



Comprehensive Transportation Impact Analysis
Steamboat Resort Master Development Plan Amendment
Steamboat Springs, Colorado



September 16, 2021

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Table of Contents

1.0	EXECUTIVE SUMMARY	5
2.0	PROJECT DESCRIPTION	9
2.1	DESCRIPTION OF EXISTING TRANSPORTATION SYSTEM.....	19
2.2	TRAFFIC DATA COLLECTION	21
2.3	SEASONAL ADJUSTMENT FACTOR	21
2.4	GROWTH RATE.....	22
2.5	FUTURE MUNICIPAL INFRASTRUCTURE PROJECTS	22
2.6	EXISTING AND BACKGROUND TRAFFIC VOLUMES.....	23
3.0	YEAR 2024 AND 2044 BACKGROUND TRAFFIC OPERATIONAL ANALYSIS.....	27
4.0	PROJECT TRAFFIC	29
4.1	TRIP GENERATION FOR PROPOSED LAND USE.....	29
4.2	TRIP GENERATION MODE SPLIT	33
4.3	TRIP GENERATION AND MODE SPLIT SUMMARY	33
4.4	DIRECTIONAL DISTRIBUTION	38
4.5	ALTERNATE SCENARIO FOR GTC IMPROVEMENTS	38
4.1	TRAFFIC ASSIGNMENT AND TOTAL TRAFFIC.....	43
5.0	YEAR 2024 AND 2044 TOTAL TRAFFIC OPERATIONAL ANALYSIS	52
6.0	ADDITIONAL ANALYSIS.....	54
6.1	TRANSIT SERVICE REQUIREMENTS	54
6.2	INTERNAL CIRCULATION	54
6.3	SUMMER OPERATIONS	54
6.4	STATE HIGHWAY ACCESS PERMIT AT US 40 AND JD HAYS WAY	54
7.0	ALTERNATIVE MODES SUMMARY.....	55
7.1	TRANSIT IMPROVEMENTS	55
7.2	PEDESTRIAN IMPROVEMENTS	55
7.3	BICYCLE IMPROVEMENTS.....	55
8.0	RECOMMENDATIONS.....	56
8.1	ROADWAY NETWORK IMPROVEMENTS.....	56
8.2	TRANSIT SERVICE REQUIREMENTS	56
8.3	PARKING DEMAND MANAGEMENT	57
8.4	GTC PERMIT SYSTEM FOR SHUTTLES	57
8.5	GTC IMPROVEMENTS.....	57
8.6	STATE HIGHWAY ACCESS PERMIT AT US 40 AND JD HAYS WAY	58
8.7	FUTURE DEVELOPMENT PROCESS.....	58
9.0	CONCLUSION	59
10.0	APPENDICES	60

Tables and Figures

FIGURE 1: AREA MAP	9
FIGURE 2: BASE AREA SITE PLAN.....	12
FIGURE 3: GREENHORN RANCH SITE PLAN	13
FIGURE 4: WILD BLUE GONDOLA SITE PLAN	14
FIGURE 5: STEAMBOAT MASTER PLAN – PREVIOUSLY APPROVED PROJECTS	15
FIGURE 6: STEAMBOAT MASTER PLAN – WINTER UPGRADE PLAN	16
FIGURE 7: STEAMBOAT MASTER PLAN – WINTER UPGRADE PLAN FOR SUNSHINE PEAK.....	17
FIGURE 8: STEAMBOAT MASTER PLAN – WINTER UPGRADE PLAN FOR BASHER BOWL.....	18
FIGURE 9: ROADWAY ORIENTATION FOR ANALYSIS	20
FIGURE 10: BACKGROUND TRAFFIC METHODOLOGY	22
FIGURE 11: EXISTING TRAFFIC	24
FIGURE 12: YEAR 2024 BACKGROUND TRAFFIC.....	25
FIGURE 13: YEAR 2044 BACKGROUND TRAFFIC.....	26
FIGURE 14: TRIP GENERATION METHODOLOGY	29
FIGURE 15: ANTICIPATED COMFORTABLE CARRYING CAPACITY	32
TABLE 1: PROJECT TRIP GENERATION	34
TABLE 2: TRIP GENERATION – EXISTING CONDITIONS COMPARISON OF GTC TO 2019 MDPA ¹	35
FIGURE 16: EXISTING CONDITIONS MODE OF TRAVEL CHART.....	35
TABLE 3: PROJECT TRIP GENERATION WITH MODE SPLIT	37
FIGURE 17: PROJECT-GENERATED DIRECTIONAL DISTRIBUTION	39
FIGURE 18: GENERAL GTC IMPROVEMENTS RECOMMENDED IN THE MAMP ³	40
FIGURE 19: PROJECT-GENERATED DIRECTIONAL DISTRIBUTION FOR ALTERNATE GTC IMPROVEMENTS.....	41
FIGURE 20: BACKGROUND TRAFFIC SHIFTS FOR ALTERNATE GTC IMPROVEMENTS.....	42
FIGURE 21: YEAR 2024 PROJECT-GENERATED TRAFFIC ASSIGNMENT.....	44
FIGURE 22: YEAR 2024 PROJECT-GENERATED TRAFFIC ASSIGNMENT WITH GTC ALTERNATE IMPROVEMENTS....	45
FIGURE 23: YEAR 2044 PROJECT-GENERATED TRAFFIC ASSIGNMENT.....	46
FIGURE 24: YEAR 2044 PROJECT-GENERATED TRAFFIC ASSIGNMENT WITH GTC ALTERNATE IMPROVEMENTS....	47
FIGURE 25: YEAR 2024 TOTAL TRAFFIC	48
FIGURE 26: YEAR 2024 TOTAL TRAFFIC WITH GTC ALTERNATE IMPROVEMENTS.....	49
FIGURE 27: YEAR 2044 TOTAL TRAFFIC	50
FIGURE 28: YEAR 2044 TOTAL TRAFFIC WITH GTC ALTERNATE IMPROVEMENTS.....	51

1.0 Executive Summary

McDowell Engineering prepared this Master Transportation Impact Analysis for the proposed Steamboat Resort expansion. In 2019, the Steamboat Resort prepared a *Mountain Resort Master Development Plan Amendment (MDPA¹)* as guidance for future development at Steamboat Resort. Based upon the resort's vision and guiding goals, the *MDPA¹* identified upgrade plans. This list has been updated by the applicant in September 2021.

- Installation of new lifts
 - Wild Blue Gondola, Stage 1 and 2
 - Sunshine II Lift
 - Bashor Beginner Carpets
 - Pioneer Ridge II
 - Rough Rider
 - Sidewinder Carpet
 - Sunshine II
- Upgrades to lifts
 - Elkhead Express
 - Pony Express
 - South Peak
 - Sundown Express
 - Thunderhead Express
 - Wrangler
- Removal of several lifts
- Terrain Expansion
 - Expansion into Sunshine Bowl
 - Realignment and regrading projects
- Expansion of Snowmaking Coverage
- Restaurant at the top of Sunshine Lift
- Ski Patrol hut at the top of Sunshine II
- Thunderhead Lodge upgrades
- Additional Lighting in Bashor Bowl for tubing and night skiing
- Fish Creek operational boundary expansion
- Multi-Season and Alternative Activities
 - Summer Activities in the base area, Bashor Bowl, and Sunshine Peak
 - Install aerial adventure park at Thunderhead
 - Expand mountain biking trail network

Additionally, Steamboat is proposing Base Village and Greenhorn Ranch facilities that were not included in the *MDPA¹* analysis.

The proposed Base Village and Greenhorn Ranch projects use the Institute of Transportation Engineers' *Trip Generation Manual²* to determine the anticipated trip generation. The Gondola and Terrain Expansion take a larger look at the entirety of travel to the resort and apply the anticipated growth of the resort's capacity to the travel network.

In practice, the traffic increase associated with the resort expansion is not likely fully realized until the increase in lodging and other amenities to support the additional visitors is added. Steamboat believes that new visitors will primarily be destination guests that will arrive in a single vehicle or via air travel and rely on more transit and walking. Therefore, the mode split assumptions based upon current data are likely conservative for these new visitors.

Trip Generation and Mode Split: The proposed development is expected to generate 3,321 trips on a peak Saturday in December. This includes 421 trips on a Saturday morning peak hour and 461 trips in the Saturday afternoon peak hour. Of these visitors, it is anticipated that approximately 30% of them are people walking to/from adjacent condos and hotels. Based upon current ridership, 60% of patrons and employees will access the resort area via transit services. Ten percent will be dropped off or picked up by a passenger car. The remaining traffic will arrive to park in the garages. This project is anticipated to increase vehicular traffic in the vicinity of the resort by 102 vehicles per hour (vph) in the morning peak hour and 111 vph in the evening peak hour.

By Year 2024, the proposed development is expected to generate 5,991 trips on a peak Saturday in December. This includes 637 trips on a Saturday morning peak hour and 728 trips in the Saturday afternoon peak hour. This project is anticipated to increase vehicular traffic in the vicinity of the resort by 154 vph in the morning peak hour and 175 vph in the evening peak hour.

Summer Operations: As described in the *MDPA*¹, summer operations are expanding. However, summer operations are not anticipated to reach peak winter guest utilization at the resort. Transit service is not as robust during the summer season. Therefore, more summer visitors drive passenger cars to the Mountain Area. As future summer activities and visitors increase, additional transit services may need to be increased accordingly.

Transit Service Requirements: The proposed Steamboat expansion is anticipated to increase the demand on the transit system. The transit system consists of City buses, Meadows Lot shuttles, individual hospitality shuttles, and the Wildhorse Gondola. Based upon the analysis in **Table 3**, it is anticipated that the proposed expansion will require an additional number of buses/shuttles per hour during a peak Saturday in December by Year 2044.

- City Bus – An additional 10-12 buses per hour.
- Small Shuttles – An additional 20-28 shuttles per hour.
- Medium Shuttles (Steamboat’s Meadows Lot Shuttles) – An additional 10-12 shuttles per hour.

The applicant will work with the City of Steamboat Springs to determine an appropriate contribution towards an expansion of transit infrastructure caused by the proposed mountain expansion.

Pedestrian Improvements: As part of the Base Village Project, Steamboat is proposing to improve a 'Gold Walk' leading visitors from the GTC to the main plaza area of the Base Village. Sidewalk and ADA considerations will be included in future development proposals and the associated site plans. City staff will have an opportunity to comment on plan specifics during the approval process.

Bicycle Improvements: Bicycles are popular at the resort during summer months. Bicycle connections and facilities will be included in future development proposals. City staff will have an opportunity to comment on plan specifics during the approval process.

Roadway Network Improvements: Modeling of the study area intersections was completed to identify current and future roadway infrastructure needs. The applicant will work with the City of Steamboat Springs to determine an appropriate contribution towards the infrastructure improvements that are necessary due to the proposed mountain expansion.

Intersection #1 - Mt. Werner Circle and Après Ski Way: This roundabout is currently operating at an overall acceptable LOS during normal operations. During peak events and heavy snowfall, minor to moderate delays are observed. With the additional traffic anticipated by the resort expansion, by Year 2044 some operational improvements may be required at this intersection. However, with the alternate scenario of GTC improvements, traffic on Mt. Werner Circle north of this roundabout is reduced and therefore minimal operational improvements are anticipated.

Intersection #2 - Mt. Werner Circle and Ski Time Square Drive: This roundabout is anticipated to operate well through long-term total traffic conditions.

Intersection #3 - Mt. Werner Road and Mt. Werner Circle: During peak events and heavy snowfall, minor to moderate delays are observed. As traffic on Mt. Werner Circle grows over time, the delay at this intersection will increase. This intersection will likely need to be constructed as a roundabout in the future.

If the GTC alternate scenario is constructed, more traffic will utilize Mt. Werner Circle to the north to pick up and drop off skiers. Therefore, an interim solution may be to improve the auxiliary turn lanes at this intersection. Long-term a roundabout would improve overall operations and reduce delay. This intersection has been identified and included in URAAC's future project list.

Intersection #4 - Mt. Werner Road and Steamboat Boulevard: The City of Steamboat Springs recently constructed a roundabout at the intersection of Mt. Werner Road and Steamboat Boulevard. It may need an additional eastbound circulating lane in the future to operate well through long term total traffic conditions.

Intersection #5 - Mt. Werner Road and Pine Grove Road: This signalized intersection is anticipated to operate at an acceptable LOS through Year 2044, with the exception of the northbound and southbound approaches. This approach is currently at LOS D in the existing conditions and is anticipated to degrade to LOS F though Year 2044. This signalized intersection will need operational improvements in the future. This

could include revising the traffic signal timing to provide optimal service to Mt. Werner Road.

Intersection #6 – JD Hays Way and US 40: During evening peak hours in the future years, the ability to make a left outbound turn will be difficult due to the southbound through volumes. This is an existing operational concern with background traffic. The *East Steamboat Springs US Highway 40 Access Study*⁸ recommends that this intersection be converted to a ¾ movement intersection that restricts the westbound left out movement.

Parking Demand Management: The applicant will work towards implementing a Parking Demand Management Plan. This could include real time wayfinding and guidance signage, paid parking management, carpool incentives, marketing, messaging, and enforcement. Refer to the *Parking Study*⁷ for more information.

GTC Permit System for Shuttles: Steamboat may decide to support the establishment of a permitting system that will be required for vehicles to enter the GTC. The fees associated with such permit could be used to cover capital improvements and fund additional monitoring and directing traffic within the GTC. Also, a permitting system would require all permittees and their drivers to go through driver training on the operations of the GTC. A permit system may promote consolidation of multiple smaller shuttles into a medium shuttle with more capacity.

GTC Improvements: The City of Steamboat Springs is currently working on a *Mountain Area Master Plan* to guide policy and future development of the Mountain Area. The applicant will work towards a public/private partnership with the City and lead the design and implementation process for the GTC Improvements.

State Highway Access Permit at US 40 and JD Hays Way: If the City's anticipated 2.0% annual growth is realized on JD Hays Way, a new State Highway Access Permit will be required in the future.

Future Development Process: This study is intended to serve as a Master Transportation Impact Analysis for the Resort Area. As specific projects are submitted to the City for review and approval, the City will require a traffic memo stating that the project complies with this Master Study or what the modifications and recommendations are necessary to comply.

Conclusion: The proposed Steamboat expansion is anticipated to be successfully accommodated into the greater roadway system and City of Steamboat Springs if the recommendations within this report are implemented.

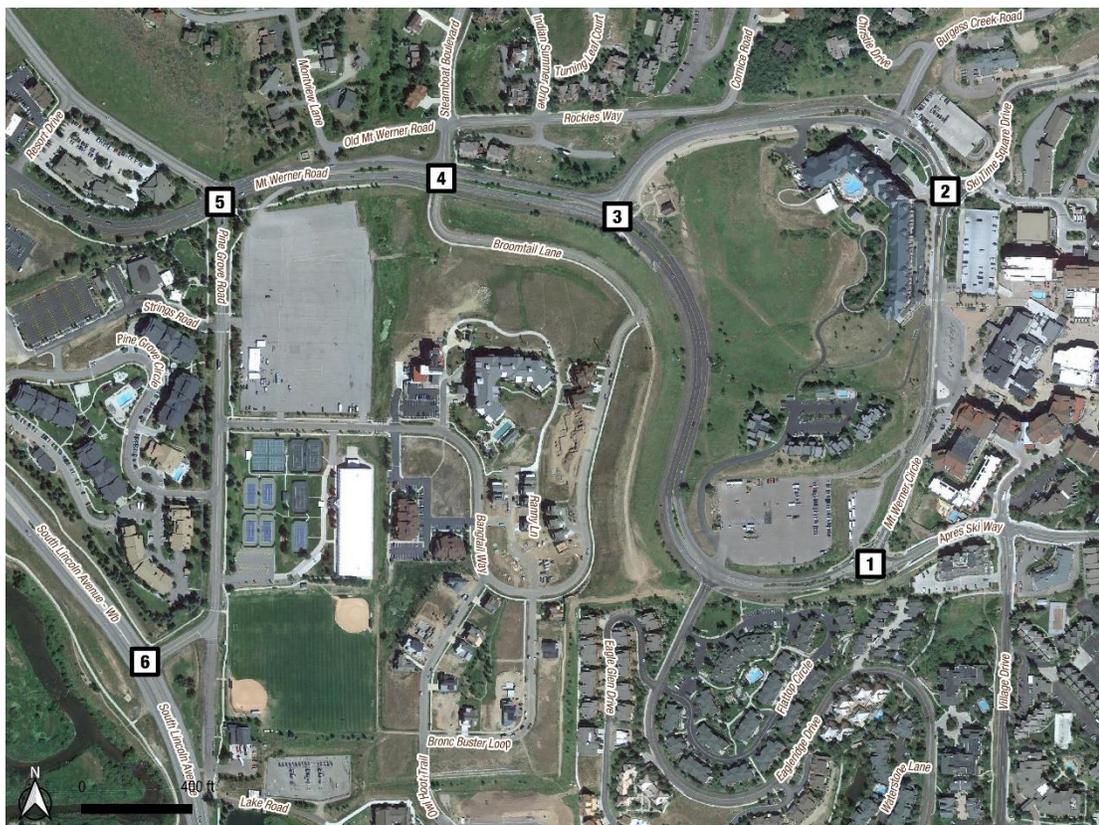
2.0 Project Description

Steamboat Resort (Steamboat) is known for its world-class skiing, resort amenities, and classic ski-town feel and this in turn attracts guests from both the regional area and the broader world-wide community. Steamboat has an extensive array of activities to provide guests in both the summer and winter. The ski area offers an extensive network of trails and lifts, ranging from beginner terrain accessed by surface lifts to high alpine, expert skiing. Steamboat also offers night skiing (5:30 p.m. to 8:30 p.m., most of the season), an expansive snowmaking system, one terrain park, two halfpipes (one half size and one full size), and race training courses. Beyond skiing, Steamboat also offers rides on the Outlaw Mountain Coaster and a variety of other outdoor adventure activities, Movies on the Mountain, Kids Adventure Club (a child-focused summer camp), scenic chairlift rides, and more. Steamboat is also integrated with many other businesses and the City of Steamboat Springs to enhance the offerings provided by Steamboat and the surrounding area.

