	36	25	2	4	1	1	94	0	1	5	2	0%	0	0	0	0	0	0	797	16	49	54	33			
5	Buffalo Crossing	Single-Family Detached Housing	210	204	DU	9.44	0.19	0.56	0.62	0.37	1,926	38	113	127	75	53	5	9	2	1	198	1	3	10	5	0%	0	0	0	0	0	0	1,675	32	101	115	69			
	Townhomes at Lorson Ranch	Multifamily Housing	220	46	DU	7.32	0.11	0.35	0.35	0.21	337	5	16	16	10	9	1	2	0	0	35	0	1	2	1	0%	0	0	0	0	0	0	293	4	13	14	9			
6	Pioneer Landing	Single-Family Detached Housing	210	59	DU	9.44	0.19	0.56	0.62	0.37	557	11	33	37	22	15	1	3	1	0	57	0	1	3	1	0%	0	0	0	0	0	0	485	10	29	33	21			
7	Pioneer Landing	Single-Family Detached Housing	210	59	DU	9.44	0.19	0.56	0.62	0.37	557	11	33	37	22	15	1	3	1	0	57	0	1	3	1	0%	0	0	0	0	0	0	485	10	29	33	21			
15	Meadows Future Fil 4 West	Single-Family Detached Housing	210	110	DU	9.44	0.19	0.56	0.62	0.37	1,038	20	61	69	40	28	2	5	1	1	107	1	2	5	2	0%	0	0	0	0	0	0	903	17	54	63	37			
16	Meadows Future Fil 4 East	Single-Family Detached Housing	210	126	DU	9.44	0.19	0.56	0.62	0.37	1,189	23	70	79	46	32	3	6	1	1	123	1	2	6	3	0%	0	0	0	0	0	0	1,034	19	62	72	42			
18	Ponderosa Fil 3	Multifamily Housing	220	90	DU	7.32	0.11	0.35	0.35	0.21	659	10	32	32	19	18	2	3	1	0	68	0	1	3	2	0%	0	0	0	0	0	0	573	8	28	28	17			
39	Pioneer Landing Fil 2	Single-Family Detached Housing	210	170	DU	9.44	0.19	0.56	0.62	0.37	1,605	31	94	106	62	44	4	8	2	1	165	1	3	8	4	0%	0	0	0	0	0	0	1,396	26	83	96	57			
Total All Residential "Between the Creeks"						1,509	DU					13,957	268	810	905	533	379	32	68	16	9	1,437	5	24	71	32									12,141	231	718	818	492	
Residential Adjacent to Marksheffel																																								
1	Carriage Meadows North	Single-Family Detached Housing	210	155	DU	9.44	0.19	0.56	0.62	0.37	1,463	29	86	97	57	40	3	7	2	1	151	1	2	7	3	0%	0	0	0	0	0	0	1,272	25	77	88	53			
147	Carriage Meadows Town Homes	Multifamily Housing	220	49	DU	7.32	0.11	0.35	0.35	0.21	359	5	17	17	10	10	1	2	0	0	37	0	1	2	1	0%	0	0	0	0	0	0	312	4	14	15	9			
47	Carriage Meadows South	Single-Family Detached Housing	210	86	DU	9.44	0.19	0.56	0.62	0.37	812	16	48	54	32	22	2	4	1	0	84	0	1	4	2	0%	0	0	0	0	0	0	706	14	43	49	30			
247		Single-Family Detached Housing	210	51	DU	9.44	0.19	0.56	0.62	0.37	481	9	28	32	19	13	1	2	1	0	50	0	1	2	1	0%	0	0	0	0	0	0	418	8	25	29	18			
347		Single-Family Detached Housing	210	97	DU	9.44	0.19	0.56	0.62	0.37	916	18	54	60	36	25	2	4	1	1	94	0	1	5	2	0%	0	0	0	0	0	0	797	16	49	54	33			
Total All Residential Adjacent to Marksheffel						438	DU					4,031	77	233	260	154	110	9	19	5	2	416	1	6	20	9									3,505	67	208	235	143	
Cumulative Total:						1,947	DU					17,988	345	1,043	1,165	687	489	41	87	21	11	1,853	6	30	91	41									15,646	298	926	1,053	635	
Lorson Ranch East																																								
42	North of Fontaine	Single-Family Detached Housing	210	277	DU	9.44	0.19	0.56	0.62	0.37	2,615	51	154	173	101	71	6	13	3	2	269	1	4	13	6	0%	0	0	0	0	0	0	2,275	44	137	157	93			
37	East of Lamprey	Single-Family Detached Housing	210	122	DU	9.44	0.19	0.56	0.62	0.37	1,152	23	68	76	45	31	3	6	1	1	119	1	2	6	3	0%	0	0	0	0	0	0	1,002	19	60	69	41			
27	West of Lamprey	Single-Family Detached Housing	210	303	DU	9.44	0.19	0.56	0.62	0.37	2,860	56	168	189	111	78	7	14	3	2	295	1	5	15	7	0%	0	0	0	0	0	0	2,487	48	149	171	102			
127	South of Lorson - West	Single-Family Detached Housing	210	76	DU	9.44	0.19	0.56	0.62	0.37	717	14	42	47	28	20	2	3	1	0	74	0	1	4	2	0%	0	0	0	0	0	0	623	12	38	42	26			
227	South of Lorson - East	Single-Family Detached Housing	210	48	DU	9.44	0.19	0.56	0.62	0.37	453	9	27	30	18	12	1	2	0	0	47	0	1	2	1	0%	0	0	0	0	0	0	394	8	24	28	17			
Lorson Ranch East						826	DU					7,797	153	459	515	303	212	19	38	8	5	804	3	13	40	19									6,781	131	408	467	279	
Cumulative Total						2,773	DU					25,785	498	1,502	1,680	990	701	60	125	29	16	2,657	9	43	131	60									22,427	362	1,126	1,285	771	
Creekside at Lorson Ranch																																								
26	Creekside East (Filing 1)	Single-Family Detached Housing	210	97	DU	9.44	0.19	0.56	0.62	0.37	916	18	54	60	36	25	2	4	1	1	94	0	1	5	2	0%	0	0	0	0	0	0	797	16	49	54	33			
126	Creekside West (Filing 1)	Single-Family Detached Housing	210	138	DU	9.44	0.19	0.56	0.62	0.37	1,303	26	77	86	51	36	3	6	1	1	134	1	2	7	3	0%	0	0	0	0	0	0	1,133	22	69	78	47			
427	Creekside South Tract B (FUTURE)	Multifamily Housing	220	97	DU	7.32	0.11	0.35	0.35	0.21	710	10	34	34	20	19	2	3	1	0	73	0	1	4	2	0%	0	0	0	0	0	0	618	8	30	29	18			
327	Creekside South	Single-Family Detached Housing	210	200	DU	9.44	0.19	0.56	0.62	0.37	1,888	37	111	125	73	52	4	9	2	1	195	1	3	10	4	0%	0	0	0	0	0	0	1,641	32	99	113	68			
Creekside at Lorson Ranch						532	DU					4,817	91	276	305	180	132	11	22	5	3	496	2	7	26	11									4,189	78	247	274	166	
Cumulative Total						3,305	DU					30,602	589	1,778	1,985	1,170	833	71	147	34	19	3,153	11	50	157	71									26,616	507	1,581	1,794	1,080	
The Hills PUD																																								
43	Area 'B'	Single-Family Detached Housing	210	116	DU	9.44	0.19	0.56	0.62	0.37	1,095	21	64	72	42	30	3	5	1	1	113	1	2	6	3	0%	0	0	0	0	0	0	952	17	57	65	38			
44	Area 'C'	Single-Family Detached Housing	210	123	DU	9.44	0.19	0.56	0.62	0.37	1,161	23	68	77	45	32	3	6	1	1	120	1	2	6	3	0%	0	0	0	0	0	0	1,009	19	60	70	41			
36	Areas 'E' &																																							

