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Windermere Filing No. 2  
Site Development Plan  
Traffic Impact Study  
PCD File No.: PPR2442  
(LSC #S224092)  
March 4, 2026

**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.

x 

  
Date

# Windermere Filing No. 2 Site Development Plan

## Traffic Impact Study

Prepared for:  
Todd Stephens  
Windsor Ridge Homes  
4164 Austin Bluffs Parkway, Suite 361  
Colorado Springs, CO 80918

MARCH 4, 2026

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LSC Transportation Consultants  
Prepared by: Kirstin D. Ferrin, P.E.  
Reviewed by: Jeffrey C. Hodsdon, P.E.

LSC #S224092

PCD File No.: PPR2442



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March 4, 2026

Todd Stephens  
Windsor Ridge Homes  
4164 Austin Bluffs Parkway, Suite 361  
Colorado Springs, CO 80918

RE: Windermere Filing No. 2  
Site Development Plan & Subdivision Plat  
El Paso County, CO  
Traffic Impact Study  
PCD File No.: [PPR2442](#)  
LSC #S224092

Dear Mr. Stephens:

In response to your request, LSC Transportation Consultants, Inc. has prepared this traffic impact analysis to accompany the Site Development Plan and subdivision plat applications for the Windermere (Filing No. 2) residential development. As shown in Figure 1, the site is located north of North Carefree Circle between Marksheffel Road and Antelope Ridge Drive in El Paso County, Colorado. Site access is proposed to Mardale Lane.

## REPORT CONTENTS

This report presents:

- The existing roadway and traffic conditions in the site's vicinity including the roadway widths, surface conditions, lane geometries, traffic controls, and posted speed limits;
- Current traffic-volume data;
- Estimates of projected 2045 background traffic volumes;
- The projected average weekday and peak-hour vehicle trips to be generated by the proposed development;
- The assignment of the projected site-generated traffic volumes to the area roadways;
- The projected short-term and long-term total traffic volumes on the area roadways;
- The projected levels of service at the key intersections in the vicinity of the site;
- The recommendations for roadway improvements to mitigate the traffic impacts;
- The project's obligation to the County roadway improvement fee program; and
- The project's obligation to the City of Colorado Springs for participation in the cost of traffic signal installation at the North Carefree/Antelope Ridge Drive intersection.

### Previous Traffic Reports Completed in the Area

LSC completed a traffic impact study (TIS) for the entire Windermere Preliminary Plan ([SP-193](#)) dated August 31, 2020. Since completion of that report, a final plat was submitted for Windermere Filing No. 1 and approved for 163 lots for single-family homes on the northern 44 acres of the preliminary plan area and all of the homes have been constructed. The land use and access proposed for Filing 1 are consistent with the preliminary plan TIS. The preliminary plan TIS also assumed an additional 40 lots for single-family homes on the southern 9-acre parcel. As part of the Filing No. 1 plat, this parcel was platted as a tract: Tract B Windermere Fil No. 1. The proposed Filing No. 2 will replace Tract B.

LSC completed a TIS for a zone change from RS-5000 to RM-30 to on the southern 9-acre parcel dated January 25, 2025. The zone change TIS assumed the site would be developed with 150 townhome units.

### LAND USE AND ACCESS

Figure 2 shows the site land use and access plan. The southern 9 acres of the Windermere Preliminary Plan area is proposed to be developed as Windermere Filing No. 2 with 104 single-family **attached** dwelling units. Applications include a site development plan/Plot Plan and a replat of this parcel from “Tract B Windermere Fil No. 1” to Windermere Fil No. 2.

Access for Windermere Filing No. 2 would be via two full-movement access points to Mardale Lane. The west access would align with Ryedale Way about 210 feet east of Antelope Ridge Drive and the east access would form the south leg of the intersection of Mardale Lane and Wyedale Way.

### PEDESTRIAN AND BICYCLE ACCESS

There is an existing sidewalk adjacent to the site along Mardale Lane. Sidewalks are planned adjacent to the site along Antelope Ridge Drive and North Carefree Circle, but not along Marksheffel Road.

### ROADWAY AND TRAFFIC CONDITIONS

The roadways in the site’s vicinity are shown in Figure 1 and are described below. Copies of the *2024 El Paso County Major Transportation Corridors Plan (MTCP) 2045 Roadway Functional Classifications* and *2024 MTCP 2065 Corridor Preservation Plan* with the site location identified on them have been attached to this report.

**North Carefree Circle** is a six-lane Principal Arterial. In the vicinity of Antelope Ridge Drive, North Carefree Circle has a posted limit of 35 miles per hour (mph). North Carefree Circle is maintained and controlled by the City of Colorado Springs.

**Marksheffel Road** is a Principal Arterial extending north from the City of Fountain to Woodmen Road. Marksheffel has two through lanes in each direction, plus a raised median south of North Carefree Circle and one through lane in each direction north of North Carefree Circle. The posted speed limit adjacent to the site is 50 mph. Marksheffel Road is ultimately planned to be widened to six lanes and extended north and west from Woodmen Road to connect to Research Parkway at Black Forest Road. The City of Colorado Springs has taken ownership and maintenance of Marksheffel Road since completion of the Windermere Preliminary Plan and zone change TIS reports.

**Antelope Ridge Drive** is an Urban Major Collector that extends north from North Carefree Circle to about one-half mile north of Stetson Hills Boulevard. In the vicinity of the site, Antelope Ridge Drive has one through lane in each direction and a striped center median. The posted speed limit on Antelope Ridge Drive is 35 mph. The intersection of Antelope Ridge Drive/North Carefree Circle is currently two-way, stop-sign controlled.

### Sight Distance Analysis

Figure 3 shows the intersection sight-distance analysis at the west site access aligning with Ryedale Way. Based on the *ECM* design speed of Urban Local streets, 25 miles per hour (mph), and the general criteria contained in Table 2-21 of the *ECM*, the *ECM*-prescribed intersection sight distance at this intersection is 280 feet. Given this site-specific situation, Figure 3 also shows the line of sight for 170' of sight distance from the "drivers' eye" at the access point to vehicles approaching the intersection from the west, following either a southbound-left turn from Antelope Ridge Drive or a northbound-right turn from Antelope Drive onto eastbound Mardale Lane. Based on a turning speed of 15 mph (and the assumed speed of the approaching vehicle at the completion of the turn onto Mardale) the required intersection sight distance would be 145 feet.<sup>1</sup> As shown in Figure 3, the intersection sight distance can be met at this intersection. Intersection sight distance was not analyzed at the Mardale Lane/Wyedale Way/east site access as it is recommended to be converted to all-way, stop-sign control.

Figure 3 also shows the required stopping sight distance at both access points. Based on a design speed of 25 miles per hour (mph) and the criteria contained in Table 2-17 of the *Engineering Criteria Manual (ECM)*, the required stopping sight distance approaching the access points is 155 feet. As shown in Figure 3, the stopping sight distance can be met at both of the proposed access points. The line of sight for the intersection of Mardale/Wyedale will need to be kept clear of any sight distance obstructions. This includes landscaping, signage, etc. proposed for the development.

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<sup>1</sup> Table 9-11 Section 9.5.3.2.3 Case B3—Crossing Maneuver from the Minor Road A Policy on Geometric Design of Highways and Streets 2018 7th Edition © 2018 by the American Association of State Highway and Transportation Officials.

## Crash History

A three-year crash history request was submitted to CSP in May 2025. Reported crash data was provided to LSC. The report cutoff date is May 28, 2025. Ten crashes were reported at the intersection of N. Carefree Circle and Antelope Ridge Drive between September 2022 and May 2025. All were vehicle crashes and none involved pedestrians. Seven of the crashes were angle collisions. Two were injury crashes. Only one of the injury crashes was an angle-type crash which would meet the criteria outlined in MUTCD section 4C.08 (2)(B).

Four of the angle crashes occurred in a 12-month period from May 2024 to May 2025. The three **non-angle** crashes included a rear end crash between two vehicles in the eastbound left-turn lane in 2023, a vehicle crashing into the curb after completing a southbound-right turn onto N. Carefree Circle to avoid being rear ended by a vehicle on North Carefree approaching from behind, and rear-end crash involving a vehicle attempting to make a westbound-right turn onto Antelope Ridge Drive in February 2024.

Two crashes were reported in 2022 near the Antelope Ridge Drive/Pronghorn Meadows Circle. Only one crash occurred between two vehicles at this intersection. An eastbound motorist did not yield right-of-way to a southbound vehicle.

## Existing Traffic Volumes

Figure 4 shows the existing morning and afternoon peak-hour traffic volumes at the intersections of North Carefree Circle/Marksheffel Road, North Carefree Circle/Antelope Ridge Drive, Antelope Ridge Drive/Pronghorn Meadows Circle/Mardale Lane and Mardale Lane/Ryedale Way. The average weekday traffic volumes shown are estimates by LSC, based on traffic counts conducted by LSC in April 2025. The traffic count reports are attached.

## Existing Levels of Service

Level of service (LOS) is a quantitative measure of the level of 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 1 shows the level of service delay ranges.

**Table 1: 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) <sup>(1)</sup> |
| 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   |

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

The intersections of North Carefree Circle/Antelope Ridge Drive, Antelope Ridge Drive/Pronghorn Meadows Circle/Mardale Lane and Mardale Lane/Ryedale Way have been analyzed to determine the existing levels of service based on the unsignalized method of analysis procedures outlined in the *Highway Capacity Manual, 6<sup>th</sup> Edition* by the Transportation Research Board. The results of the level of service analysis are shown in Figure 4. The signalized intersection of North Carefree Circle/Marksheffel Road has been analyzed using Synchro version 11. The level of service reports are attached.

**Antelope Ridge Drive/South Pronghorn Meadows Circle/Mardale Lane**

The westbound approach at the two-way, stop-sign-controlled intersection of Antelope Ridge Drive/Pronghorn Meadows/Mardale is currently operating at LOS D during the morning peak hour and LOS B during the afternoon peak hour. The eastbound approach is currently operating at LOS C during the morning peak hour and LOS A during the afternoon peak hour.

**Mardale Lane/Ryedale Way**

All movements at the two-way, stop-sign-controlled intersection of Mardale/Ryedale are currently operating at LOS A during the peak hours.

**North Carefree Circle/Antelope Ridge Drive**

The southbound approach at the intersection of North Carefree/Antelope Ridge is currently operating at LOS F during the morning peak hour and LOS E during the afternoon peak hour.

## North Carefree Circle/Marksheffel Road

The signal-controlled intersection of North Carefree/Marksheffel is currently operating at an overall LOS B during the morning peak hour and LOS C during the afternoon peak hour.

### BACKGROUND TRAFFIC

Background traffic is the traffic estimated to be on the roadways without the Windermere traffic. Figure 5 shows the projected 2045 background traffic volumes. The estimates assume the extension of North Carefree Circle east of Marksheffel Road. Background through traffic estimates for North Carefree Circle may be conservative, as traffic increases and the extension of North Carefree Circle into Banning Lewis Ranch will depend largely on the level of growth within Banning Lewis Ranch in this area. Assuming a signal or alternative improvement will be in place, improving the level of service for this turning movement.

### TRIP GENERATION

The site-generated vehicle-trips were estimated using the nationally-published trip-generation rates from *Trip Generation, 11th Edition, 2022* by the Institute of Transportation Engineers (ITE). Table 2 shows the current trip-generation estimate.

As shown in Table 2, Windermere Filing No. 2 is projected to generate about 749 new vehicle trips on the average weekday, with about one-half of the vehicles entering and one-half of the vehicles exiting in a 24-hour period. During the morning peak hour, which generally occurs for one hour between 6:30 and 8:30 a.m., about 12 vehicles would enter and 38 vehicles would exit the site. During the afternoon peak hour, which generally occurs for one hour between 4:30 and 6:30 p.m., about 35 vehicles would enter and 24 vehicles would exit the site.

### DIRECTIONAL DISTRIBUTION AND ASSIGNMENT

The estimated directional distribution of the site-generated traffic volumes on the adjacent roadways is an important factor in determining the traffic impacts of the site. Figure 6 shows the specific distribution estimates for the short-term and long-term site-generated traffic volumes, respectively. The estimates are based on the following factors: the location of the site with respect to the regional residential, employment, commercial, and activity centers and the balance of the Colorado Springs area; the land use proposed for the site; the proposed access system for the site; and the roadway system serving the site. The short-term distribution estimate is based on the existing street network and the long-term distribution estimates assume the extension of Barnes Road and North Carefree Circle east of Marksheffel Road into Banning Lewis Ranch.

When the distribution percentages (from Figure 6) are applied to the trip-generation estimates (from Table 2), the site-generated traffic volumes on the adjacent roadways can be determined.

Figures 7 and 8 show the short-term and long-term site-generated traffic volumes for Windermere Filing No. 2, respectively.

### **EXISTING-PLUS-SITE-GENERATED TRAFFIC**

Figure 9 shows the sum of the existing traffic volumes (from Figure 4) plus the short-term traffic site-generated traffic volumes (from Figure 7). The existing-plus-site-generated traffic volumes identify the short-term impacts of the development.

### **2045 TOTAL TRAFFIC**

Figure 10 shows the projected 2045 total traffic volumes. The 2045 total traffic volumes are the sum of the 2045 background traffic volumes (from Figure 5) plus the long-term site-generated traffic (from Figure 8).

### **PROJECTED INTERSECTION LEVELS OF SERVICE**

The intersections of North Carefree/Marksheffel, North Carefree/Antelope Ridge, Antelope Ridge/Pronghorn Meadows (south)/Mardale Lane, and the site-access points to Mardale Lane were analyzed to determine the projected levels of service for the 2045 background, existing-plus-site-generated and 2045 total traffic volumes, based on the unsignalized intersection analysis procedures from the *Highway Capacity Manual 6<sup>th</sup> Edition* and/or the Synchro version 11 signalized intersection procedures. Figures 5, 9, and 10 show the level of service analysis results. The level of service reports are attached.

#### **Antelope Ridge Drive/South Pronghorn Meadows Circle/Mardale Lane**

The westbound approach at the two-way, stop-sign-controlled intersection of Antelope Ridge Drive/Pronghorn Meadows/Mardale is projected to operate at LOS E during the morning peak hour and LOS B during the afternoon peak hour, based on the existing-plus-site-generated, 2045 background, and 2045 total traffic volumes. All other movements are projected to operate at LOS C or better during the peak hours through 2045.

The morning peak-hour traffic patterns on Antelope Ridge Drive adjacent to the site are highly impacted by the Rocky Mountain Classical Academy located north of the site. A copy of the school carpool plan is attached (may not be the official version). The school Parent-Student Handbook posted online notes that the “City of Colorado Springs, El Paso County Sheriff’s Department, and District Security Resource Officers have approved our traffic plan.” Only right turns are permitted out of the school access during pick-up and drop-off times. To facilitate better traffic flow, school staff meter the exiting vehicles into platoons of up to ten cars per line. LSC staff observed the afternoon pick-up time in September 2021 and, based on this recent field observation, operations appear to be generally in accordance with the established plan. The HCM analysis of the site-access points to Antelope Ridge Drive did not account for the “metering” of exiting

vehicles from the Rocky Mountain Classical Academy, which helps to create additional gaps in the southbound through traffic. These gaps generally reduce the side-street delay.

### **Mardale Lane/Ryedale Way**

All movements at the two-way, stop-sign-controlled intersection of Mardale/Ryedale are projected to operate at LOS A during the peak hours.

### **Mardale Lane/Wyedale Way**

All movements at the two-way, stop-sign-controlled intersection of Mardale/Wyedale are projected to operate at LOS A during the peak hours.

### **North Carefree Circle/Antelope Ridge Drive**

The LOS is currently F and E for the southbound-left turn during the morning and late afternoon peak hours, respectively. An early version of the Windermere Zone Change TIS recommended the intersection of North Carefree/Antelope Ridge be reconfigured as an interim/temporary channelized-T intersection. In August 2023, the City of Colorado Springs indicated that an escrow of \$100,000 toward the cost of installation of a traffic signal will be required rather than the temporary channelized-T intersection. **[Update] City Traffic Engineering's preliminary update (Early May 2025 - pending official review of this application) is that the City will likely ask for an escrow contribution of \$150,000 instead of \$200,000 toward the cost of this future signal.**

Please refer to the next section for signal warrant information.

This intersection is projected to operate at LOS D or better during the peak hours as a signal-controlled intersection, based on the projected existing-plus-site-generated and 2045 total traffic volumes.

### **North Carefree Circle/Marksheffel Road**

The signalized intersection of North Carefree/Marksheffel is projected to operate at an overall LOS D or better during the peak hours, based on the projected existing-plus-site-generated and 2045 total traffic volumes.

### **TRAFFIC SIGNAL WARRANT INFORMATION - North Carefree Circle/Antelope Ridge Drive**

The City of Colorado Springs indicated **[Early May 2025]** that a signal-warrants study was done in January of 2023 for this intersection and that only the *MUTCD Peak-Hour warrant (Warrant 3)* was met at that time. *MUTCD* guidance regarding Warrant No. 3: *This signal warrant should be applied only in unusual cases, such as office complexes, manufacturing plants, industrial*

*complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.*

LSC has reviewed the crash history at this intersection. Please refer to the Crash History section above. The crash data were compared to the criteria outlined in *MUTCD* section 4C.08 (2)(B) under **Warrant 7- Crash Experience**. Part B of the warrant criteria is likely met, as four of the angle crashes occurred in a 12-month period from May 2024 to May 2025. Additionally, seven angle crashes have occurred in a 3-year period. For Warrant 7 to be satisfied, parts A and C also must be met.

### **QUEUING ANALYSIS**

A queuing analysis was performed using Synchro/SimTraffic to determine if the existing turn lanes at the intersection of North Carefree Circle/Antelope Ridge Drive will be sufficient to accommodate the projected queues, based on the 2045 total traffic volumes. An analysis was also completed for Mardale Lane between Antelope Ridge Drive and Ryedale Way. The 2045 total peak-hour traffic volumes were entered into the Synchro model. The simulation was run five times for each scenario. The queuing reports are attached.

#### **North Carefree Circle/Antelope Ridge Drive**

It was assumed that the intersection of North Carefree Circle/Antelope Ridge Drive will be converted to traffic-signal control by the time the site is built out. Based on the 2045 total traffic volumes, the southbound maximum left-turn queue on Antelope Ridge Drive approaching North Carefree Circle is projected to be 234 feet long during the morning peak hour and 130 feet long during the afternoon peak hour. This maximum queue could be accommodated by the existing 300-foot southbound left-turn lane. Based on the 2045 total traffic volumes, the maximum southbound right-turn queue is projected to be 152 feet long during the morning peak hour and 68 feet long in the afternoon peak hour. This queue is not projected to block the intersection of Antelope Ridge/South Pronghorn Meadows Circle/Mardale.

#### **Mardale Lane**

The maximum westbound queue on Mardale Lane approaching Antelope Ridge Drive is 80 feet during the morning peak hour and 43 feet during the afternoon peak hour. This queue would not block the first intersection to the east (Ryedale Way).

### **DEVIATION REQUESTS**

No deviation requests are included with this submittal.

## COUNTY ROAD IMPROVEMENT FEE PROGRAM

This project is subject to participation in the County Roadway Improvement Fee Program. Windermere Filing 2 will join PID 4. The ten-mil PID building-permit fee portion associated with this option is \$559 per multi-family dwelling unit. The total upfront road impact fee would be \$58,136 for the 104 dwelling units.

## CONCLUSIONS AND RECOMMENDATIONS

### Trip Generation

- Windermere Filing No. 2 is projected to generate about 749 new vehicle trips on the average weekday, with about one-half of the vehicles entering and one-half of the vehicles exiting in a 24-hour period. During the morning peak hour, which generally occurs for one hour between 6:30 and 8:30 a.m., about 12 vehicles would enter and 38 vehicles would exit the site. During the afternoon peak hour, which generally occurs for one hour between 4:30 and 6:30 p.m., about 35 vehicles would enter and 24 vehicles would exit the site.

### Projected Levels of Service

- The westbound approach at the two-way, stop-sign-controlled intersection of Antelope Ridge Drive/Pronghorn Meadows/Mardale is projected to operate at LOS E during the morning peak hour and LOS B during the afternoon peak hour, based on the existing-plus-site-generated, 2045 background, and 2045 total traffic volumes. All other movements are projected to operate at LOS C or better during the peak hours through 2045. The morning peak-hour traffic patterns on Antelope Ridge Drive adjacent to the site are highly impacted by the Rocky Mountain Classical Academy located north of the site. A copy of the school carpool plan is attached (may not be the official version). The school Parent-Student Handbook posted online notes that the “City of Colorado Springs, El Paso County Sheriff’s Department, and District Security Resource Officers have approved our traffic plan.” Only right turns are permitted out of the school access during pick-up and drop-off times. To facilitate better traffic flow, school staff meter the exiting vehicles into platoons of up to ten cars per line. LSC staff observed the afternoon pick-up time in September 2021 and, based on this recent field observation, operations appear to be generally in accordance with the established plan. The HCM analysis of the site-access points to Antelope Ridge Drive did not account for the “metering” of exiting vehicles from the Rocky Mountain Classical Academy, which helps to create additional gaps in the southbound through traffic. These gaps generally reduce the side-street delay.
- The site-access points to Mardale Lane which align with Ryedale Way and Wyedale Way are projected to operate at LOS A for all movements through 2045 as two-way, stop-sign-controlled intersections.

- The City has indicated that a signal-warrants study for the intersection of North Carefree Circle/Antelope Ridge Drive was done in January of 2023 and that both peak-hour signal warrants (3A & 3B) meet the signal warrants. **[update]** LSC contacted the City of Colorado Springs Traffic Engineering staff. Current/updated information is noted in this report. This intersection is projected to operate at LOS D or better during the peak hours as a signal-controlled intersection, based on the projected existing-plus-site-generated and total traffic volumes.
- The signalized intersection of North Carefree/Marksheffel is projected to operate at an overall LOS D or better during the peak hours, based on the projected existing-plus-site-generated and 2045 total traffic volumes.

### Sight Distance

- The access-point locations on Mardale Lane would meet applicable sight distance criteria (ECM/AASHTO) Assuming AWSC (All-Way, Stop-sign Control) at the intersection of Mardale Lane/Wyedale Way. Please refer to the sight-distance section for analysis details.

### Recommended Street Classification

- Based on the projected 2045 total average weekday traffic volumes, Mardale Lane can remain classified as an Urban Local with the additional traffic projected to be generated by the proposed Windermere Filing No. 2.

### Roadway Improvements

- Based on the existing-plus-site-generated traffic volumes and the criteria contained in the *ECM*, a northbound right-turn deceleration lane is projected to be warranted on Antelope Ridge Drive approaching Mardale Lane. Based on a design speed of 40 mph, the right-turn lane approaching Mardale Lane should be 155 feet long plus a 160-foot taper.
- The criteria contained in section 2.3.7.D.1 of the *ECM*, which identifies where exclusive left-turn lanes are required, is based on left-turn **ingress** volume. At the intersection of Antelope Ridge/Mardale Lane, the projected southbound left-turn ingress volume is below the *ECM* 25 vph threshold. Regardless, a southbound left-turn lane already exists. The westbound left-turn movement at the intersection of Antelope Ridge/Mardale, to which the development would also add volume, is an **egress** turn movement. Therefore, this ***ECM* threshold criterion is not applicable** to the westbound left turn and no change would be required to the existing single lane approach on Mardale Lane.
- The City of Colorado Springs has indicated that an escrow of \$100,000 toward the cost of installation of a traffic signal at the intersection of Antelope Ridge/North Carefree will be required rather than the temporary channelized-T intersection that was previously recommended. **[Update] City Traffic Engineering's update (Early May 2025) is that the City will likely ask for an escrow contribution of \$150,000 instead of \$200,000 toward**

**the cost of this future signal.** LSC discussed with County staff and it is our understanding from that conversation that the County will defer to the City for the required project mitigation at the intersection of Antelope Ridge/North Carefree. At the final plat stage of this project, if the signal is not yet installed, the applicant, or LSC on behalf of the applicant, will contact City Traffic Engineering for an update on the timing of signal installation. **[Update May 2025] This is now the SDP and plat stage; LSC contacted the City Traffic Engineering department for any updates on plans for signalization of this intersection (no current plans); the 2023 warrant analysis is the most recent completed by the City; the City will require the escrow. Please refer to signal warrant information section included in this report. A part of MUTCD warrant No. 7 is met. For Warrant 7 to be satisfied, parts A and C also must be met.**

\* \* \* \* \*

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

Respectfully Submitted,

LSC TRANSPORTATION CONSULTANTS, INC.

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

JCH/KDF:jas

Enclosures: Table 2  
Figures 1-10  
Traffic Count Reports  
Level of Service Reports  
Queuing Reports  
Crash Data  
MTCP Maps  
Rocky Mountain Classical Academy Carpool Plan and key pages from the  
Parent-Student Handbook

# Table 2



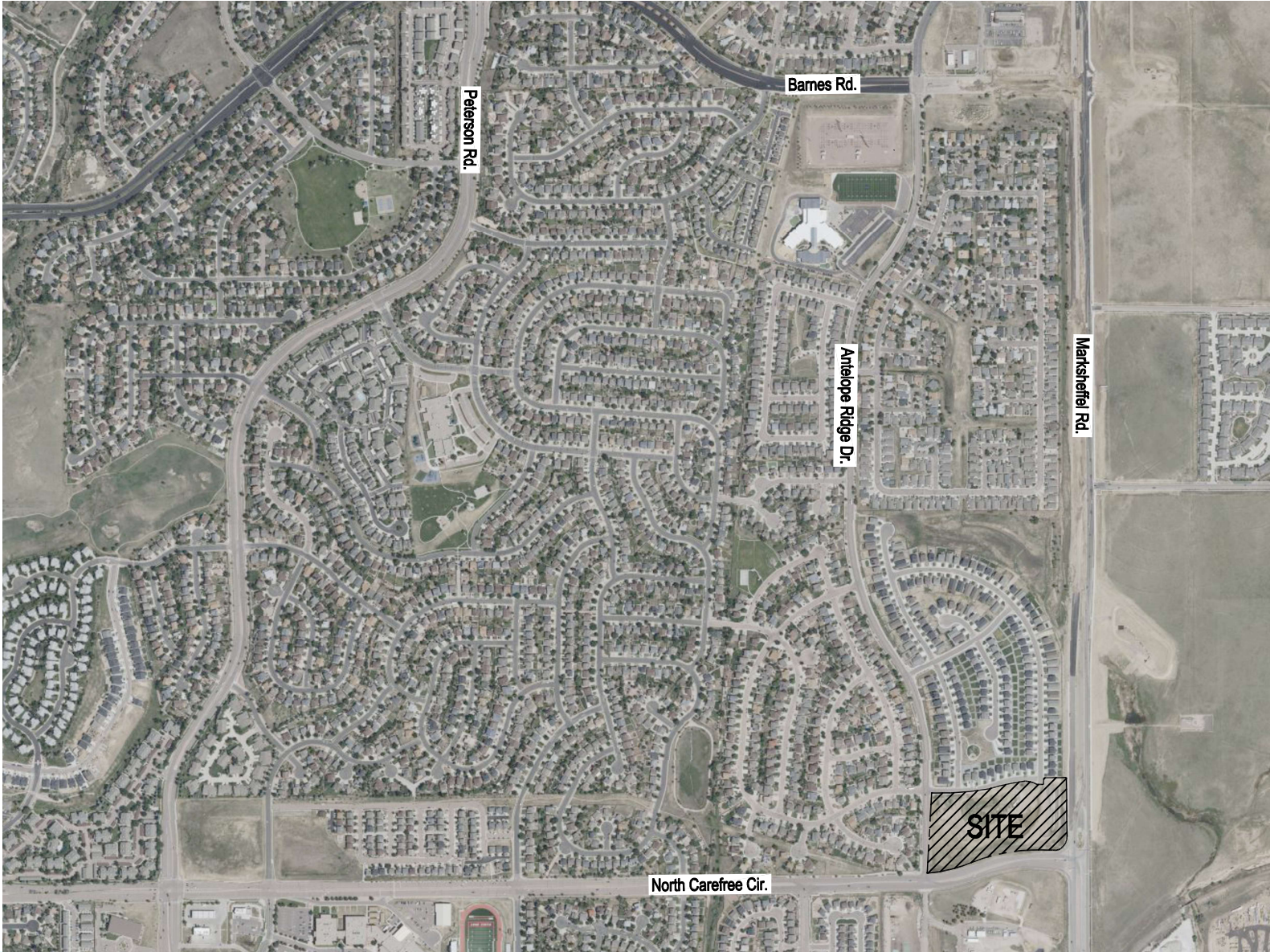
**Table 2  
Trip Generation Estimate  
Windermere Filing No. 2**

| Land Use Code  | Land Use Description           | Trip Generation Units | Average Weekday Traffic | Trip Generation Rates <sup>(1)</sup> |      |                     |      | Average Weekday Traffic | Total Trips Generated |     |                     |     |
|--|--------------------------------|-----------------------|-------------------------|--------------------------------------|------|---------------------|------|-------------------------|-----------------------|-----|---------------------|-----|
|  |                                |                       |                         | Morning Peak Hour                    |      | Afternoon Peak Hour |      |                         | Morning Peak Hour     |     | Afternoon Peak Hour |     |
|  |                                |                       |                         | In                                   | Out  | In                  | Out  |                         | In                    | Out | In                  | Out |
| 215  | Single Family Attached Housing | 104 DU <sup>(2)</sup> | 7.20                    | 0.12                                 | 0.36 | 0.34                | 0.23 | 749                     | 12                    | 38  | 35                  | 24  |
| Notes:   |                                |                       |                         |                                      |      |                     |      |                         |                       |     |                     |     |
| (1) Source: "Trip Generation, 11th Edition, 2021" by the Institute of Transportation Engineers (ITE) |                                |                       |                         |                                      |      |                     |      |                         |                       |     |                     |     |
| (2) DU = dwelling unit   |                                |                       |                         |                                      |      |                     |      |                         |                       |     |                     |     |
| Source: LSC Transportation Consultants, Inc.   |                                |                       |                         |                                      |      |                     |      |                         |                       |     | May-25              |     |

# Figures 1-10

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Approximate Scale  
Scale: 1" = 1,000'

Figure 1  
Vicinity  
Map

Windermere Filing No. 2 (LSC #S224092)

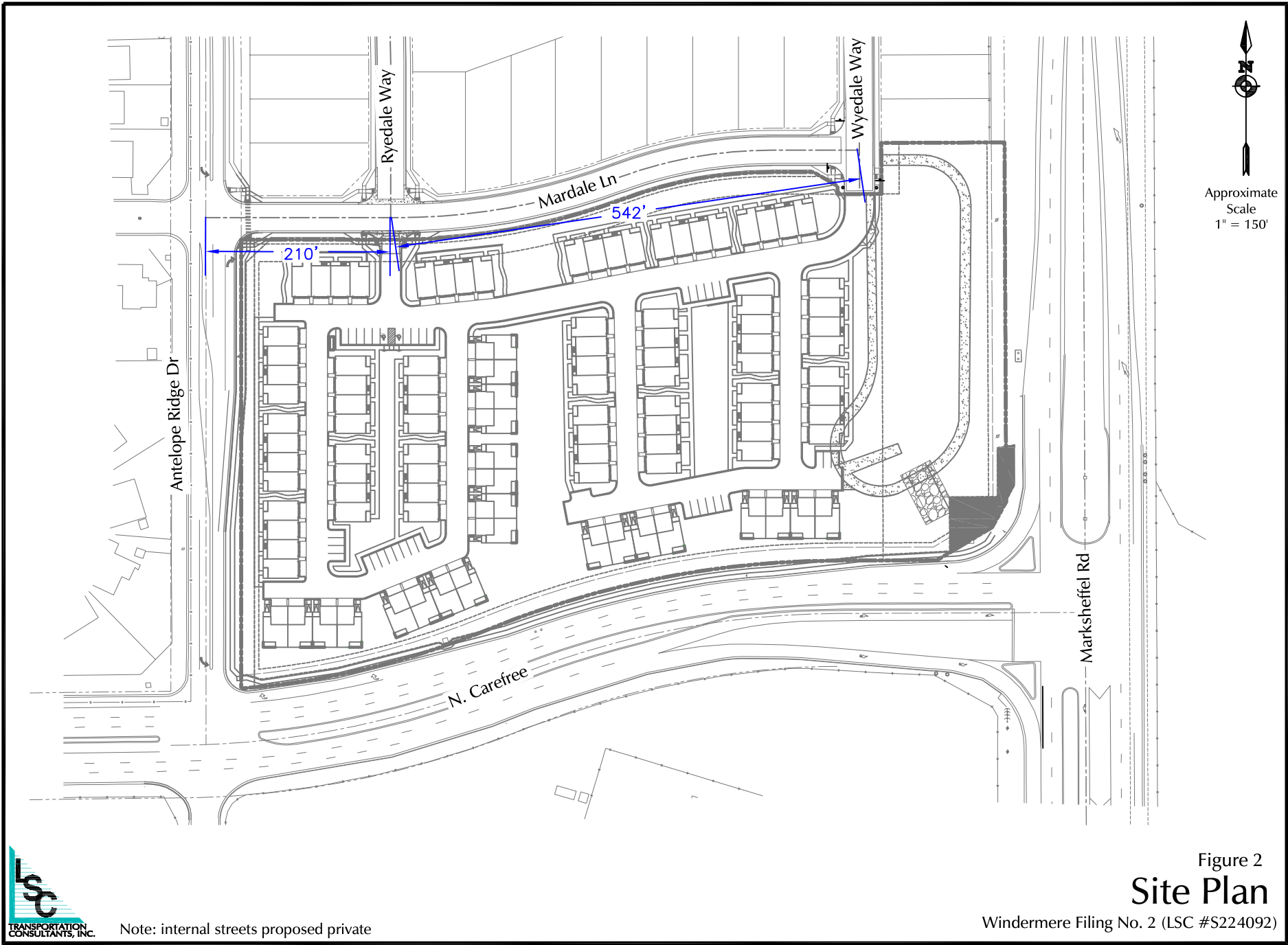
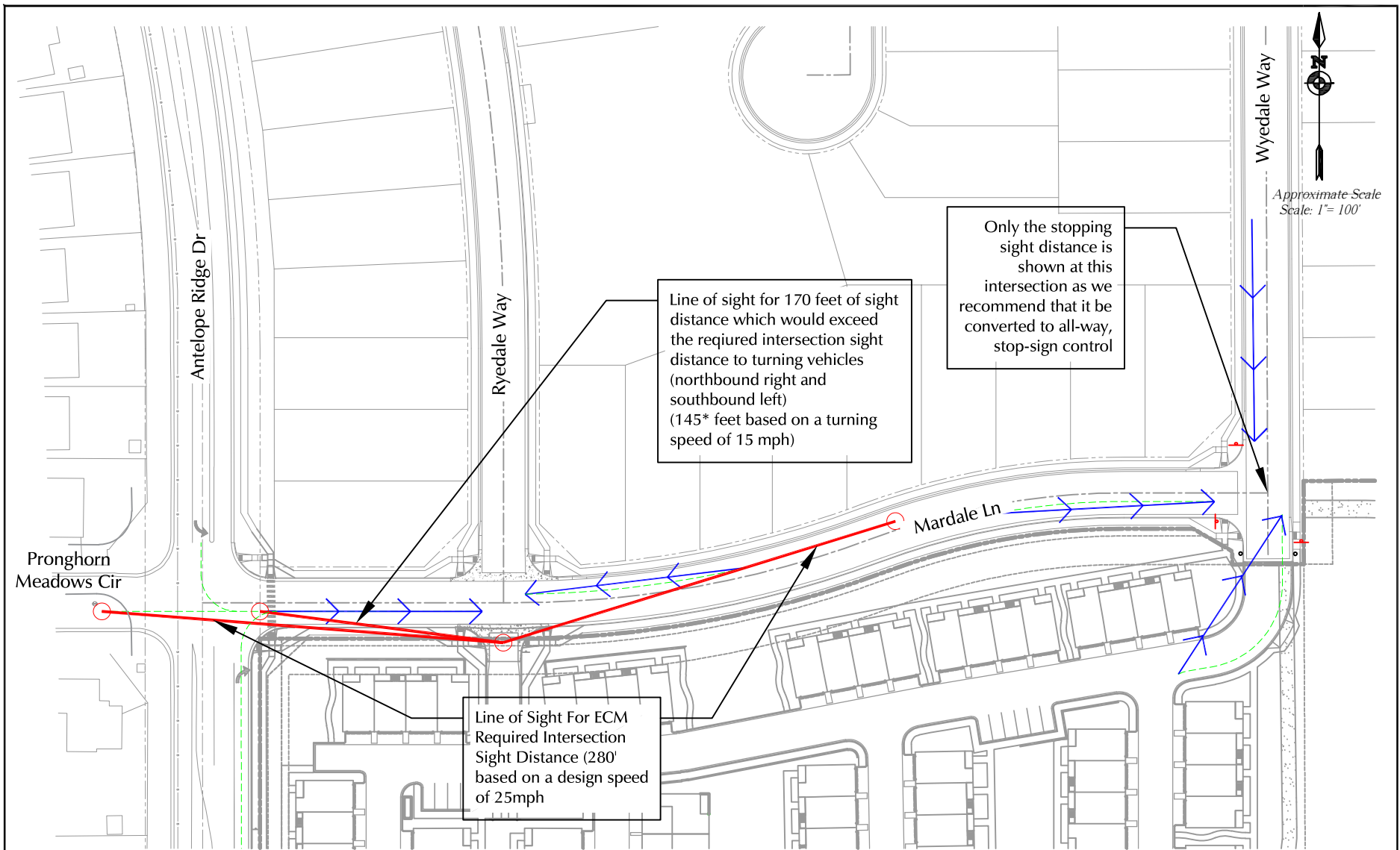





Figure 2  
**Site Plan**



LEGEND:

-  = ECM Required Stopping Sight Distance (155' based on a design speed of 25mph)
-  = Line of Sight For Intersection Sight Distance
-  = Vehicle Path

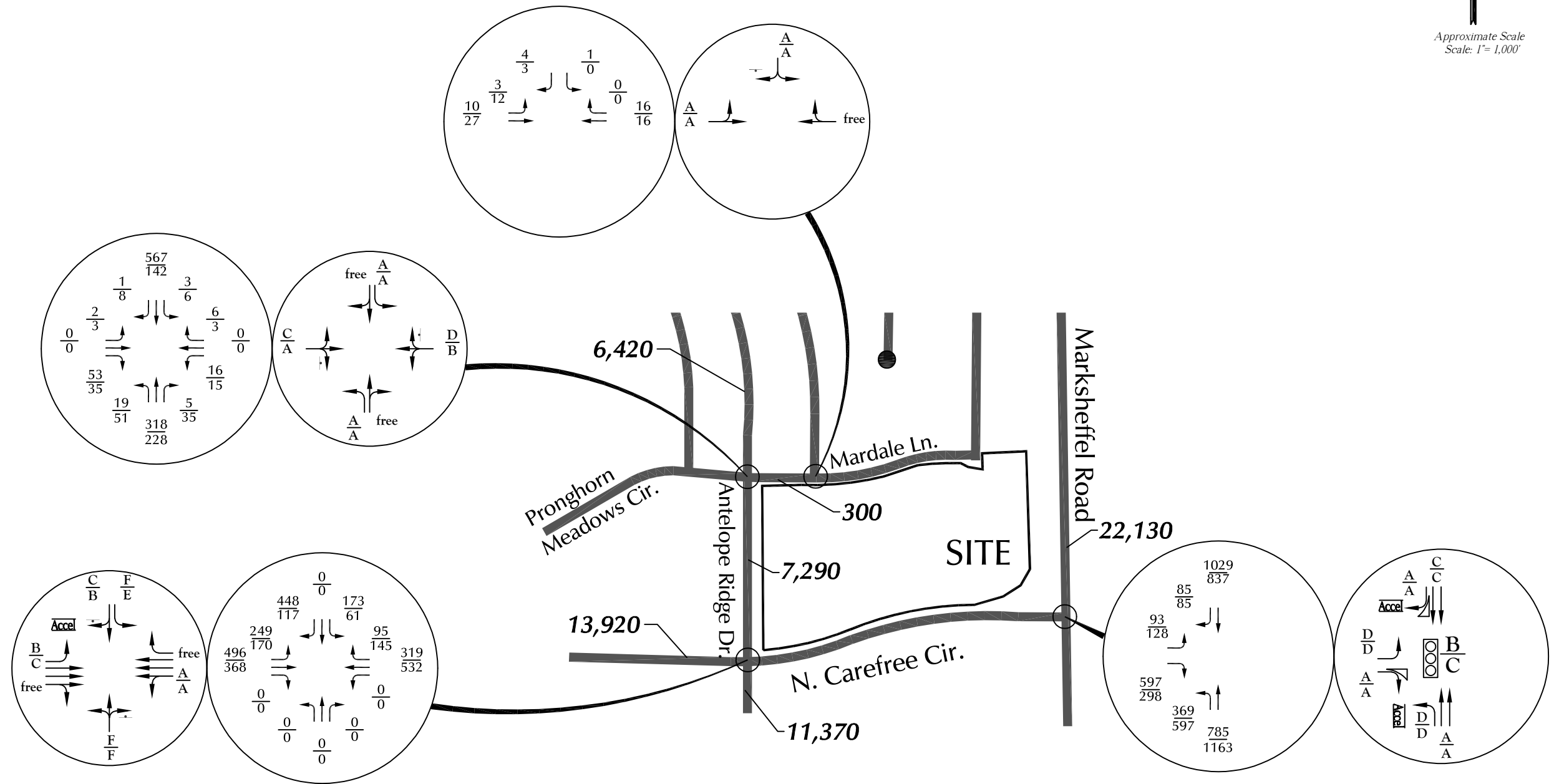
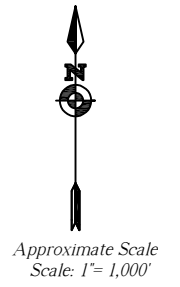
\* Source: Table 9-11 Section 9.5.3.2.3 Case B3—Crossing Maneuver from the Minor Road from *A Policy on Geometric Design of Highways and Streets* 18th Edition © 2018 by the American Association of State Highway and Transportation Officials.