Steamboat Resort is located within the Routt National Forest in Routt County, Colorado. The resort is approximately three miles from the center of the City of Steamboat Springs, a historic ranching town on the Yampa River. The resort is located approximately three hours from Denver, Colorado and the major urban corridor of the Front Range. Air transportation is available to Denver International Airport and to the Yampa Valley Regional Airport, approximately 20 miles northwest.

Refer to the area map in **Figure 1**.

Figure 1: Area Map



In 2019, the Steamboat Resort prepared a *Mountain Resort Master Development Plan Amendment (MDPA¹)* as guidance for future development at Steamboat Resort. Based upon the resort's vision and guiding goals, the *MDPA¹* identified upgrade plans. This list has been updated by the applicant in September 2021.

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Steamboat Resort operates on a United States Forest Service (Forest Service) 40-year special use permit (*SUP*). The *SUP* covers 3,738 acres. The resort currently has over 2,965 skiable acres. The conceptual plans referenced *MDPA¹* were approved by the Forest Service in 2019. As site-specific projects move forward, additional environmental clearances are required by the Forest Service.

For the purpose of this analysis, these projects have been broken down into three projects.

1. Base Village Improvements – This includes construction of a new Plaza Pavilion building with restaurant space in the location of the previous Gondola Building. It also includes the construction of Building B with restaurant and retail space. The plaza

between the two new buildings will be developed into a seasonal ice-skating rink. Additionally, a ticketing building will be constructed near the Gold Walk. The Base Village improvements are anticipated to be completed in Year 2023. Refer to the Base Village Site Plan in **Figure 2**.

2. Green Horn Ranch – A break/lunch facility for ski school is proposed at Green Horn Ranch. This will also include maintenance and operations facilities for the resort. The facility is anticipated to be completed in Year 2023. Refer to the Green Horn Ranch Site Plan in **Figure 3**.
3. Gondola and Terrain Expansion – Steamboat Resort anticipates the completion of a new Wild Blue Gondola in Year 2024. In addition to the new gondola, the resort anticipates terrain and facility expansion. Site Plans for these improvements are included in **Figures 4 – 8**.

The purpose of this transportation impact analysis is to forecast and analyze the impacts of the additional traffic volumes associated with the Steamboat Resort expansion on the surrounding roadway and multimodal network. The analysis complies with the City of Steamboat Springs' standards for this analysis. Correspondence with the City Engineer on the study's methodology and scoping are included in the **Appendix**.

Figure 2: Base Area Site Plan

MASTER PLAN
Proposed



- 1. EXISTING ENTRY PLAZA
- 2. GOLD WALK
- 3. ESCALATOR + STAIRS
- 4. KIOSKS
- 5. ICE RINK
- 6. SLOPE SIDE PLAZA
- 7. SKI BEACH
- 8. RELOCATED GONDOLA

ALTERRA east west partners
RESORTS COMPANY

DESIGNWORKSHOP Gensler | Steamboat Base Redevelopment | Steamboat-Springs, CO | 5

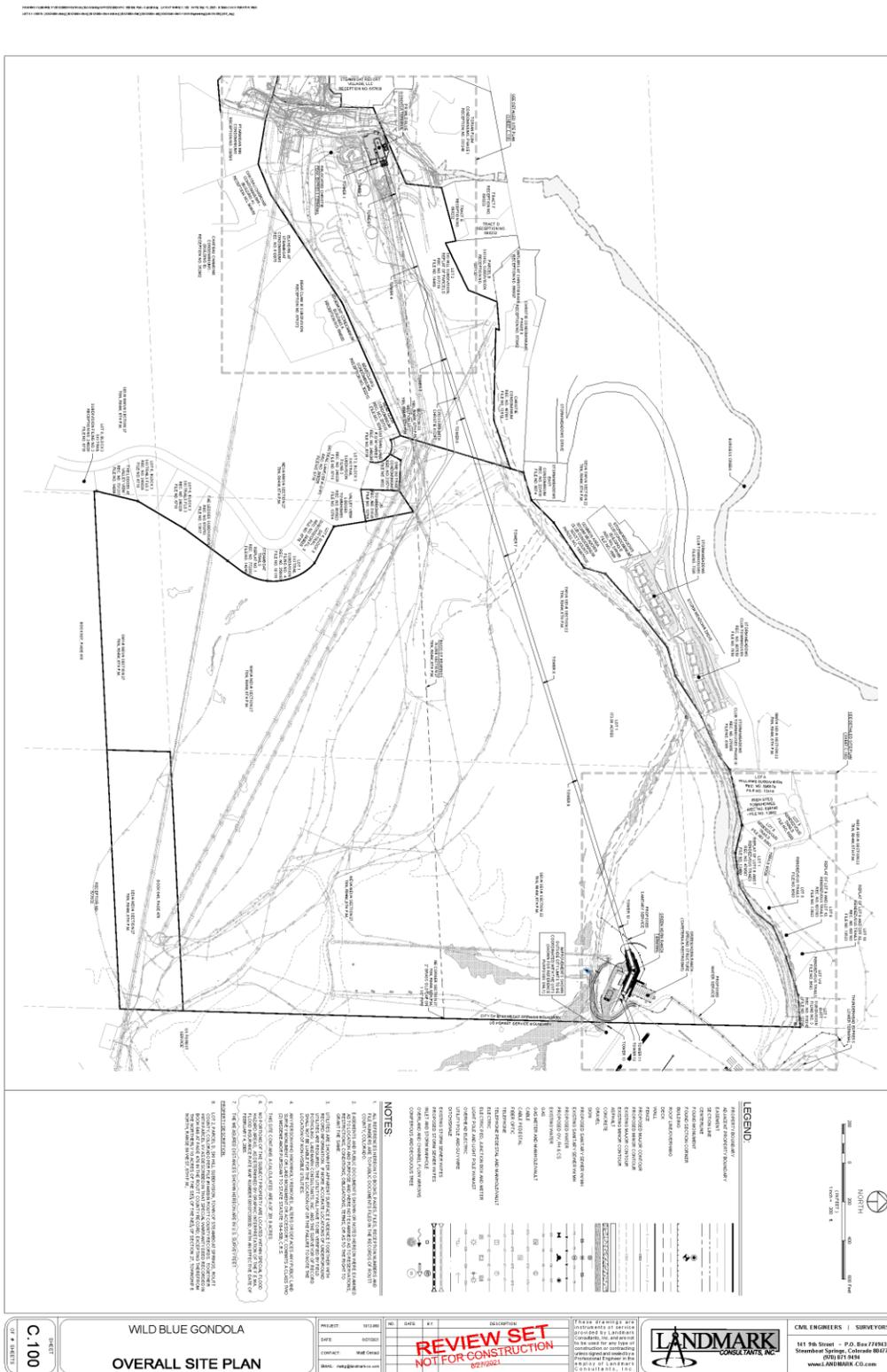
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Figure 3: Greenhorn Ranch Site Plan



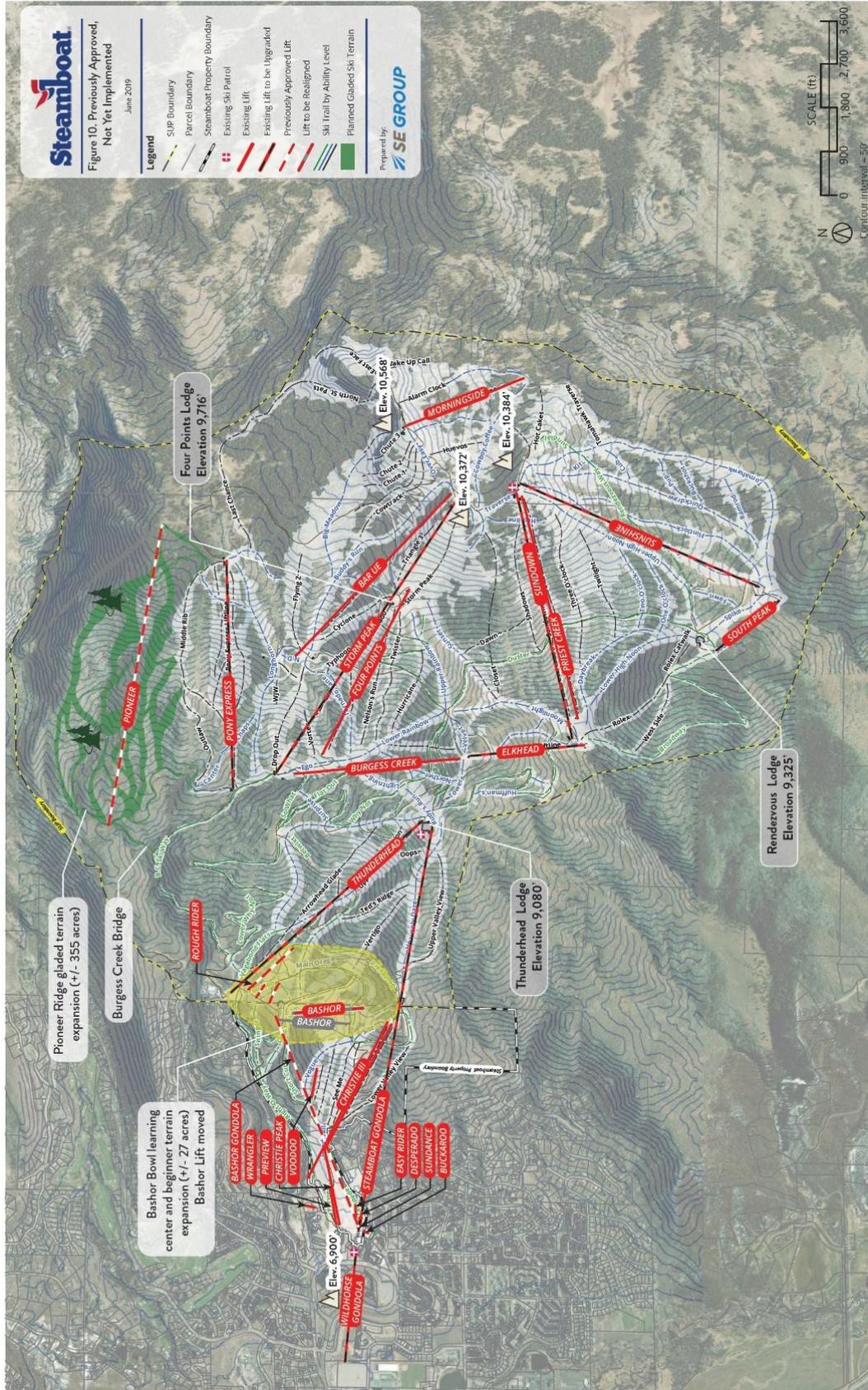
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Figure 4: Wild Blue Gondola Site Plan



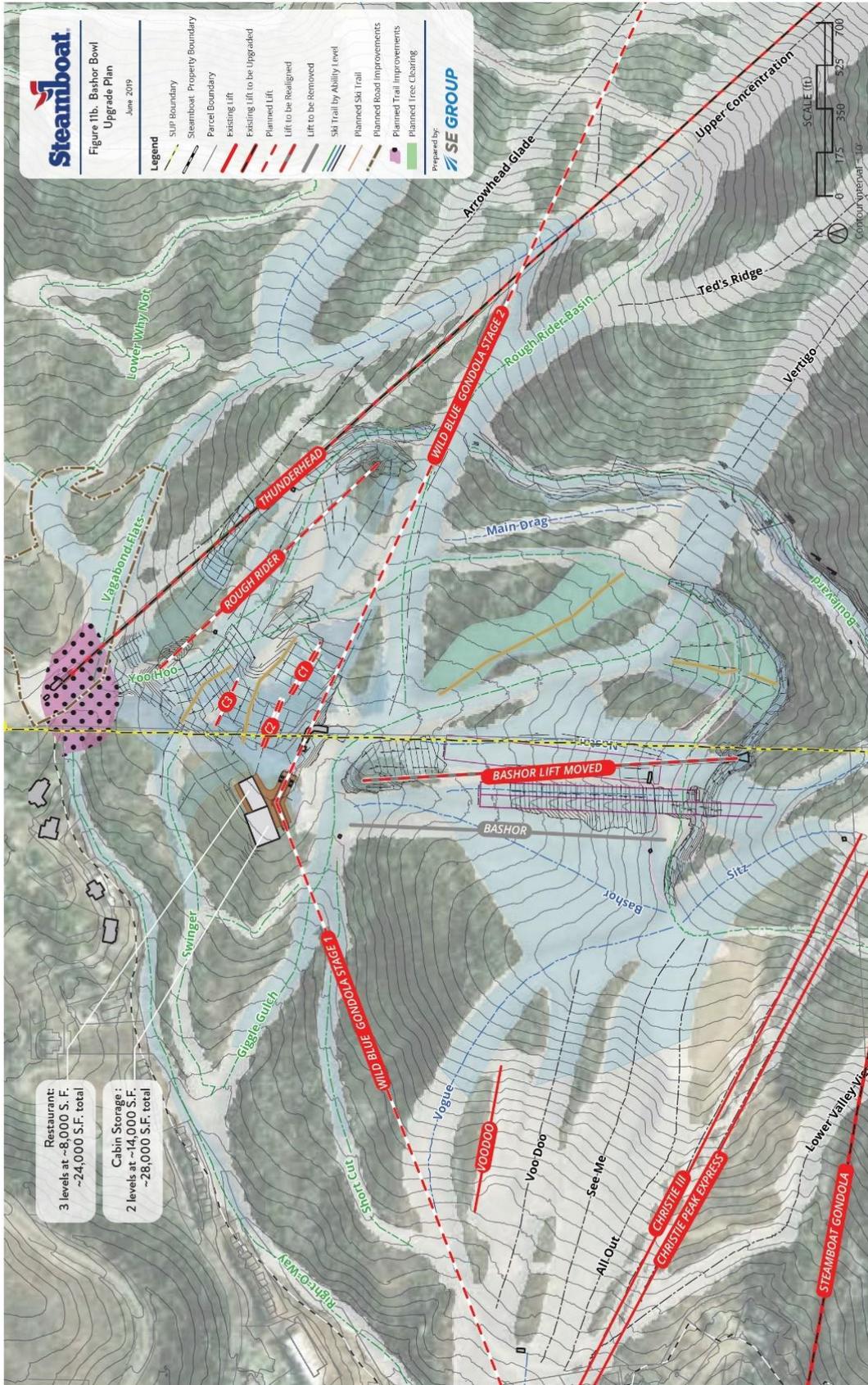
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Figure 5: Steamboat Master Plan – Previously Approved Projects



(Not to Scale.)

Figure 8: Steamboat Master Plan – Winter Upgrade Plan for Basher Bowl



(Not to Scale.)

2.1 Description of Existing Transportation System

Mt. Werner Road and Mt. Werner Circle: Mt. Werner Circle provides access between Steamboat Resort and US 40. In the vicinity of the resort, Mt. Werner Circle is a looped road providing access through the Gondola Transit Center (GTC). It has a posted speed limit of 25mph. There are roundabouts on either side of the GTC at Après Ski Way and at Ski Time Square Drive.

Après Ski Way: Après Ski Way connects the residential area southwest of the Steamboat Resort to Village Drive and Mt. Werner Circle. It also connects Walton Creek Road. Après Ski Way has a posted speed limit of 25mph.

Ski Time Square Drive: Ski Time Square Drive serves residential and retail developments northeast of Steamboat Resort. This road has a posted speed limit of 15mph. It is a 1,500-foot street that ends in a turnaround area.

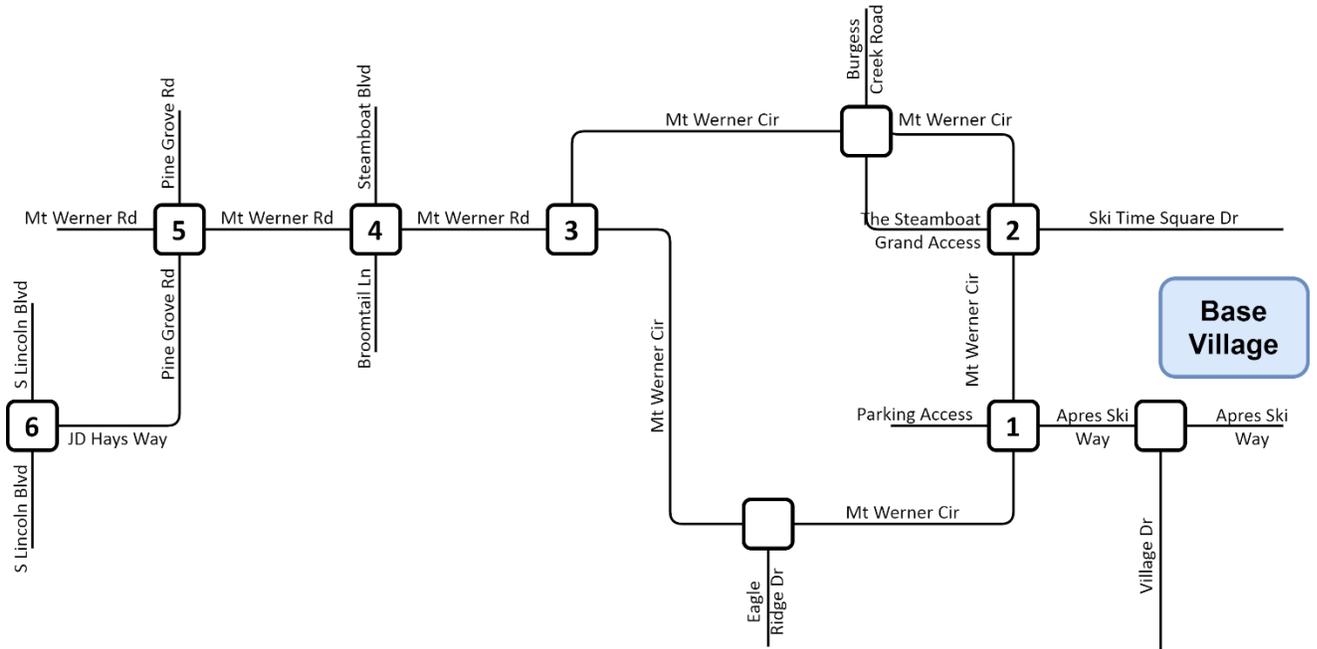
Steamboat Boulevard: Steamboat Boulevard serves residential areas north of Mt. Werner Road and connecting to Fish Creek Falls Road. The posted speed limit is 30mph. The City recently constructed a roundabout at the intersection of Mt. Werner Road and Steamboat Boulevard.