**Appendix Table 3
Ridges at Lorson Ranch
Internal Trip Estimate**

Raw ITE Trip Generation (Individual Driveway Trips)										Percent Internal Trips										Total Internal Trips										Total External Trips									
ITE Land Use	ITE Code	Quantity	Unit	Daily	Trip Generation Rates ⁽¹⁾				Daily	Trips				Daily	Percent Internal Trips				Daily	Total Internal Trips				Daily	Total External Trips														
					AM Peak Hour	Out	PM Peak Hour	In		Out	In	Out	AM Peak Hour		PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour		PM Peak Hour	AM Peak Hour	PM Peak Hour																	
Single-Family Detached Housing	210	5,057	DU ⁽²⁾	9.44	0.19	0.56	0.62	0.37	47,738	936	2,807	3,154	1,852	School Retail Total	3%	12%	8%	2%	2%	1,360	117	241	53	29	43,311	824	2,585	2,947	1,764										
Residential Condominium/Townhouse	210	282	DU	7.32	0.11	0.35	0.35	0.21	2,064	30	100	99	58		10%	3%	3%	8%	6%	5,131	25	81	253	117															
									49,802	966	2,907	3,253	1,910		13%	15%	11%	9%	8%	6,491	142	322	306	146															
Elementary School	520	690	Students	1.89	0.36	0.31	0.07	0.08	1,304	250	213	51	53	School Retail Total	70%	70%	40%	40%	70%	913	175	85	20	37	391	75	128	31	16										
Middle School/Junior High School	522	300	Students	2.13	0.31	0.27	0.07	0.08	639	94	80	22	23		70%	70%	40%	40%	70%	447	66	32	9	16	192	28	48	13	7										
Total School									1,943	344	293	73	76		1,360	241	117	29	53	583	103	176	44	23															
Shopping Center	820	219	KSF ⁽³⁾	46.75	0.74	0.45	2.13	2.30	10,261	162	99	467	506	School Retail Total	50%	50%	25%	25%	50%	5,131	81	25	117	253	5,129	80	74	350	252										
Total School and Retail									12,204	506	392	540	582		6,491	322	142	146	306																				
Notes:																																							
(1) Source: "Trip Generation, 10th Edition, 2017" by the Institute of Transportation Engineers (ITE)																																							
(2) DU = dwelling Unit																																							
(3) KSF = thousand square feet of floor area																																							
LSC Transportation Consultants, Inc.																																							
Feb-21																																							

MTCP Maps



Map 14: 2040 Roadway Plan (Classification and Lanes)

Map 17: 2060 Corridor Preservation