# Sight Distance Analysis of Site Access Location

Windermere Filing No. 2 (LSC #S224092)



Figure 3



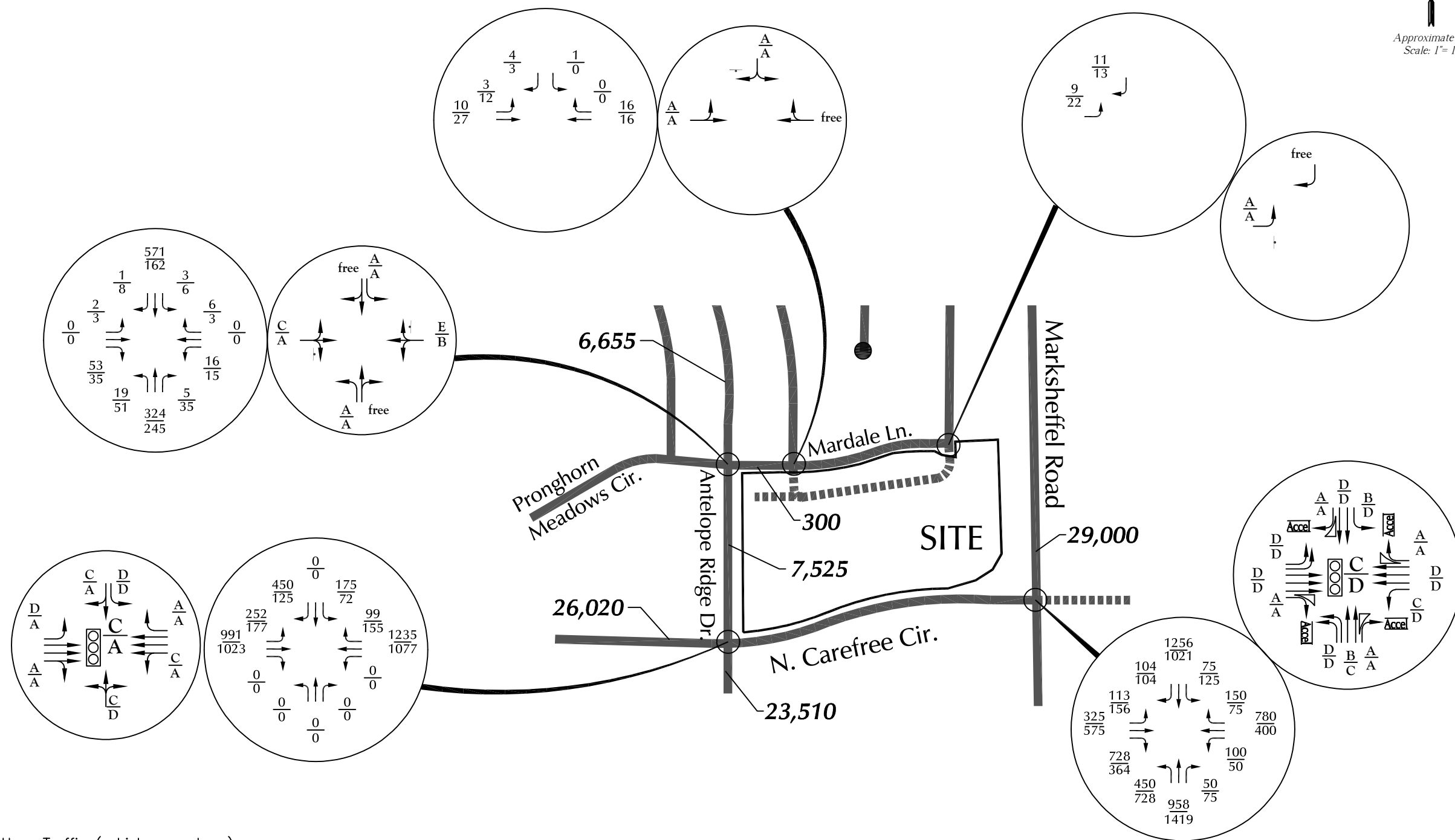
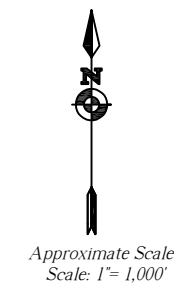
**LEGEND:**

- = Stop Sign
- = Traffic Signal
- $\frac{XX}{XX}$  = AM Weekday Peak-Hour Traffic (vehicles per hour) / PM Weekday Peak-Hour Traffic (vehicles per hour) (April 2025)
- $\frac{A}{C}$  = AM Individual Movement Peak-Hour Level of Service / PM Individual Movement Peak-Hour Level of Service
- $\frac{A}{D}$  = AM Entire Intersection Peak-Hour Level of Service / PM Entire Intersection Peak-Hour Level of Service

**16,330** = Average Weekday Traffic (vehicles per day) (Estimates by LSC based on peak-hour count data)

Figure 4  
**Existing Traffic,  
 Lane Geometry, Traffic Control  
 and Levels of Service**





**LEGEND:**

= Stop Sign

= Traffic Signal

$\frac{XX}{XX}$  = AM Weekday Peak-Hour Traffic (vehicles per hour)  
 PM Weekday Peak-Hour Traffic (vehicles per hour) (April 2025)

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

$\frac{A}{D}$  = AM Entire Intersection Peak-Hour Level of Service  
 PM Entire Intersection Peak-Hour Level of Service

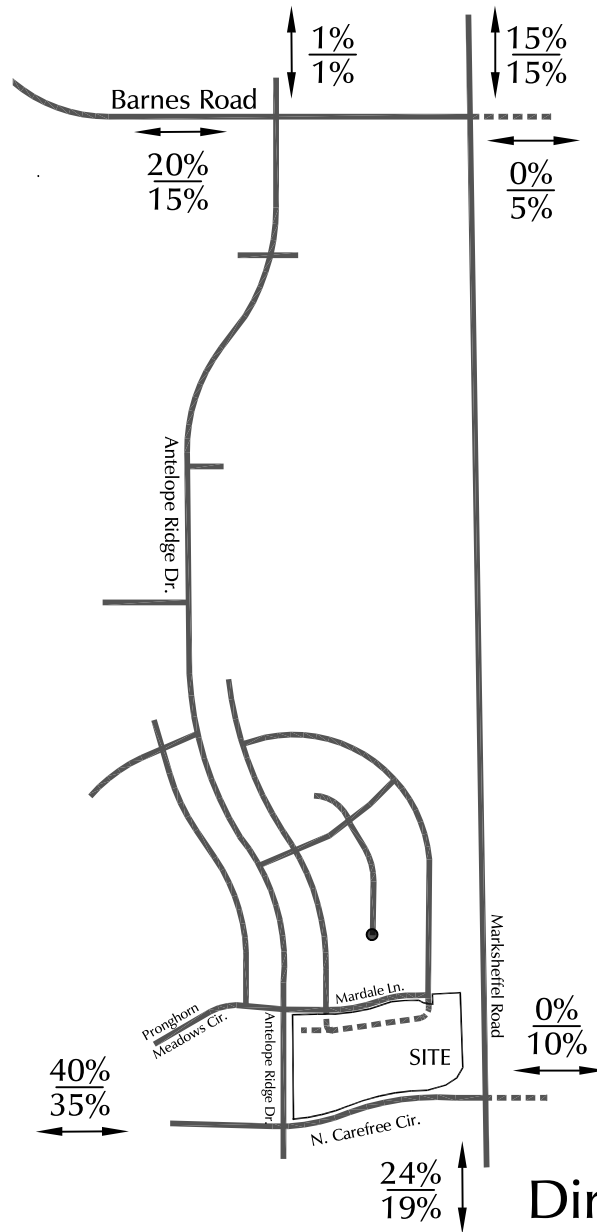
16,330 = Average Weekday Traffic (vehicles per day)


Figure 5

# 2045 Background Traffic, Lane Geometry, Traffic Control and Levels of Service

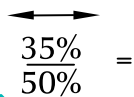
Windermere Filing No. 2 (LSC #S224092)





  
 Approximate Scale  
 Scale: 1" = 1,000'

LEGEND:

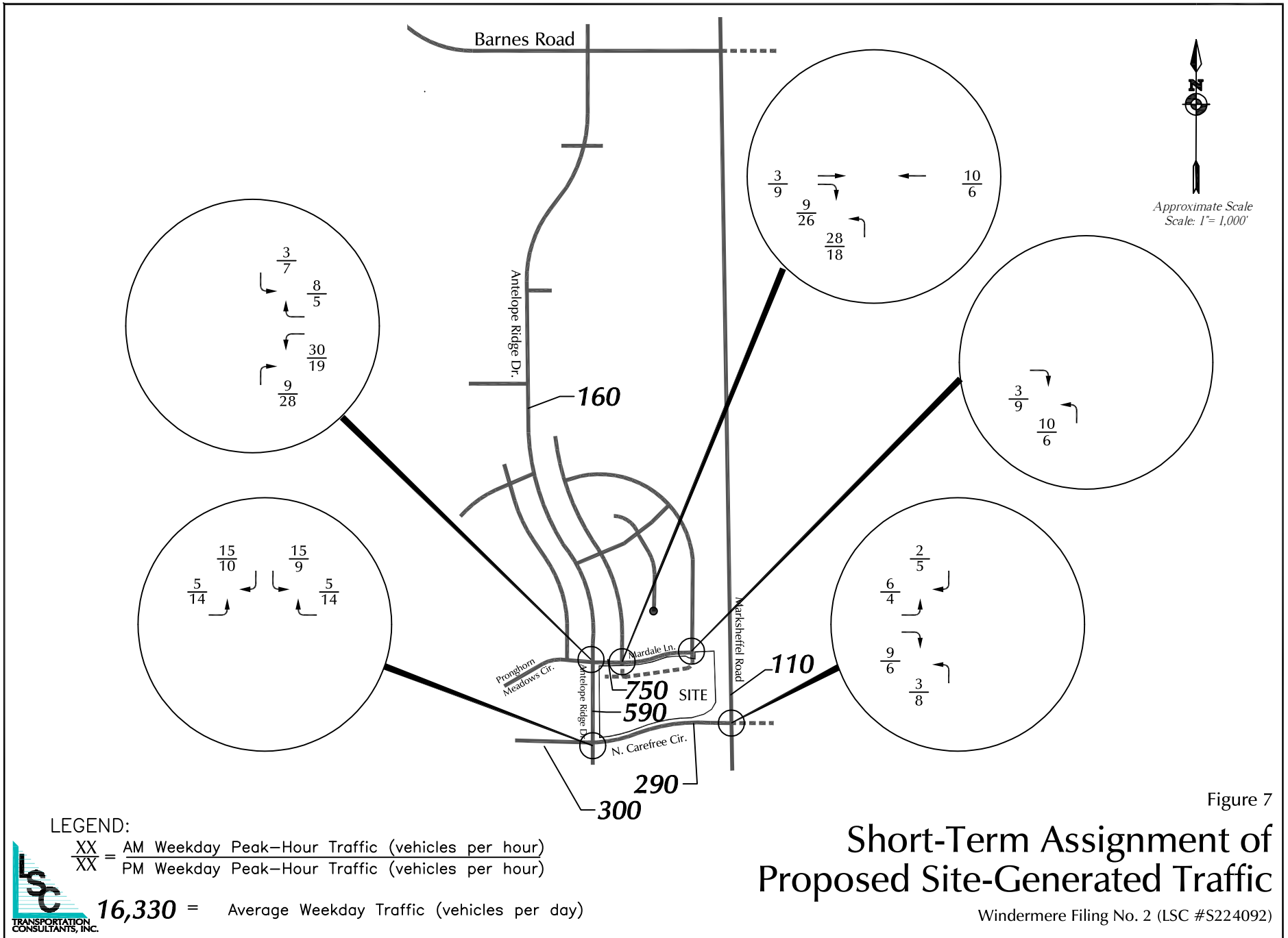


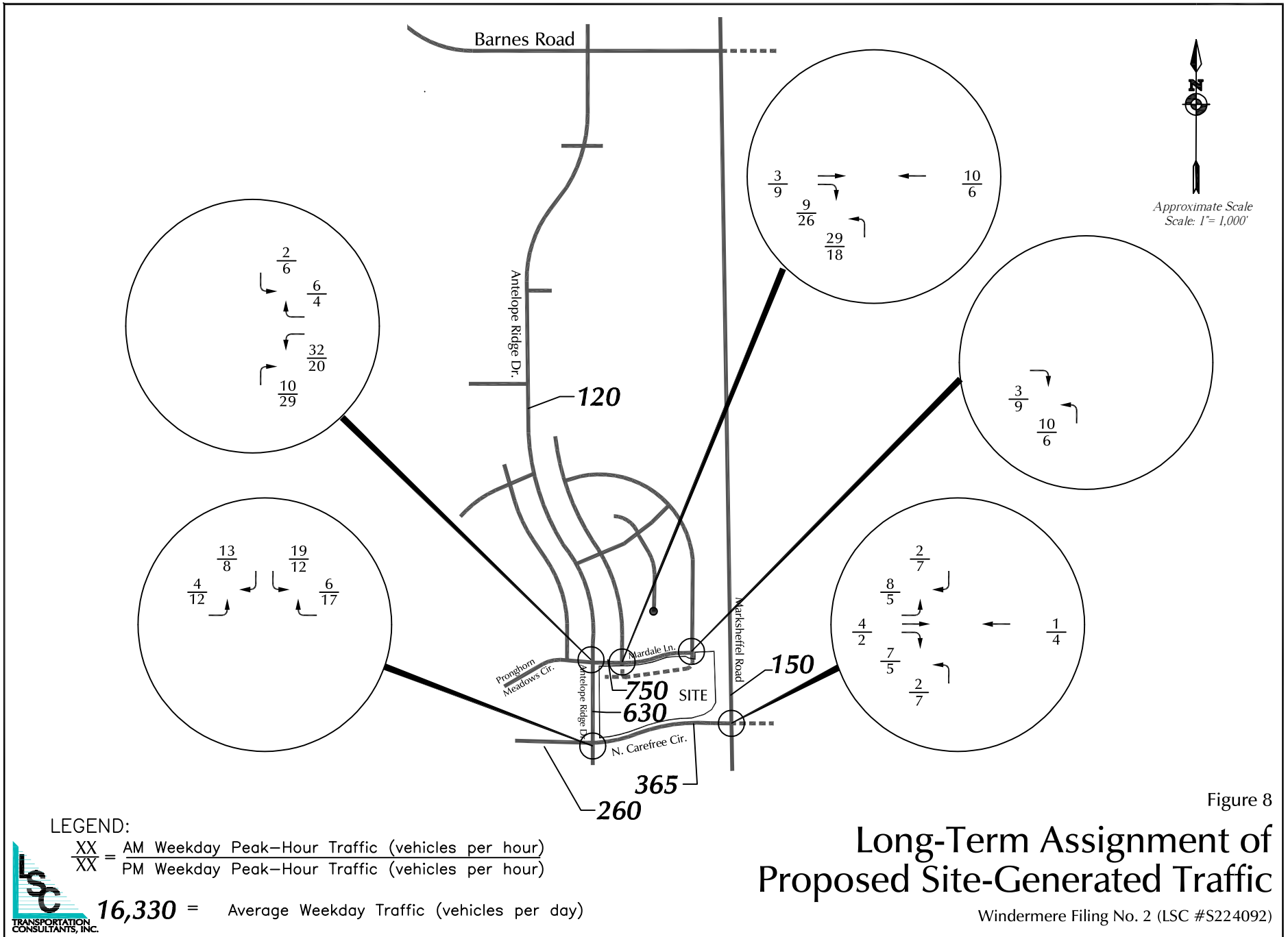
Short-Term Percent Directional Distribution  
 Long-Term Percent Directional Distribution

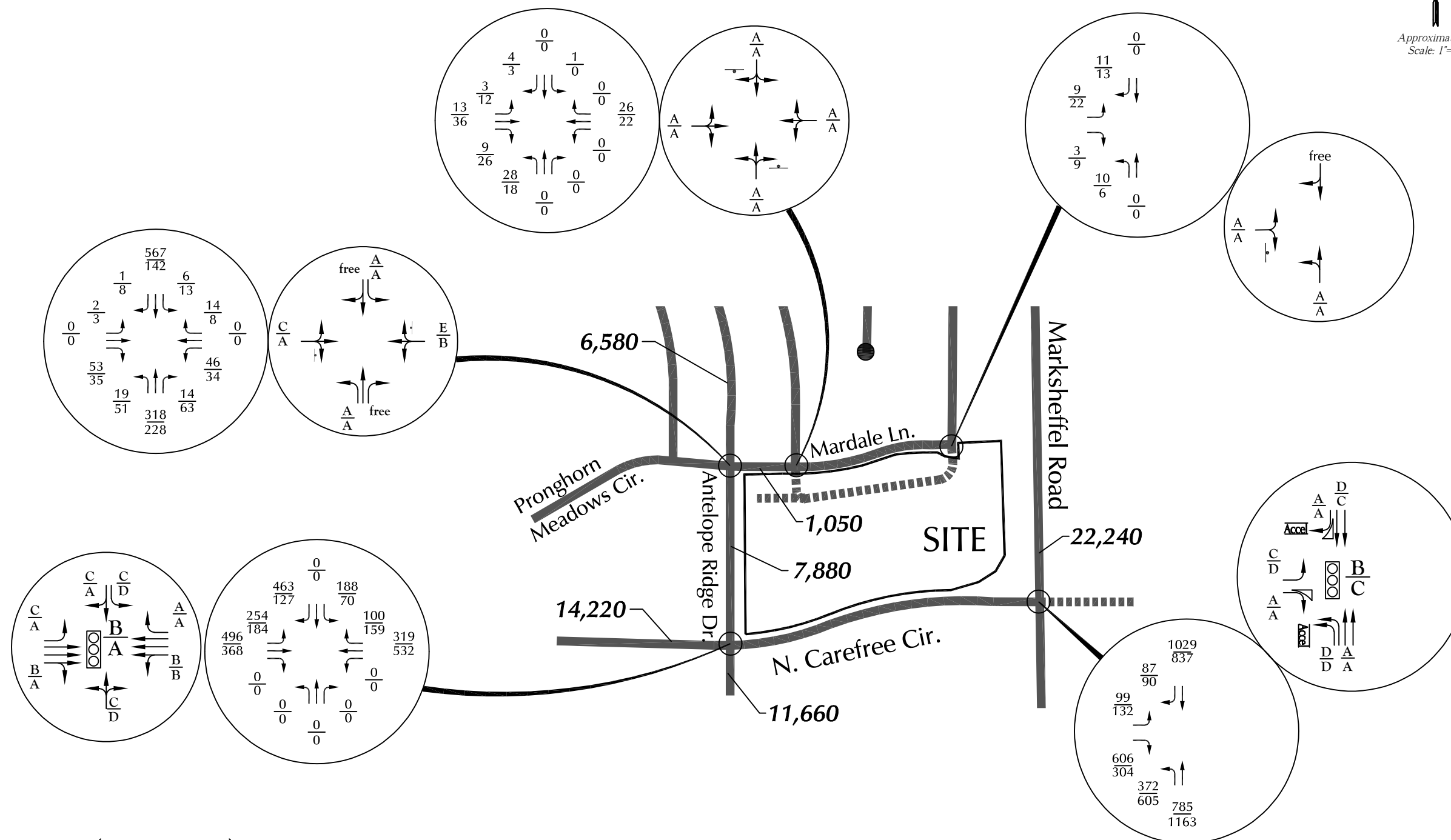


Figure 6  
**Directional Distribution  
 of Site-Generated Traffic**

Windermere Filing No. 2 (LSC #S224092)







LEGEND:

⊥ = Stop Sign

⊞ = Traffic Signal

XX = AM Weekday Peak-Hour Traffic (vehicles per hour)

XX = PM Weekday Peak-Hour Traffic (vehicles per hour)

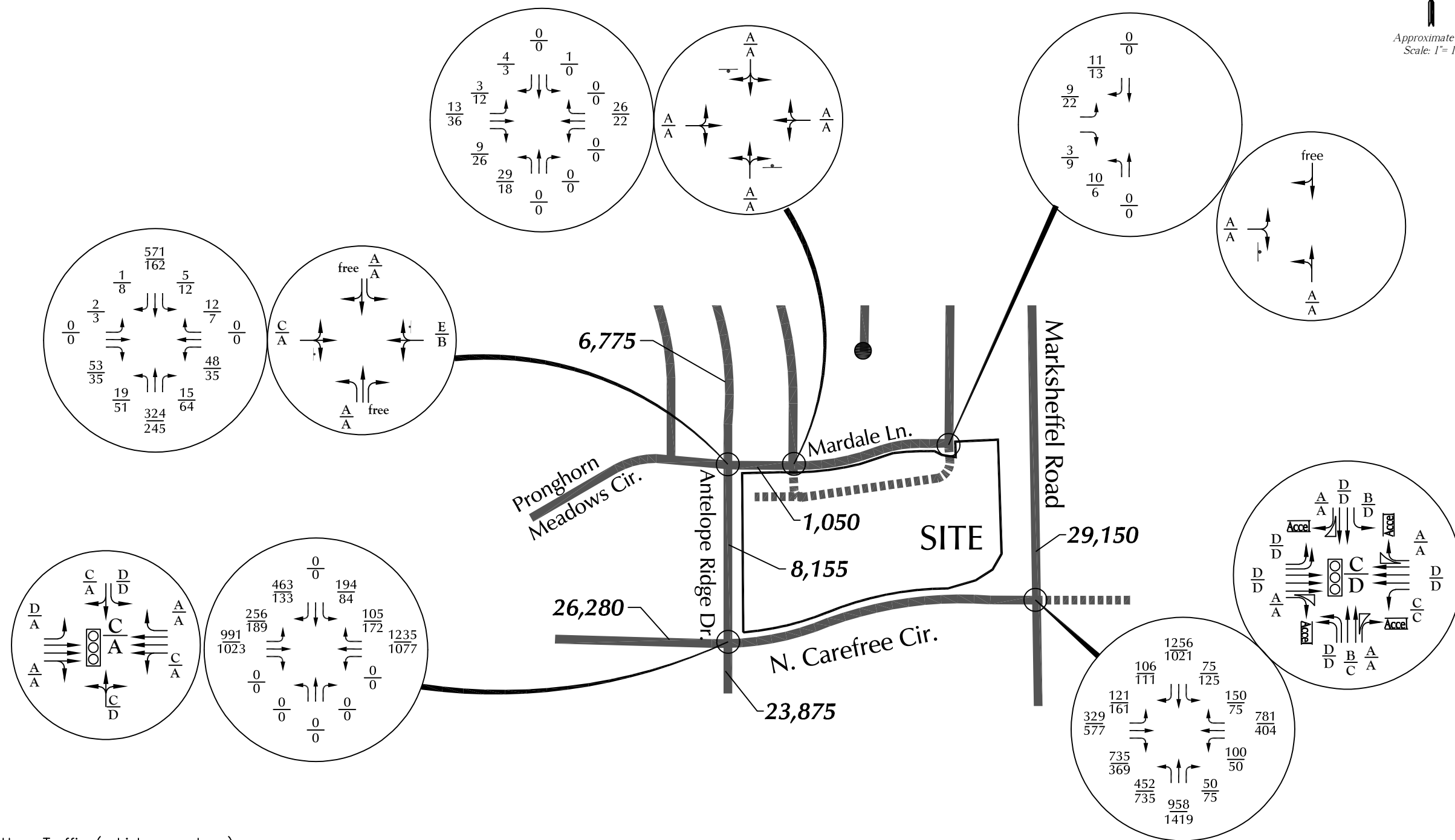
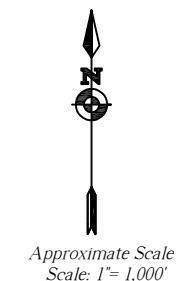
A = AM Individual Movement Peak-Hour Level of Service  
C = PM Individual Movement Peak-Hour Level of Service

A = AM Entire Intersection Peak-Hour Level of Service  
D = PM Entire Intersection Peak-Hour Level of Service

16,330 = Average Weekday Traffic (vehicles per day)

Figure 9

Existing plus Site-Generated Traffic,  
Lane Geometry, Traffic Control  
and Levels of Service



**LEGEND:**

⊥ = Stop Sign

⊞ = Traffic Signal

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

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

$\frac{A}{D}$  = AM Entire Intersection Peak-Hour Level of Service  
 PM Entire Intersection Peak-Hour Level of Service

16,330 = Average Weekday Traffic (vehicles per day)

Figure 10

# 2045 Total Traffic, Lane Geometry, Traffic Control and Levels of Service

Windermere Filing No. 2 (LSC #S224092)



# Traffic Counts

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# LSC Transportation Consultants, Inc.

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File Name : Antelope Ridge Dr - Mardale Way AM 4-23-25

Site Code : S224091

Start Date : 4/23/2025

Page No : 1

### Groups Printed- Unshifted

| Start Time  | Antelope Ridge Dr Southbound |      |      |      |            | Mardale Way Westbound |      |      |      |            | Antelope Ridge Dr Northbound |      |      |      |            | Pronghorn Meadows Cir Eastbound |      |      |      |            | Int. Total |
|-------------|------------------------------|------|------|------|------------|-----------------------|------|------|------|------------|------------------------------|------|------|------|------------|---------------------------------|------|------|------|------------|------------|
|             | Right                        | Thru | Left | Peds | App. Total | Right                 | Thru | Left | Peds | App. Total | Right                        | Thru | Left | Peds | App. Total | Right                           | Thru | Left | Peds | App. Total |            |
| 06:30       | 0                            | 25   | 0    | 0    | 25         | 0                     | 0    | 3    | 0    | 3          | 1                            | 7    | 0    | 0    | 8          | 7                               | 0    | 1    | 0    | 8          | 44         |
| 06:45       | 0                            | 43   | 0    | 0    | 43         | 0                     | 0    | 3    | 0    | 3          | 1                            | 23   | 2    | 0    | 26         | 5                               | 0    | 0    | 0    | 5          | 77         |
| Total       | 0                            | 68   | 0    | 0    | 68         | 0                     | 0    | 6    | 0    | 6          | 2                            | 30   | 2    | 0    | 34         | 12                              | 0    | 1    | 0    | 13         | 121        |
| 07:00       | 0                            | 68   | 1    | 0    | 69         | 0                     | 0    | 6    | 0    | 6          | 1                            | 27   | 3    | 0    | 31         | 15                              | 0    | 2    | 0    | 17         | 123        |
| 07:15       | 0                            | 108  | 0    | 0    | 108        | 2                     | 0    | 4    | 0    | 6          | 0                            | 87   | 5    | 0    | 92         | 16                              | 0    | 1    | 0    | 17         | 223        |
| 07:30       | 0                            | 167  | 2    | 0    | 169        | 4                     | 0    | 7    | 0    | 11         | 1                            | 99   | 2    | 0    | 102        | 16                              | 0    | 0    | 0    | 16         | 298        |
| 07:45       | 1                            | 188  | 0    | 0    | 189        | 0                     | 0    | 1    | 0    | 1          | 1                            | 96   | 3    | 0    | 100        | 14                              | 0    | 0    | 0    | 14         | 304        |
| Total       | 1                            | 531  | 3    | 0    | 535        | 6                     | 0    | 18   | 0    | 24         | 3                            | 309  | 13   | 0    | 325        | 61                              | 0    | 3    | 0    | 64         | 948        |
| 08:00       | 0                            | 104  | 1    | 0    | 105        | 0                     | 0    | 4    | 0    | 4          | 3                            | 36   | 9    | 0    | 48         | 7                               | 0    | 1    | 0    | 8          | 165        |
| 08:15       | 0                            | 39   | 0    | 0    | 39         | 1                     | 0    | 3    | 0    | 4          | 2                            | 23   | 2    | 0    | 27         | 7                               | 0    | 1    | 0    | 8          | 78         |
| Grand Total | 1                            | 742  | 4    | 0    | 747        | 7                     | 0    | 31   | 0    | 38         | 10                           | 398  | 26   | 0    | 434        | 87                              | 0    | 6    | 0    | 93         | 1312       |
| Apprch %    | 0.1                          | 99.3 | 0.5  | 0    |            | 18.4                  | 0    | 81.6 | 0    |            | 2.3                          | 91.7 | 6    | 0    |            | 93.5                            | 0    | 6.5  | 0    |            |            |
| Total %     | 0.1                          | 56.6 | 0.3  | 0    | 56.9       | 0.5                   | 0    | 2.4  | 0    | 2.9        | 0.8                          | 30.3 | 2    | 0    | 33.1       | 6.6                             | 0    | 0.5  | 0    | 7.1        |            |

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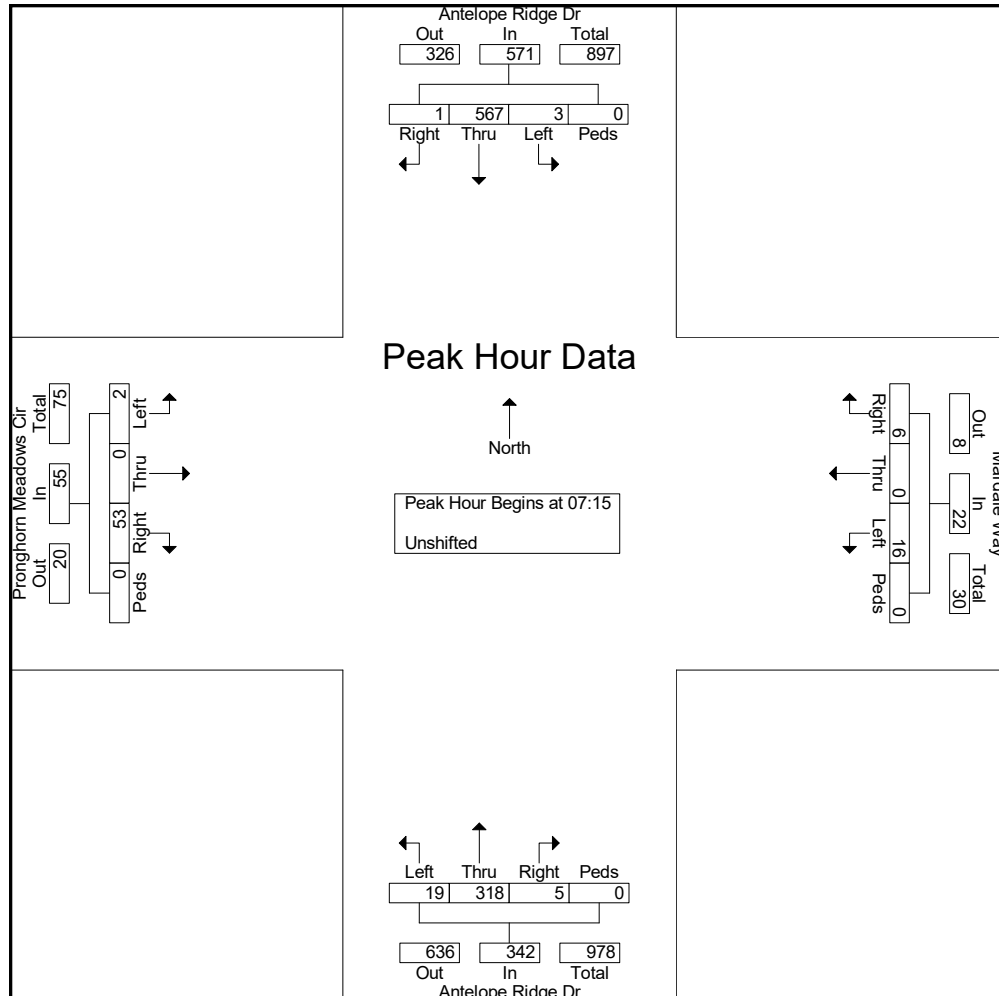
File Name : Antelope Ridge Dr - Mardale Way AM 4-23-25