Pine Grove Road: Pine Grove Road is a two-lane roadway connecting US 40 to several commercial and residential developments. The posted speed limit is 25 mph. The City has future plans to construct a new roundabout at the intersection of Rollingstone Drive and Pine Grove Road.

JD Hays Way: JD Hays Way is a short east-west two-lane residential roadway that connects S. Lincoln Ave. (US40) to Pine Grove Road. The roadway is approximately 250' long and has no posted speed limit. The speed limit is assumed to be 25 mph.

South Lincoln Avenue (US 40): US 40 is a federal US Highway that connects Interstate 70 at Empire to Salt Lake City by way of the Fraser Valley and Steamboat Springs. This major regional route is classified by the Colorado Department of Transportation (CDOT) as Access Category NR-B, Non-Rural Arterial, within the limits of the City of Steamboat Springs. The posted speed limit is 45mph in the vicinity of JD Hays Way. The route is generally north-south through this region and has two southbound and two northbound through lanes.

Figure 9: Roadway Orientation for Analysis



2.2 Traffic Data Collection

Multiple sources of traffic data were used in this analysis. Data for each location and the data source are listed. Copies of the original count data is included in the **Appendix**.

- GTC Vehicular, Passenger, and Pedestrian Data
 - From *2018/2019 GTC Data Collection*
- Mt. Werner Circle and Après Ski Way Peak Hour Turning Movement Counts
 - From *2018/2019 GTC Data Collection*
- Mt. Werner Circle and Ski Time Square Drive Peak Hour Turning Movement Counts
 - From *2018/2019 GTC Data Collection*
- Mt. Werner Road and Mt. Werner Circle Peak Hour Turning Movement Counts
 - From March 2016 Data
- Mt. Werner Road and Steamboat Boulevard Peak Hour Turning Movement Counts
 - From *December 2019 Steamboat Boulevard Traffic Analysis*
- Mt. Werner Road and Pine Grove Road Peak Hour Turning Movement Counts
 - From February 2021 Data
- US 40 and JD Hays Way Peak Hour Turning Movement Counts
 - From February 2021 Data

The morning and peak hour traffic volumes for a typical Saturday over Christmas week in December was used for this analysis. This design period aligns with the Comfortable Carrying Capacity measurement that is referenced in the *Steamboat Master Plan* and the peak Christmas weekend average that is described in the *GTC Data Collection*.

During the 2018/2019 ski season, Steamboat Resort was added to the Ikon Pass, a national/international ski pass system. As a result, increase volumes of skier traffic were noticeable at the resort. Traffic data was collected after the Ikon Pass added Steamboat Resort for all but the intersection of Mt. Werner Road and Mt. Werner Circle.

Traffic data was normalized using seasonal adjustment factors and annual growth rates. Descriptions of the methodologies for normalizing the traffic data is included in a table in the **Appendix**.

2.3 Seasonal Adjustment Factor

Steamboat Resort attracts guests in all seasons of the year; however, visitation is generally broken out into the two main seasons, which are winter and summer. Winter visitation is much higher than summer, averaging almost 950,000 annual winter visits compared to just over 50,000 annual summer visits over the last five years.³ While summer visitation to the resort is anticipated to grow in the future, it is expected to remain below the visitation generated by winter operations.¹

The City of Steamboat Springs’ Seasonal Adjustment Factor matrix was used to equate the February and March traffic data into a December equivalent. The matrix is included in the **Appendix**.

2.4 Growth Rate

Per the *Steamboat Base Area Master Transportation Study*², a 0.5% annual growth rate was applied to the forecasted traffic volumes on the roadways within the vicinity of the Steamboat Resort. Also per the *Study*², no growth rate was applied to the Ski Time Square traffic forecasts. A 2.0% annual growth rate was used for the study area west of Steamboat Boulevard. A figure with the growth rates for the study area is included in the **Appendix**.

Traffic was forecasted to Year 2024 for project buildout analysis and Year 2044 for a long-term planning analysis. **Figure 10** graphically depicts the methodology used for the background traffic forecasts.

Figure 10: Background Traffic Methodology



2.5 Future Municipal Infrastructure Projects

The City of Steamboat Springs recently constructed a roundabout at the intersection of Mt. Werner Road and Steamboat Boulevard. This roundabout is not reflected in the latest aerial images used in this report. The roundabout was used in the operational analysis.

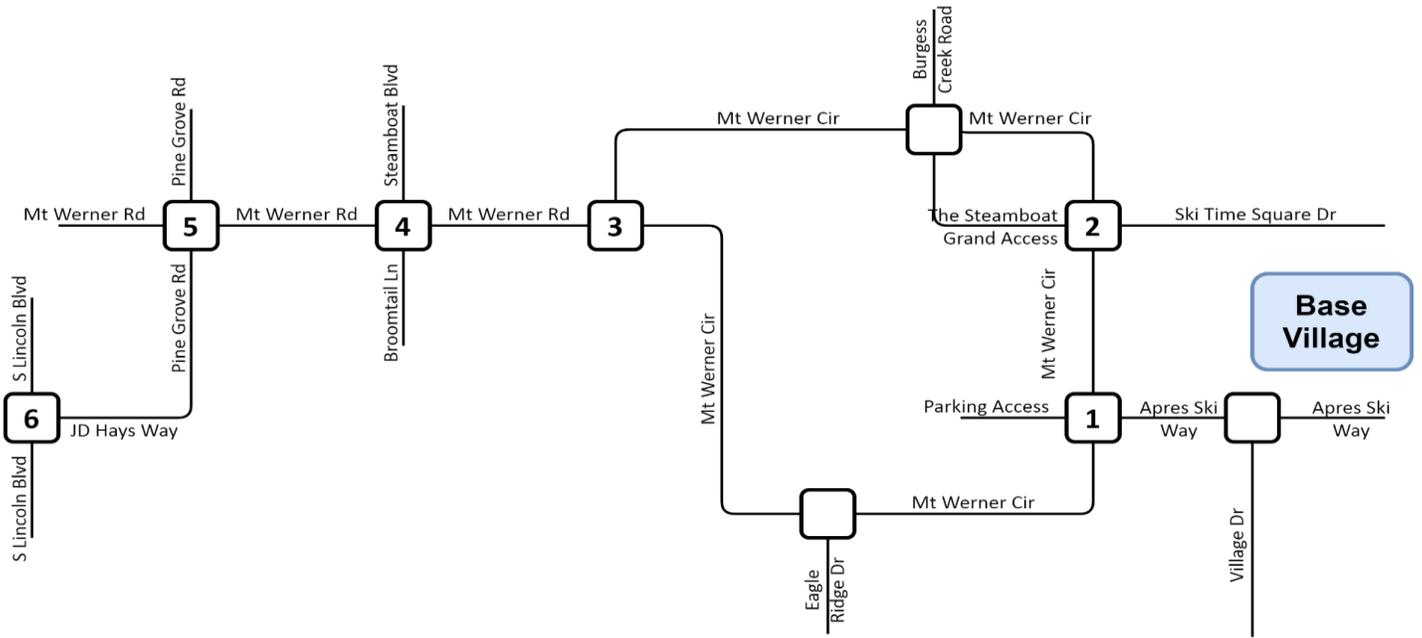
The City of Steamboat Springs is currently working on a *Mountain Area Master Plan (MAMP)* to guide policy and future development of the Mountain Area. This plan is still in the public approval process. General concepts that have been recommended in the plan are discussed in more detail in **Section 4.5**. The total traffic conditions are analyzed with and without the GTC improvements outlined in the *MAMP*.

2.6 Existing and Background Traffic Volumes

The existing traffic is shown in **Figure 11**.

Background traffic was forecasted by applying the seasonally adjustment factor and annual growth rate. Year 2024 background traffic volumes can be found in **Figure 12**. Year 2044 background traffic is depicted in **Figure 13**.

Figure 11: Existing Traffic



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<p>4</p> <table border="1"> <tr> <td> <p>44/51 11/1 99/80</p> </td> <td> <p>70/119 375/862 2/3</p> </td> </tr> <tr> <td> <p>25/77 490/649 1/0</p> </td> <td> <p>2/0 0/0 4/4</p> </td> </tr> </table>	<p>44/51 11/1 99/80</p>	<p>70/119 375/862 2/3</p>	<p>25/77 490/649 1/0</p>	<p>2/0 0/0 4/4</p>	<p>5</p> <table border="1"> <tr> <td> <p>4/13 32/33 184/193</p> </td> <td> <p>149/393 122/298 67/70</p> </td> </tr> <tr> <td> <p>0/4 252/245 36/24</p> </td> <td> <p>5/37 33/82 78/71</p> </td> </tr> </table>	<p>4/13 32/33 184/193</p>	<p>149/393 122/298 67/70</p>	<p>0/4 252/245 36/24</p>	<p>5/37 33/82 78/71</p>	<p>6</p> <table border="1"> <tr> <td> <p>526/896 59/33</p> </td> <td> <p>17/30 22/52</p> </td> </tr> <tr> <td></td> <td> <p>647/674 98/64</p> </td> </tr> </table>	<p>526/896 59/33</p>	<p>17/30 22/52</p>		<p>647/674 98/64</p>
<p>44/51 11/1 99/80</p>	<p>70/119 375/862 2/3</p>													
<p>25/77 490/649 1/0</p>	<p>2/0 0/0 4/4</p>													
<p>4/13 32/33 184/193</p>	<p>149/393 122/298 67/70</p>													
<p>0/4 252/245 36/24</p>	<p>5/37 33/82 78/71</p>													
<p>526/896 59/33</p>	<p>17/30 22/52</p>													
	<p>647/674 98/64</p>													

LEGEND:

Directional Distribution = Inbound% (Outbound%)

Sat AM/Sat PM Volumes = XX/XX VPH (in PCEs)

Turning Movements

Project Number

M1529

Prepared By

GWS

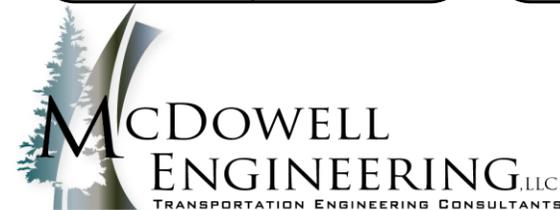
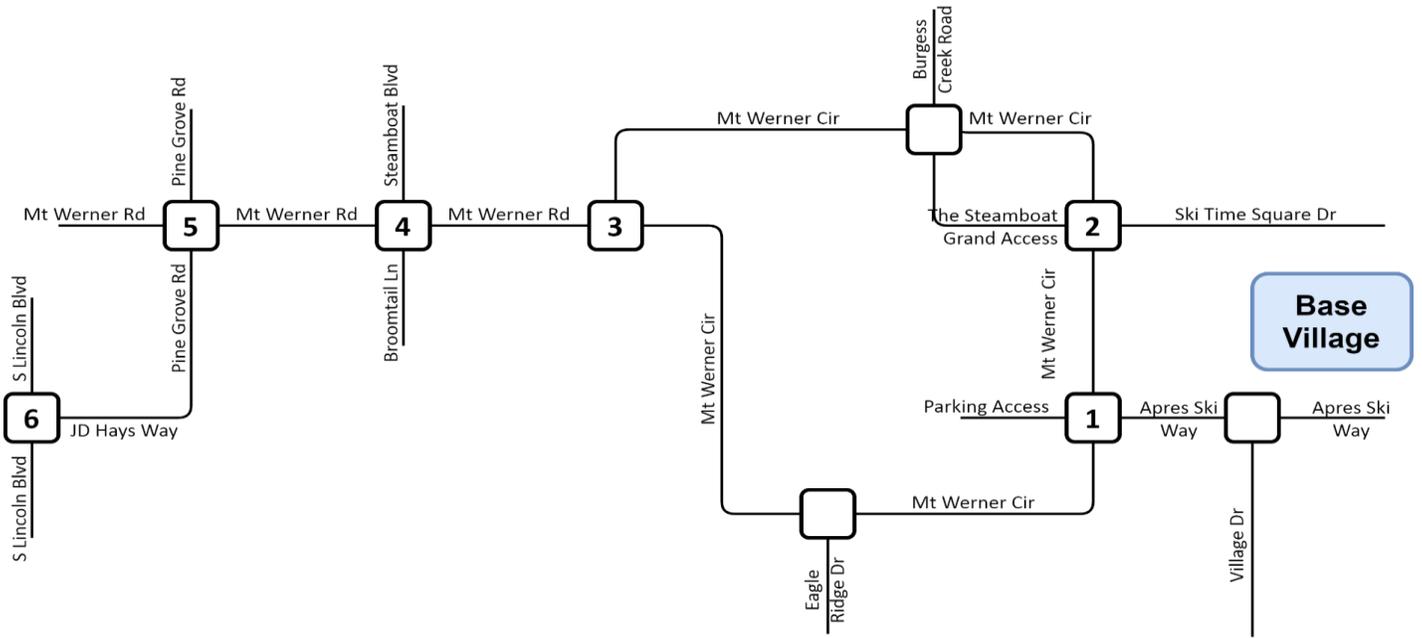


Figure 12: Year 2024 Background Traffic



<p>1</p> <p>2 / 5 49 / 124 111 / 172 2 / 5</p> <p>214 / 224 2 / 2 259 / 342 10 / 0</p> <p>0 / 0 0 / 10 0 / 2 10 / 25</p> <p>25 / 2 5 / 12 246 / 244 349 / 421</p>	<p>2</p> <p>18 / 9 97 / 91 282 / 203 2 / 0</p> <p>109 / 319 2 / 0 56 / 109 0 / 0</p> <p>0 / 0 20 / 56 11 / 32 15 / 15</p> <p>70 / 89 35 / 0 166 / 269 126 / 118</p>	<p>3</p> <p>289 / 479 35 / 47</p> <p>4 / 19 167 / 395</p> <p>280 / 343 421 / 534</p>
<p>4</p> <p>47 / 55 11 / 1 99 / 80</p> <p>71 / 120 377 / 866 2 / 3</p> <p>28 / 83 530 / 702 1 / 0</p> <p>2 / 0 0 / 0 4 / 4</p>	<p>5</p> <p>5 / 18 44 / 46 253 / 265</p> <p>205 / 540 168 / 410 92 / 97</p> <p>0 / 5 346 / 336 50 / 33</p> <p>6 / 51 46 / 112 107 / 98</p>	<p>6</p> <p>735 / 1,253 76 / 43</p> <p>22 / 39 28 / 67</p> <p>904 / 942 127 / 83</p>

LEGEND:

Directional Distribution = Inbound% (Outbound %)

Sat AM/Sat PM Volumes = XX/XX VPH (in PCEs)

Turning Movements

Project Number

M1529

Prepared By

GWS

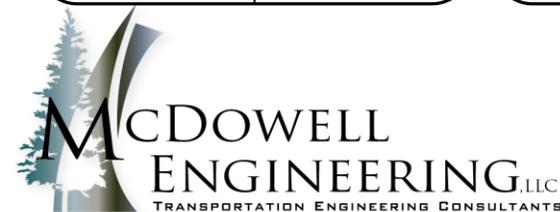
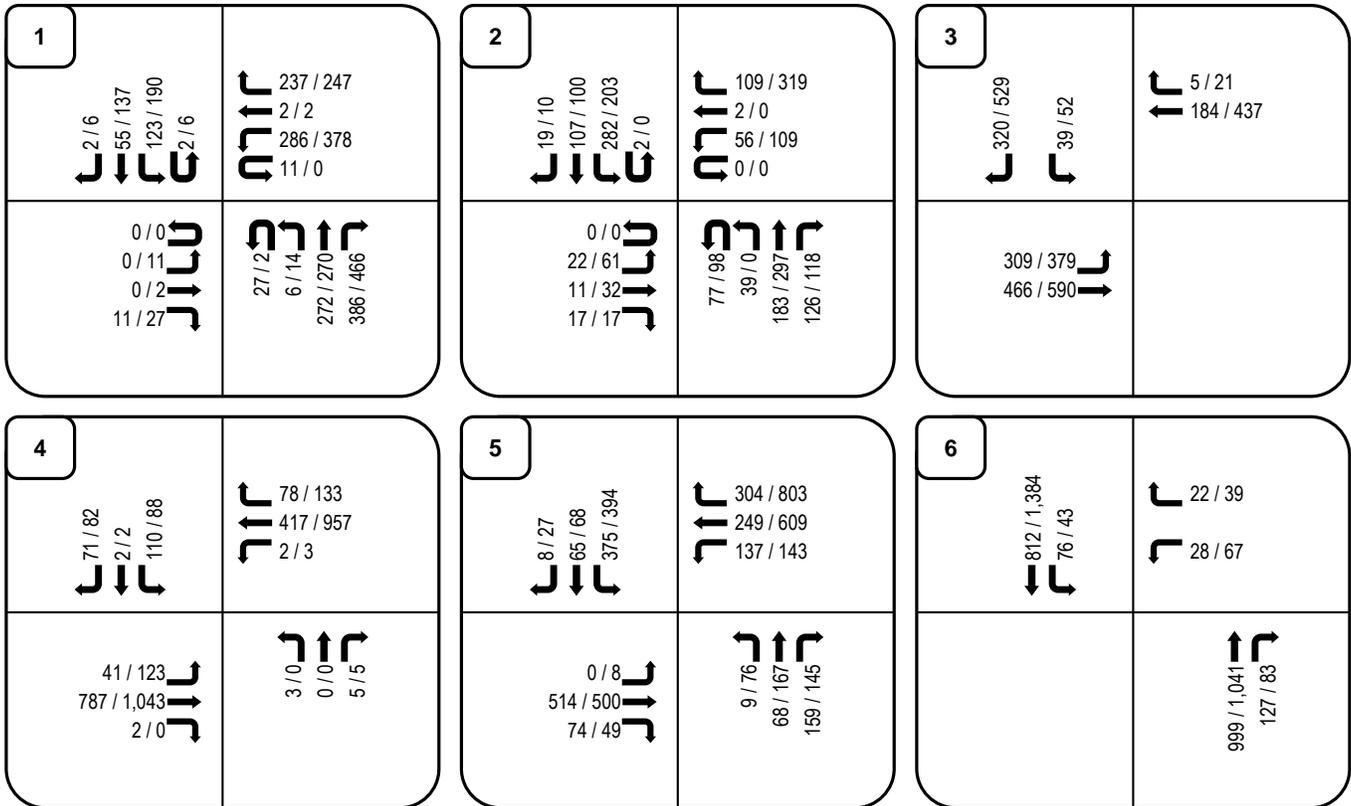
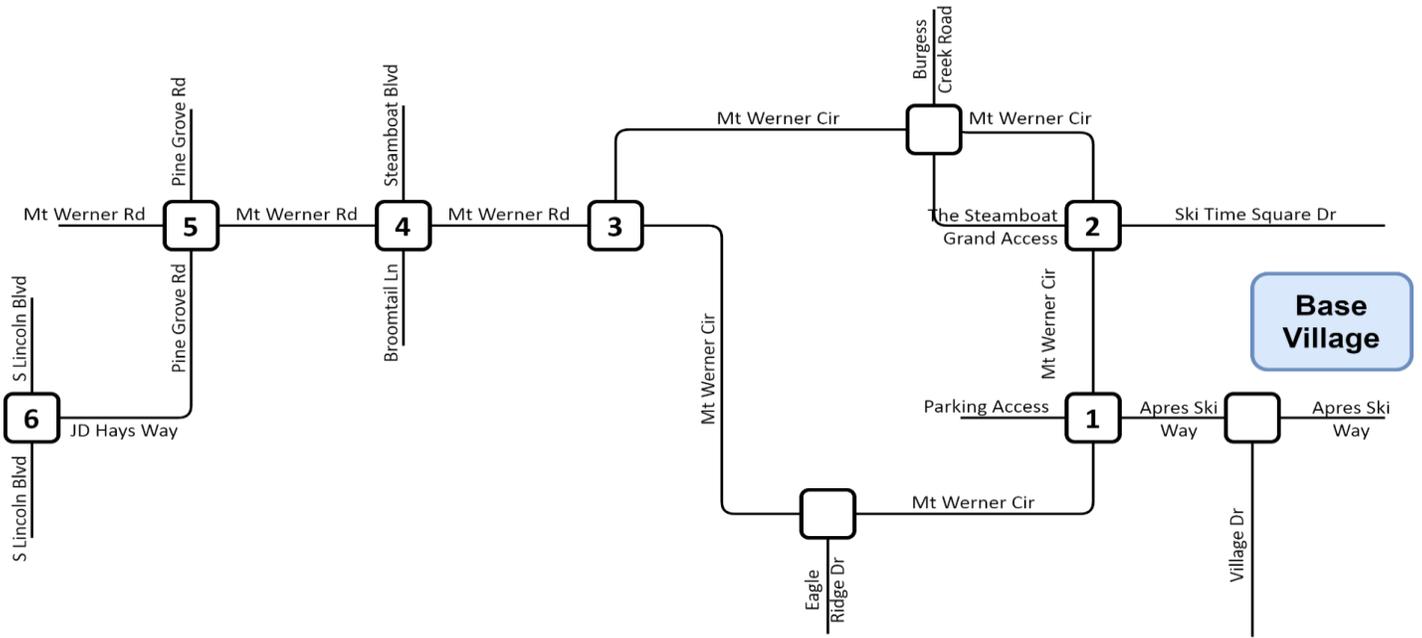


Figure 13: Year 2044 Background Traffic



LEGEND:

Directional Distribution = Inbound% (Outbound %)

Sat AM/Sat PM Volumes = XX/XX VPH (in PCEs)

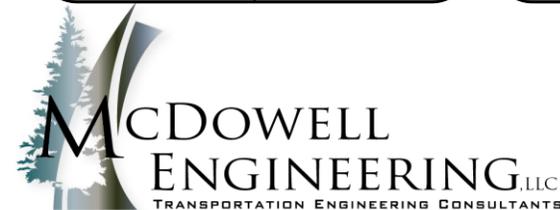
Turning Movements

Project Number

M1529

Prepared By

GWS



3.0 Year 2024 and 2044 Background Traffic Operational Analysis

Using *Highway Capacity Manual 2010* (HCM) methodology, Synchro Version 10 software was used to determine the delay and Level of Service (LOS) at the signalized and stop-controlled operations at the study area intersections.

- Intersection #3 - Mt. Werner Road and Mt. Werner Circle
- Intersection #5 - Mt. Werner Road and Pine Grove Road

Rodel software was used to analyze the operations at the roundabouts in the study area.

- Intersection #1 - Mt. Werner Circle and Après Ski Way
- Intersection #2 - Mt. Werner Circle and Ski Time Square Drive
- Intersection #4 - Mt. Werner Road and Steamboat Boulevard

The resulting HCM LOS from the traffic model is included in the **Appendix**.

Intersection #1 - Mt. Werner Circle and Après Ski Way: This roundabout is currently operating at an overall acceptable LOS during normal operations. During peak events and heavy snowfall, minor to moderate delays are observed.

Intersection #2 - Mt. Werner Circle and Ski Time Square Drive: This roundabout is currently operating at an overall acceptable LOS during normal operations. During peak events and heavy snowfall, minor to moderate delays are observed.

Intersection #3 - Mt. Werner Road and Mt. Werner Circle: This southbound stop-controlled intersection is currently operating at an overall acceptable LOS during normal operations. During peak events and heavy snowfall, minor to moderate delays are observed. As traffic on Mt. Werner Circle grows over time, the delay at this intersection will increase.

Intersection #4 - Mt. Werner Road and Steamboat Boulevard: The City of Steamboat Springs recently constructed a roundabout at the intersection of Mt. Werner Road and Steamboat Boulevard. This roundabout has been designed to accommodate long term traffic operations.

Intersection #5 - Mt. Werner Road and Pine Grove Road: This signalized intersection is anticipated to operate at an acceptable LOS through Year 2044, with the exception of the southbound approach. This approach is currently at LOS D in the existing conditions and is anticipated to degrade to LOS F though Year 2044.

Intersection #6 – JD Hays Way and US 40: The westbound approach is currently operating at a LOS C and E during the existing conditions for the morning and evening hours. It is anticipated to have substantial delay for the westbound approach due to higher through volumes on US 40. During PM peak hours in the future years, the ability to make a left outbound turn will be difficult due to the southbound through volumes.

The East Steamboat Springs US Highway 40 Access Study³ recommends that this intersection be converted to a ¾ movement intersection that restricts the westbound left out movement. It is recommended that the City implement this access modification when background traffic volumes on S. Lincoln Ave increase to the point when a westbound left turn cannot be made without significant delay.

4.0 Project Traffic

4.1 Trip Generation for Proposed Land Use

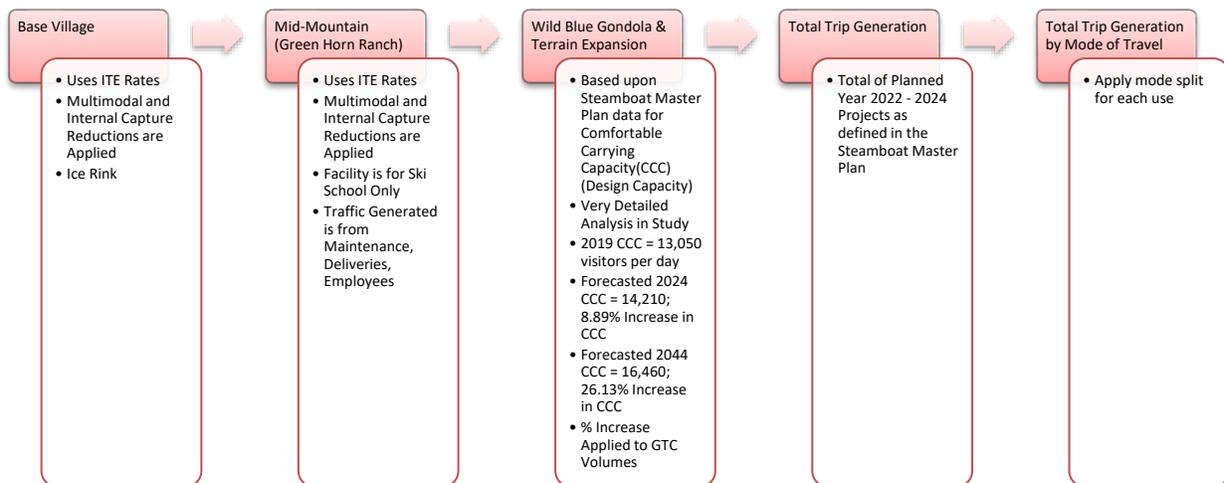
The determination of the anticipated trip generation for each project was determined relative to the type of project that is proposed. This comprehensive transportation impact analysis categorizes the planned expansion into three projects.

- Base Village Improvements
- Greenhorn Ranch Improvements
- Wild Blue Gondola and Terrain Expansion

The proposed Base Village and Greenhorn Ranch projects use the Institute of Transportation Engineers' *Trip Generation Manual*² to determine the anticipated trip generation. The Gondola and Terrain Expansion take a larger look at the entirety of travel to the resort and apply the anticipated growth of the resort's capacity to the travel network.

Figure 14 graphically depicts the methodology used for the trip generation calculations.

Figure 14: Trip Generation Methodology



Base Village: The Base Village proposal includes construction of a new Plaza Pavilion building with restaurant space in the location of the previous Gondola Building. It also includes the construction of Building B with restaurant and retail space. The plaza between the two new buildings will be developed into a seasonal ice-skating rink. Additionally, a ticketing building will be constructed near the Gold Walk.

For the trip generation analysis, ITE Land Use Code #932 High Turnover Sit-Down Restaurant, #820 Shopping Center, #712 Small Office Building, and #495 Recreational Community Center were used to calculate the base trip generation from these uses.

The restaurant patio space was included in these calculations, as the patios are typically fully occupied during peak weekends in December. Many of the restaurant patrons are anticipated to already be at the resort. Therefore, a 30% on-site reduction was taken from the national trip generation rates for a typical restaurant site. The related mechanical and restroom space in the building will also not likely be a primary destination. Therefore, a 75% reduction was taken for patrons that are already at the resort.

Similarly, the ticketing building assumed that 75% of the patrons were already coming to the resort for trips that were not specific to the ticket office.

The ice rink was analyzed as a recreational community center. ITE's data had a relatively small sample size. However, the resulting trip generation rates appear to be in line with trips to a stand-alone ice rink with scheduled activities. A 75% reduction was taken for patrons that will already be at the resort.

The retail space assumed that 50% of the patrons were already coming to the resort for trips that were not specific to the new retail.

Green Horn Ranch: A break/lunch facility for ski school is proposed at Green Horn Ranch. The ski school participants and instructors will already be on the mountain. New service staff will contribute to project-generated traffic for the proposed facility. Additionally, the facility will add maintenance and operations facilities for the resort, which will also generate traffic.

For the trip generation analysis, ITE Land Use Code #932 High Turnover Sit-Down Restaurant and #710 General Office Building were used to calculate the base trip generation from these uses.

A 90% on-site reduction was taken from the national trip generation rates for a typical restaurant site. The remaining 10% of the trips are likely generated by facility staff.

The new maintenance and operations space will likely be staffed by employees that will access the facility via the Base Area. No reduction was taken for this land use.

Wild Blue Gondola and Terrain Expansion: The additional resort capacity for the proposed expansion is most accurately calculated in the *MDPA*¹. The Comfortable Carrying Capacity (CCC) represents the guest population at the resort, to which all ski resort functions are balanced. This is not the maximum level of visitation, but the number of visitors that can be comfortably accommodated on a daily basis. Design capacity is typically equated to a resort's fifth or tenth busiest day, and a peak-day visitation at most resorts is at least 10 percent higher than the design capacity.¹

The *MDPA*'s¹ CCC calculation is based upon a variety of factors.

- Supply of Vertical Transport
- Demand for Vertical Transport
- Time Spent in Lift Line

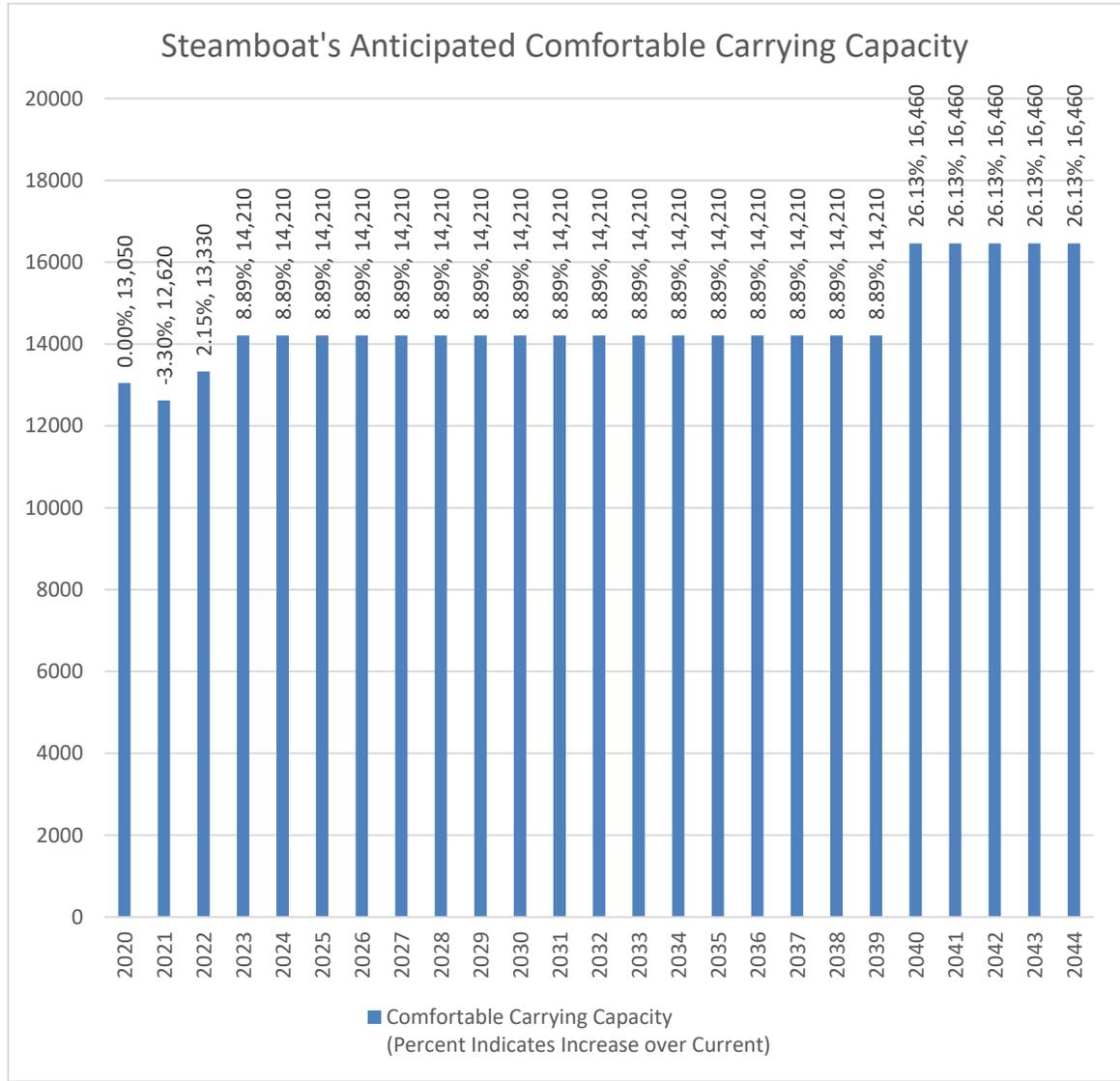
Per the *MDPA*¹, “The accurate estimation of the CCC of a mountain is a complex issue and is the single-most important planning criterion for the resort. Related skier service facilities, including base lodge seating, mountain restaurant requirements, restrooms, parking, and other guest services are planned around the proper identification of the mountain’s true capacity.”