Site Code : S224091

Start Date : 4/23/2025

Page No : 2

| Start Time   | Antelope Ridge Dr Southbound |      |      |      |            | Mardale Way Westbound |      |      |      |            | Antelope Ridge Dr Northbound |      |      |      |            | Pronghorn Meadows Cir Eastbound |      |      |      |            | Int. Total |
|--|------------------------------|------|------|------|------------|-----------------------|------|------|------|------------|------------------------------|------|------|------|------------|---------------------------------|------|------|------|------------|------------|
|  | Right                        | Thru | Left | Peds | App. Total | Right                 | Thru | Left | Peds | App. Total | Right                        | Thru | Left | Peds | App. Total | Right                           | Thru | Left | Peds | App. Total |            |
| Peak Hour Analysis From 06:30 to 08:15 - Peak 1 of 1 |                              |      |      |      |            |                       |      |      |      |            |                              |      |      |      |            |                                 |      |      |      |            |            |
| Peak Hour for Entire Intersection Begins at 07:15    |                              |      |      |      |            |                       |      |      |      |            |                              |      |      |      |            |                                 |      |      |      |            |            |
| 07:15  | 0                            | 108  | 0    | 0    | 108        | 2                     | 0    | 4    | 0    | 6          | 0                            | 87   | 5    | 0    | 92         | 16                              | 0    | 1    | 0    | 17         | 223        |
| 07:30  | 0                            | 167  | 2    | 0    | 169        | 4                     | 0    | 7    | 0    | 11         | 1                            | 99   | 2    | 0    | 102        | 16                              | 0    | 0    | 0    | 16         | 298        |
| 07:45  | 1                            | 188  | 0    | 0    | 189        | 0                     | 0    | 1    | 0    | 1          | 1                            | 96   | 3    | 0    | 100        | 14                              | 0    | 0    | 0    | 14         | 304        |
| 08:00  | 0                            | 104  | 1    | 0    | 105        | 0                     | 0    | 4    | 0    | 4          | 3                            | 36   | 9    | 0    | 48         | 7                               | 0    | 1    | 0    | 8          | 165        |
| Total Volume   | 1                            | 567  | 3    | 0    | 571        | 6                     | 0    | 16   | 0    | 22         | 5                            | 318  | 19   | 0    | 342        | 53                              | 0    | 2    | 0    | 55         | 990        |
| % App. Total   | 0.2                          | 99.3 | 0.5  | 0    |            | 27.3                  | 0    | 72.7 | 0    |            | 1.5                          | 93   | 5.6  | 0    |            | 96.4                            | 0    | 3.6  | 0    |            |            |
| PHF  | .250                         | .754 | .375 | .000 | .755       | .375                  | .000 | .571 | .000 | .500       | .417                         | .803 | .528 | .000 | .838       | .828                            | .000 | .500 | .000 | .809       | .814       |



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Site Code : S224091

Start Date : 4/22/2025

Page No : 1

### Groups Printed- Unshifted

| Start Time   | Antelope Ridge Dr Southbound |            |          |          |            | Mardale Way Westbound |          |           |          |            | Antelope Ridge Dr Northbound |            |           |          |            | Pronghorn Meadows Cir Eastbound |          |          |          |            | Int. Total |
|--------------|------------------------------|------------|----------|----------|------------|-----------------------|----------|-----------|----------|------------|------------------------------|------------|-----------|----------|------------|---------------------------------|----------|----------|----------|------------|------------|
|              | Right                        | Thru       | Left     | Peds     | App. Total | Right                 | Thru     | Left      | Peds     | App. Total | Right                        | Thru       | Left      | Peds     | App. Total | Right                           | Thru     | Left     | Peds     | App. Total |            |
| 16:00        | 2                            | 39         | 0        | 0        | 41         | 1                     | 0        | 5         | 0        | 6          | 0                            | 45         | 12        | 0        | 57         | 4                               | 0        | 1        | 0        | 5          | 109        |
| 16:15        | 1                            | 25         | 0        | 0        | 26         | 0                     | 0        | 2         | 0        | 2          | 6                            | 47         | 8         | 0        | 61         | 3                               | 1        | 0        | 0        | 4          | 93         |
| 16:30        | 0                            | 40         | 0        | 0        | 40         | 1                     | 0        | 3         | 0        | 4          | 9                            | 58         | 8         | 0        | 75         | 1                               | 0        | 1        | 0        | 2          | 121        |
| 16:45        | 1                            | 49         | 0        | 0        | 50         | 0                     | 0        | 5         | 0        | 5          | 11                           | 58         | 12        | 0        | 81         | 8                               | 0        | 0        | 0        | 8          | 144        |
| <b>Total</b> | <b>4</b>                     | <b>153</b> | <b>0</b> | <b>0</b> | <b>157</b> | <b>2</b>              | <b>0</b> | <b>15</b> | <b>0</b> | <b>17</b>  | <b>26</b>                    | <b>208</b> | <b>40</b> | <b>0</b> | <b>274</b> | <b>16</b>                       | <b>1</b> | <b>2</b> | <b>0</b> | <b>19</b>  | <b>467</b> |
| 17:00        | 1                            | 28         | 1        | 0        | 30         | 1                     | 0        | 1         | 0        | 2          | 9                            | 62         | 10        | 0        | 81         | 8                               | 0        | 0        | 0        | 8          | 121        |
| 17:15        | 1                            | 30         | 2        | 0        | 33         | 2                     | 0        | 6         | 0        | 8          | 8                            | 54         | 12        | 0        | 74         | 10                              | 0        | 0        | 0        | 10         | 125        |
| 17:30        | 5                            | 35         | 3        | 0        | 43         | 0                     | 0        | 3         | 0        | 3          | 7                            | 54         | 17        | 0        | 78         | 9                               | 0        | 3        | 0        | 12         | 136        |
| 17:45        | 3                            | 36         | 0        | 0        | 39         | 0                     | 0        | 3         | 0        | 3          | 3                            | 36         | 10        | 0        | 49         | 6                               | 0        | 1        | 0        | 7          | 98         |
| <b>Total</b> | <b>10</b>                    | <b>129</b> | <b>6</b> | <b>0</b> | <b>145</b> | <b>3</b>              | <b>0</b> | <b>13</b> | <b>0</b> | <b>16</b>  | <b>27</b>                    | <b>206</b> | <b>49</b> | <b>0</b> | <b>282</b> | <b>33</b>                       | <b>0</b> | <b>4</b> | <b>0</b> | <b>37</b>  | <b>480</b> |
| Grand Total  | 14                           | 282        | 6        | 0        | 302        | 5                     | 0        | 28        | 0        | 33         | 53                           | 414        | 89        | 0        | 556        | 49                              | 1        | 6        | 0        | 56         | 947        |
| Apprch %     | 4.6                          | 93.4       | 2        | 0        |            | 15.2                  | 0        | 84.8      | 0        |            | 9.5                          | 74.5       | 16        | 0        |            | 87.5                            | 1.8      | 10.7     | 0        |            |            |
| Total %      | 1.5                          | 29.8       | 0.6      | 0        | 31.9       | 0.5                   | 0        | 3         | 0        | 3.5        | 5.6                          | 43.7       | 9.4       | 0        | 58.7       | 5.2                             | 0.1      | 0.6      | 0        | 5.9        |            |

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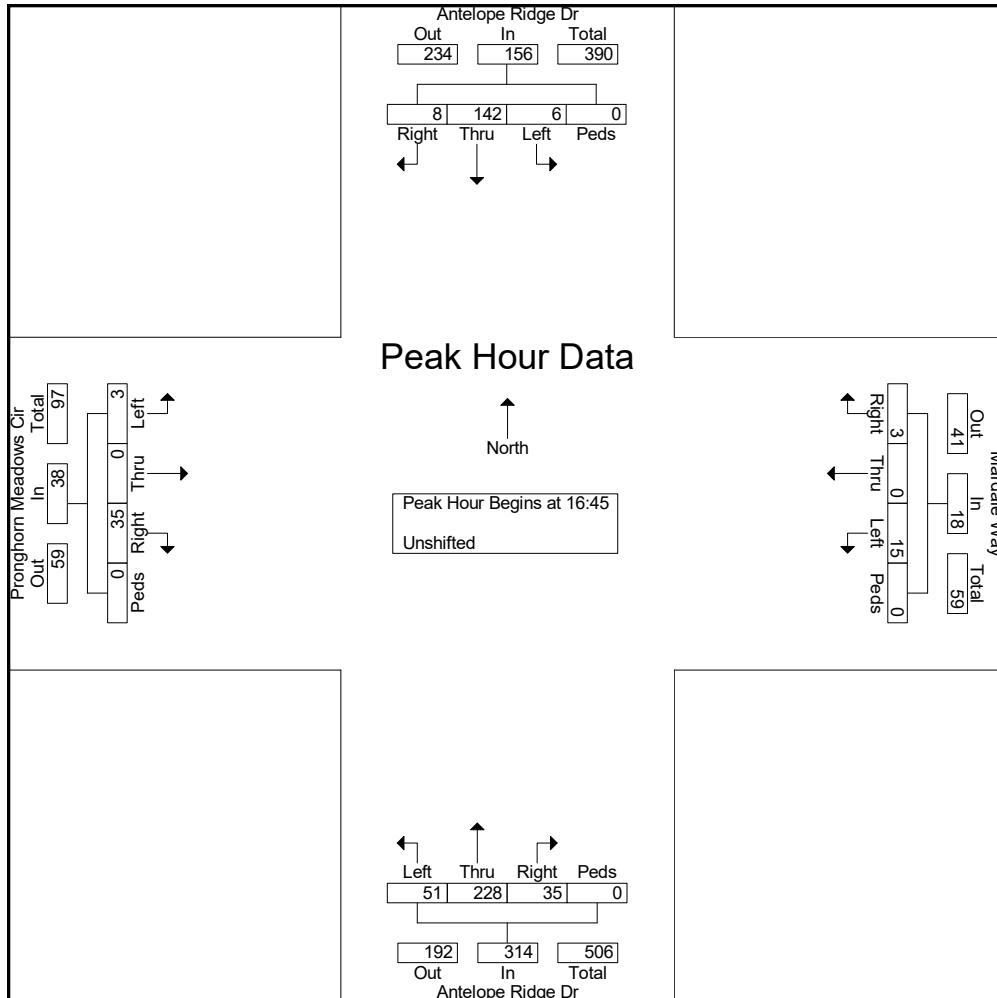
File Name : Antelope Ridge Dr - Mardale Way PM 4-22-25

Site Code : S224091

Start Date : 4/22/2025

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| Start Time   | Antelope Ridge Dr Southbound |      |      |      |            | Mardale Way Westbound |      |      |      |            | Antelope Ridge Dr Northbound |      |      |      |            | Pronghorn Meadows Cir Eastbound |      |      |      |            | Int. Total |
|--|------------------------------|------|------|------|------------|-----------------------|------|------|------|------------|------------------------------|------|------|------|------------|---------------------------------|------|------|------|------------|------------|
|  | Right                        | Thru | Left | Peds | App. Total | Right                 | Thru | Left | Peds | App. Total | Right                        | Thru | Left | Peds | App. Total | Right                           | Thru | Left | Peds | App. Total |            |
| Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1 |                              |      |      |      |            |                       |      |      |      |            |                              |      |      |      |            |                                 |      |      |      |            |            |
| Peak Hour for Entire Intersection Begins at 16:45    |                              |      |      |      |            |                       |      |      |      |            |                              |      |      |      |            |                                 |      |      |      |            |            |
| 16:45  | 1                            | 49   | 0    | 0    | 50         | 0                     | 0    | 5    | 0    | 5          | 11                           | 58   | 12   | 0    | 81         | 8                               | 0    | 0    | 0    | 8          | 144        |
| 17:00  | 1                            | 28   | 1    | 0    | 30         | 1                     | 0    | 1    | 0    | 2          | 9                            | 62   | 10   | 0    | 81         | 8                               | 0    | 0    | 0    | 8          | 121        |
| 17:15  | 1                            | 30   | 2    | 0    | 33         | 2                     | 0    | 6    | 0    | 8          | 8                            | 54   | 12   | 0    | 74         | 10                              | 0    | 0    | 0    | 10         | 125        |
| 17:30  | 5                            | 35   | 3    | 0    | 43         | 0                     | 0    | 3    | 0    | 3          | 7                            | 54   | 17   | 0    | 78         | 9                               | 0    | 3    | 0    | 12         | 136        |
| Total Volume   | 8                            | 142  | 6    | 0    | 156        | 3                     | 0    | 15   | 0    | 18         | 35                           | 228  | 51   | 0    | 314        | 35                              | 0    | 3    | 0    | 38         | 526        |
| % App. Total   | 5.1                          | 91   | 3.8  | 0    |            | 16.7                  | 0    | 83.3 | 0    |            | 11.1                         | 72.6 | 16.2 | 0    |            | 92.1                            | 0    | 7.9  | 0    |            |            |
| PHF  | .400                         | .724 | .500 | .000 | .780       | .375                  | .000 | .625 | .000 | .563       | .795                         | .919 | .750 | .000 | .969       | .875                            | .000 | .250 | .000 | .792       | .913       |



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File Name : Ryedale Way - Mardale Way AM 4-23-25

Site Code : S224091

Start Date : 4/23/2025

Page No : 1

### Groups Printed- Unshifted

| Start Time         | Ryedale Way Southbound |      |      |      |            | Mardale Way Westbound |      |      |      |            | Northbound |      |      |      |            | Mardale Way Eastbound |      |      |      |            | Int. Total |
|--------------------|------------------------|------|------|------|------------|-----------------------|------|------|------|------------|------------|------|------|------|------------|-----------------------|------|------|------|------------|------------|
|                    | Right                  | Thru | Left | Peds | App. Total | Right                 | Thru | Left | Peds | App. Total | Right      | Thru | Left | Peds | App. Total | Right                 | Thru | Left | Peds | App. Total |            |
| 06:30              | 0                      | 0    | 0    | 0    | 0          | 0                     | 3    | 0    | 0    | 3          | 0          | 0    | 0    | 0    | 0          | 0                     | 1    | 0    | 0    | 1          | 4          |
| 06:45              | 0                      | 0    | 0    | 0    | 0          | 0                     | 1    | 0    | 0    | 1          | 0          | 0    | 0    | 0    | 0          | 0                     | 1    | 0    | 0    | 1          | 2          |
| <b>Total</b>       | 0                      | 0    | 0    | 0    | 0          | 0                     | 4    | 0    | 0    | 4          | 0          | 0    | 0    | 0    | 0          | 0                     | 2    | 0    | 0    | 2          | 6          |
| 07:00              | 3                      | 0    | 0    | 0    | 3          | 0                     | 3    | 0    | 0    | 3          | 0          | 0    | 0    | 0    | 0          | 0                     | 2    | 0    | 0    | 2          | 8          |
| 07:15              | 1                      | 0    | 0    | 0    | 1          | 0                     | 6    | 0    | 0    | 6          | 0          | 0    | 0    | 0    | 0          | 0                     | 4    | 1    | 0    | 5          | 12         |
| 07:30              | 2                      | 0    | 0    | 0    | 2          | 0                     | 6    | 0    | 4    | 10         | 0          | 0    | 0    | 0    | 0          | 0                     | 1    | 2    | 0    | 3          | 15         |
| 07:45              | 0                      | 0    | 0    | 0    | 0          | 0                     | 1    | 0    | 0    | 1          | 0          | 0    | 0    | 0    | 0          | 0                     | 1    | 0    | 0    | 1          | 2          |
| <b>Total</b>       | 6                      | 0    | 0    | 0    | 6          | 0                     | 16   | 0    | 4    | 20         | 0          | 0    | 0    | 0    | 0          | 0                     | 8    | 3    | 0    | 11         | 37         |
| 08:00              | 1                      | 0    | 1    | 0    | 2          | 0                     | 3    | 0    | 0    | 3          | 0          | 0    | 0    | 0    | 0          | 0                     | 4    | 0    | 0    | 4          | 9          |
| 08:15              | 2                      | 0    | 0    | 0    | 2          | 0                     | 2    | 0    | 0    | 2          | 0          | 0    | 0    | 0    | 0          | 0                     | 2    | 0    | 0    | 2          | 6          |
| <b>Grand Total</b> | 9                      | 0    | 1    | 0    | 10         | 0                     | 25   | 0    | 4    | 29         | 0          | 0    | 0    | 0    | 0          | 0                     | 16   | 3    | 0    | 19         | 58         |
| <b>Apprch %</b>    | 90                     | 0    | 10   | 0    |            | 0                     | 86.2 | 0    | 13.8 |            | 0          | 0    | 0    | 0    |            | 0                     | 84.2 | 15.8 | 0    |            |            |
| <b>Total %</b>     | 15.5                   | 0    | 1.7  | 0    | 17.2       | 0                     | 43.1 | 0    | 6.9  | 50         | 0          | 0    | 0    | 0    | 0          | 0                     | 27.6 | 5.2  | 0    | 32.8       |            |

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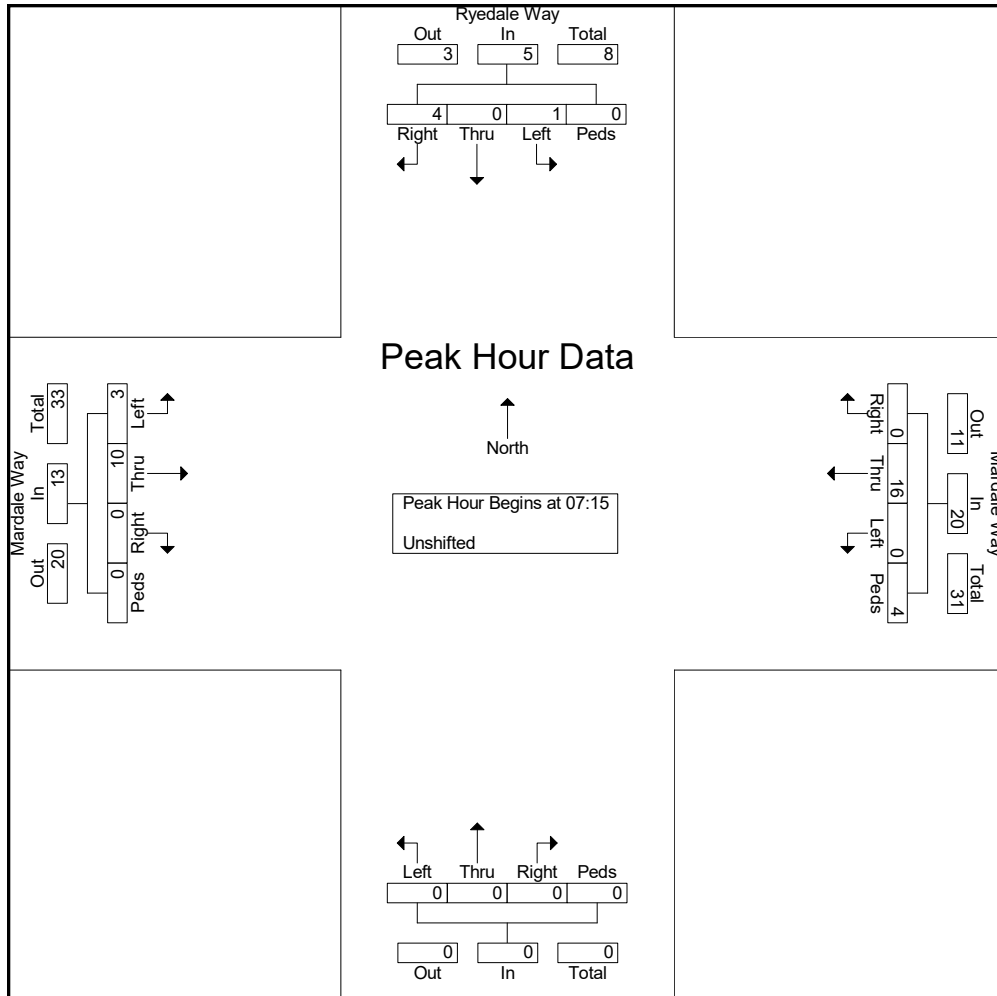
File Name : Ryedale Way - Mardale Way AM 4-23-25

Site Code : S224091

Start Date : 4/23/2025

Page No : 2

| Start Time   | Ryedale Way Southbound |      |      |      |            | Mardale Way Westbound |      |      |      |            | Northbound |      |      |      |            | Mardale Way Eastbound |      |      |      |            | Int. Total |
|--|------------------------|------|------|------|------------|-----------------------|------|------|------|------------|------------|------|------|------|------------|-----------------------|------|------|------|------------|------------|
|  | Right                  | Thru | Left | Peds | App. Total | Right                 | Thru | Left | Peds | App. Total | Right      | Thru | Left | Peds | App. Total | Right                 | Thru | Left | Peds | App. Total |            |
| Peak Hour Analysis From 06:30 to 08:15 - Peak 1 of 1 |                        |      |      |      |            |                       |      |      |      |            |            |      |      |      |            |                       |      |      |      |            |            |
| Peak Hour for Entire Intersection Begins at 07:15    |                        |      |      |      |            |                       |      |      |      |            |            |      |      |      |            |                       |      |      |      |            |            |
| 07:15  | 1                      | 0    | 0    | 0    | 1          | 0                     | 6    | 0    | 0    | 6          | 0          | 0    | 0    | 0    | 0          | 0                     | 4    | 1    | 0    | 5          | 12         |
| 07:30  | 2                      | 0    | 0    | 0    | 2          | 0                     | 6    | 0    | 4    | 10         | 0          | 0    | 0    | 0    | 0          | 0                     | 1    | 2    | 0    | 3          | 15         |
| 07:45  | 0                      | 0    | 0    | 0    | 0          | 0                     | 1    | 0    | 0    | 1          | 0          | 0    | 0    | 0    | 0          | 0                     | 1    | 0    | 0    | 1          | 2          |
| 08:00  | 1                      | 0    | 1    | 0    | 2          | 0                     | 3    | 0    | 0    | 3          | 0          | 0    | 0    | 0    | 0          | 0                     | 4    | 0    | 0    | 4          | 9          |
| Total Volume   | 4                      | 0    | 1    | 0    | 5          | 0                     | 16   | 0    | 4    | 20         | 0          | 0    | 0    | 0    | 0          | 0                     | 10   | 3    | 0    | 13         | 38         |
| % App. Total   | 80                     | 0    | 20   | 0    |            | 0                     | 80   | 0    | 20   |            | 0          | 0    | 0    | 0    |            | 0                     | 76.9 | 23.1 | 0    |            |            |
| PHF  | .500                   | .000 | .250 | .000 | .625       | .000                  | .667 | .000 | .250 | .500       | .000       | .000 | .000 | .000 | .000       | .000                  | .625 | .375 | .000 | .650       | .633       |



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File Name : Ryedale Way - Mardale Way PM 4-22-25

Site Code : S224091

Start Date : 4/22/2025

Page No : 1

### Groups Printed- Unshifted

| Start Time   | Ryedale Way Southbound |          |          |          |            | Mardale Wat Westbound |           |          |          |            | Northbound |          |          |          |            | Mardale Way Eastbound |           |           |          |            | Int. Total |           |
|--------------|------------------------|----------|----------|----------|------------|-----------------------|-----------|----------|----------|------------|------------|----------|----------|----------|------------|-----------------------|-----------|-----------|----------|------------|------------|-----------|
|              | Right                  | Thru     | Left     | Peds     | App. Total | Right                 | Thru      | Left     | Peds     | App. Total | Right      | Thru     | Left     | Peds     | App. Total | Right                 | Thru      | Left      | Peds     | App. Total |            |           |
| 16:00        | 3                      | 0        | 0        | 0        | 3          | 0                     | 3         | 0        | 0        | 3          | 0          | 0        | 0        | 0        | 0          | 0                     | 1         | 0         | 0        | 0          | 1          | 7         |
| 16:15        | 1                      | 0        | 0        | 0        | 1          | 0                     | 3         | 0        | 0        | 3          | 0          | 0        | 0        | 0        | 0          | 0                     | 4         | 3         | 0        | 0          | 7          | 11        |
| 16:30        | 1                      | 0        | 0        | 0        | 1          | 0                     | 3         | 0        | 0        | 3          | 0          | 0        | 0        | 0        | 0          | 0                     | 3         | 5         | 0        | 0          | 8          | 12        |
| 16:45        | 1                      | 0        | 0        | 0        | 1          | 0                     | 4         | 0        | 0        | 4          | 0          | 0        | 0        | 0        | 0          | 0                     | 10        | 4         | 0        | 0          | 14         | 19        |
| <b>Total</b> | <b>6</b>               | <b>0</b> | <b>0</b> | <b>0</b> | <b>6</b>   | <b>0</b>              | <b>13</b> | <b>0</b> | <b>0</b> | <b>13</b>  | <b>0</b>   | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>   | <b>0</b>              | <b>18</b> | <b>12</b> | <b>0</b> | <b>0</b>   | <b>30</b>  | <b>49</b> |
| 17:00        | 0                      | 0        | 0        | 0        | 0          | 0                     | 2         | 0        | 0        | 2          | 0          | 0        | 0        | 0        | 0          | 0                     | 9         | 1         | 0        | 0          | 10         | 12        |
| 17:15        | 1                      | 0        | 0        | 0        | 1          | 0                     | 7         | 0        | 0        | 7          | 0          | 0        | 0        | 0        | 0          | 0                     | 5         | 2         | 0        | 0          | 7          | 15        |
| 17:30        | 1                      | 0        | 0        | 0        | 1          | 0                     | 2         | 0        | 0        | 2          | 0          | 0        | 0        | 0        | 0          | 0                     | 5         | 4         | 0        | 0          | 9          | 12        |
| 17:45        | 1                      | 0        | 0        | 0        | 1          | 0                     | 1         | 0        | 0        | 1          | 0          | 0        | 0        | 0        | 0          | 0                     | 1         | 2         | 0        | 0          | 3          | 5         |
| <b>Total</b> | <b>3</b>               | <b>0</b> | <b>0</b> | <b>0</b> | <b>3</b>   | <b>0</b>              | <b>12</b> | <b>0</b> | <b>0</b> | <b>12</b>  | <b>0</b>   | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>   | <b>0</b>              | <b>20</b> | <b>9</b>  | <b>0</b> | <b>0</b>   | <b>29</b>  | <b>44</b> |
| Grand Total  | 9                      | 0        | 0        | 0        | 9          | 0                     | 25        | 0        | 0        | 25         | 0          | 0        | 0        | 0        | 0          | 0                     | 38        | 21        | 0        | 0          | 59         | 93        |
| Apprch %     | 100                    | 0        | 0        | 0        |            | 0                     | 100       | 0        | 0        |            | 0          | 0        | 0        | 0        |            | 0                     | 64.4      | 35.6      | 0        |            |            |           |
| Total %      | 9.7                    | 0        | 0        | 0        | 9.7        | 0                     | 26.9      | 0        | 0        | 26.9       | 0          | 0        | 0        | 0        | 0          | 0                     | 40.9      | 22.6      | 0        | 0          | 63.4       |           |

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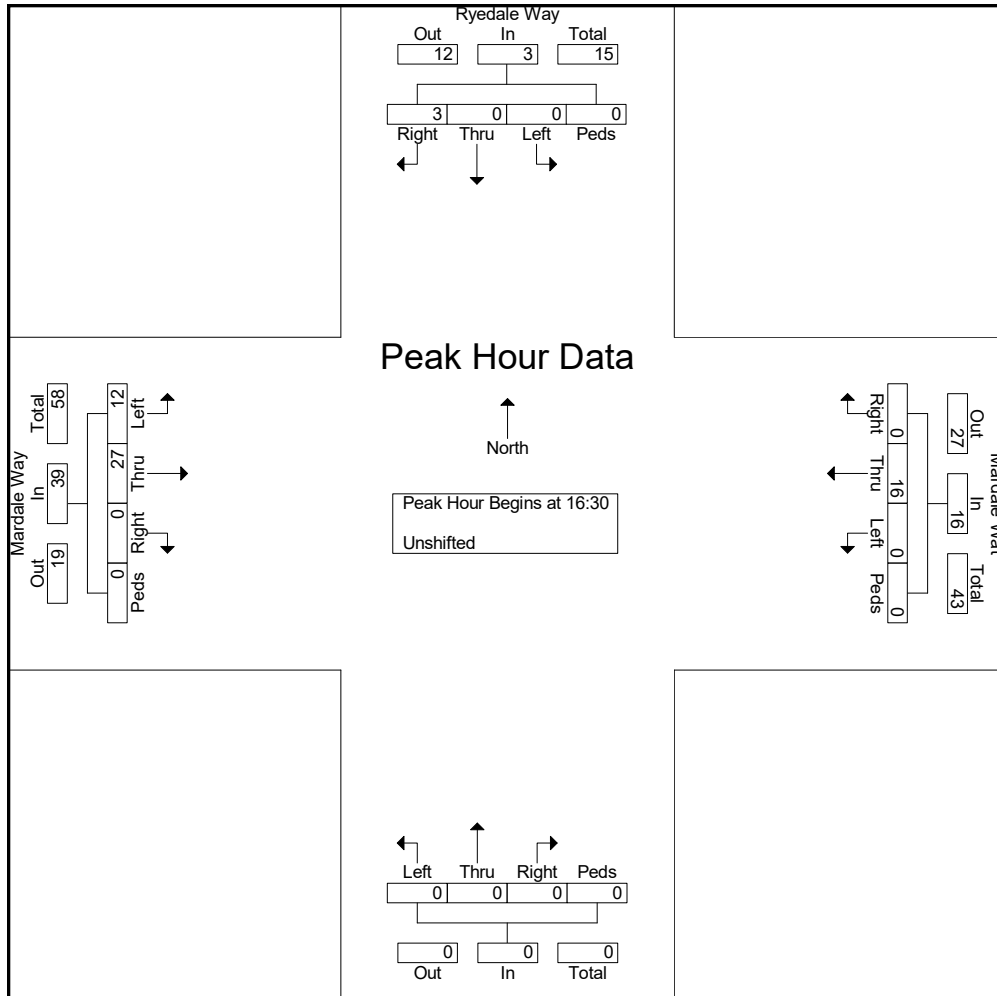
File Name : Ryedale Way - Mardale Way PM 4-22-25

Site Code : S224091

Start Date : 4/22/2025

Page No : 2

| Start Time   | Ryedale Way Southbound |      |      |      |            | Mardale Wat Westbound |      |      |      |            | Northbound |      |      |      |            | Mardale Way Eastbound |      |      |      |            | Int. Total |
|--|------------------------|------|------|------|------------|-----------------------|------|------|------|------------|------------|------|------|------|------------|-----------------------|------|------|------|------------|------------|
|  | Right                  | Thru | Left | Peds | App. Total | Right                 | Thru | Left | Peds | App. Total | Right      | Thru | Left | Peds | App. Total | Right                 | Thru | Left | Peds | App. Total |            |
| Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1 |                        |      |      |      |            |                       |      |      |      |            |            |      |      |      |            |                       |      |      |      |            |            |
| Peak Hour for Entire Intersection Begins at 16:30    |                        |      |      |      |            |                       |      |      |      |            |            |      |      |      |            |                       |      |      |      |            |            |
| 16:30  | 1                      | 0    | 0    | 0    | 1          | 0                     | 3    | 0    | 0    | 3          | 0          | 0    | 0    | 0    | 0          | 0                     | 3    | 5    | 0    | 8          | 12         |
| 16:45  | 1                      | 0    | 0    | 0    | 1          | 0                     | 4    | 0    | 0    | 4          | 0          | 0    | 0    | 0    | 0          | 0                     | 10   | 4    | 0    | 14         | 19         |
| 17:00  | 0                      | 0    | 0    | 0    | 0          | 0                     | 2    | 0    | 0    | 2          | 0          | 0    | 0    | 0    | 0          | 0                     | 9    | 1    | 0    | 10         | 12         |
| 17:15  | 1                      | 0    | 0    | 0    | 1          | 0                     | 7    | 0    | 0    | 7          | 0          | 0    | 0    | 0    | 0          | 0                     | 5    | 2    | 0    | 7          | 15         |
| Total Volume   | 3                      | 0    | 0    | 0    | 3          | 0                     | 16   | 0    | 0    | 16         | 0          | 0    | 0    | 0    | 0          | 0                     | 27   | 12   | 0    | 39         | 58         |
| % App. Total   | 100                    | 0    | 0    | 0    |            | 0                     | 100  | 0    | 0    |            | 0          | 0    | 0    | 0    |            | 0                     | 69.2 | 30.8 | 0    |            |            |
| PHF  | .750                   | .000 | .000 | .000 | .750       | .000                  | .571 | .000 | .000 | .571       | .000       | .000 | .000 | .000 | .000       | .000                  | .675 | .600 | .000 | .696       | .763       |



# LSC Transportation Consultants, Inc.

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File Name : Antelope Ridge Dr - N Carefree Cir AM 4-23-25

Site Code : S224091

Start Date : 4/23/2025

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### Groups Printed- Unshifted

| Start Time         | Antelope Ridge Dr Southbound |          |             |          |            | N Carefree Cir Westbound |             |          |            |             | Northbound |          |          |          |            | N Carefree Cir Eastbound |             |             |            |             | Int. Total  |
|--------------------|------------------------------|----------|-------------|----------|------------|--------------------------|-------------|----------|------------|-------------|------------|----------|----------|----------|------------|--------------------------|-------------|-------------|------------|-------------|-------------|
|                    | Right                        | Thru     | Left        | Peds     | App. Total | Right                    | Thru        | Left     | Peds       | App. Total  | Right      | Thru     | Left     | Peds     | App. Total | Right                    | Thru        | Left        | Peds       | App. Total  |             |
| 06:30              | 17                           | 0        | 17          | 0        | 34         | 6                        | 44          | 0        | 0          | 50          | 0          | 0        | 0        | 0        | 0          | 0                        | 89          | 2           | 0          | 91          | 175         |
| 06:45              | 24                           | 0        | 30          | 0        | 54         | 9                        | 67          | 0        | 0          | 76          | 0          | 0        | 0        | 0        | 0          | 0                        | 91          | 19          | 0          | 110         | 240         |
| <b>Total</b>       | <b>41</b>                    | <b>0</b> | <b>47</b>   | <b>0</b> | <b>88</b>  | <b>15</b>                | <b>111</b>  | <b>0</b> | <b>0</b>   | <b>126</b>  | <b>0</b>   | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>   | <b>0</b>                 | <b>180</b>  | <b>21</b>   | <b>0</b>   | <b>201</b>  | <b>415</b>  |
| 07:00              | 51                           | 0        | 32          | 0        | 83         | 9                        | 56          | 0        | 0          | 65          | 0          | 0        | 0        | 0        | 0          | 0                        | 100         | 26          | 0          | 126         | 274         |
| 07:15              | 103                          | 0        | 47          | 0        | 150        | 23                       | 110         | 0        | 0          | 133         | 0          | 0        | 0        | 0        | 0          | 0                        | 133         | 73          | 0          | 206         | 489         |
| 07:30              | 123                          | 0        | 30          | 0        | 153        | 31                       | 51          | 0        | 4          | 86          | 0          | 0        | 0        | 0        | 0          | 0                        | 124         | 69          | 0          | 193         | 432         |
| 07:45              | 153                          | 0        | 48          | 0        | 201        | 29                       | 94          | 0        | 0          | 123         | 0          | 0        | 0        | 0        | 0          | 0                        | 131         | 71          | 2          | 204         | 528         |
| <b>Total</b>       | <b>430</b>                   | <b>0</b> | <b>157</b>  | <b>0</b> | <b>587</b> | <b>92</b>                | <b>311</b>  | <b>0</b> | <b>4</b>   | <b>407</b>  | <b>0</b>   | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>   | <b>0</b>                 | <b>488</b>  | <b>239</b>  | <b>2</b>   | <b>729</b>  | <b>1723</b> |
| 08:00              | 69                           | 0        | 48          | 0        | 117        | 12                       | 64          | 0        | 0          | 76          | 0          | 0        | 0        | 0        | 0          | 0                        | 108         | 36          | 1          | 145         | 338         |
| 08:15              | 17                           | 0        | 30          | 0        | 47         | 11                       | 78          | 0        | 0          | 89          | 0          | 0        | 0        | 0        | 0          | 0                        | 80          | 14          | 0          | 94          | 230         |
| <b>Grand Total</b> | <b>557</b>                   | <b>0</b> | <b>282</b>  | <b>0</b> | <b>839</b> | <b>130</b>               | <b>564</b>  | <b>0</b> | <b>4</b>   | <b>698</b>  | <b>0</b>   | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>   | <b>0</b>                 | <b>856</b>  | <b>310</b>  | <b>3</b>   | <b>1169</b> | <b>2706</b> |
| <b>Apprch %</b>    | <b>66.4</b>                  | <b>0</b> | <b>33.6</b> | <b>0</b> |            | <b>18.6</b>              | <b>80.8</b> | <b>0</b> | <b>0.6</b> |             | <b>0</b>   | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>   | <b>0</b>                 | <b>73.2</b> | <b>26.5</b> | <b>0.3</b> |             |             |
| <b>Total %</b>     | <b>20.6</b>                  | <b>0</b> | <b>10.4</b> | <b>0</b> | <b>31</b>  | <b>4.8</b>               | <b>20.8</b> | <b>0</b> | <b>0.1</b> | <b>25.8</b> | <b>0</b>   | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>   | <b>0</b>                 | <b>31.6</b> | <b>11.5</b> | <b>0.1</b> | <b>43.2</b> |             |

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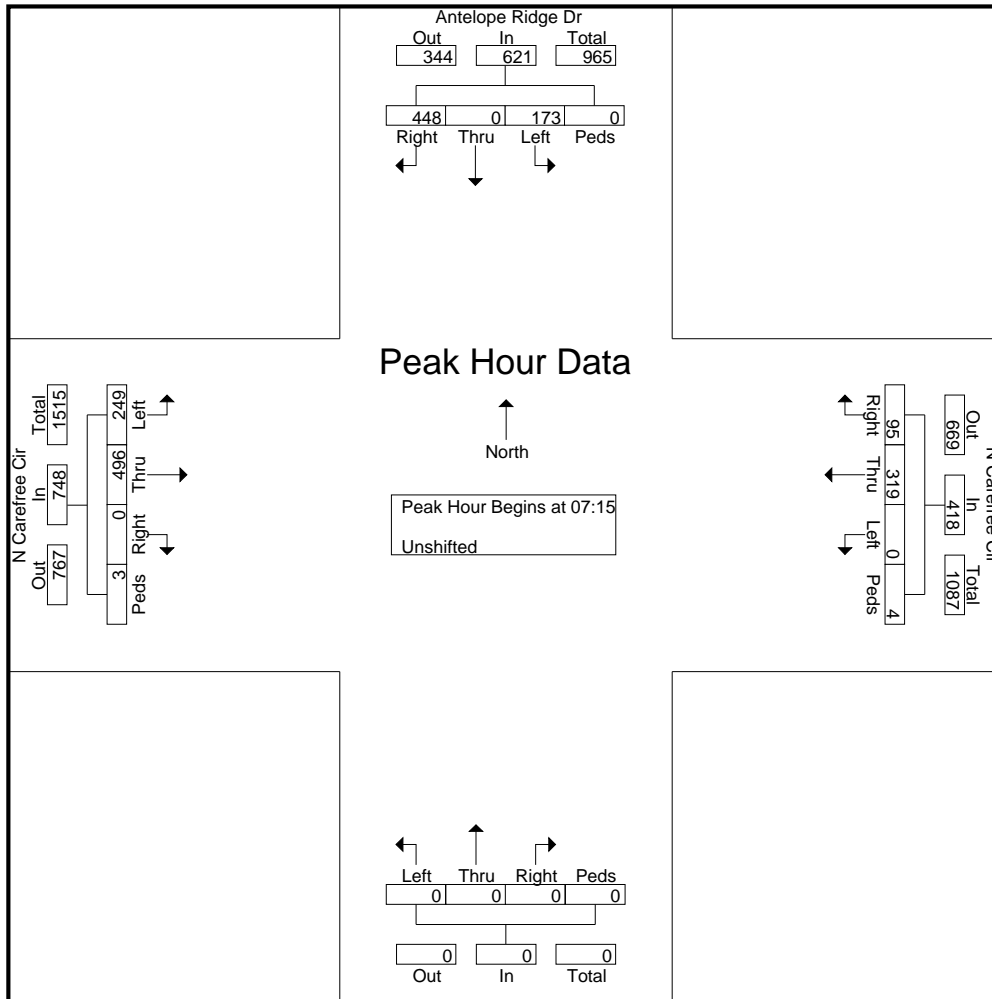
File Name : Antelope Ridge Dr - N Carefree Cir AM 4-23-25

Site Code : S224091

Start Date : 4/23/2025

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| Start Time   | Antelope Ridge Dr Southbound |      |      |      |            | N Carefree Cir Westbound |      |      |      |            | Northbound |      |      |      |            | N Carefree Cir Eastbound |      |      |      |            | Int. Total |
|--|------------------------------|------|------|------|------------|--------------------------|------|------|------|------------|------------|------|------|------|------------|--------------------------|------|------|------|------------|------------|
|  | Right                        | Thru | Left | Peds | App. Total | Right                    | Thru | Left | Peds | App. Total | Right      | Thru | Left | Peds | App. Total | Right                    | Thru | Left | Peds | App. Total |            |
| Peak Hour Analysis From 06:30 to 08:15 - Peak 1 of 1 |                              |      |      |      |            |                          |      |      |      |            |            |      |      |      |            |                          |      |      |      |            |            |
| Peak Hour for Entire Intersection Begins at 07:15    |                              |      |      |      |            |                          |      |      |      |            |            |      |      |      |            |                          |      |      |      |            |            |
| 07:15  | 103                          | 0    | 47   | 0    | 150        | 23                       | 110  | 0    | 0    | 133        | 0          | 0    | 0    | 0    | 0          | 0                        | 133  | 73   | 0    | 206        | 489        |
| 07:30  | 123                          | 0    | 30   | 0    | 153        | 31                       | 51   | 0    | 4    | 86         | 0          | 0    | 0    | 0    | 0          | 0                        | 124  | 69   | 0    | 193        | 432        |
| 07:45  | 153                          | 0    | 48   | 0    | 201        | 29                       | 94   | 0    | 0    | 123        | 0          | 0    | 0    | 0    | 0          | 0                        | 131  | 71   | 2    | 204        | 528        |
| 08:00  | 69                           | 0    | 48   | 0    | 117        | 12                       | 64   | 0    | 0    | 76         | 0          | 0    | 0    | 0    | 0          | 0                        | 108  | 36   | 1    | 145        | 338        |
| Total Volume   | 448                          | 0    | 173  | 0    | 621        | 95                       | 319  | 0    | 4    | 418        | 0          | 0    | 0    | 0    | 0          | 0                        | 496  | 249  | 3    | 748        | 1787       |
| % App. Total   | 72.1                         | 0    | 27.9 | 0    |            | 22.7                     | 76.3 | 0    | 1    |            | 0          | 0    | 0    | 0    |            | 0                        | 66.3 | 33.3 | 0.4  |            |            |
| PHF  | .732                         | .000 | .901 | .000 | .772       | .766                     | .725 | .000 | .250 | .786       | .000       | .000 | .000 | .000 | .000       | .000                     | .932 | .853 | .375 | .908       | .846       |



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File Name : Antelope Ridge Dr - N Carefree Cir PM 4-22-25

Site Code : S224091

Start Date : 4/22/2025

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### Groups Printed- Unshifted

| Start Time         | Antelope Ridge Dr Southbound |          |            |            |             | N Carefree Cir Westbound |             |          |            |             | Northbound |          |          |          |            | N Carefree Cir Eastbound |             |             |            |             | Int. Total  |
|--------------------|------------------------------|----------|------------|------------|-------------|--------------------------|-------------|----------|------------|-------------|------------|----------|----------|----------|------------|--------------------------|-------------|-------------|------------|-------------|-------------|
|                    | Right                        | Thru     | Left       | Peds       | App. Total  | Right                    | Thru        | Left     | Peds       | App. Total  | Right      | Thru     | Left     | Peds     | App. Total | Right                    | Thru        | Left        | Peds       | App. Total  |             |
| 16:00              | 28                           | 0        | 17         | 1          | 46          | 32                       | 127         | 0        | 0          | 159         | 0          | 0        | 0        | 0        | 0          | 0                        | 94          | 28          | 0          | 122         | 327         |
| 16:15              | 17                           | 0        | 11         | 0          | 28          | 40                       | 116         | 0        | 0          | 156         | 0          | 0        | 0        | 0        | 0          | 0                        | 94          | 41          | 0          | 135         | 319         |
| 16:30              | 29                           | 0        | 15         | 0          | 44          | 30                       | 142         | 0        | 0          | 172         | 0          | 0        | 0        | 0        | 0          | 0                        | 79          | 35          | 1          | 115         | 331         |
| 16:45              | 46                           | 0        | 19         | 0          | 65          | 36                       | 123         | 0        | 1          | 160         | 0          | 0        | 0        | 0        | 0          | 0                        | 98          | 42          | 0          | 140         | 365         |
| <b>Total</b>       | <b>120</b>                   | <b>0</b> | <b>62</b>  | <b>1</b>   | <b>183</b>  | <b>138</b>               | <b>508</b>  | <b>0</b> | <b>1</b>   | <b>647</b>  | <b>0</b>   | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>   | <b>0</b>                 | <b>365</b>  | <b>146</b>  | <b>1</b>   | <b>512</b>  | <b>1342</b> |
| 17:00              | 25                           | 0        | 16         | 0          | 41          | 39                       | 151         | 0        | 0          | 190         | 0          | 0        | 0        | 0        | 0          | 0                        | 97          | 52          | 1          | 150         | 381         |
| 17:15              | 23                           | 0        | 19         | 0          | 42          | 30                       | 121         | 0        | 0          | 151         | 0          | 0        | 0        | 0        | 0          | 0                        | 87          | 32          | 0          | 119         | 312         |
| 17:30              | 28                           | 0        | 18         | 0          | 46          | 32                       | 101         | 0        | 0          | 133         | 0          | 0        | 0        | 0        | 0          | 0                        | 93          | 45          | 0          | 138         | 317         |
| 17:45              | 26                           | 0        | 16         | 0          | 42          | 22                       | 129         | 0        | 0          | 151         | 0          | 0        | 0        | 0        | 0          | 0                        | 66          | 26          | 0          | 92          | 285         |
| <b>Total</b>       | <b>102</b>                   | <b>0</b> | <b>69</b>  | <b>0</b>   | <b>171</b>  | <b>123</b>               | <b>502</b>  | <b>0</b> | <b>0</b>   | <b>625</b>  | <b>0</b>   | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>   | <b>0</b>                 | <b>343</b>  | <b>155</b>  | <b>1</b>   | <b>499</b>  | <b>1295</b> |
| <b>Grand Total</b> | <b>222</b>                   | <b>0</b> | <b>131</b> | <b>1</b>   | <b>354</b>  | <b>261</b>               | <b>1010</b> | <b>0</b> | <b>1</b>   | <b>1272</b> | <b>0</b>   | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>   | <b>0</b>                 | <b>708</b>  | <b>301</b>  | <b>2</b>   | <b>1011</b> | <b>2637</b> |
| <b>Apprch %</b>    | <b>62.7</b>                  | <b>0</b> | <b>37</b>  | <b>0.3</b> |             | <b>20.5</b>              | <b>79.4</b> | <b>0</b> | <b>0.1</b> |             | <b>0</b>   | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>   | <b>0</b>                 | <b>70</b>   | <b>29.8</b> | <b>0.2</b> |             |             |
| <b>Total %</b>     | <b>8.4</b>                   | <b>0</b> | <b>5</b>   | <b>0</b>   | <b>13.4</b> | <b>9.9</b>               | <b>38.3</b> | <b>0</b> | <b>0</b>   | <b>48.2</b> | <b>0</b>   | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>   | <b>0</b>                 | <b>26.8</b> | <b>11.4</b> | <b>0.1</b> | <b>38.3</b> |             |

# LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304  
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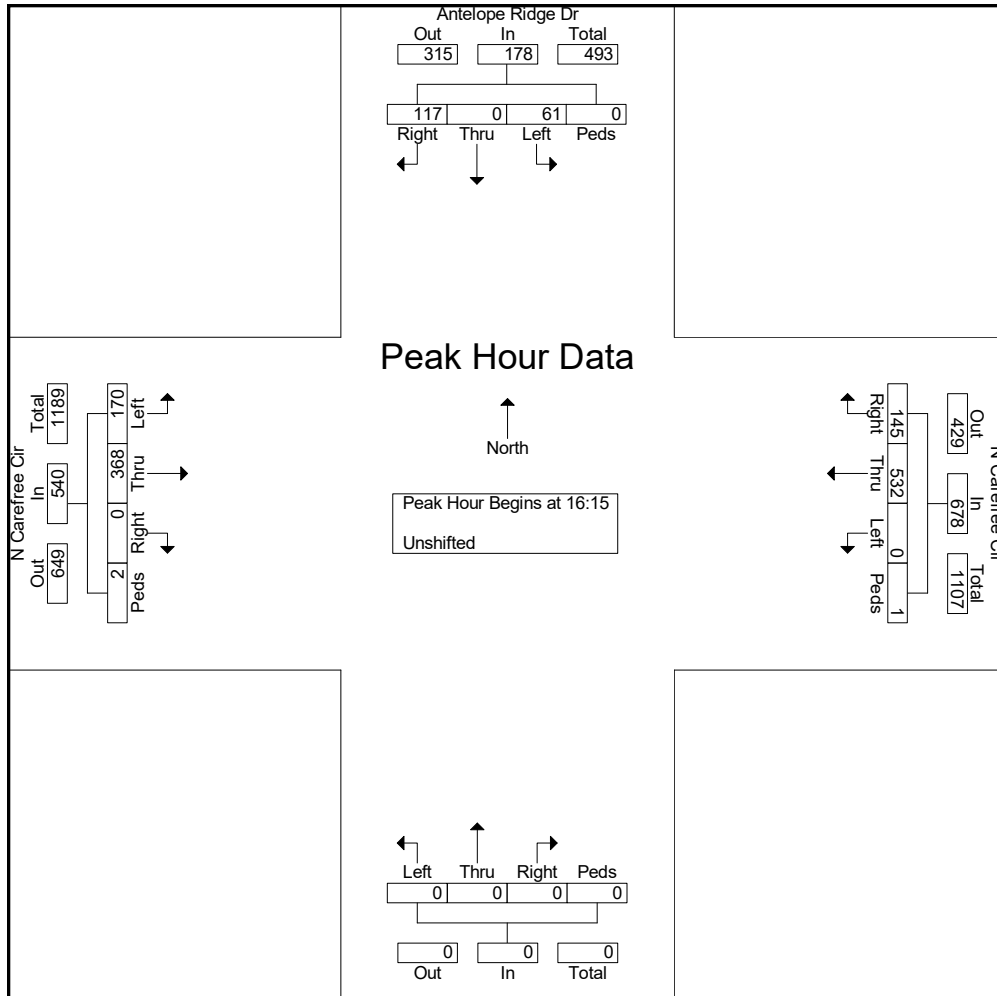
File Name : Antelope Ridge Dr - N Carefree Cir PM 4-22-25

Site Code : S224091

Start Date : 4/22/2025

Page No : 2

| Start Time   | Antelope Ridge Dr Southbound |      |      |      |            | N Carefree Cir Westbound |      |      |      |            | Northbound |      |      |      |            | N Carefree Cir Eastbound |      |      |      |            | Int. Total |
|--|------------------------------|------|------|------|------------|--------------------------|------|------|------|------------|------------|------|------|------|------------|--------------------------|------|------|------|------------|------------|
|  | Right                        | Thru | Left | Peds | App. Total | Right                    | Thru | Left | Peds | App. Total | Right      | Thru | Left | Peds | App. Total | Right                    | Thru | Left | Peds | App. Total |            |
| Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1 |                              |      |      |      |            |                          |      |      |      |            |            |      |      |      |            |                          |      |      |      |            |            |
| Peak Hour for Entire Intersection Begins at 16:15    |                              |      |      |      |            |                          |      |      |      |            |            |      |      |      |            |                          |      |      |      |            |            |
| 16:15  | 17                           | 0    | 11   | 0    | 28         | 40                       | 116  | 0    | 0    | 156        | 0          | 0    | 0    | 0    | 0          | 0                        | 94   | 41   | 0    | 135        | 319        |
| 16:30  | 29                           | 0    | 15   | 0    | 44         | 30                       | 142  | 0    | 0    | 172        | 0          | 0    | 0    | 0    | 0          | 0                        | 79   | 35   | 1    | 115        | 331        |
| 16:45  | 46                           | 0    | 19   | 0    | 65         | 36                       | 123  | 0    | 1    | 160        | 0          | 0    | 0    | 0    | 0          | 0                        | 98   | 42   | 0    | 140        | 365        |
| 17:00  | 25                           | 0    | 16   | 0    | 41         | 39                       | 151  | 0    | 0    | 190        | 0          | 0    | 0    | 0    | 0          | 0                        | 97   | 52   | 1    | 150        | 381        |
| Total Volume   | 117                          | 0    | 61   | 0    | 178        | 145                      | 532  | 0    | 1    | 678        | 0          | 0    | 0    | 0    | 0          | 0                        | 368  | 170  | 2    | 540        | 1396       |
| % App. Total   | 65.7                         | 0    | 34.3 | 0    |            | 21.4                     | 78.5 | 0    | 0.1  |            | 0          | 0    | 0    | 0    |            | 0                        | 68.1 | 31.5 | 0.4  |            |            |
| PHF  | .636                         | .000 | .803 | .000 | .685       | .906                     | .881 | .000 | .250 | .892       | .000       | .000 | .000 | .000 | .000       | .000                     | .939 | .817 | .500 | .900       | .916       |



# LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304  
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File Name : Marksheffel Rd - N Carefree Cir AM 4-23-25  
 Site Code : S224091  
 Start Date : 4/23/2025  
 Page No : 1

### Groups Printed- Unshifted

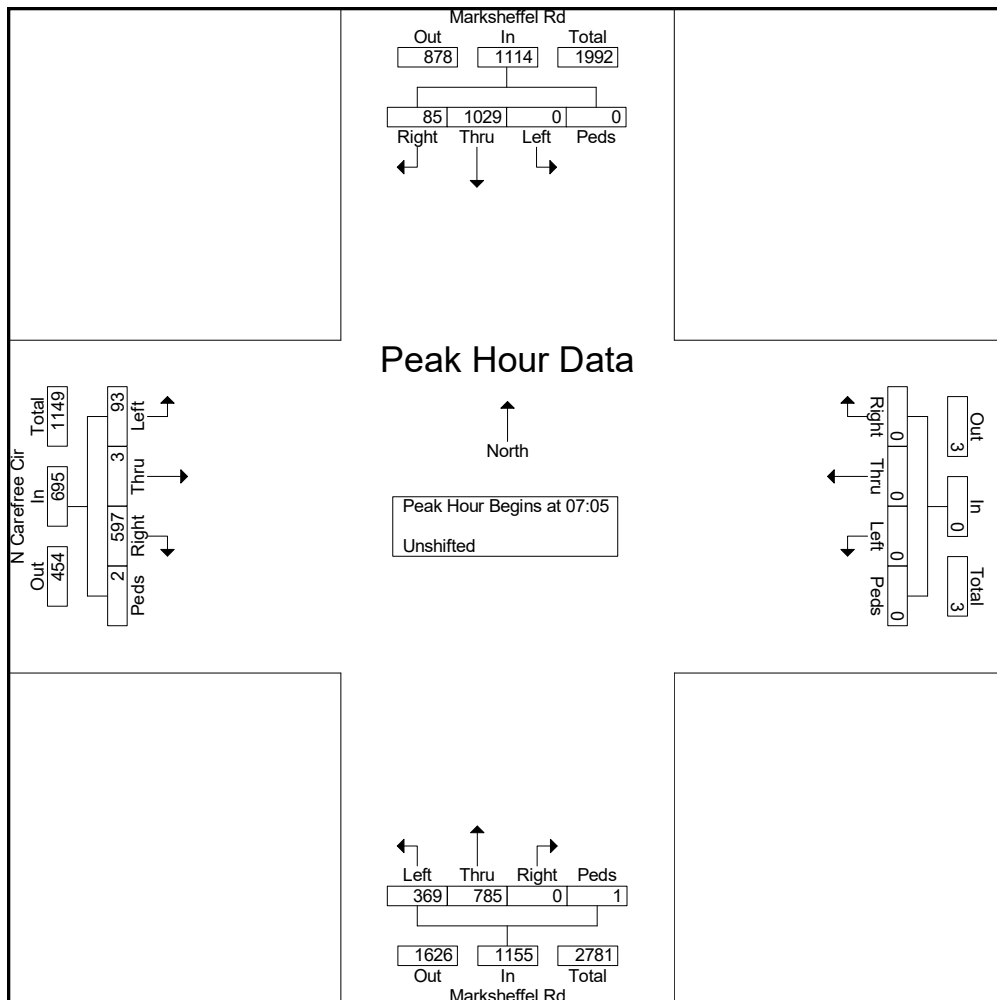
| Start Time         | Marksheffel Rd Southbound |             |          |          |             | Westbound |          |          |          |            | Marksheffel Rd Northbound |             |             |            |             | N Carefree Cir Eastbound |            |             |            |             | Int. Total  |
|--------------------|---------------------------|-------------|----------|----------|-------------|-----------|----------|----------|----------|------------|---------------------------|-------------|-------------|------------|-------------|--------------------------|------------|-------------|------------|-------------|-------------|
|                    | Right                     | Thru        | Left     | Peds     | App. Total  | Right     | Thru     | Left     | Peds     | App. Total | Right                     | Thru        | Left        | Peds       | App. Total  | Right                    | Thru       | Left        | Peds       | App. Total  |             |
| 06:30              | 5                         | 83          | 0        | 0        | 88          | 0         | 0        | 0        | 0        | 0          | 0                         | 59          | 16          | 0          | 75          | 18                       | 0          | 4           | 0          | 22          | 185         |
| 06:35              | 1                         | 110         | 0        | 0        | 111         | 0         | 0        | 0        | 0        | 0          | 0                         | 51          | 7           | 0          | 58          | 28                       | 0          | 3           | 0          | 31          | 200         |
| 06:40              | 3                         | 70          | 0        | 0        | 73          | 0         | 0        | 0        | 0        | 0          | 0                         | 43          | 13          | 0          | 56          | 27                       | 0          | 3           | 0          | 30          | 159         |
| 06:45              | 3                         | 85          | 0        | 0        | 88          | 0         | 0        | 0        | 0        | 0          | 0                         | 58          | 17          | 0          | 75          | 30                       | 0          | 5           | 0          | 35          | 198         |
| 06:50              | 4                         | 94          | 0        | 0        | 98          | 0         | 0        | 0        | 0        | 0          | 0                         | 48          | 21          | 0          | 69          | 33                       | 0          | 12          | 0          | 45          | 212         |
| 06:55              | 3                         | 75          | 0        | 0        | 78          | 0         | 0        | 0        | 0        | 0          | 0                         | 67          | 23          | 0          | 90          | 44                       | 0          | 5           | 1          | 50          | 218         |
| <b>Total</b>       | <b>19</b>                 | <b>517</b>  | <b>0</b> | <b>0</b> | <b>536</b>  | <b>0</b>  | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>   | <b>0</b>                  | <b>326</b>  | <b>97</b>   | <b>0</b>   | <b>423</b>  | <b>180</b>               | <b>0</b>   | <b>32</b>   | <b>1</b>   | <b>213</b>  | <b>1172</b> |
|                    |                           |             |          |          |             |           |          |          |          |            |                           |             |             |            |             |                          |            |             |            |             |             |
| 07:00              | 3                         | 86          | 0        | 0        | 89          | 0         | 0        | 0        | 0        | 0          | 0                         | 47          | 8           | 0          | 55          | 34                       | 0          | 10          | 0          | 44          | 188         |
| 07:05              | 5                         | 88          | 0        | 0        | 93          | 0         | 0        | 0        | 0        | 0          | 0                         | 68          | 24          | 0          | 92          | 43                       | 0          | 2           | 1          | 46          | 231         |
| 07:10              | 13                        | 81          | 0        | 0        | 94          | 0         | 0        | 0        | 0        | 0          | 0                         | 67          | 29          | 0          | 96          | 43                       | 0          | 6           | 0          | 49          | 239         |
| 07:15              | 4                         | 83          | 0        | 0        | 87          | 0         | 0        | 0        | 0        | 0          | 0                         | 64          | 30          | 0          | 94          | 45                       | 0          | 10          | 0          | 55          | 236         |
| 07:20              | 8                         | 95          | 0        | 0        | 103         | 0         | 0        | 0        | 0        | 0          | 0                         | 71          | 34          | 0          | 105         | 38                       | 0          | 6           | 0          | 44          | 252         |
| 07:25              | 7                         | 86          | 0        | 0        | 93          | 0         | 0        | 0        | 0        | 0          | 0                         | 62          | 30          | 0          | 92          | 47                       | 0          | 11          | 0          | 58          | 243         |
| 07:30              | 5                         | 83          | 0        | 0        | 88          | 0         | 0        | 0        | 0        | 0          | 0                         | 59          | 22          | 1          | 82          | 65                       | 0          | 12          | 0          | 77          | 247         |
| 07:35              | 6                         | 87          | 0        | 0        | 93          | 0         | 0        | 0        | 0        | 0          | 0                         | 68          | 34          | 0          | 102         | 45                       | 0          | 8           | 1          | 54          | 249         |
| 07:40              | 5                         | 89          | 0        | 0        | 94          | 0         | 0        | 0        | 0        | 0          | 0                         | 55          | 39          | 0          | 94          | 54                       | 0          | 6           | 0          | 60          | 248         |
| 07:45              | 5                         | 88          | 0        | 0        | 93          | 0         | 0        | 0        | 0        | 0          | 0                         | 76          | 40          | 0          | 116         | 45                       | 3          | 6           | 0          | 54          | 263         |
| 07:50              | 10                        | 79          | 0        | 0        | 89          | 0         | 0        | 0        | 0        | 0          | 0                         | 68          | 32          | 0          | 100         | 61                       | 0          | 6           | 0          | 67          | 256         |
| 07:55              | 11                        | 86          | 0        | 0        | 97          | 0         | 0        | 0        | 0        | 0          | 0                         | 68          | 35          | 0          | 103         | 47                       | 0          | 10          | 0          | 57          | 257         |
| <b>Total</b>       | <b>82</b>                 | <b>1031</b> | <b>0</b> | <b>0</b> | <b>1113</b> | <b>0</b>  | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>   | <b>0</b>                  | <b>773</b>  | <b>357</b>  | <b>1</b>   | <b>1131</b> | <b>567</b>               | <b>3</b>   | <b>93</b>   | <b>2</b>   | <b>665</b>  | <b>2909</b> |
|                    |                           |             |          |          |             |           |          |          |          |            |                           |             |             |            |             |                          |            |             |            |             |             |
| 08:00              | 6                         | 84          | 0        | 0        | 90          | 0         | 0        | 0        | 0        | 0          | 0                         | 59          | 20          | 0          | 79          | 64                       | 0          | 10          | 0          | 74          | 243         |
| 08:05              | 6                         | 75          | 0        | 0        | 81          | 0         | 0        | 0        | 0        | 0          | 0                         | 53          | 24          | 0          | 77          | 40                       | 0          | 5           | 0          | 45          | 203         |
| 08:10              | 12                        | 80          | 0        | 1        | 93          | 0         | 0        | 0        | 0        | 0          | 0                         | 42          | 16          | 0          | 58          | 44                       | 0          | 11          | 0          | 55          | 206         |
| 08:15              | 7                         | 70          | 0        | 0        | 77          | 0         | 0        | 0        | 0        | 0          | 0                         | 41          | 29          | 0          | 70          | 40                       | 0          | 5           | 0          | 45          | 192         |
| 08:20              | 9                         | 77          | 0        | 0        | 86          | 0         | 0        | 0        | 0        | 0          | 0                         | 48          | 20          | 0          | 68          | 23                       | 0          | 5           | 0          | 28          | 182         |
| 08:25              | 10                        | 67          | 0        | 0        | 77          | 0         | 0        | 0        | 0        | 0          | 0                         | 33          | 13          | 0          | 46          | 31                       | 0          | 6           | 1          | 38          | 161         |
| <b>Grand Total</b> | <b>151</b>                | <b>2001</b> | <b>0</b> | <b>1</b> | <b>2153</b> | <b>0</b>  | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>   | <b>0</b>                  | <b>1375</b> | <b>576</b>  | <b>1</b>   | <b>1952</b> | <b>989</b>               | <b>3</b>   | <b>167</b>  | <b>4</b>   | <b>1163</b> | <b>5268</b> |
| <b>Apprch %</b>    | <b>7</b>                  | <b>92.9</b> | <b>0</b> | <b>0</b> |             | <b>0</b>  | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>   | <b>0</b>                  | <b>70.4</b> | <b>29.5</b> | <b>0.1</b> |             | <b>85</b>                | <b>0.3</b> | <b>14.4</b> | <b>0.3</b> |             |             |
| <b>Total %</b>     | <b>2.9</b>                | <b>38</b>   | <b>0</b> | <b>0</b> | <b>40.9</b> | <b>0</b>  | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>   | <b>0</b>                  | <b>26.1</b> | <b>10.9</b> | <b>0</b>   | <b>37.1</b> | <b>18.8</b>              | <b>0.1</b> | <b>3.2</b>  | <b>0.1</b> | <b>22.1</b> |             |

# LSC Transportation Consultants, Inc.

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

File Name : Marksheffel Rd - N Carefree Cir AM 4-23-25  
 Site Code : S224091  
 Start Date : 4/23/2025  
 Page No : 2

| Start Time   | Marksheffel Rd Southbound |      |      |      |            | Westbound |      |      |      |            | Marksheffel Rd Northbound |      |      |      |            | N Carefree Cir Eastbound |      |      |      |            | Int. Total |
|--|---------------------------|------|------|------|------------|-----------|------|------|------|------------|---------------------------|------|------|------|------------|--------------------------|------|------|------|------------|------------|
|  | Right                     | Thru | Left | Peds | App. Total | Right     | Thru | Left | Peds | App. Total | Right                     | Thru | Left | Peds | App. Total | Right                    | Thru | Left | Peds | App. Total |            |
| Peak Hour Analysis From 06:30 to 08:25 - Peak 1 of 1 |                           |      |      |      |            |           |      |      |      |            |                           |      |      |      |            |                          |      |      |      |            |            |
| Peak Hour for Entire Intersection Begins at 07:05    |                           |      |      |      |            |           |      |      |      |            |                           |      |      |      |            |                          |      |      |      |            |            |
| 07:05  | 5                         | 88   | 0    | 0    | 93         | 0         | 0    | 0    | 0    | 0          | 0                         | 68   | 24   | 0    | 92         | 43                       | 0    | 2    | 1    | 46         | 231        |
| 07:10  | 13                        | 81   | 0    | 0    | 94         | 0         | 0    | 0    | 0    | 0          | 0                         | 67   | 29   | 0    | 96         | 43                       | 0    | 6    | 0    | 49         | 239        |
| 07:15  | 4                         | 83   | 0    | 0    | 87         | 0         | 0    | 0    | 0    | 0          | 0                         | 64   | 30   | 0    | 94         | 45                       | 0    | 10   | 0    | 55         | 236        |
| 07:20  | 8                         | 95   | 0    | 0    | 103        | 0         | 0    | 0    | 0    | 0          | 0                         | 71   | 34   | 0    | 105        | 38                       | 0    | 6    | 0    | 44         | 252        |
| 07:25  | 7                         | 86   | 0    | 0    | 93         | 0         | 0    | 0    | 0    | 0          | 0                         | 62   | 30   | 0    | 92         | 47                       | 0    | 11   | 0    | 58         | 243        |
| 07:30  | 5                         | 83   | 0    | 0    | 88         | 0         | 0    | 0    | 0    | 0          | 0                         | 59   | 22   | 1    | 82         | 65                       | 0    | 12   | 0    | 77         | 247        |
| 07:35  | 6                         | 87   | 0    | 0    | 93         | 0         | 0    | 0    | 0    | 0          | 0                         | 68   | 34   | 0    | 102        | 45                       | 0    | 8    | 1    | 54         | 249        |
| 07:40  | 5                         | 89   | 0    | 0    | 94         | 0         | 0    | 0    | 0    | 0          | 0                         | 55   | 39   | 0    | 94         | 54                       | 0    | 6    | 0    | 60         | 248        |
| 07:45  | 5                         | 88   | 0    | 0    | 93         | 0         | 0    | 0    | 0    | 0          | 0                         | 76   | 40   | 0    | 116        | 45                       | 3    | 6    | 0    | 54         | 263        |
| 07:50  | 10                        | 79   | 0    | 0    | 89         | 0         | 0    | 0    | 0    | 0          | 0                         | 68   | 32   | 0    | 100        | 61                       | 0    | 6    | 0    | 67         | 256        |
| 07:55  | 11                        | 86   | 0    | 0    | 97         | 0         | 0    | 0    | 0    | 0          | 0                         | 68   | 35   | 0    | 103        | 47                       | 0    | 10   | 0    | 57         | 257        |
| 08:00  | 6                         | 84   | 0    | 0    | 90         | 0         | 0    | 0    | 0    | 0          | 0                         | 59   | 20   | 0    | 79         | 64                       | 0    | 10   | 0    | 74         | 243        |
| Total Volume   | 85                        | 1029 | 0    | 0    | 1114       | 0         | 0    | 0    | 0    | 0          | 0                         | 785  | 369  | 1    | 1155       | 597                      | 3    | 93   | 2    | 695        | 2964       |
| % App. Total   | 7.6                       | 92.4 | 0    | 0    |            | 0         | 0    | 0    | 0    |            | 0                         | 68   | 31.9 | 0.1  |            | 85.9                     | 0.4  | 13.4 | 0.3  |            |            |
| PHF  | .545                      | .903 | .000 | .000 | .901       | .000      | .000 | .000 | .000 | .000       | .000                      | .861 | .769 | .083 | .830       | .765                     | .083 | .646 | .167 | .752       | .939       |



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2504 E. Pikes Peak Ave, Suite 304  
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File Name : Marksheffel Rd - N Carefree Cir PM 4-22-25