Therefore, a comparison of the current 2019 CCC (and traffic volumes at the resort) and the anticipated CCC with the proposed expansion gives the best forecast of future traffic to be generated by the resort.

The *MDPA*¹ identified a CCC of 13,050 visitors per day in Year 2019. It also identified a future CCC of 16,310 visitors per day with future expansion projects and the associated ancillary amenities. This is an increase of the resort’s CCC by 25%.

Since the release of the *MDPA*¹ document, the applicant has updated a phased project list with anticipated annual CCC data. The list and associated calculations were updated in September 2021. **Figure 15** summarizes the anticipated CCC by year. Steamboat’s associated phased CCC matrix is included in the **Appendix**.

Figure 15: Anticipated Comfortable Carrying Capacity



The CCC calculations provided by Steamboat were based upon the following phased project implementation.

2021/2022 Season: With the removal of the Priest Creek lift for the 2021/2022 season, the resort’s current Year 2019 CCC is anticipated to decrease by 3.30%.

2022/2023 Season: For the 2022/2023 season, the resort anticipates relocating three carpets from the base area to Green Horn Ranch, addition additional carpets at Green Horn Ranch, removing the Easy Rider and Priest Creek lifts, adding a Rough Rider lift at Green Horn Ranch, and constructing Stage 1 of the Wild Blue Gondola. This results in a 2.15% increase in the Year 2019 CCC.

2023/2024 Season: For the 2023/2024 season, the resort anticipates adding a Pioneer Ridge II lift and constructing Stage 2 of the Wild Blue Gondola. This results in an 8.89% increase in the Year 2019 CCC.

2040/2041 Season: By Year 2040+/-, Steamboat Resort anticipates the CCC will approach 16,460 visitors per day. This is a 26.13% increase over the Year 2019 CCC.

The anticipated increase in CCC was directly correlated to the Year 2019 traffic volumes in the study area. Therefore, to forecast the anticipated traffic increase associated with the increased carrying capacity, Year 2019 traffic volumes were increased by 8.89% to forecast Year 2024 traffic volumes. Year 2044 traffic was forecasted by applying the 26.13% anticipated long term growth to the Year 2019 traffic volumes. This traffic increase is included for both Year 2024 and Year 2044 scenarios in **Table 1**.

In practice, the traffic increase associated with the resort expansion is not likely fully realized until the increase in lodging and other amenities to support the additional visitors is added. Steamboat believes that new visitors will primarily be destination guests that will arrive in a single vehicle or via air travel and rely on more transit and walking. Therefore, the mode split assumptions based upon current data are likely conservative for these new visitors.

4.2 Trip Generation Mode Split

The guests and staff at Steamboat Resort arrive via multiple modes of travel. Data from the *MDPA*¹, GTC Data Collection², and traffic counts were compared to determine current travel patterns. Refer to the data comparison in **Table 2**. **Figure 15** summarizes the current mode split.

This data was also used to inform the anticipated future travel patterns and mode split. Refer to the application of the mode split to the trip generation calculations in **Table 3**. This information was used to determine likely mode split for the three proposed projects in this analysis.

4.3 Trip Generation and Mode Split Summary

From **Table 1**, by Year 2024 the proposed development is expected to generate 3,321 trips on a peak Saturday in December. This includes 421 trips on a Saturday morning peak hour and 461 trips in the Saturday afternoon peak hour. Of these visitors, it is anticipated that approximately 30% of them are people walking to/from adjacent condos and hotels. **Table 3** also shows that another 60% of patrons and employees will access the resort area via transit services. Ten percent will be dropped off or picked up by a passenger car. The remaining traffic will arrive to park in the garages. This project is anticipated to increase vehicular traffic in the vicinity of the resort by 102 vehicles per hour (vph) in the morning peak hour and 111 vph in the evening peak hour.

By Year 2024, the proposed development is expected to generate 5,991 trips on a peak Saturday in December. This includes 637 trips on a Saturday morning peak hour and 728 trips in the Saturday afternoon peak hour. This project is anticipated to increase vehicular traffic in the vicinity of the resort by 154 vph in the morning peak hour and 175 vph in the evening peak hour.

Table 1: Project Trip Generation

	ITE Code	Units ²	Eq. Coef	ITE Trip Generation Equation ³			Average Weekday Trips (vpd)	Morning Peak Hour		Evening Peak Hour						
				Avg. Weekday	AM Peak Hour	PM Peak Hour		% Trips Inbound	% Trips Outbound	% Trips Inbound	% Trips Outbound					
Steamboat Base Village	Plaza Pavilion (Steamboat Base Village)															
	Proposed Land Use															
	#932 - High-Turnover (Sit Down) Restaurant 2nd Floor	12.9	kSF	Type a= b=	Rate 112.18	Rate 14.04	Rate 17.41	1,447	57%	103	43%	78	52%	117	48%	108
	<i>On-Site Reduction</i>		-30%					-434		-31		-23		-35		-32
	Plaza Pavilion Proposed New Trips							1,013		72		55		82		76
	Ticketing Building (Steamboat Base Village)															
	Proposed Land Use															
	#820 - Shopping Center	2.8	kSF	Type a= b=	Rate 37.75	A 2.76	B 0.72	106	54%	46	46%	39	50%	22	50%	22
	<i>On-Site Reduction</i>		-75%					-80		-35		-29		-17		-17
	Ticketing Building Proposed New Trips							26		11		10		5		5
	Building B (Steamboat Base Village)															
	Proposed Land Use															
	#712 - Small Office Building - Ground Floor	2.5	kSF	Type a= b=	Rate 16.19	Rate 3.26	Rate 3.73	40	60%	5	40%	4	46%	5	54%	6
	<i>On-Site Reduction</i>		-75%					-30		-4		-3		-4		-5
	#932 - High Turn-Over (Sit Down) Restaurant	7.5	kSF	Type a= b=	Rate 112.18	Rate 14.04	Rate 17.41	841	57%	60	43%	45	52%	68	48%	63
<i>On-Site Reduction</i>		-30%					-252		-18		-14		-20		-19	
#495 - Recreational Community Center - Ice Rink	17	kSF GFA	Type a= b=	B 0.98	B 0.51	B 0.58	491	67%	59	33%	29	40%	41	60%	62	
<i>On-Site Reduction</i>		-75%					-368		-44		-22		-31		-47	
#820 - Shopping Center - 3rd Floor	1.6	kSF	Type a= b=	Rate 37.75	A 2.76	B 0.72	60	54%	44	46%	38	50%	14	50%	14	
<i>On-Site Reduction</i>		-50%					-30		-22		-19		-7		-7	
Building B Proposed New Trips							752		80		58		66		67	
Subtotal - Steamboat Base Village							1,791		163		123		153		148	
Greenhorn Ranch	Greenhorn Ranch															
	Proposed Land Use															
	#710 - General Office Building - Maintenance/Office	6.2	kSF	Type a= b=	B 0.97	B 0.88	Rate 1.42	72	88%	13	12%	2	18%	2	82%	8
	<i>On-Site Reduction</i>		0%				0		0		0		0		0	
	#932 - High-Turnover (Sit Down) Restaurant - 2nd Floor	7.0	kSF	Type a= b=	Rate 112.18	Rate 14.04	Rate 17.41	785	57%	56	43%	42	52%	63	48%	58
<i>On-Site Reduction</i>		-90%					-707		-50		-38		-57		-52	
Subtotal - Mid Mountain							150		19		6		8		14	
2024 Gondola &	Gondola and Terrain Expansion															
	Proposed Land Use															
	Gondola and Terrain Expansion (Short Term)	8.89%			% of Existing Base Village Traffic			1,380	61		49		69		69	
	<i>On-Site Reduction</i>		0%				0		0		0		0		0	
Subtotal - Gondola and Terrain Expansion							1,380		61		49		69		69	
2044 Gondola &	Gondola and Terrain Expansion															
	Proposed Land Use															
	Gondola and Terrain Expansion (Long Term)	26.13%			% of Existing Base Village Traffic			4,050	181		145		203		202	
	<i>On-Site Reduction</i>		0%				0		0		0		0		0	
Subtotal - Gondola and Terrain Expansion							4,050		181		145		203		202	
2024 Totals - Steamboat Base Village, Greenhorn Ranch, and Gondola & Terrain Expansion							3,321		243		178		230		231	
2044 Totals - Steamboat Base Village, Greenhorn Ranch, and Gondola & Terrain Expansion							5,991		363		274		364		364	

Notes:

¹ Values obtained from *Trip Generation, 10th Edition*, Institute of Transportation Engineers, 2017.

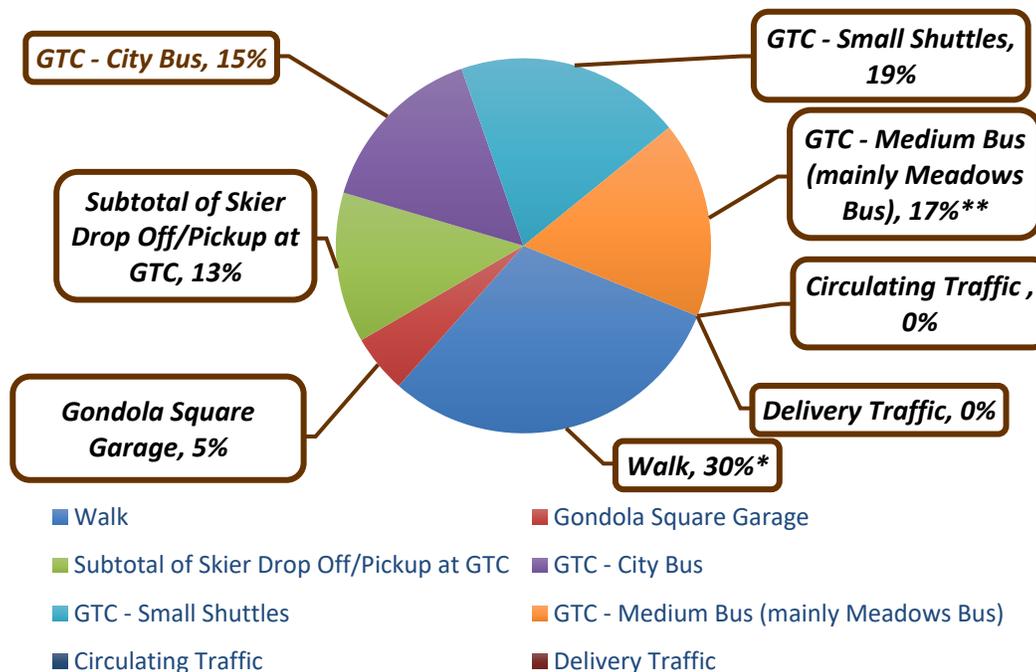
² DU = Dwelling Units, kSF = 1,000 Square Feet

³ Fitted curve equations from ITE Land Uses - Equation Type A is T = a * X + b, Equation Type B is Ln(T) = a * Ln(X) + b, Rate is T = a * X

Table 2: Trip Generation – Existing Conditions Comparison of GTC to 2019 MDPA¹

Mode of Travel	2019 Existing Conditions						
	Daily People	Mode Percentage	Passengers per Vehicle	Vehicles per Hour	Passengers per Hour	Percentage of Vehicular Traffic Attributing to GTC Traffic	Vehicular Traffic Attributing to GTC Traffic
Walk*	3,975	30%	0	0	0	0%	0
Gondola Square Garage	656	5%	1.9	173	329	25%	43
Subtotal of Skier Drop Off/Pickup at GTC	1,693	13%	1.9	155	295	100%	155
GTC - City Bus	1,967	15%	16.3	28	456	100%	28
GTC - Small Shuttles	2,544	19%	4.7	135	635	150%	203
GTC - Medium Bus (Meadows Bus)**	2,214	17%	11.1	48	535	125%	60
Circulating Traffic	0	0%	N/A	354	N/A	100%	354
Delivery Traffic	0	0%	N/A	10	N/A	100%	10
Subtotal	13,049	100%		903			853

Figure 16: Existing Conditions Mode of Travel Chart



*Assumes 1,500 peds/day (per GTC Data) arrive from Knoll Lot area. The visitors are dropped off by 20 vph and this double-counted operation has been included in the calculations.

**Assumes 2,214 Meadows Lot users/day (per GTC Data) utilize the Meadows Lot via 200vph. This double-counted operation has been included in the calculations. No growth was assumed at this lot.

In two scenarios, the traffic has been purposefully double counted in the modeling analysis.

- Visitors driving to the Meadows lot will arrive via passenger car and park in the available parking spaces. From there, visitors will board the Meadows bus to arrive at the GTC area. **Figure 16** allocates these visitors as “GTC – Medium Bus” riders. However, they are also adding vehicular traffic as they arrive in their passenger car to the Meadows lot. Therefore, the model also includes vehicular traffic for these visitors.
- The same scenario is true for visitors that are being dropped off at the Knoll lot.

Table 3: Project Trip Generation with Mode Split

Estimated Project-Generated Traffic ¹					ITE Trip	Average	Morning Peak Hour		Evening Peak Hour	
					Generation	Weekday	Inbound	Outbound	Inbound	Outbound
ITE Code	Mode Split %	Passengers per Vehicle ¹	Normalized Carpool Rate ²	Contributes Vehicle Trips?	Trips (vpd)	Trips (vph)	Trips (vph)	Trips (vph)	Trips (vph)	Trips (vph)
Steamboat Base Village	Subtotal - Steamboat Base Village (From Table 1)					1,791	163	123	153	148
	Pedestrian Trips	30%	1.9	100%	No	537	49	37	46	44
	Gondola Square Garage	0%	1.9	100%	Yes	0	0	0	0	0
	Skier Drop Off / Pickup	10%	1.9	100%	Yes	179	16	12	15	15
	City Bus	20%	16.3	12%	Yes	42	4	3	4	3
	Small Shuttles	20%	4.7	40%	Yes	145	13	10	12	12
	Medium Shuttles	20%	11.1	17%	Yes	61	6	4	5	5
	Vehicle Trips					427	39	29	36	35
	Greenhorn Ranch	Greenhorn Ranch (From Table 1)					150	19	6	8
Pedestrian Trips		0%	1.9	100%	No	0	0	0	0	0
Gondola Square Garage		0%	1.9	100%	Yes	0	0	0	0	0
Skier Drop Off / Pickup		10%	1.9	100%	Yes	15	2	1	1	1
City Bus		30%	16.3	12%	Yes	5	1	0	0	0
Small Shuttles		30%	4.7	40%	Yes	18	2	1	1	2
Medium Shuttles		30%	11.1	17%	Yes	8	1	0	0	1
Vehicle Trips					46	6	2	2	4	
2024 Gondola & Terrain Expansion	Gondola and Terrain Expansion (From Table 1)					1,380	61	49	69	69
	Pedestrian Trips	30%	1.9	100%	No	414	18	15	21	21
	Gondola Square Garage	0%	1.9	100%	Yes	0	0	0	0	0
	Skier Drop Off / Pickup	10%	1.9	100%	Yes	138	6	5	7	7
	City Bus	20%	16.3	12%	Yes	32	1	1	2	2
	Small Shuttles	20%	4.7	40%	Yes	112	5	4	6	6
	Medium Shuttles	20%	11.1	17%	Yes	47	2	2	2	2
	Vehicle Trips					329	15	12	16	16
2044 Gondola & Terrain Expansion	Gondola and Terrain Expansion (From Table 1)					4,050	181	145	203	202
	Pedestrian Trips	30%	1.9	100%	No	1,215	54	44	61	61
	Gondola Square Garage	0%	1.9	100%	Yes	0	0	0	0	0
	Skier Drop Off / Pickup	10%	1.9	100%	Yes	405	18	15	20	20
	City Bus	20%	16.3	12%	Yes	94	4	3	5	5
	Small Shuttles	20%	4.7	40%	Yes	327	15	12	16	16
	Medium Shuttles	20%	11.1	17%	Yes	139	6	5	7	7
	Vehicle Trips					966	43	35	48	48
2024 Vehicle Trip Totals - Steamboat Base Village, Greenhorn Ranch, and Gondola & Terrain Expansion					802	59	43	55	56	
2044 Vehicle Trip Totals - Steamboat Base Village, Greenhorn Ranch, and Gondola & Terrain Expansion					1,439	88	66	87	88	

Notes:

¹ Passengers per Vehicle is from the 2019 Steamboat Master Plan & 2019 GTC Data Collection.

² Normalized Carpool Rate = Number of Passengers per specific vehicle / 1.9 passengers per passenger car. Therefore, the adjustment factor for a car is 100%. The adjustment factor for a City bus is 12%, as it carries 8 times more people per vehicle.

4.4 Directional Distribution

The distribution of project-generated vehicular traffic on adjacent roadways is influenced by several factors including the following:

- The location of the site relative to other related facilities
- The configuration of the existing and proposed adjacent roadway network
- The relative location of neighboring population centers
- The circulation of transit routes

The directional distribution for the proposed projects associated with the Steamboat Resort expansion were directly correlated to current travel patterns on the roadway network. This directional distribution was generalized to apply to all vehicle types and both the morning and evening hours of analysis. The directional distribution is depicted in **Figure 17**.