Site Code : S224091

Start Date : 4/22/2025

Page No : 1

### Groups Printed- Unshifted

| Start Time         | Marksheffel Rd Southbound |             |            |          |             | Westbound |          |          |          |            | Marksheffel Rd Northbound |             |             |          |             | N Carefree Cir Eastbound |          |             |            |             | Int. Total  |
|--------------------|---------------------------|-------------|------------|----------|-------------|-----------|----------|----------|----------|------------|---------------------------|-------------|-------------|----------|-------------|--------------------------|----------|-------------|------------|-------------|-------------|
|                    | Right                     | Thru        | Left       | Peds     | App. Total  | Right     | Thru     | Left     | Peds     | App. Total | Right                     | Thru        | Left        | Peds     | App. Total  | Right                    | Thru     | Left        | Peds       | App. Total  |             |
| 16:00              | 8                         | 79          | 0          | 0        | 87          | 0         | 0        | 0        | 0        | 0          | 0                         | 116         | 36          | 1        | 153         | 12                       | 0        | 5           | 0          | 17          | 257         |
| 16:05              | 7                         | 60          | 1          | 0        | 68          | 0         | 0        | 0        | 0        | 0          | 0                         | 104         | 44          | 0        | 148         | 18                       | 0        | 12          | 1          | 31          | 247         |
| 16:10              | 3                         | 82          | 0          | 0        | 85          | 0         | 0        | 0        | 0        | 0          | 0                         | 104         | 37          | 0        | 141         | 33                       | 0        | 5           | 0          | 38          | 264         |
| 16:15              | 14                        | 70          | 0          | 0        | 84          | 0         | 0        | 0        | 0        | 0          | 0                         | 96          | 30          | 0        | 126         | 23                       | 0        | 4           | 0          | 27          | 237         |
| 16:20              | 5                         | 61          | 0          | 0        | 66          | 0         | 0        | 0        | 0        | 0          | 0                         | 111         | 47          | 0        | 158         | 20                       | 0        | 14          | 0          | 34          | 258         |
| 16:25              | 10                        | 43          | 0          | 0        | 53          | 0         | 0        | 0        | 0        | 0          | 0                         | 100         | 45          | 0        | 145         | 32                       | 0        | 9           | 0          | 41          | 239         |
| 16:30              | 13                        | 63          | 0          | 0        | 76          | 0         | 0        | 0        | 0        | 0          | 0                         | 80          | 26          | 0        | 106         | 13                       | 0        | 8           | 1          | 22          | 204         |
| 16:35              | 4                         | 56          | 0          | 0        | 60          | 0         | 0        | 0        | 0        | 0          | 0                         | 107         | 67          | 0        | 174         | 25                       | 0        | 8           | 0          | 33          | 267         |
| 16:40              | 5                         | 76          | 0          | 0        | 81          | 0         | 0        | 0        | 0        | 0          | 0                         | 98          | 51          | 0        | 149         | 17                       | 0        | 8           | 0          | 25          | 255         |
| 16:45              | 11                        | 87          | 0          | 0        | 98          | 0         | 0        | 0        | 0        | 0          | 0                         | 120         | 36          | 0        | 156         | 31                       | 0        | 5           | 0          | 36          | 290         |
| 16:50              | 11                        | 75          | 0          | 0        | 86          | 0         | 0        | 0        | 0        | 0          | 0                         | 98          | 44          | 0        | 142         | 41                       | 0        | 7           | 0          | 48          | 276         |
| 16:55              | 7                         | 56          | 0          | 0        | 63          | 0         | 0        | 0        | 0        | 0          | 0                         | 90          | 46          | 0        | 136         | 20                       | 0        | 17          | 0          | 37          | 236         |
| <b>Total</b>       | <b>98</b>                 | <b>808</b>  | <b>1</b>   | <b>0</b> | <b>907</b>  | <b>0</b>  | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>   | <b>0</b>                  | <b>1224</b> | <b>509</b>  | <b>1</b> | <b>1734</b> | <b>285</b>               | <b>0</b> | <b>102</b>  | <b>2</b>   | <b>389</b>  | <b>3030</b> |
| 17:00              | 7                         | 58          | 0          | 0        | 65          | 0         | 0        | 0        | 0        | 0          | 0                         | 99          | 48          | 0        | 147         | 19                       | 0        | 13          | 0          | 32          | 244         |
| 17:05              | 11                        | 69          | 0          | 0        | 80          | 0         | 0        | 0        | 0        | 0          | 0                         | 94          | 64          | 0        | 158         | 26                       | 0        | 15          | 0          | 41          | 279         |
| 17:10              | 3                         | 56          | 0          | 0        | 59          | 0         | 0        | 0        | 0        | 0          | 0                         | 87          | 58          | 0        | 145         | 28                       | 0        | 14          | 0          | 42          | 246         |
| 17:15              | 6                         | 80          | 0          | 0        | 86          | 0         | 0        | 0        | 0        | 0          | 0                         | 109         | 45          | 0        | 154         | 19                       | 0        | 12          | 0          | 31          | 271         |
| 17:20              | 5                         | 84          | 0          | 0        | 89          | 0         | 0        | 0        | 0        | 0          | 0                         | 97          | 38          | 0        | 135         | 23                       | 0        | 10          | 0          | 33          | 257         |
| 17:25              | 11                        | 72          | 0          | 0        | 83          | 0         | 0        | 0        | 0        | 0          | 0                         | 90          | 58          | 0        | 148         | 21                       | 0        | 11          | 0          | 32          | 263         |
| 17:30              | 4                         | 68          | 0          | 0        | 72          | 0         | 0        | 0        | 0        | 0          | 0                         | 74          | 42          | 0        | 116         | 28                       | 0        | 8           | 0          | 36          | 224         |
| 17:35              | 12                        | 67          | 0          | 0        | 79          | 0         | 0        | 0        | 0        | 0          | 0                         | 99          | 34          | 0        | 133         | 24                       | 0        | 13          | 0          | 37          | 249         |
| 17:40              | 12                        | 51          | 0          | 0        | 63          | 0         | 0        | 0        | 0        | 0          | 0                         | 96          | 34          | 0        | 130         | 22                       | 0        | 8           | 0          | 30          | 223         |
| 17:45              | 12                        | 65          | 0          | 0        | 77          | 0         | 0        | 0        | 0        | 0          | 0                         | 93          | 44          | 0        | 137         | 20                       | 0        | 12          | 0          | 32          | 246         |
| 17:50              | 14                        | 73          | 0          | 0        | 87          | 0         | 0        | 0        | 0        | 0          | 0                         | 97          | 38          | 0        | 135         | 20                       | 0        | 5           | 0          | 25          | 247         |
| 17:55              | 10                        | 43          | 0          | 0        | 53          | 0         | 0        | 0        | 0        | 0          | 0                         | 52          | 27          | 0        | 79          | 14                       | 0        | 3           | 0          | 17          | 149         |
| <b>Total</b>       | <b>107</b>                | <b>786</b>  | <b>0</b>   | <b>0</b> | <b>893</b>  | <b>0</b>  | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>   | <b>0</b>                  | <b>1087</b> | <b>530</b>  | <b>0</b> | <b>1617</b> | <b>264</b>               | <b>0</b> | <b>124</b>  | <b>0</b>   | <b>388</b>  | <b>2898</b> |
| <b>Grand Total</b> | <b>205</b>                | <b>1594</b> | <b>1</b>   | <b>0</b> | <b>1800</b> | <b>0</b>  | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>   | <b>0</b>                  | <b>2311</b> | <b>1039</b> | <b>1</b> | <b>3351</b> | <b>549</b>               | <b>0</b> | <b>226</b>  | <b>2</b>   | <b>777</b>  | <b>5928</b> |
| <b>Apprch %</b>    | <b>11.4</b>               | <b>88.6</b> | <b>0.1</b> | <b>0</b> |             | <b>0</b>  | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>   | <b>0</b>                  | <b>69</b>   | <b>31</b>   | <b>0</b> |             | <b>70.7</b>              | <b>0</b> | <b>29.1</b> | <b>0.3</b> |             |             |
| <b>Total %</b>     | <b>3.5</b>                | <b>26.9</b> | <b>0</b>   | <b>0</b> | <b>30.4</b> | <b>0</b>  | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>   | <b>0</b>                  | <b>39</b>   | <b>17.5</b> | <b>0</b> | <b>56.5</b> | <b>9.3</b>               | <b>0</b> | <b>3.8</b>  | <b>0</b>   | <b>13.1</b> |             |

# LSC Transportation Consultants, Inc.

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

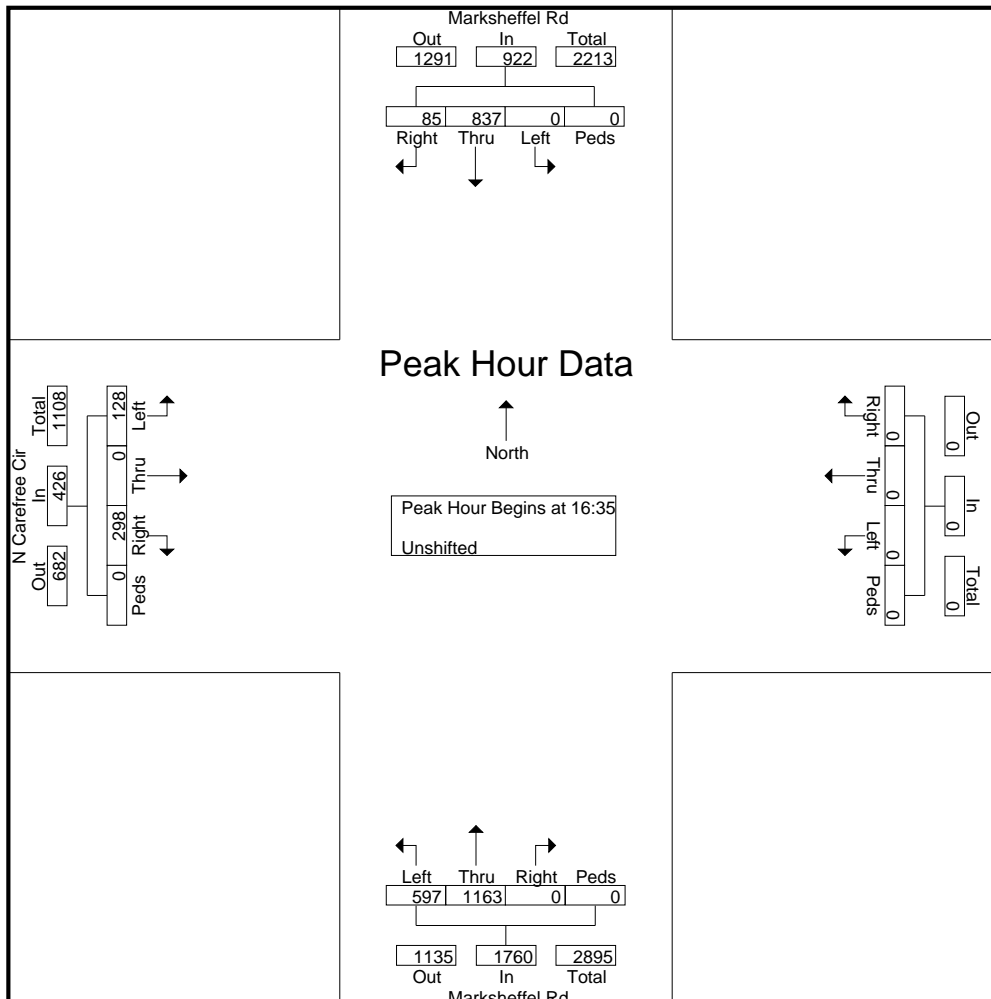
File Name : Marksheffel Rd - N Carefree Cir PM 4-22-25

Site Code : S224091

Start Date : 4/22/2025

Page No : 2

| Start Time   | Marksheffel Rd Southbound |      |      |      |            | Westbound |      |      |      |            | Marksheffel Rd Northbound |      |      |      |            | N Carefree Cir Eastbound |      |      |      |            | Int. Total |
|--|---------------------------|------|------|------|------------|-----------|------|------|------|------------|---------------------------|------|------|------|------------|--------------------------|------|------|------|------------|------------|
|  | Right                     | Thru | Left | Peds | App. Total | Right     | Thru | Left | Peds | App. Total | Right                     | Thru | Left | Peds | App. Total | Right                    | Thru | Left | Peds | App. Total |            |
| Peak Hour Analysis From 16:00 to 17:55 - Peak 1 of 1 |                           |      |      |      |            |           |      |      |      |            |                           |      |      |      |            |                          |      |      |      |            |            |
| Peak Hour for Entire Intersection Begins at 16:35    |                           |      |      |      |            |           |      |      |      |            |                           |      |      |      |            |                          |      |      |      |            |            |
| 16:35  | 4                         | 56   | 0    | 0    | 60         | 0         | 0    | 0    | 0    | 0          | 0                         | 107  | 67   | 0    | 174        | 25                       | 0    | 8    | 0    | 33         | 267        |
| 16:40  | 5                         | 76   | 0    | 0    | 81         | 0         | 0    | 0    | 0    | 0          | 0                         | 98   | 51   | 0    | 149        | 17                       | 0    | 8    | 0    | 25         | 255        |
| 16:45  | 11                        | 87   | 0    | 0    | 98         | 0         | 0    | 0    | 0    | 0          | 0                         | 120  | 36   | 0    | 156        | 31                       | 0    | 5    | 0    | 36         | 290        |
| 16:50  | 11                        | 75   | 0    | 0    | 86         | 0         | 0    | 0    | 0    | 0          | 0                         | 98   | 44   | 0    | 142        | 41                       | 0    | 7    | 0    | 48         | 276        |
| 16:55  | 7                         | 56   | 0    | 0    | 63         | 0         | 0    | 0    | 0    | 0          | 0                         | 90   | 46   | 0    | 136        | 20                       | 0    | 17   | 0    | 37         | 236        |
| 17:00  | 7                         | 58   | 0    | 0    | 65         | 0         | 0    | 0    | 0    | 0          | 0                         | 99   | 48   | 0    | 147        | 19                       | 0    | 13   | 0    | 32         | 244        |
| 17:05  | 11                        | 69   | 0    | 0    | 80         | 0         | 0    | 0    | 0    | 0          | 0                         | 94   | 64   | 0    | 158        | 26                       | 0    | 15   | 0    | 41         | 279        |
| 17:10  | 3                         | 56   | 0    | 0    | 59         | 0         | 0    | 0    | 0    | 0          | 0                         | 87   | 58   | 0    | 145        | 28                       | 0    | 14   | 0    | 42         | 246        |
| 17:15  | 6                         | 80   | 0    | 0    | 86         | 0         | 0    | 0    | 0    | 0          | 0                         | 109  | 45   | 0    | 154        | 19                       | 0    | 12   | 0    | 31         | 271        |
| 17:20  | 5                         | 84   | 0    | 0    | 89         | 0         | 0    | 0    | 0    | 0          | 0                         | 97   | 38   | 0    | 135        | 23                       | 0    | 10   | 0    | 33         | 257        |
| 17:25  | 11                        | 72   | 0    | 0    | 83         | 0         | 0    | 0    | 0    | 0          | 0                         | 90   | 58   | 0    | 148        | 21                       | 0    | 11   | 0    | 32         | 263        |
| 17:30  | 4                         | 68   | 0    | 0    | 72         | 0         | 0    | 0    | 0    | 0          | 0                         | 74   | 42   | 0    | 116        | 28                       | 0    | 8    | 0    | 36         | 224        |
| Total Volume   | 85                        | 837  | 0    | 0    | 922        | 0         | 0    | 0    | 0    | 0          | 0                         | 1163 | 597  | 0    | 1760       | 298                      | 0    | 128  | 0    | 426        | 3108       |
| % App. Total   | 9.2                       | 90.8 | 0    | 0    |            | 0         | 0    | 0    | 0    |            | 0                         | 66.1 | 33.9 | 0    |            | 70                       | 0    | 30   | 0    |            |            |
| PHF  | .644                      | .802 | .000 | .000 | .784       | .000      | .000 | .000 | .000 | .000       | .000                      | .808 | .743 | .000 | .843       | .606                     | .000 | .627 | .000 | .740       | .893       |



# Level of Service Reports

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HCM 6th TWSC  
1: Antelope Ridge Dr. & Mardale Ln

Existing Traffic  
AM Peak Hour

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.7  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      | ↕    | ↕    |      | ↕    | ↕    |      |
| Traffic Vol, veh/h       | 2    | 0    | 53   | 16   | 0    | 6    | 19   | 318  | 5    | 3    | 567  | 1    |
| Future Vol, veh/h        | 2    | 0    | 53   | 16   | 0    | 6    | 19   | 318  | 5    | 3    | 567  | 1    |
| 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           | -    | -    | -    | -    | -    | -    | 80   | -    | -    | 80   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 2    | 0    | 65   | 20   | 0    | 7    | 23   | 393  | 6    | 4    | 700  | 1    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 1155   | 1154  | 701    | 1183  | 1151   | 396   | 701    | 0 | 0 | 399   | 0 | 0 |
| Stage 1              | 709    | 709   | -      | 442   | 442    | -     | -      | - | - | -     | - | - |
| Stage 2              | 446    | 445   | -      | 741   | 709    | -     | -      | - | - | -     | - | - |
| 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   | 174    | 197   | 439    | 166   | 198    | 653   | 896    | - | - | 1160  | - | - |
| Stage 1              | 425    | 437   | -      | 594   | 576    | -     | -      | - | - | -     | - | - |
| Stage 2              | 591    | 575   | -      | 408   | 437    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - | -     | - | - |
| Mov Cap-1 Maneuver   | 168    | 191   | 439    | 138   | 192    | 653   | 896    | - | - | 1160  | - | - |
| Mov Cap-2 Maneuver   | 168    | 191   | -      | 138   | 192    | -     | -      | - | - | -     | - | - |
| Stage 1              | 414    | 436   | -      | 579   | 561    | -     | -      | - | - | -     | - | - |
| Stage 2              | 569    | 560   | -      | 346   | 436    | -     | -      | - | - | -     | - | - |

| Approach             | EB   | WB   | NB  | SB |
|----------------------|------|------|-----|----|
| HCM Control Delay, s | 15.4 | 29.2 | 0.5 | 0  |
| HCM LOS              | C    | D    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 896   | -   | -   | 415   | 176   | 1160  | -   | -   |
| HCM Lane V/C Ratio    | 0.026 | -   | -   | 0.164 | 0.154 | 0.003 | -   | -   |
| HCM Control Delay (s) | 9.1   | -   | -   | 15.4  | 29.2  | 8.1   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | C     | D     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.6   | 0.5   | 0     | -   | -   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.9  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 3    | 10   | 16   | 0    | 1    | 4    |
| Future Vol, veh/h        | 3    | 10   | 16   | 0    | 1    | 4    |
| 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         | 71   | 71   | 71   | 71   | 71   | 71   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 4    | 14   | 23   | 0    | 1    | 6    |

| Major/Minor          | Major1 | Major2 | Minor2 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 23     | 0      | -      | 0 | 45 23       |
| Stage 1              | -      | -      | -      | - | 23 -        |
| Stage 2              | -      | -      | -      | - | 22 -        |
| 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   | -      | -      | - | 965 1054    |
| Stage 1              | -      | -      | -      | - | 1000 -      |
| Stage 2              | -      | -      | -      | - | 1001 -      |
| Platoon blocked, %   |        | -      | -      | - |             |
| Mov Cap-1 Maneuver   | 1592   | -      | -      | - | 962 1054    |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 962 -       |
| Stage 1              | -      | -      | -      | - | 997 -       |
| Stage 2              | -      | -      | -      | - | 1001 -      |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 1.7 | 0  | 8.5 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1592  | -   | -   | -   | 1034  |
| HCM Lane V/C Ratio    | 0.003 | -   | -   | -   | 0.007 |
| HCM Control Delay (s) | 7.3   | 0   | -   | -   | 8.5   |
| HCM Lane LOS          | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0     |

HCM 6th TWSC  
4: Antelope Ridge Dr. & North Carefree

Existing Traffic  
AM Peak Hour

| Intersection             |       |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 40.8  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL   | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↘ ↑↑↑ |      |      | ↘↑↑↑ |      | ↗    |      | ↔    |      | ↗    | ↘    |      |
| Traffic Vol, veh/h       | 249   | 496  | 0    | 0    | 319  | 95   | 0    | 0    | 0    | 173  | 0    | 448  |
| Future Vol, veh/h        | 249   | 496  | 0    | 0    | 319  | 95   | 0    | 0    | 0    | 173  | 0    | 448  |
| 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           | 345   | -    | -    | -    | -    | 155  | -    | -    | -    | 150  | -    | -    |
| 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, %        | 1     | 2    | 2    | 2    | 2    | 1    | 2    | 2    | 2    | 1    | 2    | 1    |
| Mvmt Flow                | 293   | 584  | 0    | 0    | 375  | 112  | 0    | 0    | 0    | 204  | 0    | 527  |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |      |      | Minor2 |      |      |
|----------------------|--------|---|---|--------|---|---|--------|------|------|--------|------|------|
| Conflicting Flow All | 487    | 0 | 0 | 584    | 0 | 0 | 1320   | 1657 | 292  | 1195   | 1545 | 188  |
| Stage 1              | -      | - | - | -      | - | - | 1170   | 1170 | -    | 375    | 375  | -    |
| Stage 2              | -      | - | - | -      | - | - | 150    | 487  | -    | 820    | 1170 | -    |
| Critical Hdwy        | 5.32   | - | - | 5.34   | - | - | 6.44   | 6.54 | 7.14 | 6.42   | 6.54 | 7.12 |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 7.34   | 5.54 | -    | 7.32   | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.74   | 5.54 | -    | 6.72   | 5.54 | -    |
| Follow-up Hdwy       | 3.11   | - | - | 3.12   | - | - | 3.82   | 4.02 | 3.92 | 3.81   | 4.02 | 3.91 |
| Pot Cap-1 Maneuver   | 690    | - | - | 618    | - | - | 165    | 97   | 601  | ~ 198  | 114  | 702  |
| Stage 1              | -      | - | - | -      | - | - | 151    | 265  | -    | 534    | 615  | -    |
| Stage 2              | -      | - | - | -      | - | - | 770    | 549  | -    | 306    | 265  | -    |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -    | -    | -      | -    | -    |
| Mov Cap-1 Maneuver   | 690    | - | - | 618    | - | - | 28     | 56   | 601  | ~ 132  | 66   | 702  |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 28     | 56   | -    | ~ 132  | 66   | -    |
| Stage 1              | -      | - | - | -      | - | - | 87     | 152  | -    | 307    | 615  | -    |
| Stage 2              | -      | - | - | -      | - | - | 192    | 549  | -    | ~ 176  | 152  | -    |

| Approach             | EB  | WB | NB | SB    |
|----------------------|-----|----|----|-------|
| HCM Control Delay, s | 4.7 | 0  | 0  | 111.4 |
| HCM LOS              |     |    | A  | F     |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL | WBT | WBR | SBLn1  | SBLn2 |
|-----------------------|-------|-------|-----|-----|-----|-----|-----|--------|-------|
| Capacity (veh/h)      | -     | 690   | -   | -   | 618 | -   | -   | 132    | 702   |
| HCM Lane V/C Ratio    | -     | 0.425 | -   | -   | -   | -   | -   | 1.542  | 0.751 |
| HCM Control Delay (s) | 0     | 14    | -   | -   | 0   | -   | -   | \$ 338 | 23.9  |
| HCM Lane LOS          | A     | B     | -   | -   | A   | -   | -   | F      | C     |
| HCM 95th %tile Q(veh) | -     | 2.1   | -   | -   | 0   | -   | -   | 14.3   | 6.9   |

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Timings  
5: Marksheffel & North Carefree

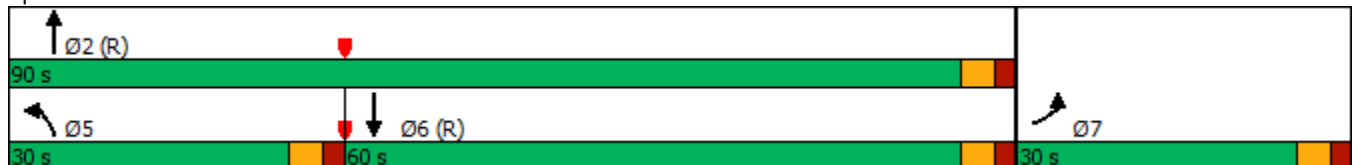
Existing Traffic  
AM Peak Hour

| Lane Group           | EBL   | EBR   | NBL   | NBT   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |
| Traffic Volume (vph) | 93    | 597   | 369   | 785   | 1029  | 85    |
| Future Volume (vph)  | 93    | 597   | 369   | 785   | 1029  | 85    |
| Turn Type            | Prot  | Free  | Prot  | NA    | NA    | Free  |
| Protected Phases     | 7     |       | 5     | 2     | 6     |       |
| Permitted Phases     |       | Free  |       |       |       | Free  |
| Detector Phase       | 7     |       | 5     | 2     | 6     |       |
| Switch Phase         |       |       |       |       |       |       |
| Minimum Initial (s)  | 25.0  |       | 20.0  | 4.0   | 4.0   |       |
| Minimum Split (s)    | 30.0  |       | 25.0  | 11.0  | 11.0  |       |
| Total Split (s)      | 30.0  |       | 30.0  | 90.0  | 60.0  |       |
| Total Split (%)      | 25.0% |       | 25.0% | 75.0% | 50.0% |       |
| Yellow Time (s)      | 3.0   |       | 3.0   | 3.0   | 3.0   |       |
| All-Red Time (s)     | 2.0   |       | 2.0   | 2.0   | 2.0   |       |
| Lost Time Adjust (s) | 0.0   |       | 0.0   | 0.0   | 0.0   |       |
| Total Lost Time (s)  | 5.0   |       | 5.0   | 5.0   | 5.0   |       |
| Lead/Lag             |       |       | Lead  |       | Lag   |       |
| Lead-Lag Optimize?   |       |       | Yes   |       | Yes   |       |
| Recall Mode          | None  |       | None  | C-Max | C-Max |       |
| Act Effct Green (s)  | 25.0  | 120.0 | 20.9  | 85.0  | 59.1  | 120.0 |
| Actuated g/C Ratio   | 0.21  | 1.00  | 0.17  | 0.71  | 0.49  | 1.00  |
| v/c Ratio            | 0.27  | 0.40  | 0.66  | 0.33  | 0.63  | 0.06  |
| Control Delay        | 42.2  | 0.8   | 51.9  | 7.1   | 24.6  | 0.1   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 42.2  | 0.8   | 51.9  | 7.1   | 24.6  | 0.1   |
| LOS                  | D     | A     | D     | A     | C     | A     |
| Approach Delay       | 6.3   |       |       | 21.4  | 22.7  |       |
| Approach LOS         | A     |       |       | C     | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.66  
 Intersection Signal Delay: 18.4  
 Intersection LOS: B  
 Intersection Capacity Utilization 78.4%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 5: Marksheffel & North Carefree



HCM 6th TWSC  
1: Antelope Ridge Dr. & Mardale Ln

Existing Traffic  
PM Peak Hour

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      | ↕    | ↕    |      | ↕    | ↕    |      |
| Traffic Vol, veh/h       | 3    | 0    | 35   | 15   | 0    | 3    | 51   | 228  | 35   | 6    | 142  | 8    |
| Future Vol, veh/h        | 3    | 0    | 35   | 15   | 0    | 3    | 51   | 228  | 35   | 6    | 142  | 8    |
| 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           | -    | -    | -    | -    | -    | -    | 80   | -    | -    | 80   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 91   | 91   | 91   | 91   | 91   | 91   | 91   | 91   | 91   | 91   | 91   | 91   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 3    | 0    | 38   | 16   | 0    | 3    | 56   | 251  | 38   | 7    | 156  | 9    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 559    | 576   | 161    | 576   | 561    | 270   | 165    | 0 | 0 | 289   | 0 | 0 |
| Stage 1              | 175    | 175   | -      | 382   | 382    | -     | -      | - | - | -     | - | - |
| Stage 2              | 384    | 401   | -      | 194   | 179    | -     | -      | - | - | -     | - | - |
| 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   | 440    | 428   | 884    | 428   | 436    | 769   | 1413   | - | - | 1273  | - | - |
| Stage 1              | 827    | 754   | -      | 640   | 613    | -     | -      | - | - | -     | - | - |
| Stage 2              | 639    | 601   | -      | 808   | 751    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - | -     | - | - |
| Mov Cap-1 Maneuver   | 423    | 409   | 884    | 395   | 416    | 769   | 1413   | - | - | 1273  | - | - |
| Mov Cap-2 Maneuver   | 423    | 409   | -      | 395   | 416    | -     | -      | - | - | -     | - | - |
| Stage 1              | 794    | 750   | -      | 614   | 588    | -     | -      | - | - | -     | - | - |
| Stage 2              | 611    | 577   | -      | 769   | 747    | -     | -      | - | - | -     | - | - |

| Approach             | EB  | WB   | NB  | SB  |
|----------------------|-----|------|-----|-----|
| HCM Control Delay, s | 9.7 | 13.8 | 1.2 | 0.3 |
| HCM LOS              | A   | B    |     |     |

| Minor Lane/Major Mvmt | NBL  | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 1413 | -   | -   | 814   | 430   | 1273  | -   | -   |
| HCM Lane V/C Ratio    | 0.04 | -   | -   | 0.051 | 0.046 | 0.005 | -   | -   |
| HCM Control Delay (s) | 7.7  | -   | -   | 9.7   | 13.8  | 7.8   | -   | -   |
| HCM Lane LOS          | A    | -   | -   | A     | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1  | -   | -   | 0.2   | 0.1   | 0     | -   | -   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.9  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↶    | ↷    |      | ↶    |      |
| Traffic Vol, veh/h       | 12   | 27   | 16   | 0    | 0    | 3    |
| Future Vol, veh/h        | 12   | 27   | 16   | 0    | 0    | 3    |
| 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         | 76   | 76   | 76   | 76   | 76   | 76   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 16   | 36   | 21   | 0    | 0    | 4    |

| Major/Minor          | Major1 | Major2 | Minor2 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 21     | 0      | -      | 0 | 89 21       |
| Stage 1              | -      | -      | -      | - | 21 -        |
| Stage 2              | -      | -      | -      | - | 68 -        |
| 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   | 1595   | -      | -      | - | 912 1056    |
| Stage 1              | -      | -      | -      | - | 1002 -      |
| Stage 2              | -      | -      | -      | - | 955 -       |
| Platoon blocked, %   |        | -      | -      | - |             |
| Mov Cap-1 Maneuver   | 1595   | -      | -      | - | 903 1056    |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 903 -       |
| Stage 1              | -      | -      | -      | - | 992 -       |
| Stage 2              | -      | -      | -      | - | 955 -       |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 2.2 | 0  | 8.4 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1595 | -   | -   | -   | 1056  |
| HCM Lane V/C Ratio    | 0.01 | -   | -   | -   | 0.004 |
| HCM Control Delay (s) | 7.3  | 0   | -   | -   | 8.4   |
| HCM Lane LOS          | A    | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -   | 0     |

HCM 6th TWSC  
4: Antelope Ridge Dr. & North Carefree

Existing Traffic  
PM Peak Hour

| Intersection             |       |      |      |       |      |      |      |      |      |      |      |      |
|--------------------------|-------|------|------|-------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.8   |      |      |       |      |      |      |      |      |      |      |      |
| Movement                 | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔ ↑↑↑ |      |      | ↔ ↑↑↑ |      | ↔    |      | ↔    |      | ↔    | ↔    |      |
| Traffic Vol, veh/h       | 170   | 368  | 0    | 0     | 532  | 145  | 0    | 1    | 0    | 61   | 0    | 117  |
| Future Vol, veh/h        | 170   | 368  | 0    | 0     | 532  | 145  | 0    | 1    | 0    | 61   | 0    | 117  |
| 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           | 345   | -    | -    | -     | -    | 155  | -    | -    | -    | 150  | -    | -    |
| 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, %        | 1     | 2    | 2    | 2     | 2    | 1    | 2    | 2    | 2    | 1    | 2    | 1    |
| Mvmt Flow                | 185   | 400  | 0    | 0     | 578  | 158  | 0    | 1    | 0    | 66   | 0    | 127  |
















| Major/Minor          | Major1 |   | Major2 |      | Minor1 |   |      | Minor2 |      |      |      |      |
|----------------------|--------|---|--------|------|--------|---|------|--------|------|------|------|------|
| Conflicting Flow All | 736    | 0 | 0      | 400  | 0      | 0 | 1001 | 1506   | 200  | 1109 | 1348 | 289  |
| Stage 1              | -      | - | -      | -    | -      | - | 770  | 770    | -    | 578  | 578  | -    |
| Stage 2              | -      | - | -      | -    | -      | - | 231  | 736    | -    | 531  | 770  | -    |
| Critical Hdwy        | 5.32   | - | -      | 5.34 | -      | - | 6.44 | 6.54   | 7.14 | 6.42 | 6.54 | 7.12 |
| Critical Hdwy Stg 1  | -      | - | -      | -    | -      | - | 7.34 | 5.54   | -    | 7.32 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | - | -      | -    | -      | - | 6.74 | 5.54   | -    | 6.72 | 5.54 | -    |
| Follow-up Hdwy       | 3.11   | - | -      | 3.12 | -      | - | 3.82 | 4.02   | 3.92 | 3.81 | 4.02 | 3.91 |
| Pot Cap-1 Maneuver   | 527    | - | -      | 754  | -      | - | 255  | 120    | 687  | 222  | 150  | 606  |
| Stage 1              | -      | - | -      | -    | -      | - | 287  | 408    | -    | 390  | 499  | -    |
| Stage 2              | -      | - | -      | -    | -      | - | 690  | 423    | -    | 458  | 408  | -    |
| Platoon blocked, %   | -      | - | -      | -    | -      | - | -    | -      | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | 527    | - | -      | 754  | -      | - | 147  | 78     | 687  | 160  | 97   | 606  |
| Mov Cap-2 Maneuver   | -      | - | -      | -    | -      | - | 147  | 78     | -    | 160  | 97   | -    |
| Stage 1              | -      | - | -      | -    | -      | - | 186  | 265    | -    | 253  | 499  | -    |
| Stage 2              | -      | - | -      | -    | -      | - | 545  | 423    | -    | 296  | 265  | -    |

| Approach             | EB  | WB | NB   | SB   |
|----------------------|-----|----|------|------|
| HCM Control Delay, s | 4.9 | 0  | 51.8 | 22.8 |
| HCM LOS              |     |    | F    | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-------|-----|-----|-----|-----|-----|-------|-------|
| Capacity (veh/h)      | 78    | 527   | -   | -   | 754 | -   | -   | 160   | 606   |
| HCM Lane V/C Ratio    | 0.014 | 0.351 | -   | -   | -   | -   | -   | 0.414 | 0.21  |
| HCM Control Delay (s) | 51.8  | 15.5  | -   | -   | 0   | -   | -   | 42.6  | 12.5  |
| HCM Lane LOS          | F     | C     | -   | -   | A   | -   | -   | E     | B     |
| HCM 95th %tile Q(veh) | 0     | 1.6   | -   | -   | 0   | -   | -   | 1.8   | 0.8   |