4.5 Alternate Scenario for GTC Improvements

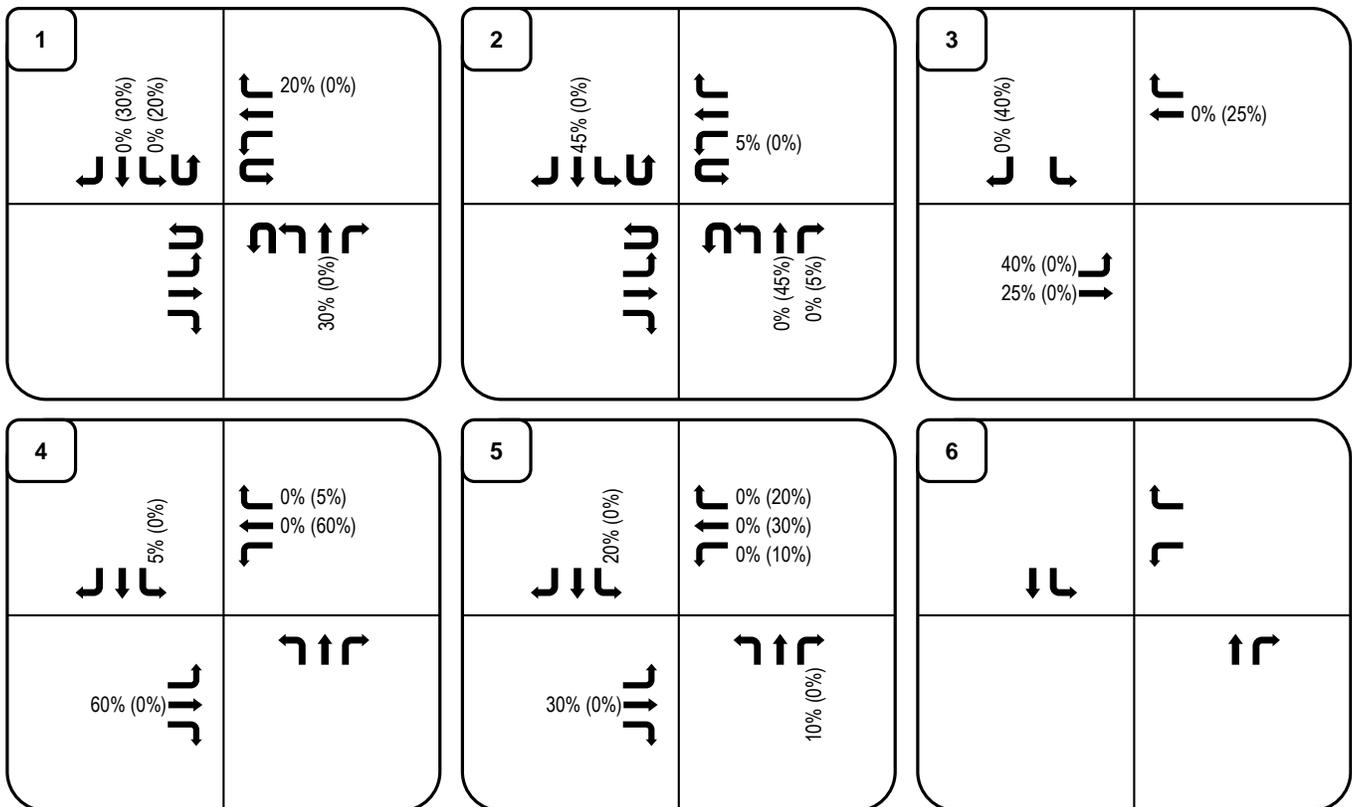
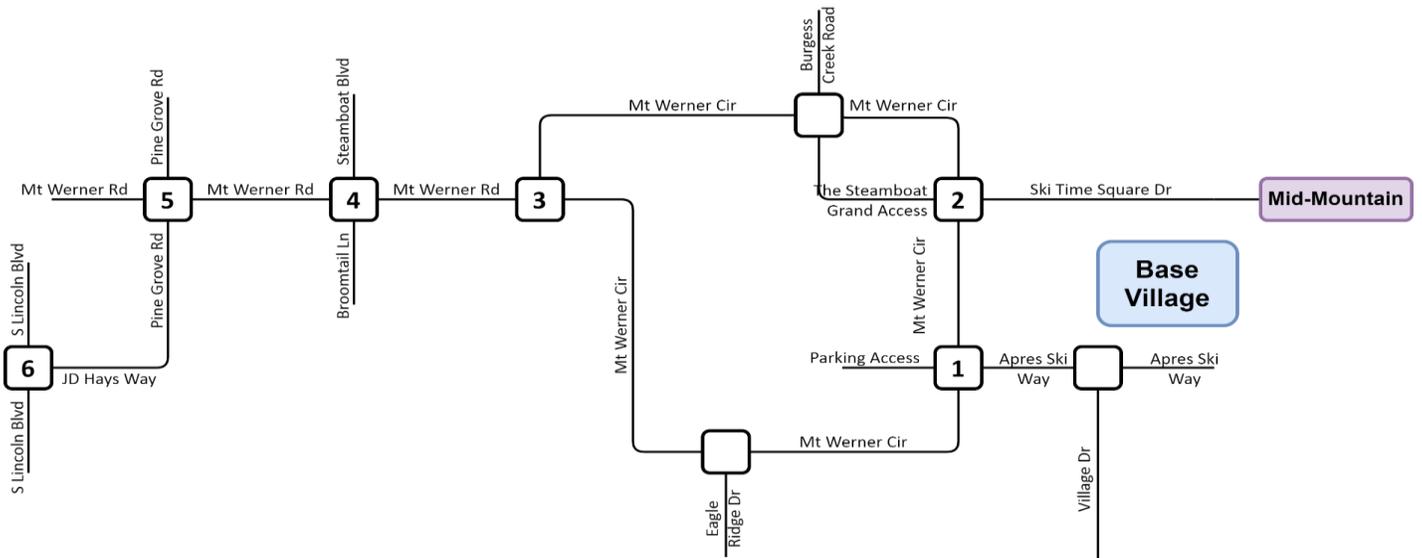
The City of Steamboat Springs is currently working on a *Mountain Area Master Plan*⁴ (*MAMP*⁴) to guide policy and future development of the Mountain Area. This plan is still in the public approval process.

The *GTC Data Collection*³ identified that the high conflict volume at the at-grade pedestrian crossings and Mt. Werner Circle was unsafe. This report recommended removing the conflict from this high traffic area. As such, the draft *MAMP*⁴ identified restrictions of the traffic at this pedestrian crossing. Traffic at this pedestrian crossing would be restricted to City buses and emergency services. Other buses and shuttles would utilize a loop south of the crossing to circulate to the GTC. Passenger cars would be restricted within the GTC. Public skier pick up and drop off would be accommodated north of the pedestrian crossing. General concepts that have been recommended in the *MAMP*⁴ are illustrated in **Figure 18**.

The total traffic conditions have been analyzed with two scenarios - with and without the GTC improvements. A secondary directional distribution was prepared for the project-generated traffic. Refer to **Figure 19**.

Similarly, background traffic was shifted to accommodate the alternate scenario. An overview of the background traffic shifts is shown in **Figure 20**. Detailed traffic volume shifts and modified background traffic forecasts are included in the **Appendix**.

Figure 17: Project Generated Directional Distribution

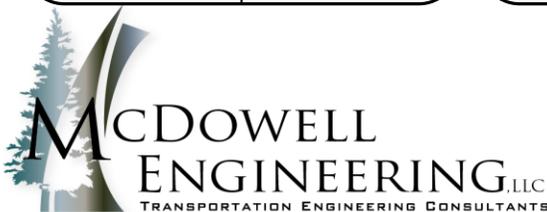


LEGEND:

Directional Distribution = Inbound% (Outbound %)

Sat AM/Sat PM Volumes = XX/XX VPH (in PCEs)

Turning Movements



Project Number

M1529

Prepared By

GWS

Figure 18: General GTC Improvements Recommended in the MAMP³

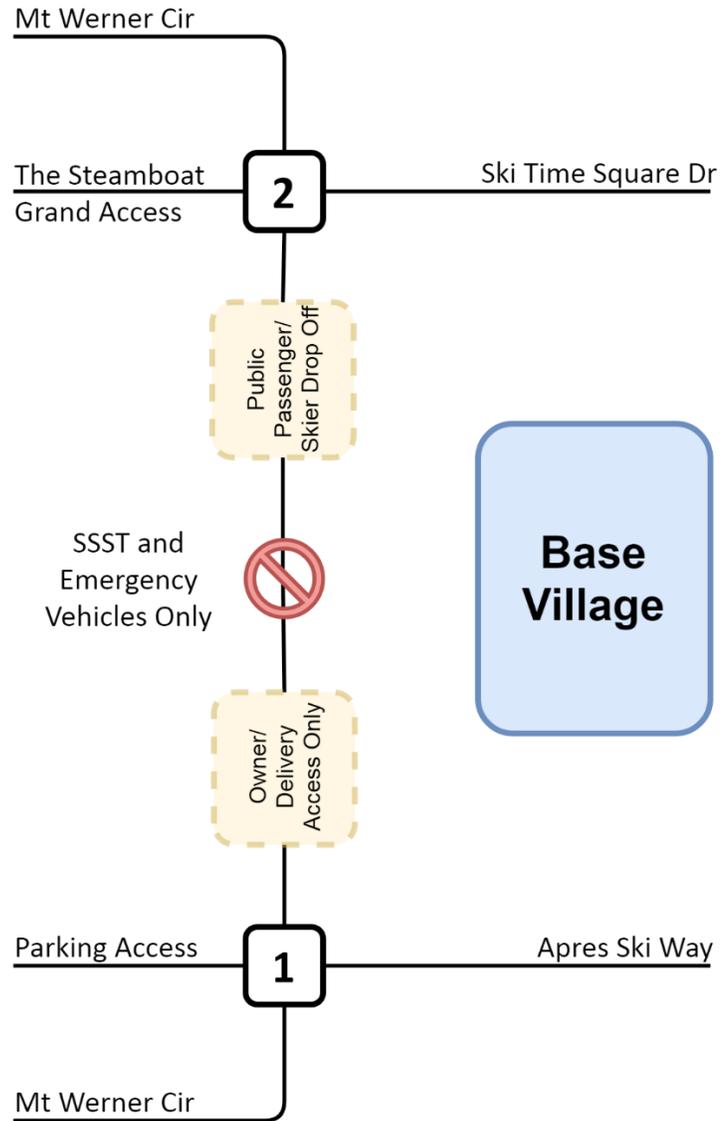
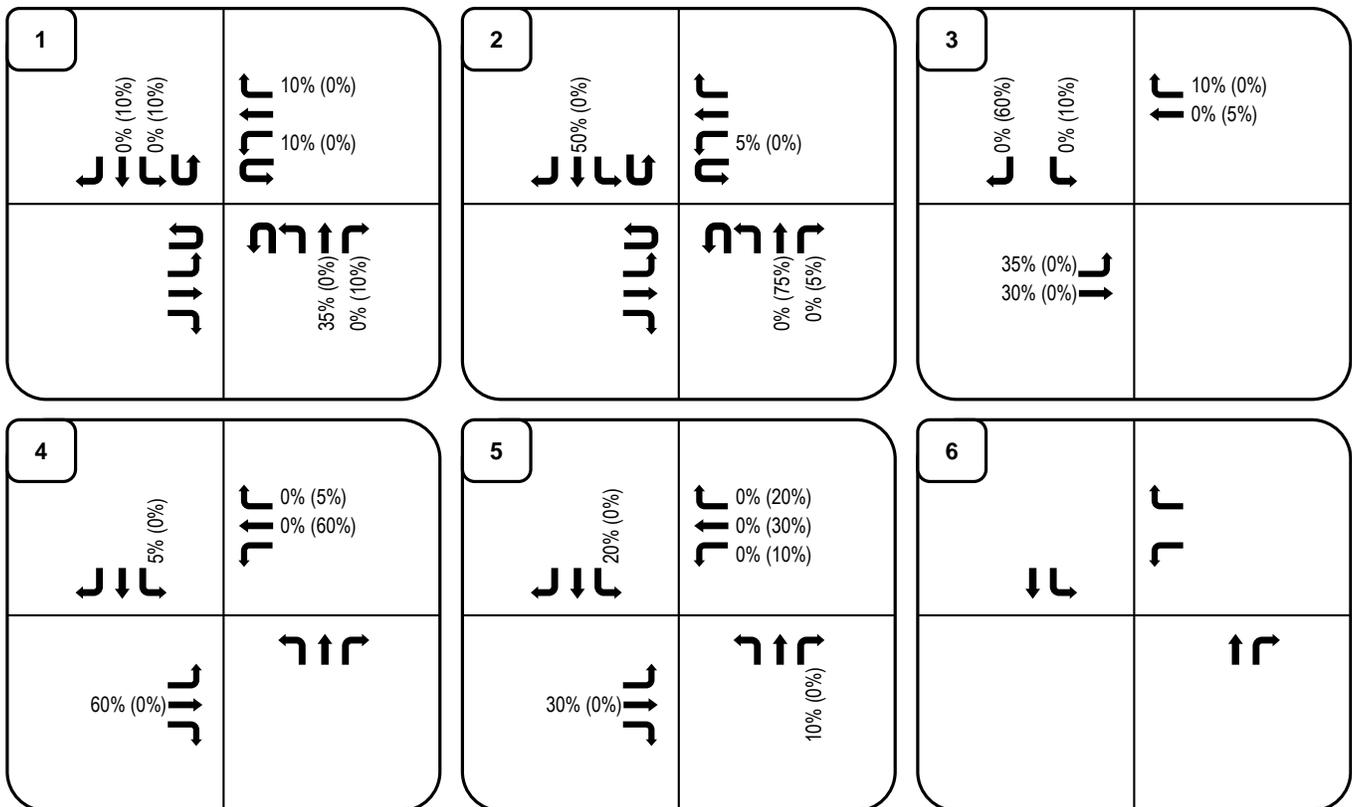
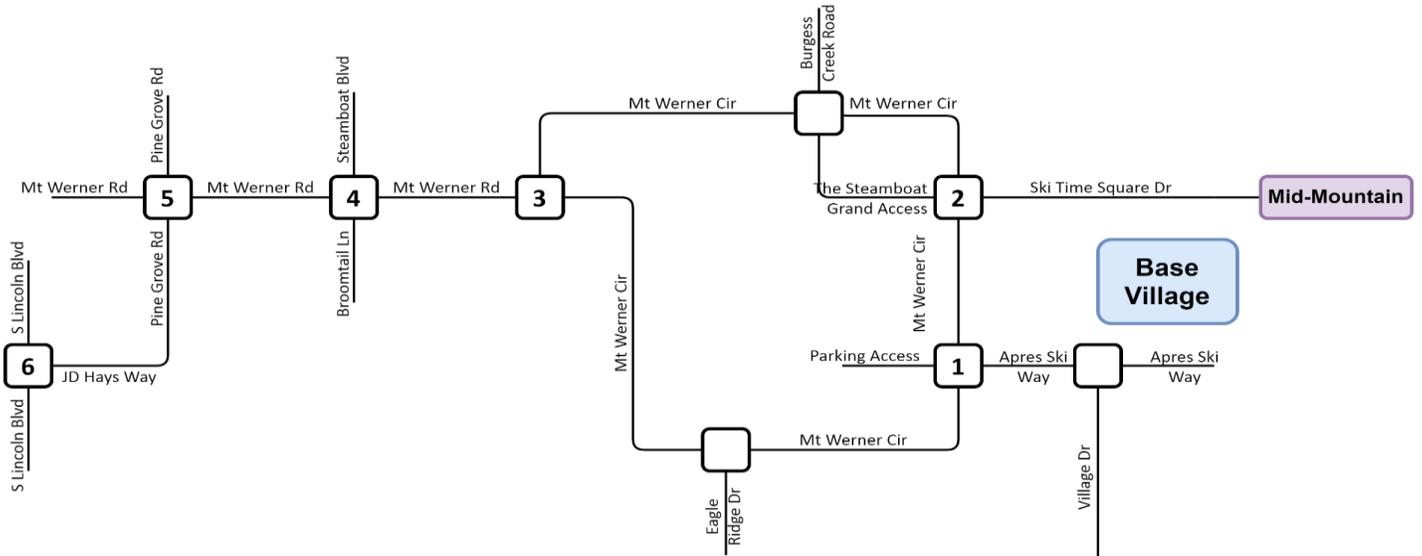


Figure 19: Project Generated Directional Distribution for Alternate GTC Improvements



LEGEND:

Directional Distribution = Inbound% (Outbound %)

Sat AM/Sat PM Volumes = XX/XX VPH (in PCEs)

Turning Movements

Project Number

M1529

Prepared By

GWS

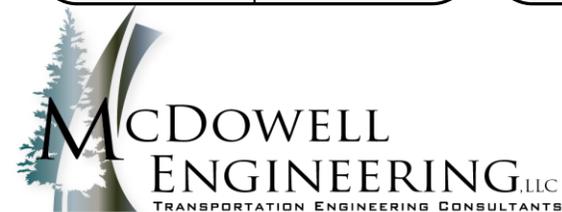
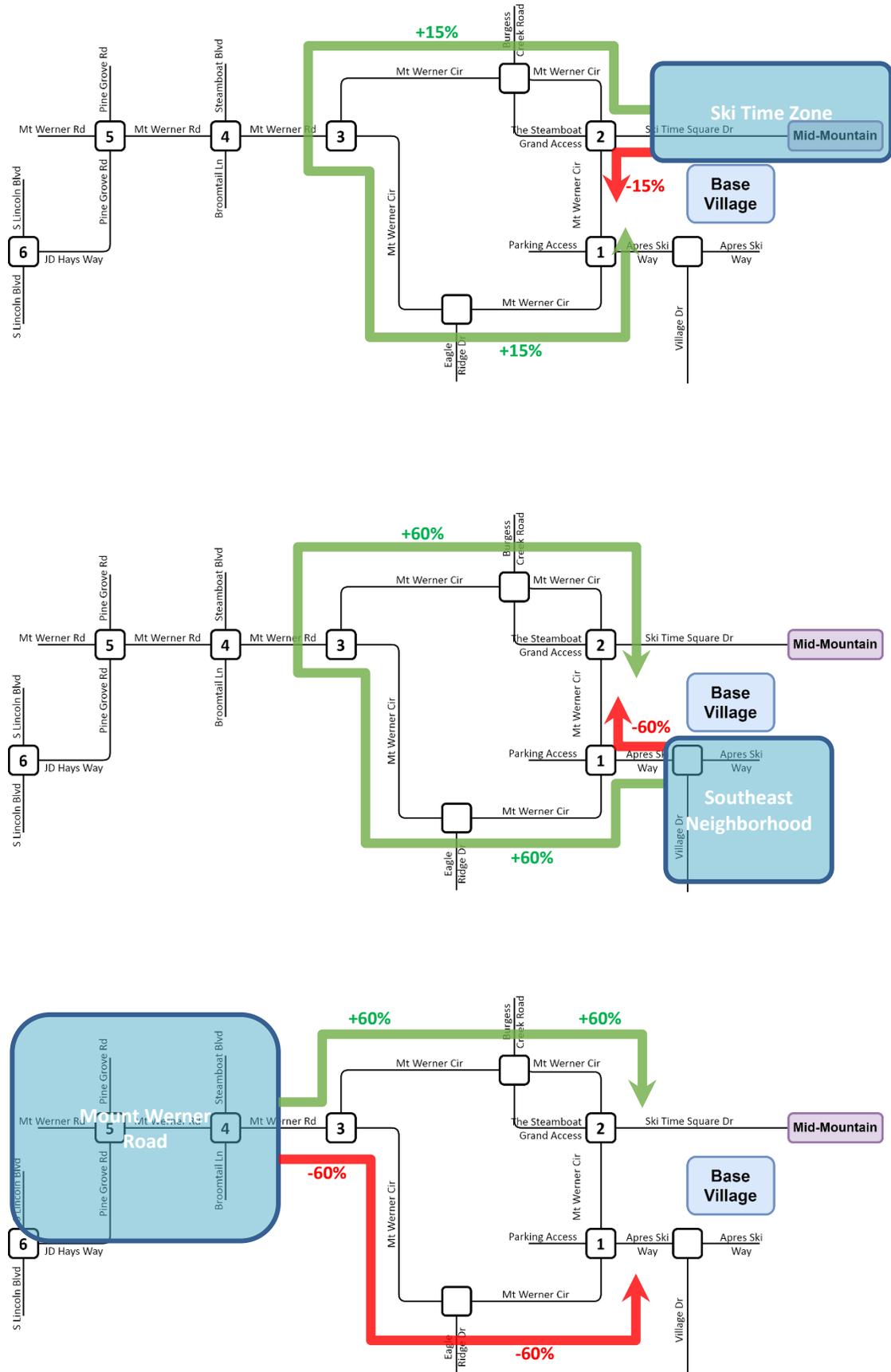


Figure 20: Background Traffic Shifts for Alternate GTC Improvements



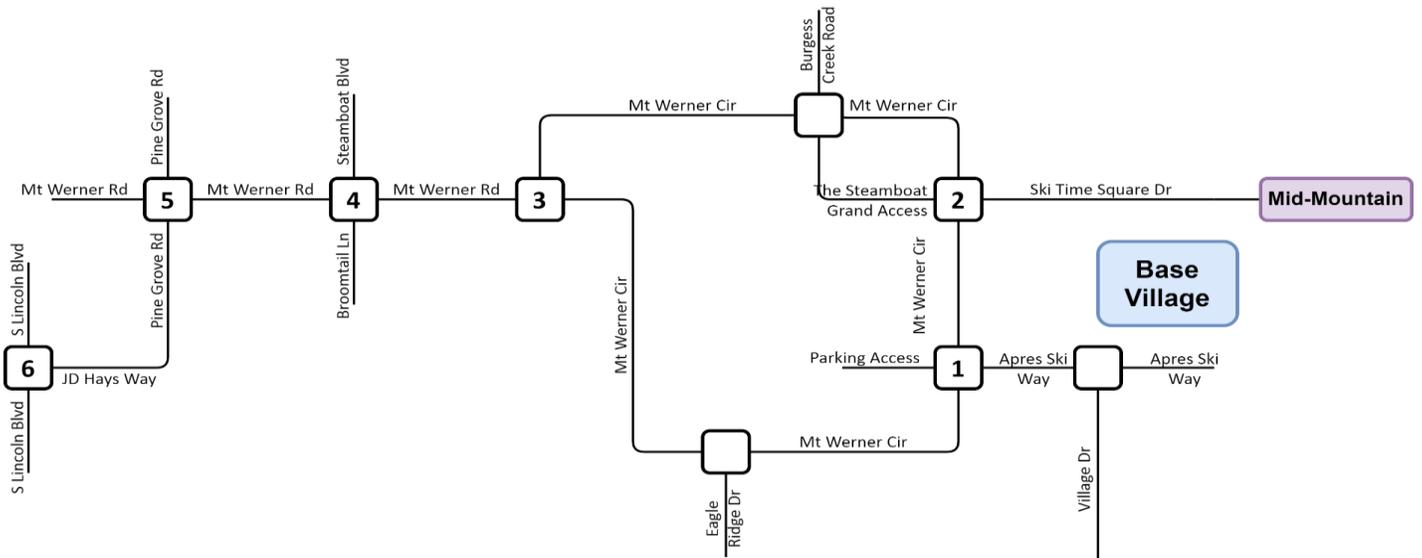
4.1 Traffic Assignment and Total Traffic

When the trip generation expected for all three projects is applied to the directional distribution, the result is the anticipated assignment of trips on the roadway system. The anticipated Year 2024 traffic assignment for all three projects is depicted in **Figure 21**. The Year 2024 traffic assignment for the projects with the alternate GTC Improvements is shown in **Figure 22**. The anticipated Year 2044 traffic assignment for all three projects is depicted in **Figure 23**. The Year 2044 traffic assignment for the projects with the alternate GTC Improvements is shown in **Figure 24**.

The Year 2024 total traffic is the sum of Year 2024 background traffic in **Figure 12** with the project-generated traffic in **Figure 21** and can be seen in **Figure 25**. With the GTC Alternate scenario, the Year 2024 total traffic is depicted in **Figure 26**.

The Year 2044 total traffic is the sum of Year 2044 background traffic in **Figure 13** with the project-generated traffic in **Figure 23** and can be seen in **Figure 27**. With the GTC Alternate scenario, the Year 2044 total traffic is depicted in **Figure 28**.

Figure 21: Year 2024 Project Generated Traffic Assignment



<p>1</p> <table border="1"> <tr> <td>14 / 17 8 / 11</td> <td>12 / 10</td> </tr> <tr> <td>18 / 17</td> <td>3 / 3</td> </tr> </table>	14 / 17 8 / 11	12 / 10	18 / 17	3 / 3	<p>2</p> <table border="1"> <tr> <td>27 / 24</td> <td>3 / 3</td> </tr> <tr> <td>19 / 25</td> <td>2 / 3</td> </tr> </table>	27 / 24	3 / 3	19 / 25	2 / 3	<p>3</p> <table border="1"> <tr> <td>18 / 23</td> <td>10 / 14</td> </tr> <tr> <td>24 / 23</td> <td>15 / 14</td> </tr> </table>	18 / 23	10 / 14	24 / 23	15 / 14				
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LEGEND:

Directional Distribution = Inbound% (Outbound %)

Sat AM/Sat PM Volumes = XX/XX VPH (in PCEs)

Turning Movements

Project Number

M1529

Prepared By

GWS

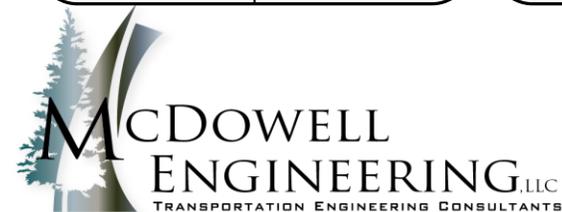
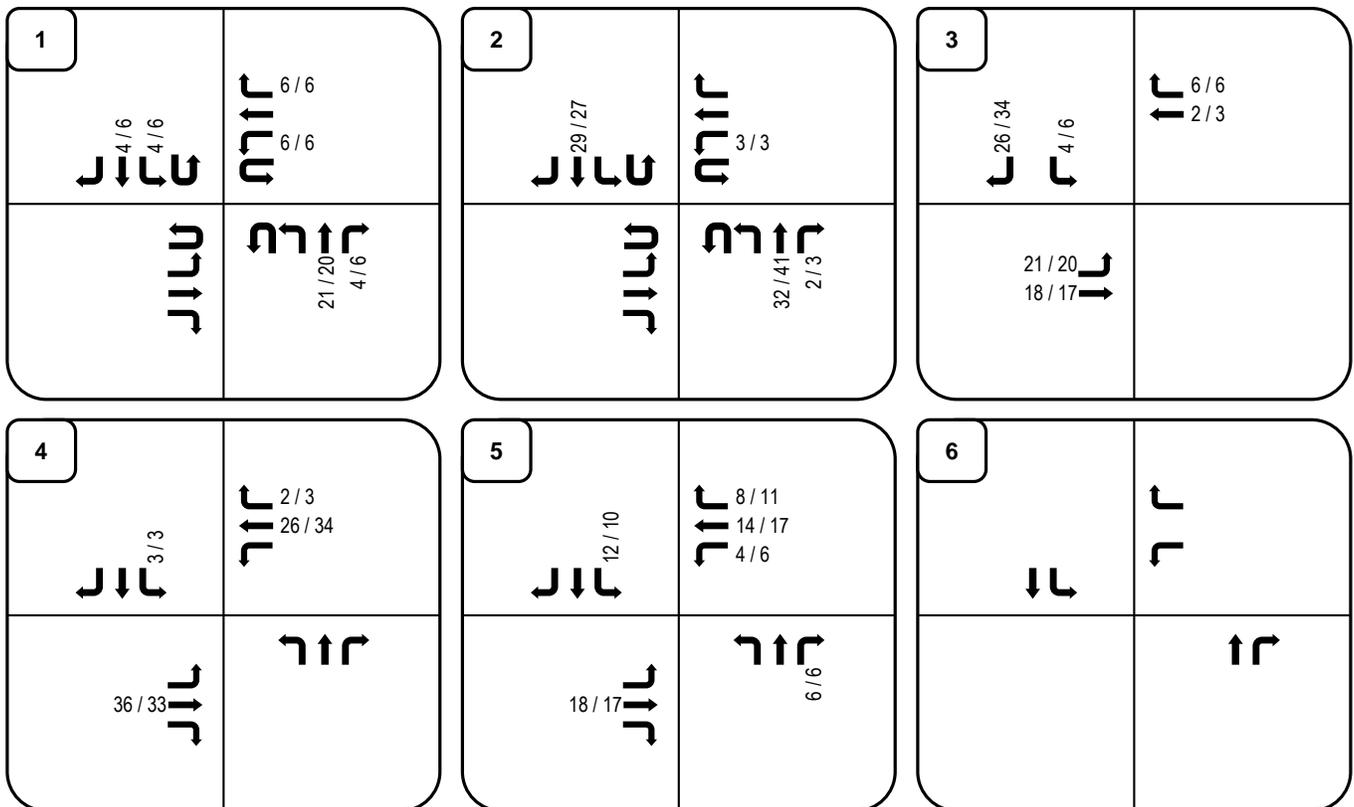
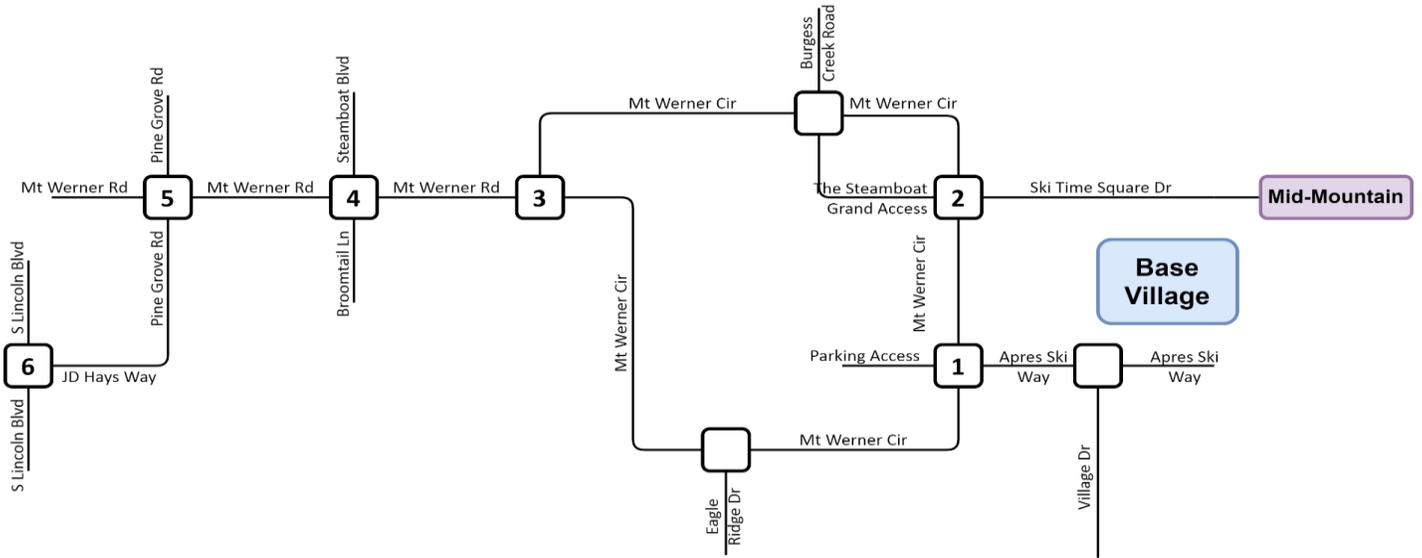


Figure 22: Year 2024 Project Generated Traffic Assignment with GTC Alternate Improvements



LEGEND:

Directional Distribution = Inbound% (Outbound %)

Sat AM/Sat PM Volumes = XX/XX VPH (in PCEs)