Timings  
5: Marksheffel & North Carefree

Existing Traffic  
PM Peak Hour

|                      |  |  |   |   |   |  |
|----------------------|---|---|--|--|--|---|
| Lane Group           | EBL   | EBR   | NBL  | NBT  | SBT  | SBR   |
| Lane Configurations  |  |  | <br> | <br> | <br> |  |
| Traffic Volume (vph) | 128   | 298   | 597  | 1163   | 837  | 85  |
| Future Volume (vph)  | 128   | 298   | 597  | 1163   | 837  | 85  |
| Turn Type            | Prot  | Free  | Prot   | NA   | NA   | Free  |
| Protected Phases     | 7   |   | 5  | 2  | 6  |   |
| Permitted Phases     |   | Free  |  |  |  | Free  |
| Detector Phase       | 7   |   | 5  | 2  | 6  |   |
| Switch Phase         |   |   |  |  |  |   |
| Minimum Initial (s)  | 20.0  |   | 15.0   | 4.0  | 4.0  |   |
| Minimum Split (s)    | 25.0  |   | 20.0   | 11.0   | 11.0   |   |
| Total Split (s)      | 27.0  |   | 40.0   | 93.0   | 53.0   |   |
| Total Split (%)      | 22.5%   |   | 33.3%  | 77.5%  | 44.2%  |   |
| Yellow Time (s)      | 3.0   |   | 3.0  | 3.0  | 3.0  |   |
| All-Red Time (s)     | 2.0   |   | 2.0  | 2.0  | 2.0  |   |
| Lost Time Adjust (s) | 0.0   |   | 0.0  | 0.0  | 0.0  |   |
| Total Lost Time (s)  | 5.0   |   | 5.0  | 5.0  | 5.0  |   |
| Lead/Lag             |   |   | Lead   |  | Lag  |   |
| Lead-Lag Optimize?   |   |   | Yes  |  | Yes  |   |
| Recall Mode          | None  |   | None   | C-Max  | C-Max  |   |
| Act Effct Green (s)  | 20.0  | 120.0   | 27.3   | 90.0   | 57.7   | 120.0   |
| Actuated g/C Ratio   | 0.17  | 1.00  | 0.23   | 0.75   | 0.48   | 1.00  |
| v/c Ratio            | 0.45  | 0.20  | 0.80   | 0.46   | 0.51   | 0.06  |
| Control Delay        | 50.6  | 0.3   | 51.6   | 6.3  | 23.5   | 0.1   |
| Queue Delay          | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   |
| Total Delay          | 50.6  | 0.3   | 51.6   | 6.3  | 23.5   | 0.1   |
| LOS                  | D   | A   | D  | A  | C  | A   |
| Approach Delay       | 15.4  |   |  | 21.7   | 21.4   |   |
| Approach LOS         | B   |   |  | C  | C  |   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.80  
 Intersection Signal Delay: 20.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 69.3%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 5: Marksheffel & North Carefree



| 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       | 2    | 0    | 53   | 46   | 0    | 14   | 19   | 318  | 14   | 6    | 567  | 1    |
| Future Vol, veh/h        | 2    | 0    | 53   | 46   | 0    | 14   | 19   | 318  | 14   | 6    | 567  | 1    |
| 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           | -    | -    | -    | -    | -    | -    | 80   | -    | 150  | 80   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 2    | 0    | 65   | 57   | 0    | 17   | 23   | 393  | 17   | 7    | 700  | 1    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 1171   | 1171  | 701    | 1186  | 1154   | 393   | 701    | 0 | 0 | 410   | 0 | 0 |
| Stage 1              | 715    | 715   | -      | 439   | 439    | -     | -      | - | - | -     | - | - |
| Stage 2              | 456    | 456   | -      | 747   | 715    | -     | -      | - | - | -     | - | - |
| 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   | 170    | 193   | 439    | 166   | 197    | 656   | 896    | - | - | 1149  | - | - |
| Stage 1              | 422    | 434   | -      | 597   | 578    | -     | -      | - | - | -     | - | - |
| Stage 2              | 584    | 568   | -      | 405   | 434    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - | -     | - | - |
| Mov Cap-1 Maneuver   | 162    | 187   | 439    | 138   | 191    | 656   | 896    | - | - | 1149  | - | - |
| Mov Cap-2 Maneuver   | 162    | 187   | -      | 138   | 191    | -     | -      | - | - | -     | - | - |
| Stage 1              | 411    | 431   | -      | 581   | 563    | -     | -      | - | - | -     | - | - |
| Stage 2              | 554    | 553   | -      | 343   | 431    | -     | -      | - | - | -     | - | - |

| Approach             | EB   | WB | NB  | SB  |
|----------------------|------|----|-----|-----|
| HCM Control Delay, s | 15.4 | 42 | 0.5 | 0.1 |
| HCM LOS              | C    | E  |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 896   | -   | -   | 413   | 169   | 1149  | -   | -   |
| HCM Lane V/C Ratio    | 0.026 | -   | -   | 0.164 | 0.438 | 0.006 | -   | -   |
| HCM Control Delay (s) | 9.1   | -   | -   | 15.4  | 42    | 8.2   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | C     | E     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.6   | 2     | 0     | -   | -   |

| 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       | 3    | 13   | 9    | 0    | 26   | 0    | 28   | 0    | 0    | 1    | 0    | 4    |
| Future Vol, veh/h        | 3    | 13   | 9    | 0    | 26   | 0    | 28   | 0    | 0    | 1    | 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         | 71   | 71   | 85   | 85   | 71   | 71   | 85   | 85   | 85   | 71   | 71   | 71   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 4    | 18   | 11   | 0    | 37   | 0    | 33   | 0    | 0    | 1    | 0    | 6    |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 37     | 0 | 0 | 29     | 0 | 0 | 72     | 69    | 24    | 69     | 74    | 37    |
| Stage 1              | -      | - | - | -      | - | - | 32     | 32    | -     | 37     | 37    | -     |
| Stage 2              | -      | - | - | -      | - | - | 40     | 37    | -     | 32     | 37    | -     |
| 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   | 1574   | - | - | 1584   | - | - | 919    | 822   | 1052  | 923    | 816   | 1035  |
| Stage 1              | -      | - | - | -      | - | - | 984    | 868   | -     | 978    | 864   | -     |
| Stage 2              | -      | - | - | -      | - | - | 975    | 864   | -     | 984    | 864   | -     |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -     | -     | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1574   | - | - | 1584   | - | - | 912    | 820   | 1052  | 921    | 814   | 1035  |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 912    | 820   | -     | 921    | 814   | -     |
| Stage 1              | -      | - | - | -      | - | - | 981    | 865   | -     | 975    | 864   | -     |
| Stage 2              | -      | - | - | -      | - | - | 970    | 864   | -     | 981    | 861   | -     |

| Approach             | EB  |  |  | WB |  |  | NB  |  |  | SB  |  |  |
|----------------------|-----|--|--|----|--|--|-----|--|--|-----|--|--|
| HCM Control Delay, s | 0.9 |  |  | 0  |  |  | 9.1 |  |  | 8.6 |  |  |
| HCM LOS              |     |  |  |    |  |  | A   |  |  | A   |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL  | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|------|-----|-----|-------|
| Capacity (veh/h)      | 912   | 1574  | -   | -   | 1584 | -   | -   | 1010  |
| HCM Lane V/C Ratio    | 0.036 | 0.003 | -   | -   | -    | -   | -   | 0.007 |
| HCM Control Delay (s) | 9.1   | 7.3   | 0   | -   | 0    | -   | -   | 8.6   |
| HCM Lane LOS          | A     | A     | A   | -   | A    | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | 0     | -   | -   | 0    | -   | -   | 0     |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 5.2  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | T    |      |      | T    |      |      |
| Traffic Vol, veh/h       | 9    | 3    | 10   | 0    | 0    | 11   |
| Future Vol, veh/h        | 9    | 3    | 10   | 0    | 0    | 11   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 71   | 85   | 85   | 85   | 85   | 71   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 13   | 4    | 12   | 0    | 0    | 15   |

| Major/Minor          | Minor2 | Major1 |       | Major2 |   |
|----------------------|--------|--------|-------|--------|---|
| Conflicting Flow All | 32     | 8      | 15    | 0      | 0 |
| Stage 1              | 8      | -      | -     | -      | - |
| Stage 2              | 24     | -      | -     | -      | - |
| 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   | 982    | 1074   | 1603  | -      | - |
| Stage 1              | 1015   | -      | -     | -      | - |
| Stage 2              | 999    | -      | -     | -      | - |
| Platoon blocked, %   |        |        |       | -      | - |
| Mov Cap-1 Maneuver   | 975    | 1074   | 1603  | -      | - |
| Mov Cap-2 Maneuver   | 975    | -      | -     | -      | - |
| Stage 1              | 1008   | -      | -     | -      | - |
| Stage 2              | 999    | -      | -     | -      | - |

| Approach             | EB  | NB  | SB |
|----------------------|-----|-----|----|
| HCM Control Delay, s | 8.7 | 7.3 | 0  |
| HCM LOS              | A   |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 1603  | -   | 995   | -   | -   |
| HCM Lane V/C Ratio    | 0.007 | -   | 0.016 | -   | -   |
| HCM Control Delay (s) | 7.3   | 0   | 8.7   | -   | -   |
| HCM Lane LOS          | A     | A   | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0.1   | -   | -   |

Timings  
4: Antelope Ridge Dr. & North Carefree

Existing Plus Site-Generated Traffic  
AM Peak Hour

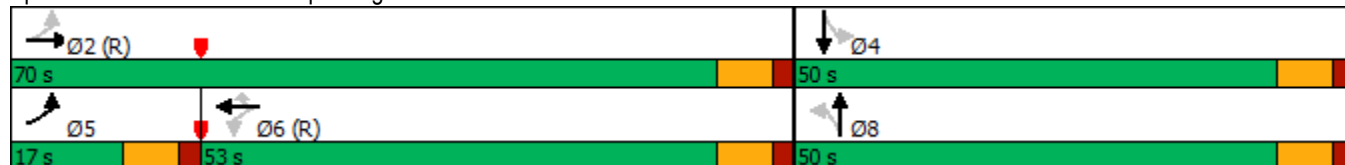


| Lane Group           | EBL   | EBT   | WBT   | WBR   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↕↕↕   | ↖↕↕   | ↗     | ↕↕    | ↖     | ↗     |
| Traffic Volume (vph) | 254   | 496   | 319   | 100   | 1     | 188   | 0     |
| Future Volume (vph)  | 254   | 496   | 319   | 100   | 1     | 188   | 0     |
| Turn Type            | pm+pt | NA    | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 5     | 2     | 6     |       | 8     |       | 4     |
| Permitted Phases     | 2     |       |       | 6     |       | 4     |       |
| Detector Phase       | 5     | 2     | 6     | 6     | 8     | 4     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 20.0  | 20.0  |
| Minimum Split (s)    | 11.0  | 23.0  | 23.0  | 23.0  | 23.0  | 27.0  | 27.0  |
| Total Split (s)      | 17.0  | 70.0  | 53.0  | 53.0  | 50.0  | 50.0  | 50.0  |
| Total Split (%)      | 14.2% | 58.3% | 44.2% | 44.2% | 41.7% | 41.7% | 41.7% |
| Yellow Time (s)      | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Lead/Lag             | Lead  |       | Lag   | Lag   |       |       |       |
| Lead-Lag Optimize?   | Yes   |       | Yes   | Yes   |       |       |       |
| Recall Mode          | None  | C-Max | C-Max | C-Max | None  | Max   | Max   |
| Act Effct Green (s)  | 63.0  | 63.0  | 46.0  | 46.0  | 43.0  | 43.0  | 43.0  |
| Actuated g/C Ratio   | 0.52  | 0.52  | 0.38  | 0.38  | 0.36  | 0.36  | 0.36  |
| v/c Ratio            | 0.57  | 0.22  | 0.19  | 0.17  | 0.00  | 0.43  | 0.63  |
| Control Delay        | 21.6  | 15.6  | 11.0  | 5.2   | 25.0  | 32.6  | 9.6   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 21.6  | 15.6  | 11.0  | 5.2   | 25.0  | 32.6  | 9.6   |
| LOS                  | C     | B     | B     | A     | C     | C     | A     |
| Approach Delay       |       | 17.6  | 9.6   |       | 25.0  |       | 16.3  |
| Approach LOS         |       | B     | A     |       | C     |       | B     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.63  
 Intersection Signal Delay: 15.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 66.4%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 4: Antelope Ridge Dr. & North Carefree



Timings  
5: Marksheffel & North Carefree

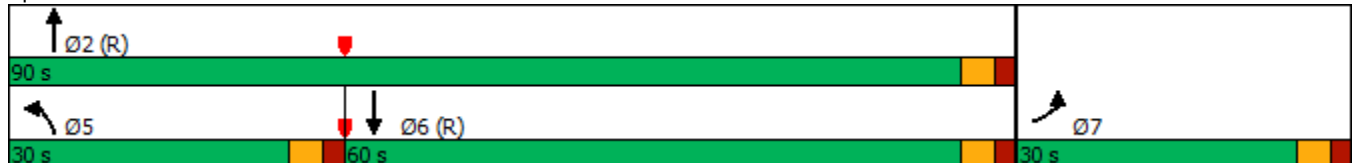
Existing Plus Site-Generated Traffic  
AM Peak Hour

| Lane Group           | EBL   | EBR   | NBL   | NBT   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |
| Traffic Volume (vph) | 99    | 606   | 372   | 785   | 1029  | 87    |
| Future Volume (vph)  | 99    | 606   | 372   | 785   | 1029  | 87    |
| Turn Type            | Prot  | Free  | Prot  | NA    | NA    | Free  |
| Protected Phases     | 7     |       | 5     | 2     | 6     |       |
| Permitted Phases     |       | Free  |       |       |       | Free  |
| Detector Phase       | 7     |       | 5     | 2     | 6     |       |
| Switch Phase         |       |       |       |       |       |       |
| Minimum Initial (s)  | 25.0  |       | 20.0  | 4.0   | 4.0   |       |
| Minimum Split (s)    | 30.0  |       | 25.0  | 11.0  | 11.0  |       |
| Total Split (s)      | 30.0  |       | 30.0  | 90.0  | 60.0  |       |
| Total Split (%)      | 25.0% |       | 25.0% | 75.0% | 50.0% |       |
| Yellow Time (s)      | 3.0   |       | 3.0   | 3.0   | 3.0   |       |
| All-Red Time (s)     | 2.0   |       | 2.0   | 2.0   | 2.0   |       |
| Lost Time Adjust (s) | 0.0   |       | 0.0   | 0.0   | 0.0   |       |
| Total Lost Time (s)  | 5.0   |       | 5.0   | 5.0   | 5.0   |       |
| Lead/Lag             |       |       | Lead  |       | Lag   |       |
| Lead-Lag Optimize?   |       |       | Yes   |       | Yes   |       |
| Recall Mode          | None  |       | None  | C-Max | C-Max |       |
| Act Effct Green (s)  | 25.0  | 120.0 | 21.0  | 85.0  | 59.0  | 120.0 |
| Actuated g/C Ratio   | 0.21  | 1.00  | 0.18  | 0.71  | 0.49  | 1.00  |
| v/c Ratio            | 0.29  | 0.41  | 0.66  | 0.33  | 0.63  | 0.06  |
| Control Delay        | 43.1  | 3.8   | 51.9  | 7.1   | 24.7  | 0.1   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 43.1  | 3.8   | 51.9  | 7.1   | 24.7  | 0.1   |
| LOS                  | D     | A     | D     | A     | C     | A     |
| Approach Delay       | 9.3   |       |       | 21.5  | 22.7  |       |
| Approach LOS         | A     |       |       | C     | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.66  
 Intersection Signal Delay: 19.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 78.4%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 5: Marksheffel & North Carefree



| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.5  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      | ↗    | ↑    | ↖    | ↗    | ↖    | ↖    |
| Traffic Vol, veh/h       | 3    | 0    | 35   | 34   | 0    | 8    | 51   | 228  | 63   | 13   | 142  | 8    |
| Future Vol, veh/h        | 3    | 0    | 35   | 34   | 0    | 8    | 51   | 228  | 63   | 13   | 142  | 8    |
| 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           | -    | -    | -    | -    | -    | -    | 80   | -    | 150  | 80   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 91   | 91   | 91   | 91   | 91   | 91   | 91   | 91   | 91   | 91   | 91   | 91   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 3    | 0    | 38   | 37   | 0    | 9    | 56   | 251  | 69   | 14   | 156  | 9    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 591    | 621   | 161    | 571   | 556    | 251   | 165    | 0 | 0 | 320   | 0 | 0 |
| Stage 1              | 189    | 189   | -      | 363   | 363    | -     | -      | - | - | -     | - | - |
| Stage 2              | 402    | 432   | -      | 208   | 193    | -     | -      | - | - | -     | - | - |
| 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   | 419    | 403   | 884    | 432   | 439    | 788   | 1413   | - | - | 1240  | - | - |
| Stage 1              | 813    | 744   | -      | 656   | 625    | -     | -      | - | - | -     | - | - |
| Stage 2              | 625    | 582   | -      | 794   | 741    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - | -     | - | - |
| Mov Cap-1 Maneuver   | 398    | 382   | 884    | 397   | 417    | 788   | 1413   | - | - | 1240  | - | - |
| Mov Cap-2 Maneuver   | 398    | 382   | -      | 397   | 417    | -     | -      | - | - | -     | - | - |
| Stage 1              | 780    | 736   | -      | 630   | 600    | -     | -      | - | - | -     | - | - |
| Stage 2              | 594    | 559   | -      | 751   | 733    | -     | -      | - | - | -     | - | - |

| Approach             | EB  |  | WB   |  | NB  |  | SB  |  |
|----------------------|-----|--|------|--|-----|--|-----|--|
| HCM Control Delay, s | 9.7 |  | 14.2 |  | 1.1 |  | 0.6 |  |
| HCM LOS              | A   |  | B    |  |     |  |     |  |

| Minor Lane/Major Mvmt | NBL  | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 1413 | -   | -   | 806   | 438   | 1240  | -   | -   |
| HCM Lane V/C Ratio    | 0.04 | -   | -   | 0.052 | 0.105 | 0.012 | -   | -   |
| HCM Control Delay (s) | 7.7  | -   | -   | 9.7   | 14.2  | 7.9   | -   | -   |
| HCM Lane LOS          | A    | -   | -   | A     | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1  | -   | -   | 0.2   | 0.4   | 0     | -   | -   |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 12   | 36   | 26   | 0    | 22   | 0    | 18   | 0    | 0    | 0    | 0    | 3    |
| Future Vol, veh/h        | 12   | 36   | 26   | 0    | 22   | 0    | 18   | 0    | 0    | 0    | 0    | 3    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 76   | 76   | 85   | 85   | 76   | 85   | 85   | 85   | 85   | 76   | 76   | 76   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 16   | 47   | 31   | 0    | 29   | 0    | 21   | 0    | 0    | 0    | 0    | 4    |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 29     | 0 | 0 | 78     | 0 | 0 | 126    | 124   | 63    | 124    | 139   | 29    |
| Stage 1              | -      | - | - | -      | - | - | 95     | 95    | -     | 29     | 29    | -     |
| Stage 2              | -      | - | - | -      | - | - | 31     | 29    | -     | 95     | 110   | -     |
| 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   | 1584   | - | - | 1520   | - | - | 848    | 766   | 1002  | 850    | 752   | 1046  |
| Stage 1              | -      | - | - | -      | - | - | 912    | 816   | -     | 988    | 871   | -     |
| Stage 2              | -      | - | - | -      | - | - | 986    | 871   | -     | 912    | 804   | -     |
| Platoon blocked, %   |        | - | - |        | - | - |        |       |       |        |       |       |
| Mov Cap-1 Maneuver   | 1584   | - | - | 1520   | - | - | 838    | 758   | 1002  | 843    | 744   | 1046  |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 838    | 758   | -     | 843    | 744   | -     |
| Stage 1              | -      | - | - | -      | - | - | 902    | 807   | -     | 977    | 871   | -     |
| Stage 2              | -      | - | - | -      | - | - | 982    | 871   | -     | 902    | 795   | -     |

| Approach             | EB  |  |  | WB |  |  | NB  |  |  | SB  |  |  |
|----------------------|-----|--|--|----|--|--|-----|--|--|-----|--|--|
| HCM Control Delay, s | 1.2 |  |  | 0  |  |  | 9.4 |  |  | 8.5 |  |  |
| HCM LOS              |     |  |  |    |  |  | A   |  |  | A   |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL  | EBT | EBR | WBL  | WBT | WBR | SBLn1 |
|-----------------------|-------|------|-----|-----|------|-----|-----|-------|
| Capacity (veh/h)      | 838   | 1584 | -   | -   | 1520 | -   | -   | 1046  |
| HCM Lane V/C Ratio    | 0.025 | 0.01 | -   | -   | -    | -   | -   | 0.004 |
| HCM Control Delay (s) | 9.4   | 7.3  | 0   | -   | 0    | -   | -   | 8.5   |
| HCM Lane LOS          | A     | A    | A   | -   | A    | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | 0    | -   | -   | 0    | -   | -   | 0     |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 6.2  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | T    |      |      | T    |      |      |
| Traffic Vol, veh/h       | 22   | 9    | 6    | 0    | 0    | 13   |
| Future Vol, veh/h        | 22   | 9    | 6    | 0    | 0    | 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    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 76   | 85   | 85   | 85   | 85   | 76   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 29   | 11   | 7    | 0    | 0    | 17   |

| Major/Minor          | Minor2 | Major1 |       | Major2 |   |
|----------------------|--------|--------|-------|--------|---|
| Conflicting Flow All | 23     | 9      | 17    | 0      | 0 |
| Stage 1              | 9      | -      | -     | -      | - |
| Stage 2              | 14     | -      | -     | -      | - |
| 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   | 993    | 1073   | 1600  | -      | - |
| Stage 1              | 1014   | -      | -     | -      | - |
| Stage 2              | 1009   | -      | -     | -      | - |
| Platoon blocked, %   |        |        |       | -      | - |
| Mov Cap-1 Maneuver   | 989    | 1073   | 1600  | -      | - |
| Mov Cap-2 Maneuver   | 989    | -      | -     | -      | - |
| Stage 1              | 1010   | -      | -     | -      | - |
| Stage 2              | 1009   | -      | -     | -      | - |

| Approach             | EB  | NB  | SB |
|----------------------|-----|-----|----|
| HCM Control Delay, s | 8.7 | 7.3 | 0  |
| HCM LOS              | A   |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 1600  | -   | 1010  | -   | -   |
| HCM Lane V/C Ratio    | 0.004 | -   | 0.039 | -   | -   |
| HCM Control Delay (s) | 7.3   | 0   | 8.7   | -   | -   |
| HCM Lane LOS          | A     | A   | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0.1   | -   | -   |

Timings  
4: Antelope Ridge Dr. & North Carefree

Existing Plus Site-Generated Traffic  
PM Peak Hour



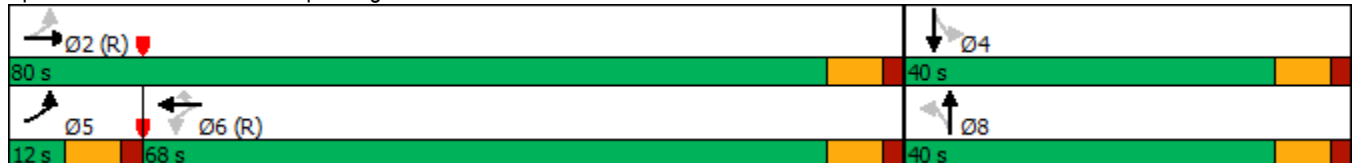
| Lane Group           | EBL   | EBT   | WBT   | WBR   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↕↕↕   | ↖↕↕   | ↗     | ↕↕    | ↖     | ↗     |
| Traffic Volume (vph) | 184   | 368   | 532   | 159   | 1     | 70    | 0     |
| Future Volume (vph)  | 184   | 368   | 532   | 159   | 1     | 70    | 0     |
| Turn Type            | pm+pt | NA    | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 5     | 2     | 6     |       | 8     |       | 4     |
| Permitted Phases     | 2     |       |       | 6     |       | 4     |       |
| Detector Phase       | 5     | 2     | 6     | 6     | 8     | 4     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 20.0  | 20.0  |
| Minimum Split (s)    | 11.0  | 23.0  | 23.0  | 23.0  | 23.0  | 27.0  | 27.0  |
| Total Split (s)      | 12.0  | 80.0  | 68.0  | 68.0  | 40.0  | 40.0  | 40.0  |
| Total Split (%)      | 10.0% | 66.7% | 56.7% | 56.7% | 33.3% | 33.3% | 33.3% |
| Yellow Time (s)      | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Lead/Lag             | Lead  |       | Lag   | Lag   |       |       |       |
| Lead-Lag Optimize?   | Yes   |       | Yes   | Yes   |       |       |       |
| Recall Mode          | None  | C-Max | C-Max | C-Max | None  | None  | None  |
| Act Effct Green (s)  | 86.0  | 86.0  | 69.2  | 69.2  | 20.0  | 20.0  | 20.0  |
| Actuated g/C Ratio   | 0.72  | 0.72  | 0.58  | 0.58  | 0.17  | 0.17  | 0.17  |
| v/c Ratio            | 0.33  | 0.11  | 0.20  | 0.17  | 0.00  | 0.32  | 0.26  |
| Control Delay        | 7.0   | 5.3   | 10.3  | 6.3   | 42.0  | 48.3  | 1.2   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 7.0   | 5.3   | 10.3  | 6.3   | 42.0  | 48.3  | 1.2   |
| LOS                  | A     | A     | B     | A     | D     | D     | A     |
| Approach Delay       |       | 5.9   | 9.3   |       | 42.0  |       | 17.9  |
| Approach LOS         |       | A     | A     |       | D     |       | B     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.33  
 Intersection Signal Delay: 9.2  
 Intersection Capacity Utilization 54.6%  
 Analysis Period (min) 15

Intersection LOS: A  
 ICU Level of Service A

Splits and Phases: 4: Antelope Ridge Dr. & North Carefree



Timings  
5: Marksheffel & North Carefree

Existing Plus Site-Generated Traffic  
PM Peak Hour

| Lane Group           | EBL   | EBR   | NBL   | NBT   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |
| Traffic Volume (vph) | 132   | 304   | 605   | 1163  | 837   | 90    |
| Future Volume (vph)  | 132   | 304   | 605   | 1163  | 837   | 90    |
| Turn Type            | Prot  | Free  | Prot  | NA    | NA    | Free  |
| Protected Phases     | 7     |       | 5     | 2     | 6     |       |
| Permitted Phases     |       | Free  |       |       |       | Free  |
| Detector Phase       | 7     |       | 5     | 2     | 6     |       |
| Switch Phase         |       |       |       |       |       |       |
| Minimum Initial (s)  | 20.0  |       | 15.0  | 4.0   | 4.0   |       |
| Minimum Split (s)    | 25.0  |       | 20.0  | 11.0  | 11.0  |       |
| Total Split (s)      | 27.0  |       | 40.0  | 93.0  | 53.0  |       |
| Total Split (%)      | 22.5% |       | 33.3% | 77.5% | 44.2% |       |
| Yellow Time (s)      | 3.0   |       | 3.0   | 3.0   | 3.0   |       |
| All-Red Time (s)     | 2.0   |       | 2.0   | 2.0   | 2.0   |       |
| Lost Time Adjust (s) | 0.0   |       | 0.0   | 0.0   | 0.0   |       |
| Total Lost Time (s)  | 5.0   |       | 5.0   | 5.0   | 5.0   |       |
| Lead/Lag             |       |       | Lead  |       | Lag   |       |
| Lead-Lag Optimize?   |       |       | Yes   |       | Yes   |       |
| Recall Mode          | None  |       | None  | C-Max | C-Max |       |
| Act Effct Green (s)  | 20.0  | 120.0 | 27.6  | 90.0  | 57.4  | 120.0 |
| Actuated g/C Ratio   | 0.17  | 1.00  | 0.23  | 0.75  | 0.48  | 1.00  |
| v/c Ratio            | 0.47  | 0.20  | 0.80  | 0.46  | 0.52  | 0.06  |
| Control Delay        | 53.2  | 0.8   | 51.5  | 6.3   | 23.7  | 0.1   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 53.2  | 0.8   | 51.5  | 6.3   | 23.7  | 0.1   |
| LOS                  | D     | A     | D     | A     | C     | A     |
| Approach Delay       | 16.7  |       |       | 21.8  | 21.4  |       |
| Approach LOS         | B     |       |       | C     | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.80  
 Intersection Signal Delay: 21.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 69.6%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 5: Marksheffel & North Carefree



| 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       | 2    | 0    | 53   | 48   | 0    | 12   | 19   | 324  | 15   | 5    | 571  | 1    |
| Future Vol, veh/h        | 2    | 0    | 53   | 48   | 0    | 12   | 19   | 324  | 15   | 5    | 571  | 1    |
| 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           | -    | -    | -    | -    | -    | -    | 80   | -    | -    | 80   | -    | -    |
| 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                | 2    | 0    | 62   | 56   | 0    | 14   | 22   | 381  | 18   | 6    | 672  | 1    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 1126   | 1128  | 673    | 1150  | 1119   | 390   | 673    | 0 | 0 | 399   | 0 | 0 |
| Stage 1              | 685    | 685   | -      | 434   | 434    | -     | -      | - | - | -     | - | - |
| Stage 2              | 441    | 443   | -      | 716   | 685    | -     | -      | - | - | -     | - | - |
| 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   | 167    | 183   | 455    | 158   | 185    | 784   | 918    | - | - | 1181  | - | - |
| Stage 1              | 438    | 448   | -      | 691   | 618    | -     | -      | - | - | -     | - | - |
| Stage 2              | 682    | 612   | -      | 421   | 448    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   | 1      | 1     |        | 1     | 1      | 1     |        | - | - | 1     | - | - |
| Mov Cap-1 Maneuver   | 160    | 177   | 455    | 134   | 179    | 784   | 918    | - | - | 1181  | - | - |
| Mov Cap-2 Maneuver   | 160    | 177   | -      | 134   | 179    | -     | -      | - | - | -     | - | - |
| Stage 1              | 427    | 446   | -      | 674   | 604    | -     | -      | - | - | -     | - | - |
| Stage 2              | 654    | 597   | -      | 361   | 446    | -     | -      | - | - | -     | - | - |

| Approach             | EB | WB   | NB  | SB  |
|----------------------|----|------|-----|-----|
| HCM Control Delay, s | 15 | 43.8 | 0.5 | 0.1 |
| HCM LOS              | C  | E    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 918   | -   | -   | 426   | 161   | 1181  | -   | -   |
| HCM Lane V/C Ratio    | 0.024 | -   | -   | 0.152 | 0.438 | 0.005 | -   | -   |
| HCM Control Delay (s) | 9     | -   | -   | 15    | 43.8  | 8.1   | -   | -   |
| HCM Lane LOS          | A     | -   | -   | C     | E     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.5   | 2     | 0     | -   | -   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.4  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↕    | ↕    |      | ↕    |      |
| Traffic Vol, veh/h       | 3    | 13   | 26   | 0    | 1    | 4    |
| Future Vol, veh/h        | 3    | 13   | 26   | 0    | 1    | 4    |
| 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         | 71   | 71   | 71   | 71   | 71   | 71   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 4    | 18   | 37   | 0    | 1    | 6    |

| Major/Minor          | Major1 | Major2 | Minor2 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 37     | 0      | -      | 0 | 63 37       |
| Stage 1              | -      | -      | -      | - | 37 -        |
| Stage 2              | -      | -      | -      | - | 26 -        |
| 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   | 1574   | -      | -      | - | 943 1035    |
| Stage 1              | -      | -      | -      | - | 985 -       |
| Stage 2              | -      | -      | -      | - | 997 -       |
| Platoon blocked, %   |        | -      | -      | - |             |
| Mov Cap-1 Maneuver   | 1574   | -      | -      | - | 940 1035    |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 940 -       |
| Stage 1              | -      | -      | -      | - | 982 -       |
| Stage 2              | -      | -      | -      | - | 997 -       |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 1.4 | 0  | 8.6 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1574  | -   | -   | -   | 1014  |
| HCM Lane V/C Ratio    | 0.003 | -   | -   | -   | 0.007 |
| HCM Control Delay (s) | 7.3   | 0   | -   | -   | 8.6   |
| HCM Lane LOS          | A     | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0     | -   | -   | -   | 0     |

Timings  
4: Antelope Ridge Dr. & North Carefree

2045 Background Traffic  
AM Peak Hour

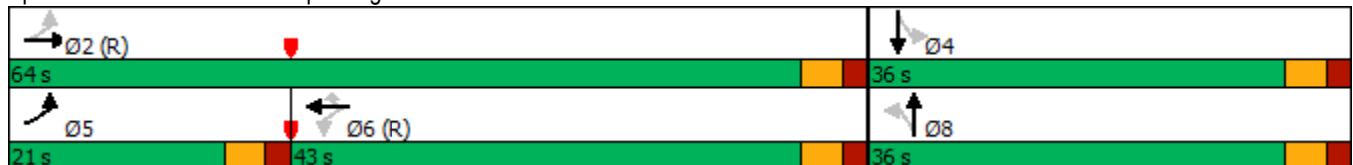


| Lane Group           | EBL   | EBT   | WBT   | WBR   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↗     | ↗↗↗   | ↖↖↖   | ↖     | ↔     | ↗     | ↘     |
| Traffic Volume (vph) | 256   | 991   | 1235  | 105   | 1     | 194   | 0     |
| Future Volume (vph)  | 256   | 991   | 1235  | 105   | 1     | 194   | 0     |
| Turn Type            | pm+pt | NA    | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 5     | 2     | 6     |       | 8     |       | 4     |
| Permitted Phases     | 2     |       |       | 6     |       | 4     |       |
| Detector Phase       | 5     | 2     | 6     | 6     | 8     | 4     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 10.0  | 10.0  | 10.0  | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 11.0  | 15.0  | 15.0  | 15.0  | 10.0  | 10.0  | 10.0  |
| Total Split (s)      | 21.0  | 64.0  | 43.0  | 43.0  | 36.0  | 36.0  | 36.0  |
| Total Split (%)      | 21.0% | 64.0% | 43.0% | 43.0% | 36.0% | 36.0% | 36.0% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Lead/Lag             | Lead  |       | Lag   | Lag   |       |       |       |
| Lead-Lag Optimize?   | Yes   |       | Yes   | Yes   |       |       |       |
| Recall Mode          | None  | C-Max | C-Max | C-Max | None  | None  | None  |
| Act Effct Green (s)  | 66.0  | 66.0  | 46.2  | 46.2  | 24.0  | 24.0  | 24.0  |
| Actuated g/C Ratio   | 0.66  | 0.66  | 0.46  | 0.46  | 0.24  | 0.24  | 0.24  |
| v/c Ratio            | 0.85  | 0.35  | 0.62  | 0.16  | 0.00  | 0.67  | 0.86  |
| Control Delay        | 43.7  | 8.6   | 23.4  | 6.9   | 24.0  | 43.2  | 28.2  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 43.7  | 8.6   | 23.4  | 6.9   | 24.0  | 43.2  | 28.2  |
| LOS                  | D     | A     | C     | A     | C     | D     | C     |
| Approach Delay       |       | 15.8  | 22.1  |       | 24.0  |       | 32.6  |
| Approach LOS         |       | B     | C     |       | C     |       | C     |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 86 (86%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 21.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 84.2%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 4: Antelope Ridge Dr. & North Carefree



Timings  
5: Marksheffel & North Carefree

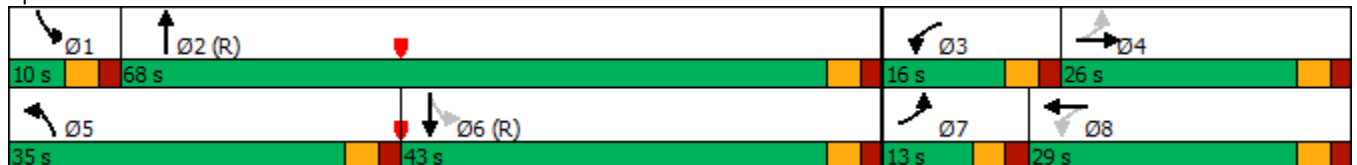
2045 Background Traffic  
AM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 121   | 329   | 735   | 100   | 781   | 150   | 452   | 958   | 50    | 75    | 1256  | 106   |
| Future Volume (vph)  | 121   | 329   | 735   | 100   | 781   | 150   | 452   | 958   | 50    | 75    | 1256  | 106   |
| Turn Type            | pm+pt | NA    | Free  | pm+pt | NA    | Free  | Prot  | NA    | Free  | pm+pt | NA    | Free  |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     | 4     |       | Free  | 8     |       | Free  |       |       | Free  | 6     |       | Free  |
| Detector Phase       | 7     | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 4.0   |       | 4.0   | 4.0   |       | 4.0   | 4.0   |       | 4.0   | 4.0   |       |
| Minimum Split (s)    | 10.0  | 9.0   |       | 9.0   | 9.0   |       | 9.0   | 9.0   |       | 9.0   | 9.0   |       |
| Total Split (s)      | 13.0  | 26.0  |       | 16.0  | 29.0  |       | 35.0  | 68.0  |       | 10.0  | 43.0  |       |
| Total Split (%)      | 10.8% | 21.7% |       | 13.3% | 24.2% |       | 29.2% | 56.7% |       | 8.3%  | 35.8% |       |
| Yellow Time (s)      | 3.0   | 3.0   |       | 3.0   | 3.0   |       | 3.0   | 3.0   |       | 3.0   | 3.0   |       |
| All-Red Time (s)     | 2.0   | 2.0   |       | 2.0   | 2.0   |       | 2.0   | 2.0   |       | 2.0   | 2.0   |       |
| Lost Time Adjust (s) | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Total Lost Time (s)  | 5.0   | 5.0   |       | 5.0   | 5.0   |       | 5.0   | 5.0   |       | 5.0   | 5.0   |       |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   |       | Lead  | Lag   |       | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   | Yes   |       | Yes   | Yes   |       | Yes   | Yes   |       | Yes   | Yes   |       |
| Recall Mode          | None  | None  |       | None  | None  |       | None  | C-Max |       | None  | C-Max |       |
| Act Effct Green (s)  | 29.5  | 21.5  | 120.0 | 32.9  | 23.2  | 120.0 | 21.4  | 65.8  | 120.0 | 52.7  | 47.5  | 120.0 |
| Actuated g/C Ratio   | 0.25  | 0.18  | 1.00  | 0.27  | 0.19  | 1.00  | 0.18  | 0.55  | 1.00  | 0.44  | 0.40  | 1.00  |
| v/c Ratio            | 0.69  | 0.37  | 0.47  | 0.34  | 0.81  | 0.10  | 0.75  | 0.50  | 0.03  | 0.26  | 0.92  | 0.07  |
| Control Delay        | 52.7  | 44.7  | 1.0   | 34.1  | 53.7  | 0.1   | 54.8  | 18.7  | 0.0   | 14.7  | 46.4  | 0.1   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 52.7  | 44.7  | 1.0   | 34.1  | 53.7  | 0.1   | 54.8  | 18.7  | 0.0   | 14.7  | 46.4  | 0.1   |
| LOS                  | D     | D     | A     | C     | D     | A     | D     | B     | A     | B     | D     | A     |
| Approach Delay       |       | 18.4  |       |       | 44.0  |       |       | 29.3  |       |       | 41.4  |       |
| Approach LOS         |       | B     |       |       | D     |       |       | C     |       |       | D     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.92  
 Intersection Signal Delay: 33.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 86.1%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 5: Marksheffel & North Carefree



| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.9  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      | ↕    | ↕    |      | ↕    | ↕    |      |
| Traffic Vol, veh/h       | 3    | 0    | 35   | 15   | 0    | 3    | 51   | 245  | 35   | 6    | 162  | 8    |
| Future Vol, veh/h        | 3    | 0    | 35   | 15   | 0    | 3    | 51   | 245  | 35   | 6    | 162  | 8    |
| 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           | -    | -    | -    | -    | -    | -    | 80   | -    | -    | 80   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 91   | 91   | 91   | 91   | 91   | 91   | 91   | 91   | 91   | 91   | 91   | 91   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 3    | 0    | 38   | 16   | 0    | 3    | 56   | 269  | 38   | 7    | 178  | 9    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 599    | 616   | 183    | 616   | 601    | 288   | 187    | 0 | 0 | 307   | 0 | 0 |
| Stage 1              | 197    | 197   | -      | 400   | 400    | -     | -      | - | - | -     | - | - |
| Stage 2              | 402    | 419   | -      | 216   | 201    | -     | -      | - | - | -     | - | - |
| 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   | 459    | 430   | 859    | 445   | 440    | 867   | 1387   | - | - | 1282  | - | - |
| Stage 1              | 805    | 738   | -      | 692   | 629    | -     | -      | - | - | -     | - | - |
| Stage 2              | 691    | 615   | -      | 786   | 735    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   | 1      | 1     |        | 1     | 1      | 1     |        | - | - | 1     | - | - |
| Mov Cap-1 Maneuver   | 441    | 410   | 859    | 411   | 420    | 867   | 1387   | - | - | 1282  | - | - |
| Mov Cap-2 Maneuver   | 441    | 410   | -      | 411   | 420    | -     | -      | - | - | -     | - | - |
| Stage 1              | 773    | 734   | -      | 665   | 604    | -     | -      | - | - | -     | - | - |
| Stage 2              | 660    | 590   | -      | 747   | 731    | -     | -      | - | - | -     | - | - |

| Approach             | EB  | WB   | NB  | SB  |
|----------------------|-----|------|-----|-----|
| HCM Control Delay, s | 9.8 | 13.4 | 1.2 | 0.3 |
| HCM LOS              | A   | B    |     |     |

| Minor Lane/Major Mvmt | NBL  | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 1387 | -   | -   | 799   | 450   | 1282  | -   | -   |
| HCM Lane V/C Ratio    | 0.04 | -   | -   | 0.052 | 0.044 | 0.005 | -   | -   |
| HCM Control Delay (s) | 7.7  | -   | -   | 9.8   | 13.4  | 7.8   | -   | -   |
| HCM Lane LOS          | A    | -   | -   | A     | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1  | -   | -   | 0.2   | 0.1   | 0     | -   | -   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.9  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      | ↶    | ↷    |      | ↶    |      |
| Traffic Vol, veh/h       | 12   | 27   | 16   | 0    | 0    | 3    |
| Future Vol, veh/h        | 12   | 27   | 16   | 0    | 0    | 3    |
| 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         | 76   | 76   | 76   | 85   | 76   | 76   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 16   | 36   | 21   | 0    | 0    | 4    |

| Major/Minor          | Major1 | Major2 | Minor2 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 21     | 0      | -      | 0 | 89 21       |
| Stage 1              | -      | -      | -      | - | 21 -        |
| Stage 2              | -      | -      | -      | - | 68 -        |
| 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   | 1595   | -      | -      | - | 912 1056    |
| Stage 1              | -      | -      | -      | - | 1002 -      |
| Stage 2              | -      | -      | -      | - | 955 -       |
| Platoon blocked, %   |        | -      | -      | - |             |
| Mov Cap-1 Maneuver   | 1595   | -      | -      | - | 903 1056    |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 903 -       |
| Stage 1              | -      | -      | -      | - | 992 -       |
| Stage 2              | -      | -      | -      | - | 955 -       |

| Approach             | EB  | WB | SB  |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 2.2 | 0  | 8.4 |
| HCM LOS              |     |    | A   |

| Minor Lane/Major Mvmt | EBL  | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1595 | -   | -   | -   | 1056  |
| HCM Lane V/C Ratio    | 0.01 | -   | -   | -   | 0.004 |
| HCM Control Delay (s) | 7.3  | 0   | -   | -   | 8.4   |
| HCM Lane LOS          | A    | A   | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0    | -   | -   | -   | 0     |

Timings  
4: Antelope Ridge Dr. & North Carefree

2045 Background Traffic  
PM Peak Hour

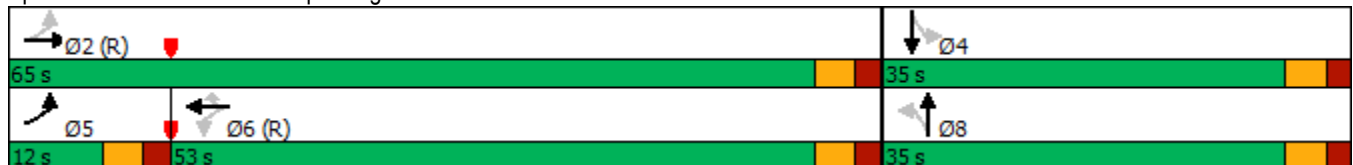


| Lane Group           | EBL   | EBT   | WBT   | WBR   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↗     | ↗↗↗   | ↖↖↖   | ↖     | ↔     | ↗     | ↖     |
| Traffic Volume (vph) | 177   | 1023  | 1077  | 155   | 1     | 72    | 0     |
| Future Volume (vph)  | 177   | 1023  | 1077  | 155   | 1     | 72    | 0     |
| Turn Type            | pm+pt | NA    | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 5     | 2     | 6     |       | 8     |       | 4     |
| Permitted Phases     | 2     |       |       | 6     |       | 4     |       |
| Detector Phase       | 5     | 2     | 6     | 6     | 8     | 4     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 10.0  | 10.0  | 10.0  | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 11.0  | 15.0  | 15.0  | 15.0  | 10.0  | 10.0  | 10.0  |
| Total Split (s)      | 12.0  | 65.0  | 53.0  | 53.0  | 35.0  | 35.0  | 35.0  |
| Total Split (%)      | 12.0% | 65.0% | 53.0% | 53.0% | 35.0% | 35.0% | 35.0% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Lead/Lag             | Lead  |       | Lag   | Lag   |       |       |       |
| Lead-Lag Optimize?   | Yes   |       | Yes   | Yes   |       |       |       |
| Recall Mode          | None  | C-Max | C-Max | C-Max | None  | None  | None  |
| Act Effct Green (s)  | 79.2  | 79.2  | 65.8  | 65.8  | 10.8  | 10.8  | 10.8  |
| Actuated g/C Ratio   | 0.79  | 0.79  | 0.66  | 0.66  | 0.11  | 0.11  | 0.11  |
| v/c Ratio            | 0.47  | 0.28  | 0.35  | 0.15  | 0.00  | 0.51  | 0.41  |
| Control Delay        | 6.7   | 3.2   | 8.5   | 1.7   | 37.0  | 52.5  | 6.6   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 6.7   | 3.2   | 8.5   | 1.7   | 37.0  | 52.5  | 6.6   |
| LOS                  | A     | A     | A     | A     | D     | D     | A     |
| Approach Delay       |       | 3.7   | 7.7   |       | 37.0  |       | 23.3  |
| Approach LOS         |       | A     | A     |       | D     |       | C     |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 86 (86%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.51  
 Intersection Signal Delay: 7.0  
 Intersection LOS: A  
 Intersection Capacity Utilization 63.7%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 4: Antelope Ridge Dr. & North Carefree



Timings  
5: Marksheffel & North Carefree

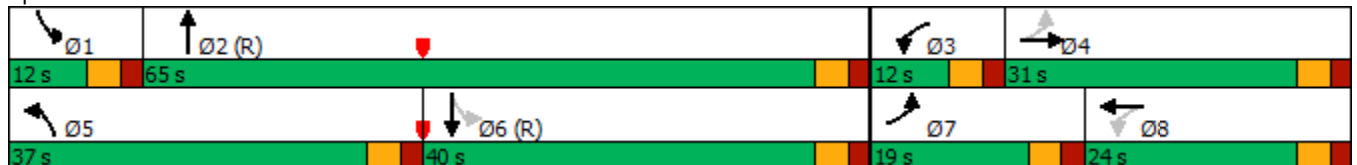
2045 Background Traffic  
PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 156   | 575   | 364   | 50    | 400   | 75    | 728   | 1419  | 75    | 125   | 1021  | 104   |
| Future Volume (vph)  | 156   | 575   | 364   | 50    | 400   | 75    | 728   | 1419  | 75    | 125   | 1021  | 104   |
| Turn Type            | pm+pt | NA    | Free  | pm+pt | NA    | Free  | Prot  | NA    | Free  | pm+pt | NA    | Free  |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     | 4     |       | Free  | 8     |       | Free  |       |       | Free  | 6     |       | Free  |
| Detector Phase       | 7     | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   |       | 4.0   | 4.0   |       | 4.0   | 4.0   |       | 4.0   | 4.0   |       |
| Minimum Split (s)    | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  | 11.0  |       |
| Total Split (s)      | 19.0  | 31.0  |       | 12.0  | 24.0  |       | 37.0  | 65.0  |       | 12.0  | 40.0  |       |
| Total Split (%)      | 15.8% | 25.8% |       | 10.0% | 20.0% |       | 30.8% | 54.2% |       | 10.0% | 33.3% |       |
| Yellow Time (s)      | 3.0   | 3.0   |       | 3.0   | 3.0   |       | 3.0   | 3.0   |       | 3.0   | 3.0   |       |
| All-Red Time (s)     | 2.0   | 2.0   |       | 2.0   | 2.0   |       | 2.0   | 2.0   |       | 2.0   | 2.0   |       |
| Lost Time Adjust (s) | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | -2.0  |       | 0.0   | -2.0  |       |
| Total Lost Time (s)  | 5.0   | 5.0   |       | 5.0   | 5.0   |       | 5.0   | 3.0   |       | 5.0   | 3.0   |       |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   |       | Lead  | Lag   |       | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   | Yes   |       | Yes   | Yes   |       | Yes   | Yes   |       | Yes   | Yes   |       |
| Recall Mode          | None  | None  |       | None  | None  |       | None  | C-Max |       | None  | C-Max |       |
| Act Effct Green (s)  | 33.4  | 23.8  | 120.0 | 22.2  | 15.5  | 120.0 | 30.8  | 65.0  | 120.0 | 49.4  | 42.8  | 120.0 |
| Actuated g/C Ratio   | 0.28  | 0.20  | 1.00  | 0.18  | 0.13  | 1.00  | 0.26  | 0.54  | 1.00  | 0.41  | 0.36  | 1.00  |
| v/c Ratio            | 0.59  | 0.60  | 0.24  | 0.28  | 0.64  | 0.05  | 0.87  | 0.78  | 0.05  | 0.69  | 0.85  | 0.07  |
| Control Delay        | 42.8  | 46.7  | 0.4   | 35.0  | 54.1  | 0.1   | 54.0  | 26.1  | 0.1   | 46.8  | 44.6  | 0.1   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 42.8  | 46.7  | 0.4   | 35.0  | 54.1  | 0.1   | 54.0  | 26.1  | 0.1   | 46.8  | 44.6  | 0.1   |
| LOS                  | D     | D     | A     | D     | D     | A     | D     | C     | A     | D     | D     | A     |
| Approach Delay       |       | 30.7  |       |       | 44.6  |       |       | 34.4  |       |       | 41.2  |       |
| Approach LOS         |       | C     |       |       | D     |       |       | C     |       |       | D     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.87  
 Intersection Signal Delay: 36.3  
 Intersection LOS: D  
 Intersection Capacity Utilization 81.2%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 5: Marksheffel & North Carefree



| 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       | 2    | 0    | 53   | 48   | 0    | 12   | 19   | 324  | 15   | 5    | 571  | 1    |
| Future Vol, veh/h        | 2    | 0    | 53   | 48   | 0    | 12   | 19   | 324  | 15   | 5    | 571  | 1    |
| 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           | -    | -    | -    | -    | -    | -    | 80   | -    | 100  | 80   | -    | -    |
| 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                | 2    | 0    | 62   | 56   | 0    | 14   | 22   | 381  | 18   | 6    | 672  | 1    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 1126   | 1128  | 673    | 1141  | 1110   | 381   | 673    | 0 | 0 | 399   | 0 | 0 |
| Stage 1              | 685    | 685   | -      | 425   | 425    | -     | -      | - | - | -     | - | - |
| Stage 2              | 441    | 443   | -      | 716   | 685    | -     | -      | - | - | -     | - | - |
| 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   | 167    | 183   | 455    | 161   | 188    | 796   | 918    | - | - | 1181  | - | - |
| Stage 1              | 438    | 448   | -      | 701   | 626    | -     | -      | - | - | -     | - | - |
| Stage 2              | 682    | 612   | -      | 421   | 448    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   | 1      | 1     |        | 1     | 1      | 1     |        | - | - | 1     | - | - |
| Mov Cap-1 Maneuver   | 160    | 177   | 455    | 136   | 182    | 796   | 918    | - | - | 1181  | - | - |
| Mov Cap-2 Maneuver   | 160    | 177   | -      | 136   | 182    | -     | -      | - | - | -     | - | - |
| Stage 1              | 427    | 446   | -      | 684   | 611    | -     | -      | - | - | -     | - | - |
| Stage 2              | 654    | 597   | -      | 361   | 446    | -     | -      | - | - | -     | - | - |

| Approach             | EB | WB | NB  | SB  |
|----------------------|----|----|-----|-----|
| HCM Control Delay, s | 15 | 43 | 0.5 | 0.1 |
| HCM LOS              | C  | E  |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1 | SBL   | SBT   | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h)      | 918   | -   | -   | 426        | 163   | 1181  | -   |
| HCM Lane V/C Ratio    | 0.024 | -   | -   | 0.152      | 0.433 | 0.005 | -   |
| HCM Control Delay (s) | 9     | -   | -   | 15         | 43    | 8.1   | -   |
| HCM Lane LOS          | A     | -   | -   | C          | E     | A     | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.5        | 2     | 0     | -   |

| 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       | 3    | 13   | 9    | 0    | 26   | 0    | 29   | 0    | 0    | 1    | 0    | 4    |
| Future Vol, veh/h        | 3    | 13   | 9    | 0    | 26   | 0    | 29   | 0    | 0    | 1    | 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         | 71   | 71   | 85   | 85   | 71   | 71   | 85   | 85   | 85   | 71   | 71   | 71   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 4    | 18   | 11   | 0    | 37   | 0    | 34   | 0    | 0    | 1    | 0    | 6    |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 37     | 0 | 0 | 29     | 0 | 0 | 72     | 69    | 24    | 69     | 74    | 37    |
| Stage 1              | -      | - | - | -      | - | - | 32     | 32    | -     | 37     | 37    | -     |
| Stage 2              | -      | - | - | -      | - | - | 40     | 37    | -     | 32     | 37    | -     |
| 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   | 1574   | - | - | 1584   | - | - | 919    | 822   | 1052  | 923    | 816   | 1035  |
| Stage 1              | -      | - | - | -      | - | - | 984    | 868   | -     | 978    | 864   | -     |
| Stage 2              | -      | - | - | -      | - | - | 975    | 864   | -     | 984    | 864   | -     |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -     | -     | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1574   | - | - | 1584   | - | - | 912    | 820   | 1052  | 921    | 814   | 1035  |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 912    | 820   | -     | 921    | 814   | -     |
| Stage 1              | -      | - | - | -      | - | - | 981    | 865   | -     | 975    | 864   | -     |
| Stage 2              | -      | - | - | -      | - | - | 970    | 864   | -     | 981    | 861   | -     |

| Approach             | EB  | WB | NB  | SB  |
|----------------------|-----|----|-----|-----|
| HCM Control Delay, s | 0.9 | 0  | 9.1 | 8.6 |
| HCM LOS              |     |    | A   | A   |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL  | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|------|-----|-----|-------|
| Capacity (veh/h)      | 912   | 1574  | -   | -   | 1584 | -   | -   | 1010  |
| HCM Lane V/C Ratio    | 0.037 | 0.003 | -   | -   | -    | -   | -   | 0.007 |
| HCM Control Delay (s) | 9.1   | 7.3   | 0   | -   | 0    | -   | -   | 8.6   |
| HCM Lane LOS          | A     | A     | A   | -   | A    | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | 0     | -   | -   | 0    | -   | -   | 0     |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 5.2  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | T    |      |      | T    |      | T    |
| Traffic Vol, veh/h       | 9    | 3    | 10   | 0    | 0    | 11   |
| Future Vol, veh/h        | 9    | 3    | 10   | 0    | 0    | 11   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 71   | 85   | 85   | 85   | 85   | 71   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 13   | 4    | 12   | 0    | 0    | 15   |

| Major/Minor          | Minor2 | Major1 |       | Major2 |   |
|----------------------|--------|--------|-------|--------|---|
| Conflicting Flow All | 32     | 8      | 15    | 0      | 0 |
| Stage 1              | 8      | -      | -     | -      | - |
| Stage 2              | 24     | -      | -     | -      | - |
| 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   | 982    | 1074   | 1603  | -      | - |
| Stage 1              | 1015   | -      | -     | -      | - |
| Stage 2              | 999    | -      | -     | -      | - |
| Platoon blocked, %   |        |        |       | -      | - |
| Mov Cap-1 Maneuver   | 975    | 1074   | 1603  | -      | - |
| Mov Cap-2 Maneuver   | 975    | -      | -     | -      | - |
| Stage 1              | 1008   | -      | -     | -      | - |
| Stage 2              | 999    | -      | -     | -      | - |

| Approach             | EB  | NB  | SB |
|----------------------|-----|-----|----|
| HCM Control Delay, s | 8.7 | 7.3 | 0  |
| HCM LOS              | A   |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 1603  | -   | 995   | -   | -   |
| HCM Lane V/C Ratio    | 0.007 | -   | 0.016 | -   | -   |
| HCM Control Delay (s) | 7.3   | 0   | 8.7   | -   | -   |
| HCM Lane LOS          | A     | A   | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0.1   | -   | -   |

Timings  
4: Antelope Ridge Dr. & North Carefree

2045 Total Traffic  
AM Peak Hour

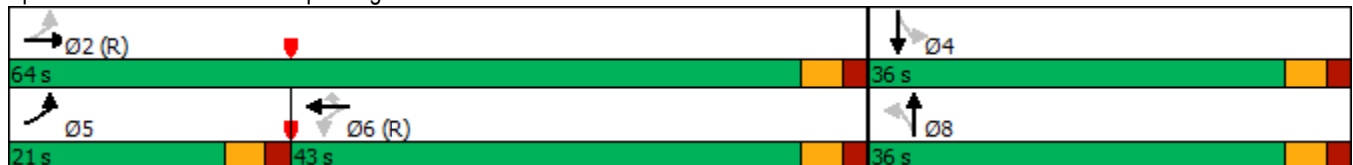


| Lane Group           | EBL   | EBT   | WBT   | WBR   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↗     | ↗↗↗   | ↖↖↖   | ↖     | ↔     | ↗     | ↖     |
| Traffic Volume (vph) | 256   | 991   | 1235  | 105   | 1     | 194   | 0     |
| Future Volume (vph)  | 256   | 991   | 1235  | 105   | 1     | 194   | 0     |
| Turn Type            | pm+pt | NA    | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 5     | 2     | 6     |       | 8     |       | 4     |
| Permitted Phases     | 2     |       |       | 6     |       | 4     |       |
| Detector Phase       | 5     | 2     | 6     | 6     | 8     | 4     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 10.0  | 10.0  | 10.0  | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 11.0  | 15.0  | 15.0  | 15.0  | 10.0  | 10.0  | 10.0  |
| Total Split (s)      | 21.0  | 64.0  | 43.0  | 43.0  | 36.0  | 36.0  | 36.0  |
| Total Split (%)      | 21.0% | 64.0% | 43.0% | 43.0% | 36.0% | 36.0% | 36.0% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Lead/Lag             | Lead  |       | Lag   | Lag   |       |       |       |
| Lead-Lag Optimize?   | Yes   |       | Yes   | Yes   |       |       |       |
| Recall Mode          | None  | C-Max | C-Max | C-Max | None  | None  | None  |
| Act Effct Green (s)  | 66.0  | 66.0  | 46.2  | 46.2  | 24.0  | 24.0  | 24.0  |
| Actuated g/C Ratio   | 0.66  | 0.66  | 0.46  | 0.46  | 0.24  | 0.24  | 0.24  |
| v/c Ratio            | 0.85  | 0.35  | 0.62  | 0.16  | 0.00  | 0.67  | 0.86  |
| Control Delay        | 43.7  | 8.6   | 23.4  | 6.9   | 24.0  | 43.2  | 28.2  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 43.7  | 8.6   | 23.4  | 6.9   | 24.0  | 43.2  | 28.2  |
| LOS                  | D     | A     | C     | A     | C     | D     | C     |
| Approach Delay       |       | 15.8  | 22.1  |       | 24.0  |       | 32.6  |
| Approach LOS         |       | B     | C     |       | C     |       | C     |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 86 (86%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 21.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 84.2%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 4: Antelope Ridge Dr. & North Carefree



Timings  
5: Marksheffel & North Carefree

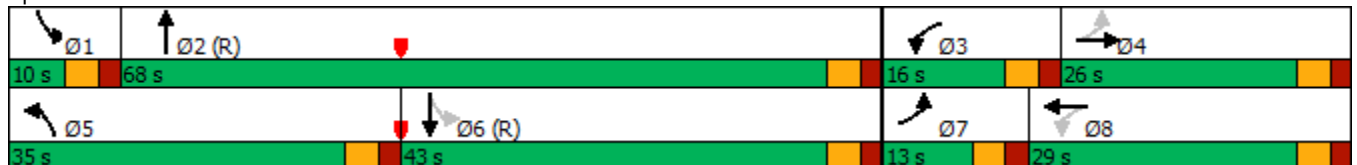
2045 Total Traffic  
AM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 121   | 329   | 735   | 100   | 781   | 150   | 452   | 958   | 50    | 75    | 1256  | 106   |
| Future Volume (vph)  | 121   | 329   | 735   | 100   | 781   | 150   | 452   | 958   | 50    | 75    | 1256  | 106   |
| Turn Type            | pm+pt | NA    | Free  | pm+pt | NA    | Free  | Prot  | NA    | Free  | pm+pt | NA    | Free  |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     | 4     |       | Free  | 8     |       | Free  |       |       | Free  | 6     |       | Free  |
| Detector Phase       | 7     | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 4.0   |       | 4.0   | 4.0   |       | 4.0   | 4.0   |       | 4.0   | 4.0   |       |
| Minimum Split (s)    | 10.0  | 9.0   |       | 9.0   | 9.0   |       | 9.0   | 9.0   |       | 9.0   | 9.0   |       |
| Total Split (s)      | 13.0  | 26.0  |       | 16.0  | 29.0  |       | 35.0  | 68.0  |       | 10.0  | 43.0  |       |
| Total Split (%)      | 10.8% | 21.7% |       | 13.3% | 24.2% |       | 29.2% | 56.7% |       | 8.3%  | 35.8% |       |
| Yellow Time (s)      | 3.0   | 3.0   |       | 3.0   | 3.0   |       | 3.0   | 3.0   |       | 3.0   | 3.0   |       |
| All-Red Time (s)     | 2.0   | 2.0   |       | 2.0   | 2.0   |       | 2.0   | 2.0   |       | 2.0   | 2.0   |       |
| Lost Time Adjust (s) | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Total Lost Time (s)  | 5.0   | 5.0   |       | 5.0   | 5.0   |       | 5.0   | 5.0   |       | 5.0   | 5.0   |       |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   |       | Lead  | Lag   |       | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   | Yes   |       | Yes   | Yes   |       | Yes   | Yes   |       | Yes   | Yes   |       |
| Recall Mode          | None  | None  |       | None  | None  |       | None  | C-Max |       | None  | C-Max |       |
| Act Effct Green (s)  | 29.5  | 21.5  | 120.0 | 32.9  | 23.2  | 120.0 | 21.4  | 65.8  | 120.0 | 52.7  | 47.5  | 120.0 |
| Actuated g/C Ratio   | 0.25  | 0.18  | 1.00  | 0.27  | 0.19  | 1.00  | 0.18  | 0.55  | 1.00  | 0.44  | 0.40  | 1.00  |
| v/c Ratio            | 0.69  | 0.37  | 0.47  | 0.34  | 0.81  | 0.10  | 0.75  | 0.50  | 0.03  | 0.26  | 0.92  | 0.07  |
| Control Delay        | 52.7  | 44.7  | 1.0   | 34.1  | 53.7  | 0.1   | 54.8  | 18.7  | 0.0   | 14.7  | 46.4  | 0.1   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 52.7  | 44.7  | 1.0   | 34.1  | 53.7  | 0.1   | 54.8  | 18.7  | 0.0   | 14.7  | 46.4  | 0.1   |
| LOS                  | D     | D     | A     | C     | D     | A     | D     | B     | A     | B     | D     | A     |
| Approach Delay       |       | 18.4  |       |       | 44.0  |       |       | 29.3  |       |       | 41.4  |       |
| Approach LOS         |       | B     |       |       | D     |       |       | C     |       |       | D     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.92  
 Intersection Signal Delay: 33.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 86.1%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 5: Marksheffel & North Carefree



| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      | ↗    | ↖    | ↗    | ↖    | ↖    | ↗    |
| Traffic Vol, veh/h       | 3    | 0    | 35   | 35   | 0    | 7    | 51   | 245  | 64   | 12   | 162  | 8    |
| Future Vol, veh/h        | 3    | 0    | 35   | 35   | 0    | 7    | 51   | 245  | 64   | 12   | 162  | 8    |
| 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           | -    | -    | -    | -    | -    | -    | 80   | -    | 100  | 80   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 91   | 91   | 91   | 91   | 91   | 91   | 91   | 91   | 91   | 91   | 91   | 91   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 3    | 0    | 38   | 38   | 0    | 8    | 56   | 269  | 70   | 13   | 178  | 9    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 629    | 660   | 183    | 609   | 594    | 269   | 187    | 0 | 0 | 339   | 0 | 0 |
| Stage 1              | 209    | 209   | -      | 381   | 381    | -     | -      | - | - | -     | - | - |
| Stage 2              | 420    | 451   | -      | 228   | 213    | -     | -      | - | - | -     | - | - |
| 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   | 435    | 400   | 859    | 451   | 444    | *887  | 1387   | - | - | 1241  | - | - |
| Stage 1              | 793    | 729   | -      | 713   | 643    | -     | -      | - | - | -     | - | - |
| Stage 2              | 672    | 591   | -      | 775   | 726    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   | 1      | 1     |        | 1     | 1      | 1     |        | - | - | 1     | - | - |
| Mov Cap-1 Maneuver   | 414    | 380   | 859    | 414   | 422    | *887  | 1387   | - | - | 1241  | - | - |
| Mov Cap-2 Maneuver   | 414    | 380   | -      | 414   | 422    | -     | -      | - | - | -     | - | - |
| Stage 1              | 761    | 722   | -      | 684   | 618    | -     | -      | - | - | -     | - | - |
| Stage 2              | 639    | 567   | -      | 733   | 719    | -     | -      | - | - | -     | - | - |

| Approach             | EB  | WB   | NB  | SB  |
|----------------------|-----|------|-----|-----|
| HCM Control Delay, s | 9.8 | 13.8 | 1.1 | 0.5 |
| HCM LOS              | A   | B    |     |     |

| Minor Lane/Major Mvmt | NBL  | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 1387 | -   | -   | 792   | 454   | 1241  | -   | -   |
| HCM Lane V/C Ratio    | 0.04 | -   | -   | 0.053 | 0.102 | 0.011 | -   | -   |
| HCM Control Delay (s) | 7.7  | -   | -   | 9.8   | 13.8  | 7.9   | -   | -   |
| HCM Lane LOS          | A    | -   | -   | A     | B     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1  | -   | -   | 0.2   | 0.3   | 0     | -   | -   |

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 12   | 36   | 26   | 0    | 22   | 0    | 18   | 0    | 0    | 0    | 0    | 3    |
| Future Vol, veh/h        | 12   | 36   | 26   | 0    | 22   | 0    | 18   | 0    | 0    | 0    | 0    | 3    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 76   | 76   | 85   | 85   | 76   | 85   | 85   | 85   | 85   | 76   | 76   | 76   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 16   | 47   | 31   | 0    | 29   | 0    | 21   | 0    | 0    | 0    | 0    | 4    |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 29     | 0 | 0 | 78     | 0 | 0 | 126    | 124   | 63    | 124    | 139   | 29    |
| Stage 1              | -      | - | - | -      | - | - | 95     | 95    | -     | 29     | 29    | -     |
| Stage 2              | -      | - | - | -      | - | - | 31     | 29    | -     | 95     | 110   | -     |
| 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   | 1584   | - | - | 1520   | - | - | 848    | 766   | 1002  | 850    | 752   | 1046  |
| Stage 1              | -      | - | - | -      | - | - | 912    | 816   | -     | 988    | 871   | -     |
| Stage 2              | -      | - | - | -      | - | - | 986    | 871   | -     | 912    | 804   | -     |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -     | -     | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1584   | - | - | 1520   | - | - | 838    | 758   | 1002  | 843    | 744   | 1046  |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 838    | 758   | -     | 843    | 744   | -     |
| Stage 1              | -      | - | - | -      | - | - | 902    | 807   | -     | 977    | 871   | -     |
| Stage 2              | -      | - | - | -      | - | - | 982    | 871   | -     | 902    | 795   | -     |

| Approach             | EB  |  |  | WB |  |  | NB  |  |  | SB  |  |  |
|----------------------|-----|--|--|----|--|--|-----|--|--|-----|--|--|
| HCM Control Delay, s | 1.2 |  |  | 0  |  |  | 9.4 |  |  | 8.5 |  |  |
| HCM LOS              |     |  |  |    |  |  | A   |  |  | A   |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL  | EBT | EBR | WBL  | WBT | WBR | SBLn1 |
|-----------------------|-------|------|-----|-----|------|-----|-----|-------|
| Capacity (veh/h)      | 838   | 1584 | -   | -   | 1520 | -   | -   | 1046  |
| HCM Lane V/C Ratio    | 0.025 | 0.01 | -   | -   | -    | -   | -   | 0.004 |
| HCM Control Delay (s) | 9.4   | 7.3  | 0   | -   | 0    | -   | -   | 8.5   |
| HCM Lane LOS          | A     | A    | A   | -   | A    | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.1   | 0    | -   | -   | 0    | -   | -   | 0     |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 6.2  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 22   | 9    | 6    | 0    | 0    | 13   |
| Future Vol, veh/h        | 22   | 9    | 6    | 0    | 0    | 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    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 76   | 85   | 85   | 85   | 85   | 76   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 29   | 11   | 7    | 0    | 0    | 17   |

| Major/Minor          | Minor2 | Major1 |       | Major2 |   |
|----------------------|--------|--------|-------|--------|---|
| Conflicting Flow All | 23     | 9      | 17    | 0      | 0 |
| Stage 1              | 9      | -      | -     | -      | - |
| Stage 2              | 14     | -      | -     | -      | - |
| 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   | 993    | 1073   | 1600  | -      | - |
| Stage 1              | 1014   | -      | -     | -      | - |
| Stage 2              | 1009   | -      | -     | -      | - |
| Platoon blocked, %   |        |        |       | -      | - |
| Mov Cap-1 Maneuver   | 989    | 1073   | 1600  | -      | - |
| Mov Cap-2 Maneuver   | 989    | -      | -     | -      | - |
| Stage 1              | 1010   | -      | -     | -      | - |
| Stage 2              | 1009   | -      | -     | -      | - |

| Approach             | EB  | NB  | SB |
|----------------------|-----|-----|----|
| HCM Control Delay, s | 8.7 | 7.3 | 0  |
| HCM LOS              | A   |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 1600  | -   | 1010  | -   | -   |
| HCM Lane V/C Ratio    | 0.004 | -   | 0.039 | -   | -   |
| HCM Control Delay (s) | 7.3   | 0   | 8.7   | -   | -   |
| HCM Lane LOS          | A     | A   | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | 0.1   | -   | -   |

Timings  
4: Antelope Ridge Dr. & North Carefree

2045 Total Traffic  
PM Peak Hour



| Lane Group           | EBL   | EBT   | WBT   | WBR   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↕↕↕   | ↖↖↖   | ↗     | ↕↕    | ↖     | ↗     |
| Traffic Volume (vph) | 189   | 1023  | 1077  | 172   | 1     | 84    | 0     |
| Future Volume (vph)  | 189   | 1023  | 1077  | 172   | 1     | 84    | 0     |
| Turn Type            | pm+pt | NA    | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 5     | 2     | 6     |       | 8     |       | 4     |
| Permitted Phases     | 2     |       |       | 6     |       | 4     |       |
| Detector Phase       | 5     | 2     | 6     | 6     | 8     | 4     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 10.0  | 10.0  | 10.0  | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 11.0  | 15.0  | 15.0  | 15.0  | 10.0  | 10.0  | 10.0  |
| Total Split (s)      | 12.0  | 65.0  | 53.0  | 53.0  | 35.0  | 35.0  | 35.0  |
| Total Split (%)      | 12.0% | 65.0% | 53.0% | 53.0% | 35.0% | 35.0% | 35.0% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Lead/Lag             | Lead  |       | Lag   | Lag   |       |       |       |
| Lead-Lag Optimize?   | Yes   |       | Yes   | Yes   |       |       |       |
| Recall Mode          | None  | C-Max | C-Max | C-Max | None  | None  | None  |
| Act Effct Green (s)  | 78.3  | 78.3  | 64.2  | 64.2  | 11.7  | 11.7  | 11.7  |
| Actuated g/C Ratio   | 0.78  | 0.78  | 0.64  | 0.64  | 0.12  | 0.12  | 0.12  |
| v/c Ratio            | 0.50  | 0.28  | 0.36  | 0.17  | 0.00  | 0.54  | 0.42  |
| Control Delay        | 7.4   | 3.5   | 9.4   | 1.9   | 36.0  | 52.9  | 7.4   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 7.4   | 3.5   | 9.4   | 1.9   | 36.0  | 52.9  | 7.4   |
| LOS                  | A     | A     | A     | A     | D     | D     | A     |
| Approach Delay       |       | 4.1   | 8.3   |       | 36.0  |       | 24.9  |
| Approach LOS         |       | A     | A     |       | D     |       | C     |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 86 (86%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.54  
 Intersection Signal Delay: 7.8  
 Intersection LOS: A  
 Intersection Capacity Utilization 64.4%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 4: Antelope Ridge Dr. & North Carefree



Timings  
5: Marksheffel & North Carefree

2045 Total Traffic  
PM Peak Hour

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 161   | 577   | 369   | 50    | 404   | 75    | 735   | 1419  | 75    | 125   | 1021  | 111   |
| Future Volume (vph)  | 161   | 577   | 369   | 50    | 404   | 75    | 735   | 1419  | 75    | 125   | 1021  | 111   |
| Turn Type            | pm+pt | NA    | Free  | pm+pt | NA    | Free  | Prot  | NA    | Free  | pm+pt | NA    | Free  |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     | 4     |       | Free  | 8     |       | Free  |       |       | Free  | 6     |       | Free  |
| Detector Phase       | 7     | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   |       | 4.0   | 4.0   |       | 4.0   | 4.0   |       | 4.0   | 4.0   |       |
| Minimum Split (s)    | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  | 11.0  |       |
| Total Split (s)      | 19.0  | 31.0  |       | 12.0  | 24.0  |       | 37.0  | 65.0  |       | 12.0  | 40.0  |       |
| Total Split (%)      | 15.8% | 25.8% |       | 10.0% | 20.0% |       | 30.8% | 54.2% |       | 10.0% | 33.3% |       |
| Yellow Time (s)      | 3.0   | 3.0   |       | 3.0   | 3.0   |       | 3.0   | 3.0   |       | 3.0   | 3.0   |       |
| All-Red Time (s)     | 2.0   | 2.0   |       | 2.0   | 2.0   |       | 2.0   | 2.0   |       | 2.0   | 2.0   |       |
| Lost Time Adjust (s) | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | -2.0  |       | 0.0   | -2.0  |       |
| Total Lost Time (s)  | 5.0   | 5.0   |       | 5.0   | 5.0   |       | 5.0   | 3.0   |       | 5.0   | 3.0   |       |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   |       | Lead  | Lag   |       | Lead  | Lag   |       |
| Lead-Lag Optimize?   | Yes   | Yes   |       | Yes   | Yes   |       | Yes   | Yes   |       | Yes   | Yes   |       |
| Recall Mode          | None  | None  |       | None  | None  |       | None  | C-Max |       | None  | C-Max |       |
| Act Effct Green (s)  | 33.5  | 23.9  | 120.0 | 22.2  | 15.5  | 120.0 | 31.0  | 64.9  | 120.0 | 49.1  | 42.5  | 120.0 |
| Actuated g/C Ratio   | 0.28  | 0.20  | 1.00  | 0.18  | 0.13  | 1.00  | 0.26  | 0.54  | 1.00  | 0.41  | 0.35  | 1.00  |
| v/c Ratio            | 0.61  | 0.60  | 0.25  | 0.28  | 0.65  | 0.05  | 0.87  | 0.78  | 0.05  | 0.69  | 0.86  | 0.07  |
| Control Delay        | 43.5  | 46.5  | 0.4   | 35.0  | 54.2  | 0.1   | 54.3  | 26.2  | 0.1   | 47.2  | 45.2  | 0.1   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 43.5  | 46.5  | 0.4   | 35.0  | 54.2  | 0.1   | 54.3  | 26.2  | 0.1   | 47.2  | 45.2  | 0.1   |
| LOS                  | D     | D     | A     | C     | D     | A     | D     | C     | A     | D     | D     | A     |
| Approach Delay       |       | 30.7  |       |       | 44.7  |       |       | 34.6  |       |       | 41.4  |       |
| Approach LOS         |       | C     |       |       | D     |       |       | C     |       |       | D     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.87  
 Intersection Signal Delay: 36.5  
 Intersection LOS: D  
 Intersection Capacity Utilization 81.8%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 5: Marksheffel & North Carefree



# Queuing Reports

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Intersection: 1: Antelope Ridge Dr. & S. Pronghorn Meadows Cir/Mardale Ln

| Movement              | EB  | WB  | NB | SB |
|-----------------------|-----|-----|----|----|
| Directions Served     | LTR | LTR | L  | L  |
| Maximum Queue (ft)    | 65  | 80  | 33 | 23 |
| Average Queue (ft)    | 29  | 26  | 7  | 1  |
| 95th Queue (ft)       | 58  | 56  | 28 | 10 |
| Link Distance (ft)    | 156 | 130 |    |    |
| Upstream Blk Time (%) |     | 0   |    |    |
| Queuing Penalty (veh) |     | 0   |    |    |
| Storage Bay Dist (ft) |     |     | 80 | 80 |
| Storage Blk Time (%)  |     |     |    |    |
| Queuing Penalty (veh) |     |     |    |    |

Intersection: 2: Ryedale Wy/Site Access & Mardale Ln

| Movement              | NB  | SB  |
|-----------------------|-----|-----|
| Directions Served     | LTR | LTR |
| Maximum Queue (ft)    | 55  | 31  |
| Average Queue (ft)    | 22  | 4   |
| 95th Queue (ft)       | 48  | 22  |
| Link Distance (ft)    | 143 | 208 |
| Upstream Blk Time (%) |     |     |
| Queuing Penalty (veh) |     |     |
| Storage Bay Dist (ft) |     |     |
| Storage Blk Time (%)  |     |     |
| Queuing Penalty (veh) |     |     |

Intersection: 3: Wyedale Wy & Mardale Ln

| Movement              | EB  | NB  |
|-----------------------|-----|-----|
| Directions Served     | LR  | LT  |
| Maximum Queue (ft)    | 31  | 6   |
| Average Queue (ft)    | 11  | 0   |
| 95th Queue (ft)       | 35  | 4   |
| Link Distance (ft)    | 467 | 201 |
| Upstream Blk Time (%) |     |     |
| Queuing Penalty (veh) |     |     |
| Storage Bay Dist (ft) |     |     |
| Storage Blk Time (%)  |     |     |
| Queuing Penalty (veh) |     |     |

Intersection: 4: Antelope Ridge Dr. & North Carefree

| Movement              | EB  | EB  | EB  | EB  | B20 | WB  | WB  | WB  | WB  | NB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | T   | T   | TR  | T   | LT  | T   | T   | R   | LTR | L   | TR  |
| Maximum Queue (ft)    | 229 | 149 | 135 | 274 | 5   | 454 | 466 | 368 | 111 | 12  | 234 | 152 |
| Average Queue (ft)    | 99  | 58  | 28  | 120 | 0   | 136 | 147 | 151 | 29  | 1   | 122 | 78  |
| 95th Queue (ft)       | 176 | 121 | 85  | 221 | 4   | 333 | 342 | 322 | 70  | 9   | 200 | 127 |
| Link Distance (ft)    |     | 355 | 355 | 355 | 652 | 930 | 930 | 930 | 930 | 140 |     | 480 |
| Upstream Blk Time (%) |     |     |     | 0   |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     | 0   |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) | 350 |     |     |     |     |     |     |     |     |     | 300 |     |
| Storage Blk Time (%)  |     |     |     |     |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |     |     |     |     |

Intersection: 5: Marksheffel & North Carefree

| Movement              | EB  | EB  | EB  | EB  | WB  | WB  | WB  | WB  | NB  | NB  | NB  | NB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | T   | T   | T   | L   | T   | T   | T   | L   | L   | T   | T   |
| Maximum Queue (ft)    | 219 | 159 | 156 | 120 | 128 | 401 | 360 | 258 | 256 | 296 | 248 | 242 |
| Average Queue (ft)    | 95  | 90  | 86  | 54  | 64  | 264 | 228 | 156 | 146 | 188 | 132 | 130 |
| 95th Queue (ft)       | 182 | 135 | 134 | 112 | 110 | 360 | 319 | 253 | 226 | 259 | 219 | 218 |
| Link Distance (ft)    |     | 930 | 930 | 930 | 801 | 801 | 801 | 801 |     |     | 944 | 944 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) | 500 |     |     |     |     |     |     |     | 350 | 350 |     |     |
| Storage Blk Time (%)  |     |     |     |     |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |     |     |     |     |

Intersection: 5: Marksheffel & North Carefree

| Movement              | SB  | SB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | L   | T   | T   | R   |
| Maximum Queue (ft)    | 375 | 535 | 536 | 375 |
| Average Queue (ft)    | 158 | 500 | 490 | 160 |
| 95th Queue (ft)       | 422 | 559 | 585 | 465 |
| Link Distance (ft)    |     | 987 | 987 |     |
| Upstream Blk Time (%) |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |
| Storage Bay Dist (ft) | 350 |     |     | 350 |
| Storage Blk Time (%)  | 0   | 59  | 55  | 0   |
| Queuing Penalty (veh) | 0   | 44  | 58  | 0   |

Zone Summary

Zone wide Queuing Penalty: 102

Intersection: 1: Antelope Ridge Dr. & S. Pronghorn Meadows Cir/Mardale Ln

| Movement              | EB  | WB  | NB | SB |
|-----------------------|-----|-----|----|----|
| Directions Served     | LTR | LTR | L  | L  |
| Maximum Queue (ft)    | 56  | 43  | 39 | 30 |
| Average Queue (ft)    | 25  | 18  | 7  | 3  |
| 95th Queue (ft)       | 48  | 37  | 30 | 17 |
| Link Distance (ft)    | 156 | 130 |    |    |
| Upstream Blk Time (%) |     |     |    |    |
| Queuing Penalty (veh) |     |     |    |    |
| Storage Bay Dist (ft) |     |     | 80 | 80 |
| Storage Blk Time (%)  |     |     |    |    |
| Queuing Penalty (veh) |     |     |    |    |

Intersection: 2: Ryedale Wy/Site Access & Mardale Ln

| Movement              | EB  | NB  | SB  |
|-----------------------|-----|-----|-----|
| Directions Served     | LTR | LTR | LTR |
| Maximum Queue (ft)    | 12  | 35  | 31  |
| Average Queue (ft)    | 0   | 14  | 3   |
| 95th Queue (ft)       | 6   | 39  | 18  |
| Link Distance (ft)    | 130 | 143 | 208 |
| Upstream Blk Time (%) |     |     |     |
| Queuing Penalty (veh) |     |     |     |
| Storage Bay Dist (ft) |     |     |     |
| Storage Blk Time (%)  |     |     |     |
| Queuing Penalty (veh) |     |     |     |

Intersection: 3: Wyedale Wy & Mardale Ln

| Movement              | EB  |
|-----------------------|-----|
| Directions Served     | LR  |
| Maximum Queue (ft)    | 45  |
| Average Queue (ft)    | 19  |
| 95th Queue (ft)       | 45  |
| Link Distance (ft)    | 467 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

Intersection: 4: Antelope Ridge Dr. & North Carefree

| Movement              | EB  | EB  | EB  | EB  | WB  | WB  | WB  | WB  | NB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | T   | T   | TR  | LT  | T   | T   | R   | LTR | L   | TR  |
| Maximum Queue (ft)    | 150 | 135 | 111 | 134 | 230 | 218 | 243 | 107 | 12  | 130 | 68  |
| Average Queue (ft)    | 67  | 53  | 25  | 46  | 65  | 74  | 80  | 28  | 2   | 68  | 38  |
| 95th Queue (ft)       | 117 | 110 | 80  | 104 | 177 | 191 | 200 | 73  | 13  | 117 | 59  |
| Link Distance (ft)    |     | 355 | 355 | 355 | 930 | 930 | 930 | 930 | 140 |     | 480 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) | 350 |     |     |     |     | 300 |     |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |     |     |     |

Intersection: 5: Marksheffel & North Carefree

| Movement              | EB  | EB  | EB  | EB  | WB  | WB  | WB  | WB  | NB  | NB  | NB  | NB  |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | T   | T   | T   | L   | T   | T   | T   | L   | L   | T   | T   |
| Maximum Queue (ft)    | 202 | 231 | 230 | 194 | 86  | 227 | 195 | 139 | 361 | 374 | 706 | 538 |
| Average Queue (ft)    | 98  | 139 | 139 | 105 | 37  | 162 | 131 | 59  | 265 | 308 | 313 | 287 |
| 95th Queue (ft)       | 173 | 200 | 200 | 168 | 74  | 219 | 197 | 117 | 384 | 407 | 578 | 461 |
| Link Distance (ft)    |     | 930 | 930 | 930 | 801 | 801 | 801 | 801 |     |     | 944 | 944 |
| Upstream Blk Time (%) |     |     |     |     |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) | 500 |     |     |     |     |     |     | 350 |     | 350 |     |     |
| Storage Blk Time (%)  |     |     |     |     |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |     |     |     |     |     |     |     |

Intersection: 5: Marksheffel & North Carefree

| Movement              | NB  | SB  | SB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|-----|
| Directions Served     | R   | L   | T   | T   | R   |
| Maximum Queue (ft)    | 148 | 375 | 662 | 686 | 375 |
| Average Queue (ft)    | 8   | 204 | 472 | 475 | 147 |
| 95th Queue (ft)       | 96  | 442 | 710 | 729 | 449 |
| Link Distance (ft)    |     |     | 987 | 987 |     |
| Upstream Blk Time (%) |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |     |
| Storage Bay Dist (ft) | 350 | 350 |     |     | 350 |
| Storage Blk Time (%)  | 0   | 0   | 34  | 34  | 0   |
| Queuing Penalty (veh) | 0   | 0   | 42  | 38  | 0   |

Zone Summary

Zone wide Queuing Penalty: 128

# Crash History

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| AccidentDate | TotalVehicles | FIP      | ReferencePointName | ReferencePointAtName | AccidentNarrative  |
|--------------|---------------|----------|--------------------|----------------------|--|
| 9/21/2022    | 2             | Property | N CAREFREE CIR     | ANTELOPE DR          | Vehicle #1 was driving south on Antelope Ridge Dr. Vehicle #2 was driving east on North Carefree Cir. Vehicle #1's front bumper collided into Vehicle #2's driver side. Vehicle #2 drove to Marksheffel Rd. and made a right to go south on Marksheffel Rd. Vehicle #2 came to rest on the right shoulder of Marksheffel Rd. approximately 500 feet south of the intersection of North Carefree Cir. and Marksheffel Rd. Vehicle #1 came to rest approximately 25 feet behind Vehicle #2.  |
| 4/10/2023    | 2             | Injury   | CAREFREE CIR       | ANTELOPE RIDGE DR    | Vehicle #1 was eastbound on N. Carefree Circle. Vehicle #2 was eastbound on N. Carefree Circle, slowing to turn left onto Antelope Ridge. Vehicle #1 failed to slow in time. The front of vehicle #1 collided with the rear of vehicle #2. Both vehicles were moved from final rest.   |
| 4/28/2023    | 2             | Property | N CAREFREE CIR     | ANTELOPE RIDGE DR    | Vehicle 1 was travelling northbound on Antelope Ridge Dr, at the intersection with N Carefree Cir. Vehicle 2 was travelling westbound on N Carefree Cir, east of Antelope Ridge Dr. Vehicle 1 proceeded through the intersection, attempting to turn left onto eastbound N Carefree Cir, pulling out in front of Vehicle 2. The left front end of Vehicle 2 collided with the rear left side of Vehicle 1, causing obvious damage. Vehicle 1 rotated counter-clockwise approximately 135 degrees, coming to final rest on its wheels, in the roadway, facing northwest. Vehicle 2 was moved prior to investigation.  |
| 6/13/2023    | 2             | Property | N CAREFREE CIR     | ANTELOPE RIDGE DR    | Vehicle #2 was eastbound on Carefree Circle N, in the #2 lane, approaching the intersection for Antelope Ridge Road. Vehicle #1 was south on Antelope Ridge Road and began to make a left turn to drive east on Carefree Circle N. Vehicle #1 failed to turn into the closest lane and turned into the #2 lane. Vehicle #1 failed to yield the right of way to vehicle #2 and collided its rear right side with the front left side of vehicle #2 in the #2 lane. Both vehicles pulled over on the south shoulder of east bound Carefree Circle N and parked facing east.  |
| 12/4/2023    | 1             | Property | N CAREFREE CIR     | ANTELOPE RIDGE DR    | Vehicle #1 turned west onto N. Carefree Circle from Antelope Ridge. Vehicle #1 was in the #3 lane and struck the curb on the north side of N. Carefree Circle because there was another Vehicle approaching him in the #2 lane going west. Vehicle #1 was moved prior to my arrival.   |
| 2/9/2024     | 2             | Property | CAREFREE CIR       | ANTELOPE RIDGE DR    | Vehicle #1 was traveling westbound on Carefree Circle. Vehicle #2 was traveling westbound on Carefree Circle, attempting to turn right onto Antelope Ridge. Vehicle #1 collided its right side with the rear of vehicle #2. After impact, vehicle #2 collided with a curb before coming to final rest, facing west.  |
| 5/8/2024     | 3             | Injury   | N CAREFREE CIR     | ANTELOPE RIDGE DR    | Vehicle #1 was southbound on Antelope Ridge Drive approaching the intersection with N. Carefree Circle. Vehicles #2 and #3 were westbound on N. Carefree Circle. Vehicle #1 failed to stop at the stop sign, and entered the intersection. The front of Vehicle #1 impacted the right side of Vehicle #2, causing vehicle #2 to start to rotate clockwise. Vehicle #2, after impact, also rolled one-quarter time onto its right side, and continued to rotate clockwise as it slid on its right side to final rest. Vehicle #2 came to final rest in the #1 (left) lane of westbound N. Carefree Circle on its right side facing approximately east. Vehicle #1, after impact, rotated clockwise less than 90 degrees, and began to roll backward. Upon seeing the crash, Vehicle #3 had pulled to the right side of the road and stopped, or was nearly at a stop. As vehicle #1 rolled backward, the rear of vehicle #1 rolled into the left front corner of Vehicle #3. Vehicles #1 & #3 remained in contact at final rest, both facing approximately west in the #4 lane or westbound N. Carefree Circle. |
| 5/14/2024    | 2             | Property | N CAREFREE CIR     | ANTELOPE RIDGE DR    | Vehicle #1 was at the intersection of Antelope Ridge Dr and N Carefree Circle attempting to make a left turn onto N Carefree Circle. Vehicle #2 was traveling eastbound on N Carefree Circle in the center lane. Vehicle #1 made the left turn and turned into the wrong position by turning into the center lane, there same lane Vehicle #1 was traveling in. Vehicle #1 side collided with vehicle #2 side traveling in the same direction. After the collision both Vehicles came to final rest in the roadway but was moved from the lanes of traffic prior to my arrival.  |
| 7/23/2024    | 2             | Property | N CAREFREE CIR     | ANTELOPE RIDGE DR    | Vehicle #1 was stationary at a stop sign in the Southbound left turn lane at the Antelope Ridge Drive and North Carefree Circle intersection. Vehicle #2 was traveling Westbound in the #3 lane approaching Antelope Ridge Drive. Vehicle #1 failed to yield and began to travel straight from stationary position colliding its front with the front of Vehicle #2. Vehicle #1 continued through initial impact 85.5ft, rotating 90 degrees, coming to final rest on all four wheels facing West. Vehicle #2 progressed through initial impact 82.4ft rotating right 90 degrees, continuing until fully on the Westbound curb at final rest on all four wheels facing North.  |
| 5/2/2025     | 2             | Property | N CAREFREE CIR     | ANTELOPE RIDGE DR    | Vehicle 1 was stopped on southbound Antelope Ridge Drive at North Carefree Circle. Vehicle 2 was traveling eastbound on North Carefree Circle, in the #2 lane, approaching Antelope Ridge Drive. Vehicle 1 turned left onto North Carefree Circle and drove into the left rear wheel of Vehicle 2 in the #2 lane. Vehicle 1 and Vehicle 2 came to final rest in the #1 eastbound lane, facing east.  |

| Accident Date | Reference Point Name | Reference Point At Name | Accident Narrative   |
|---------------|----------------------|-------------------------|--|
| 2022-05-06    | ANTELOPE RIDGE DR    | PRONGHORN MEADOWS CIR   | <p>Vehicle #1 was travelling southbound on Antelope Ridge Dr, just south of Pronghorn Meadows Cir. Vehicle #1 drove off the left side of the road and collided its front with a temporary construction fence. Vehicle #1 drove through the dirt lot under construction for approximately 525 feet before colliding its front with another temporary construction fence. Vehicle #1 then collided its front with a ditch, causing Vehicle #1 to go airborne across the westbound lanes of N. Carefree Cir. Vehicle #1 landed in the rock filled median on N Carefree Cir, drove across the eastbound lanes, and collided its front with the raised curb. Vehicle #1 came to rest on its wheels facing southeast off the right side of the road.</p> |
| 2022-11-05    | ANTELOPE RIDGE DR    | PRONGHORN MEADOWS CIR   | <p>Vehicle #1 was eastbound on Pronghorn Meadows Cir proceeding from a stop sign. Vehicle #2 was southbound on Antelope Ridge. The front of vehicle #1 collided with the right side of vehicle #2. Vehicles were moved prior to investigation.</p>   |

| Accident Date | Reference Point Name | Reference Point At Name | Accident Narrative   |
|---------------|----------------------|-------------------------|--|
| 2020-12-13    | ANTELOPE RIDGE DR    | N CAREFREE CIR          | Vehicle #1 was traveling westbound on N Carefree Cir near Antelope Ridge Dr. Vehicle #1 lost control and went off the right side of the roadway and struck a concrete fence. Vehicle #1 backed out of the fence and got back onto the roadway. Vehicle #1 came to rest in the left lane of N Carefree Cir. |

# MTCP Maps

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Figure 22. 2045 Roadway Functional Classifications

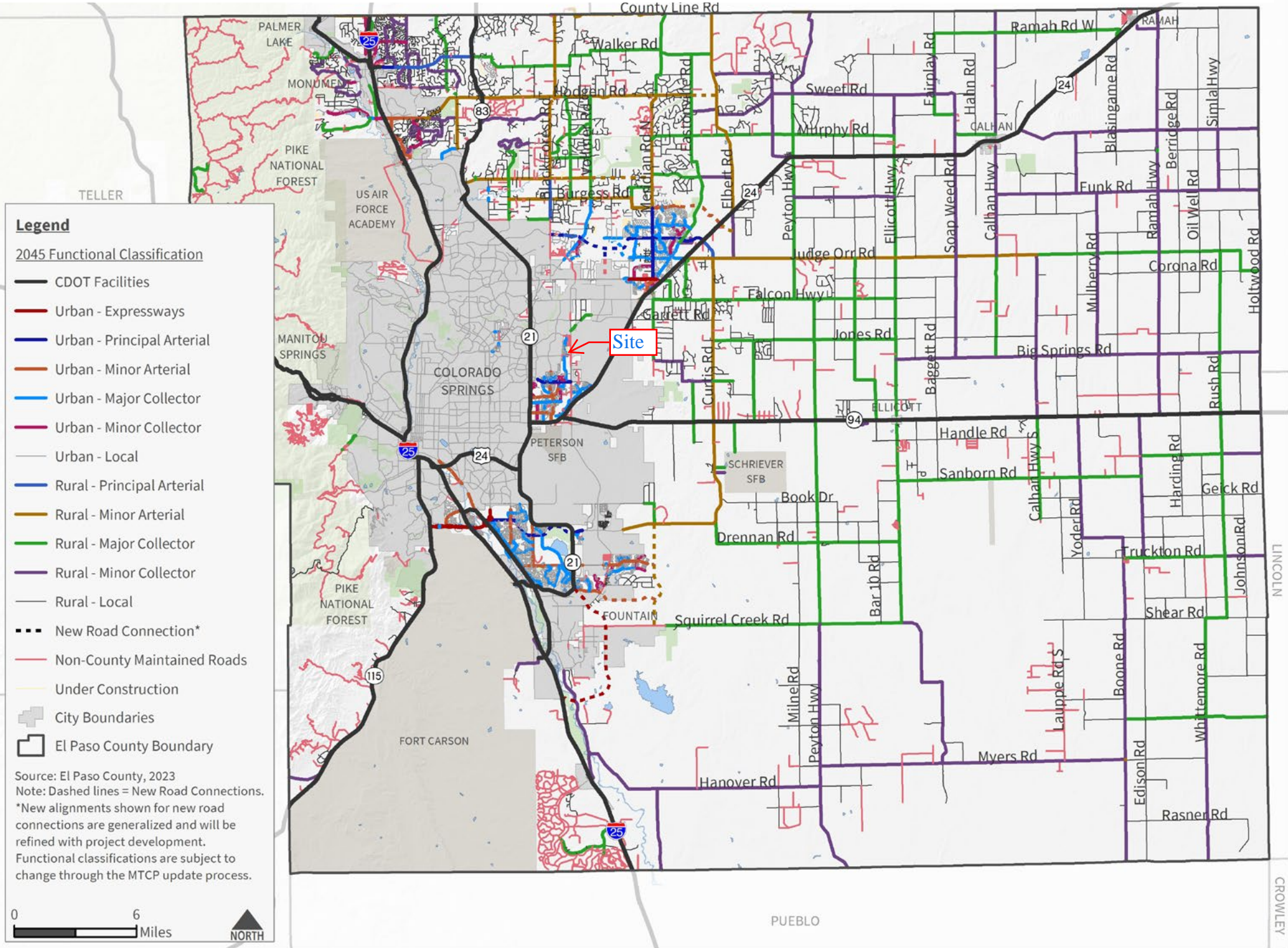
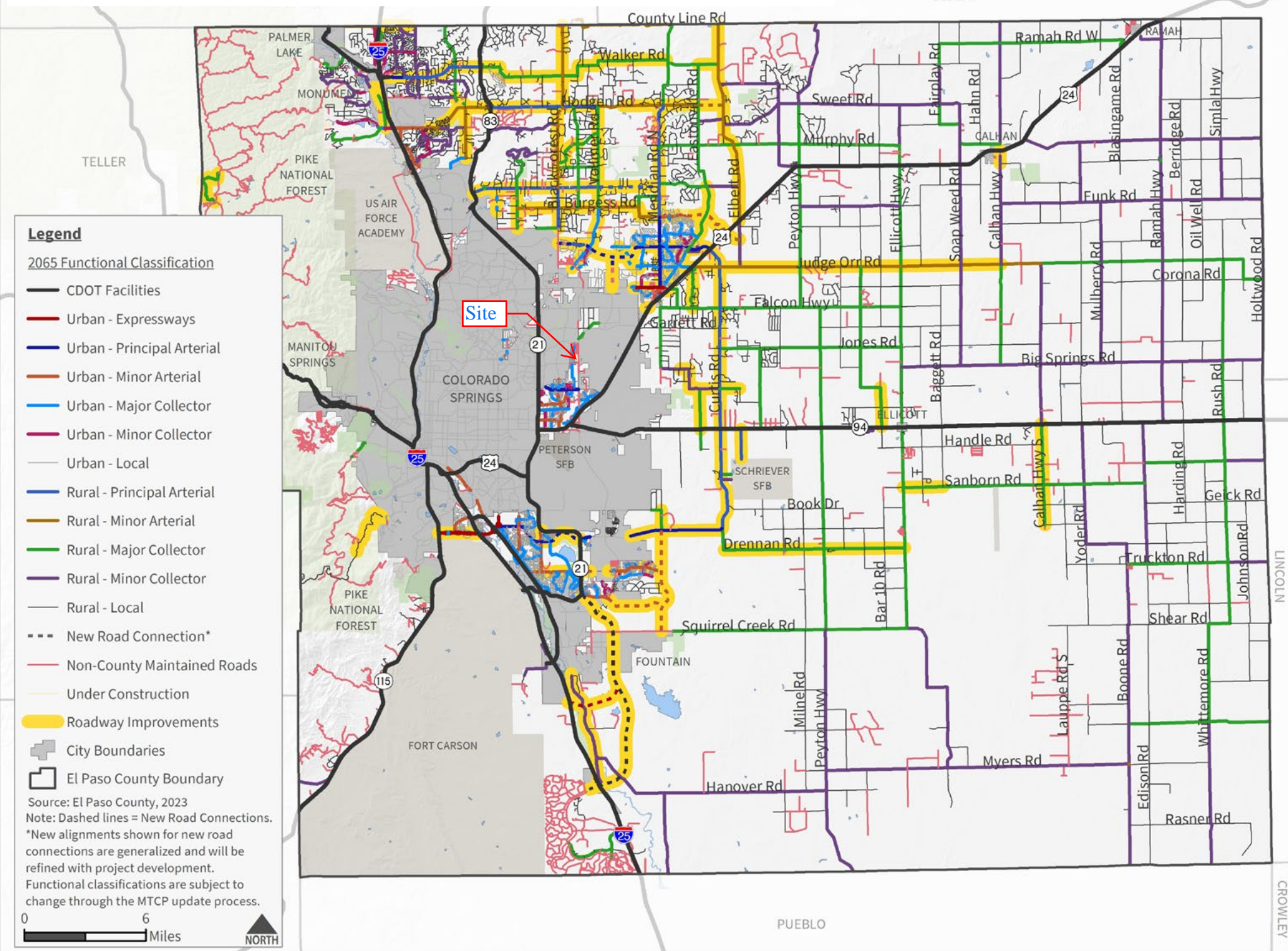


Figure 39. 2065 Corridor Preservation Plan



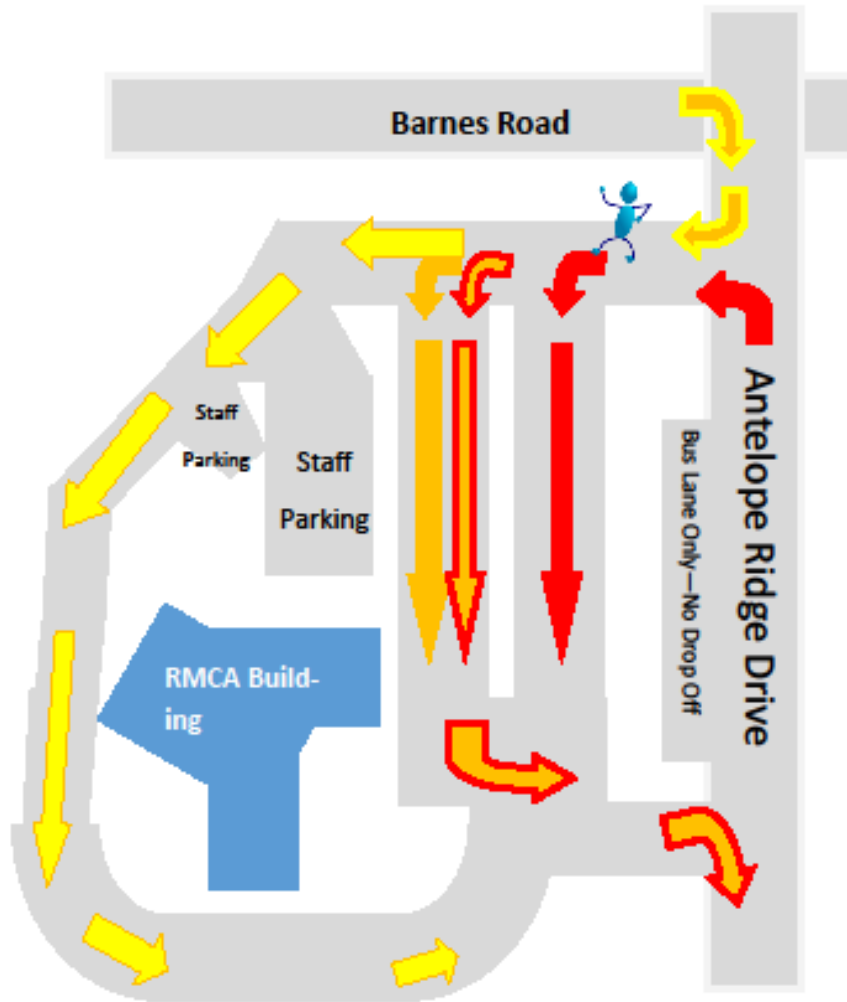
# Additional Attachment

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Rocky Mountain Classical Academy Carpool Plan and key pages from the Parent Student Handbook



**Morning Carpool Drop**—Doors open at 7:30am Classes start at 8:00am



- PRE-SCHOOL**
- If Preschooler has a K-8 sibling drop off between 7:45 and 8am (K-8 students come in with pre-school and continue to appropriate locations)
  - Preschool without K-8 sibling drop off between 8 and 8:15 am
  - Must come in from the north Barnes entrance

\*Starting at 7:30, staff will open access to the parking lot for student drop-off.

\*Staff will direct you to the lane for entry. Stay in the lane to which you are you directed.

**\*NEVER CROSS OR CHANGE LANES WHEN ENTERING AND/OR EXITING CAR POOL.**

**\*NEVER DROP STUDENTS OFF IN BUS LANE**

**No cell phone use during carpool**

**\*RIGHT TURN ONLY TO EXIT after drop-off.**

\*Never park in a drop off lane and exit your car      \*Do not threaten RMCA staff , other drivers or students.

\*The City of Colorado Springs & El Paso County Sherriff's Department have approved this traffic plan. Keep our students, faculty, and yourself safe by following all procedures.

**Violating any of the carpool rules creates serious safety hazards and drivers who do not comply may have their carpool privileges revoked by administration. These drivers would need to make other arrangements for drop-off.**

**Be Good to Our Neighbors!**

Please note that Antelope Ridge to our east, and Falcon Ridge to our west are PRIVATE PROPERTIES! Do not drive though, park in, or walk through these properties. You will be ticketed or towed.

Our neighbors to the south in Whispering Pines need access to their driveways and streets. We ask that you do not park in front of their homes, block driveways or roadways

if you do not live in the neighborhood and walk to school, please use carpool

## Afterschool Carpool Pick-Up

K-4 dismisses at 3:00 pm

Pre-K 3:15 pm,

5th-8th dismiss at 3:30 pm

Parents of 5th-8th & Pre-K grade: Wait until 3:30pm to enter the line. If you arrive before elementary carpool is complete, you will be asked to leave the parking lot and return to the end of the line



\* If you have a K-4 grade student with a Pre-K sibling, the K-4 student will wait in the Pre-K waiters room from 3 to 3:30, then when called will go out through the gate from Kindie gate. This will mean parents 2 stops in close proximity in the fire lane.

- Display your carpool numbers on the front dashboard of your car.
- K-4 dismiss at 3:00 pm. Older siblings go the youngest sibling's carpool line.
- If you have children in both K-4 and 5-8, the K-4 younger siblings will to their waiters room until the 5th-8th grade sibling picks them up after the 5th-8th grade dismissal at 3:30 pm.
- All siblings go to the youngest 5th-8th grade student's carpool line.

Enter the parking lot from the designated direction as display on the map. In 30 minutes, we safely move and average of 765 cars every day, providing pickup for 1,200 students. Traffic safety is a serious matter, we need YOUR help to ensure the safety of our children's lives.

- Once your children load into your car, wait for Staff to direct you to pull forward. Do not pull around any cars. RMCA reserves the legal right to deny violators the privilege of carpool.
- Only RIGHT TURNS are permitted to exit the parking lot during carpool and only RIGHT TURNS are accepted by the City of Colorado and El Paso Sheriff Department's approved traffic plan.

**ONLY STAFF** may access the building through the staff doors before and during school. All others must enter through the front entrance near the flagpole for safety purposes.



# Parent-Student Handbook

## 2020 - 2021

Last Update 08-02-19  
RMCA Board of Directors

## SCHOOL CONTACT INFORMATION

Pre-K-8 CAMPUS  
4620 Antelope Ridge  
Colorado Springs, CO 80922

PHONE: 719-622-8000  
FAX: 719-622-8004

OFFICE HOURS:  
Monday – Friday 7:30am – 4:00pm

SCHOOL HOURS:  
Full-day kindergarten, first thru fourth grade:  
Monday-Friday from 8:00am – 3:00pm

Fifth thru eighth grade:  
Monday-Friday from 8:00am – 3:30pm

### Homeschool Program Kindergarten – High School

“HOMESCHOOL CAMPUS”  
RMCA Home School Program  
3525 Akers Drive, Suite 100  
Colorado Springs, CO 80922

PHONE: 719-591-5666  
FAX: 719-591-5777

SCHOOL HOURS:  
Monday-Friday from 8:00am – 3:00pm

OFFICE HOURS:  
Monday-Friday from 8:00am – 4:00pm

Website: [www.rmcaacs.org](http://www.rmcaacs.org)

Email: [info@rmcaacs.org](mailto:info@rmcaacs.org)

following link to D49's website: <http://www.d49.org/sf/feeforservicebus/Pages/default.aspx>.

## Carpool and Traffic Safety

### Elementary (K-5)

Upon enrollment, you will be given a carpool number. Please display in a visible location on your dashboard during carpool pickup. If you lose your carpool display number, you may obtain another from the front office at your child's campus.

### Carpool Procedures (See Appendix C for carpool maps)

RMCA operates two carpools each day, one for morning drop off, and one for afternoon pickup. Our City of Colorado Springs, El Paso County Sheriff's Department, and District Security Resource Officers have approved our traffic plan. Please follow all procedures, because doing so ensures the safest possible movement of over 2,200 people and 860 cars in both daily carpools. **Our traffic flows best when we release blocks of up to ten cars per line.** This sometimes causes short personal delays, but it makes overall carpool time shrink.

Many of the streets off of Antelope Ridge Drive are not public or city streets. Do not park in our bordering neighborhoods and wait for students. Doing so violates privately owned communities, prevents our neighbors from safely navigating to and from home, and potentially disrupts emergency services. Please support RMCA in this process as we strive to be good neighbors.

Violating any of the carpool rules creates serious safety hazards and drivers who do not comply may have their carpool privileges revoked. These drivers will need to make other arrangements for the drop off and pick up of their child.

RMCA operates a staff parking lot. Staff cars have been designated staff parking stickers. Cars not displaying a staff parking sticker and parked in the staff lot may be towed at the vehicle owners expense. Except for AM/PM Kindergarten pick up, please do not park in the carpool lane closest to the school during the school day. This creates a safety hazard for the school. Please utilize the visitor parking at all times.

### Morning Carpool Procedures

Starting at 7:30am, staff will open access to the parking lot for student drop-off. Staff will direct you into a lane for entry. Stay in the lane you are directed into.

- Never cross over or change lanes when entering and/or exiting carpool.

- Never drop off students in the bus lane.
- Right turns onto Antelope Ridge only to exit after drop-off.
- No cell phone use.
- Never park in a drop off lane and exit your car.
- Do not engage in conflict with staff or fellow drivers.
- If there is a carpool violation, please refer that to the school administration

### Afternoon Carpool Procedures

Only PreK-5<sup>th</sup> grade students have carpool numbers. Display these on the front dashboard of your car. Kindergarten through 4<sup>th</sup> grades dismiss at 3:00pm. Older siblings go to youngest sibling’s carpool line. If you have children in both K-4<sup>th</sup> and 5<sup>th</sup>-8<sup>th</sup>, the K-4<sup>th</sup> younger siblings will wait inside for the 5<sup>th</sup>-8<sup>th</sup> grade sibling to pick them up after the 5<sup>th</sup>-8<sup>th</sup> sibling dismisses at 3:30 pm. All siblings then go to the youngest 5<sup>th</sup>-8<sup>th</sup> grade student’s line.

Enter the parking lot from the designated direction as displayed on the map you receive during the enrollment process.

Kindergarten and 5<sup>th</sup> use the “yellow” lane that goes behind the school.

1<sup>st</sup> and 8<sup>th</sup> graders use the “purple” lane closest to the building.

2<sup>nd</sup> and 7<sup>th</sup> graders use the “green” middle lane in front of the building.

3<sup>rd</sup>, 4<sup>th</sup> and 6<sup>th</sup> graders use the “blue” lane closest to the street. Once your children load into your car, wait for Staff to direct you to pull forward. Do not pull around any cars.

RMCA reserves the legal right to deny violators the privilege of carpool.

Only RIGHT TURNS are permitted to exit the parking lot during carpool and right turns only are accepted by the City of Colorado Springs and El Paso Sheriff Department’s approved traffic plan.

Parents of 5th-8th graders: Wait until at least 3:15pm to enter the line. If you arrive before elementary carpool is complete, you will be directed to leave the parking lot and return to the end of the line. This allows elementary parents arriving at the end of elementary carpool to pick up their children without disrupting middle school traffic.

### Walkers

#### K-8 Campus

Your student may not walk home without prior, written notification from a parent or guardian on the family dismissal plan.

### Someone Else Picking Up Your

#### Student(s)