Turning Movements

Project Number

M1529

Prepared By

GWS

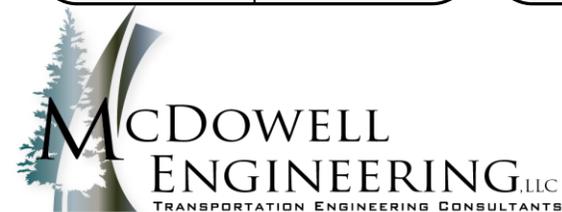
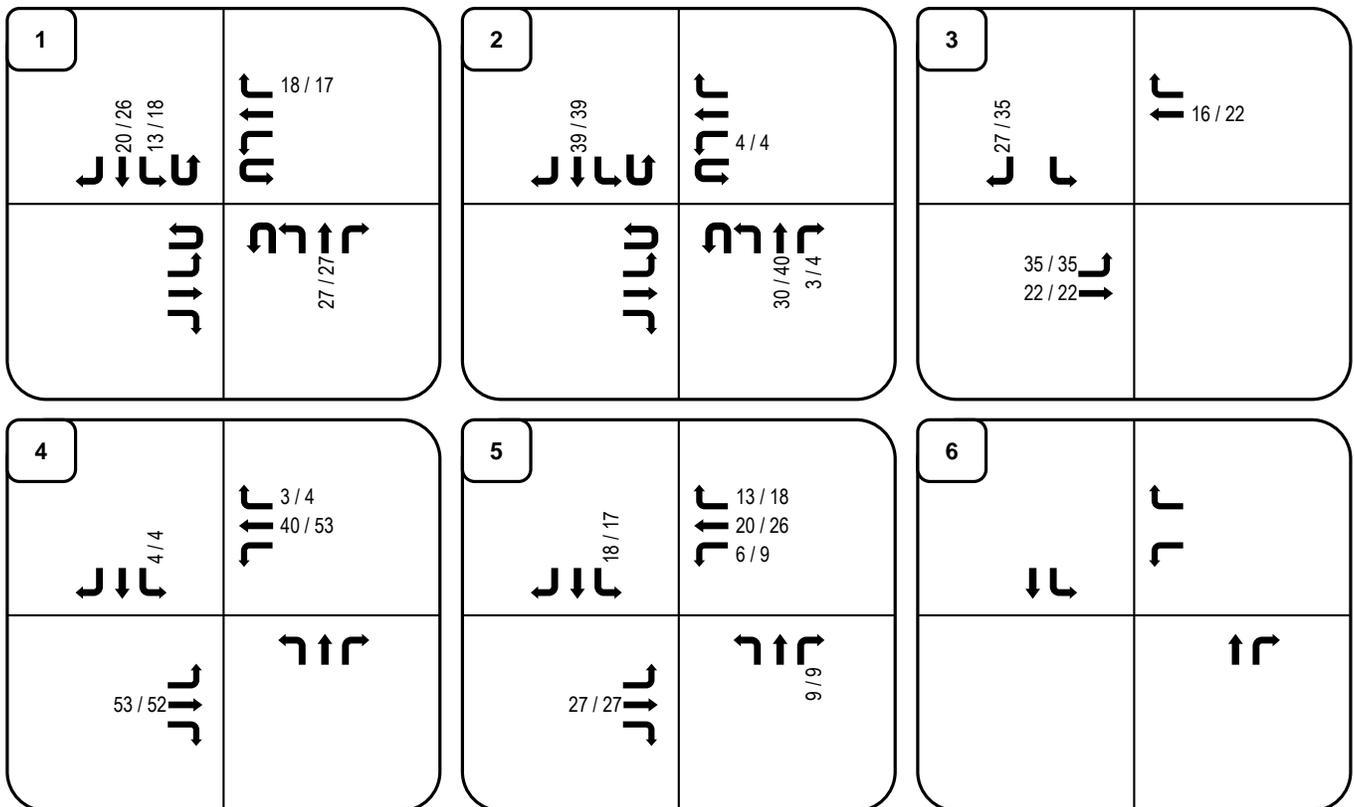
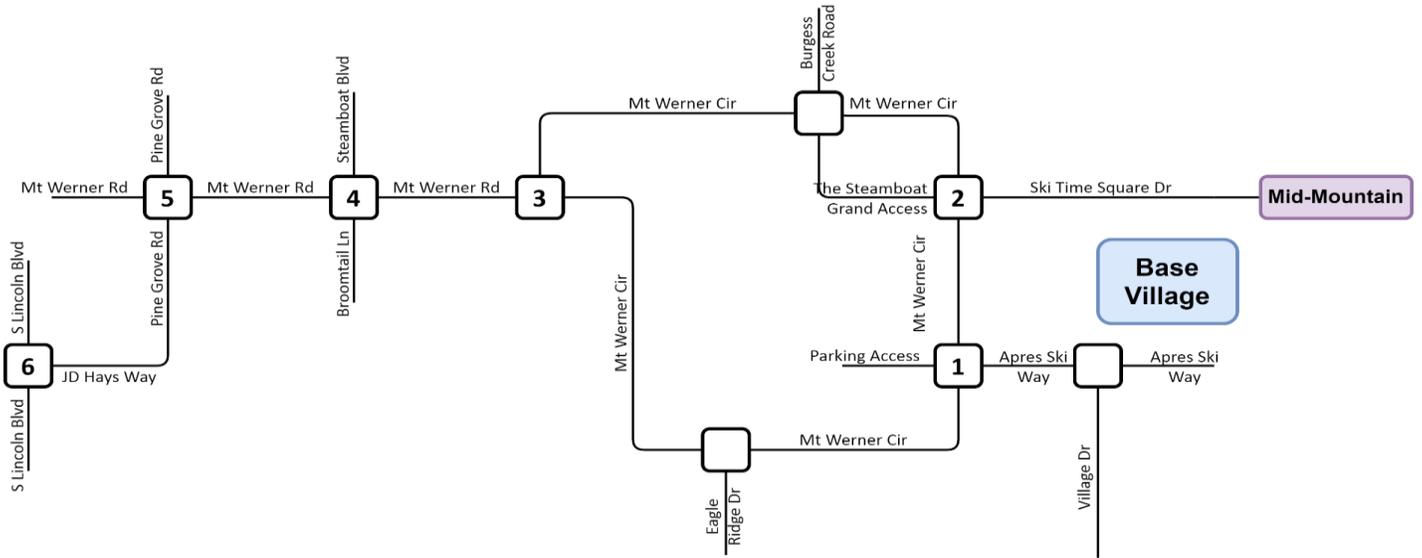


Figure 23: Year 2044 Project Generated Traffic Assignment



LEGEND:

Directional Distribution = Inbound% (Outbound %)

Sat AM/Sat PM Volumes = XX/XX VPH (in PCEs)

Turning Movements

Project Number

M1529

Prepared By

GWS

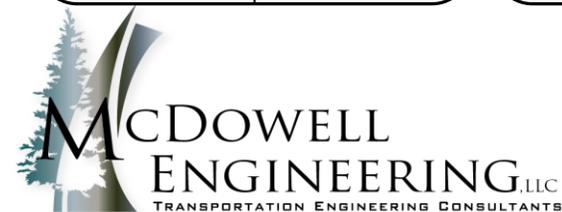
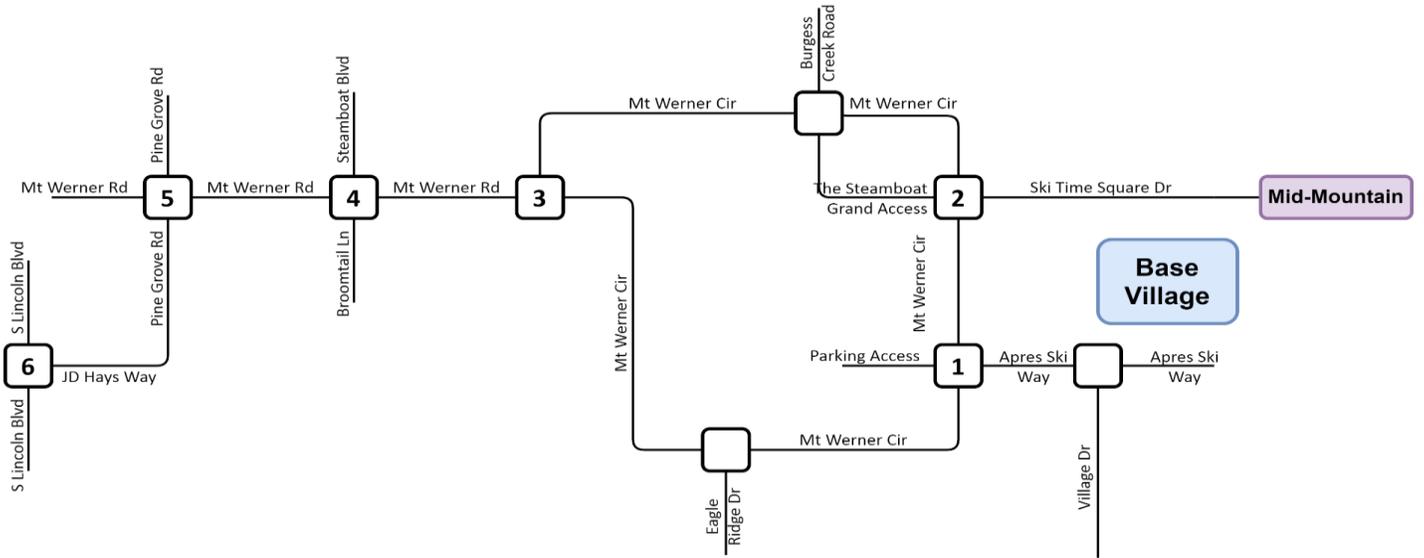


Figure 24: Year 2044 Project Generated Traffic Assignment with GTC Alternate Improvements



<p>1</p> <table border="1"> <tr> <td>6/9 ↙</td> <td>9/9 ↘</td> </tr> <tr> <td>6/9 ↘</td> <td>9/9 ↙</td> </tr> <tr> <td>↙</td> <td>↘</td> </tr> <tr> <td>↘</td> <td>31/31 6/9</td> </tr> </table>	6/9 ↙	9/9 ↘	6/9 ↘	9/9 ↙	↙	↘	↘	31/31 6/9	<p>2</p> <table border="1"> <tr> <td>44/43 ↙</td> <td>4/4 ↘</td> </tr> <tr> <td>↙</td> <td>49/65 3/4</td> </tr> <tr> <td>↙</td> <td>↘</td> </tr> <tr> <td>↘</td> <td>↘</td> </tr> </table>	44/43 ↙	4/4 ↘	↙	49/65 3/4	↙	↘	↘	↘	<p>3</p> <table border="1"> <tr> <td>40/53 ↙</td> <td>6/9 ↘</td> </tr> <tr> <td>31/31 27/27</td> <td>9/9 3/4</td> </tr> <tr> <td>↙</td> <td>↘</td> </tr> <tr> <td>↘</td> <td>↘</td> </tr> </table>	40/53 ↙	6/9 ↘	31/31 27/27	9/9 3/4	↙	↘	↘	↘
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LEGEND:

Directional Distribution = Inbound% (Outbound %)

Sat AM/Sat PM Volumes = XX/XX VPH (in PCEs)

Turning Movements

Project Number

M1529

Prepared By

GWS

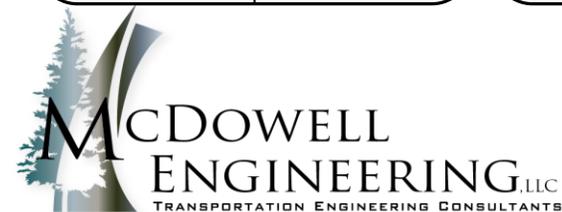
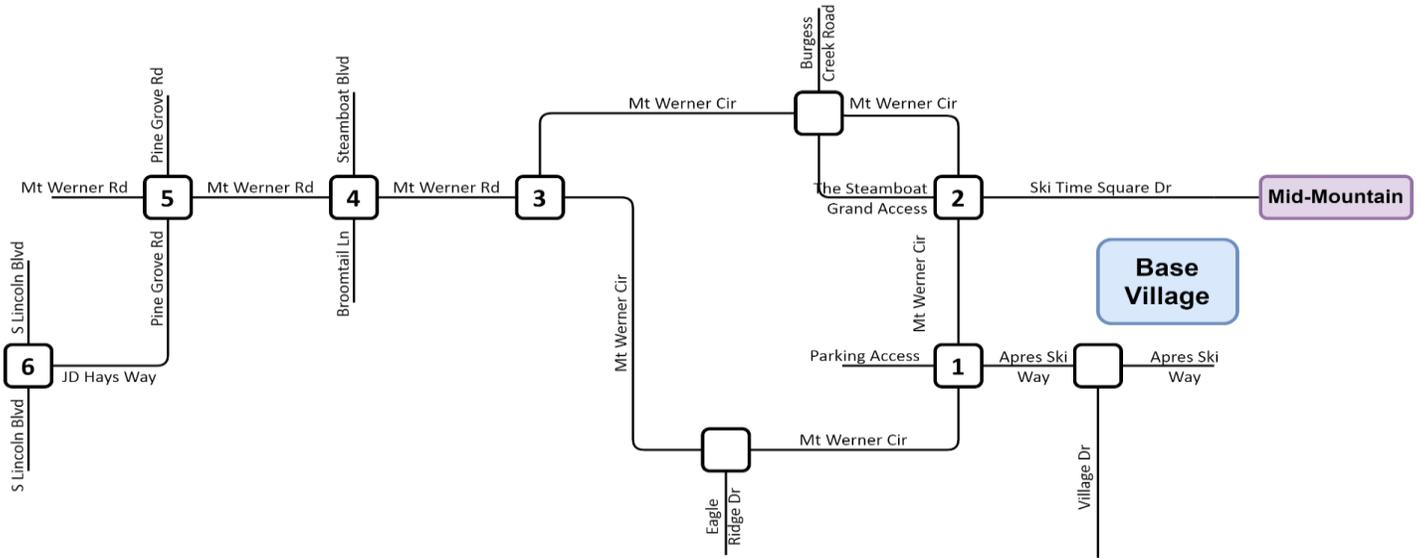


Figure 25: Year 2024 Total Traffic



<p>1</p> <p>2 / 5 63 / 141 119 / 183 2 / 5</p> <p>226 / 234 2 / 2 259 / 342 10 / 0</p> <p>0 / 0 0 / 10 0 / 2 10 / 25</p> <p>25 / 2 5 / 12 264 / 261 349 / 421</p>	<p>2</p> <p>18 / 9 124 / 115 282 / 203 2 / 0</p> <p>109 / 319 2 / 0 59 / 112 0 / 0</p> <p>0 / 0 20 / 56 11 / 32 15 / 15</p> <p>70 / 89 35 / 0 185 / 294 128 / 121</p>	<p>3</p> <p>307 / 502 35 / 47</p> <p>4 / 19 177 / 409</p> <p>304 / 366 436 / 548</p>
<p>4</p> <p>47 / 55 11 / 1 102 / 83</p> <p>73 / 123 403 / 900 2 / 3</p> <p>28 / 83 566 / 735 1 / 0</p> <p>2 / 0 0 / 0 4 / 4</p>	<p>5</p> <p>5 / 18 74 / 46 265 / 275</p> <p>213 / 551 182 / 427 96 / 103</p> <p>0 / 5 364 / 353 120 / 33</p> <p>6 / 201 46 / 142 113 / 104</p>	<p>6</p> <p>735 / 1,253 96 / 43</p> <p>22 / 59 28 / 67</p> <p>904 / 942 207 / 83</p>

LEGEND:

Directional Distribution = Inbound% (Outbound %)

Sat AM/Sat PM Volumes = XX/XX VPH (in PCEs)

Turning Movements

Project Number

M1529

Prepared By

GWS

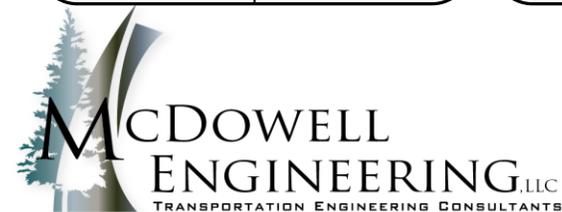
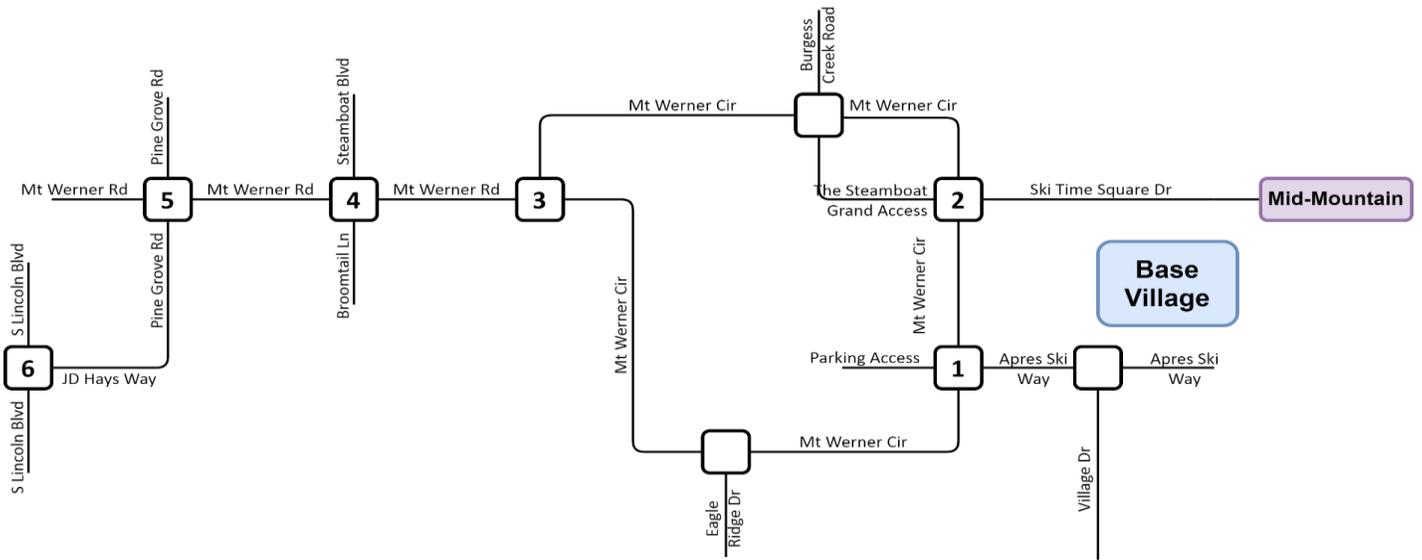


Figure 26: Year 2024 Total Traffic with GTC Alternate Improvements



<p>1</p> <p>2 / 5 43 / 74 48 / 75 2 / 5</p> <p>92 / 96 2 / 2 393 / 482 10 / 0</p> <p>0 / 0 0 / 10 0 / 2 10 / 25</p> <p>25 / 2 5 / 12 127 / 134 420 / 530</p>	<p>2</p> <p>18 / 9 402 / 398 301 / 221 2 / 0</p> <p>117 / 335 2 / 0 51 / 96 0 / 0</p> <p>0 / 0 20 / 56 11 / 32 15 / 15</p> <p>70 / 89 35 / 0 294 / 487 109 / 103</p>	<p>3</p> <p>344 / 587 114 / 172</p> <p>157 / 177 140 / 324</p> <p>449 / 509 291 / 405</p>
<p>4</p> <p>47 / 55 11 / 1 102 / 83</p> <p>73 / 123 403 / 900 2 / 3</p> <p>28 / 83 566 / 735 1 / 0</p> <p>2 / 0 0 / 0 4 / 4</p>	<p>5</p> <p>5 / 18 74 / 46 265 / 275</p> <p>213 / 551 182 / 427 96 / 103</p> <p>0 / 5 364 / 353 120 / 33</p> <p>6 / 201 46 / 142 113 / 104</p>	<p>6</p> <p>735 / 1,253 96 / 43</p> <p>22 / 59 28 / 67</p> <p>904 / 942 207 / 83</p>

LEGEND:

Directional Distribution = Inbound% (Outbound %)

Sat AM/Sat PM Volumes = XX/XX VPH (in PCEs)

Turning Movements

Project Number

M1529

Prepared By

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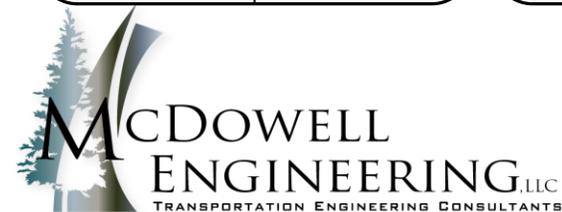
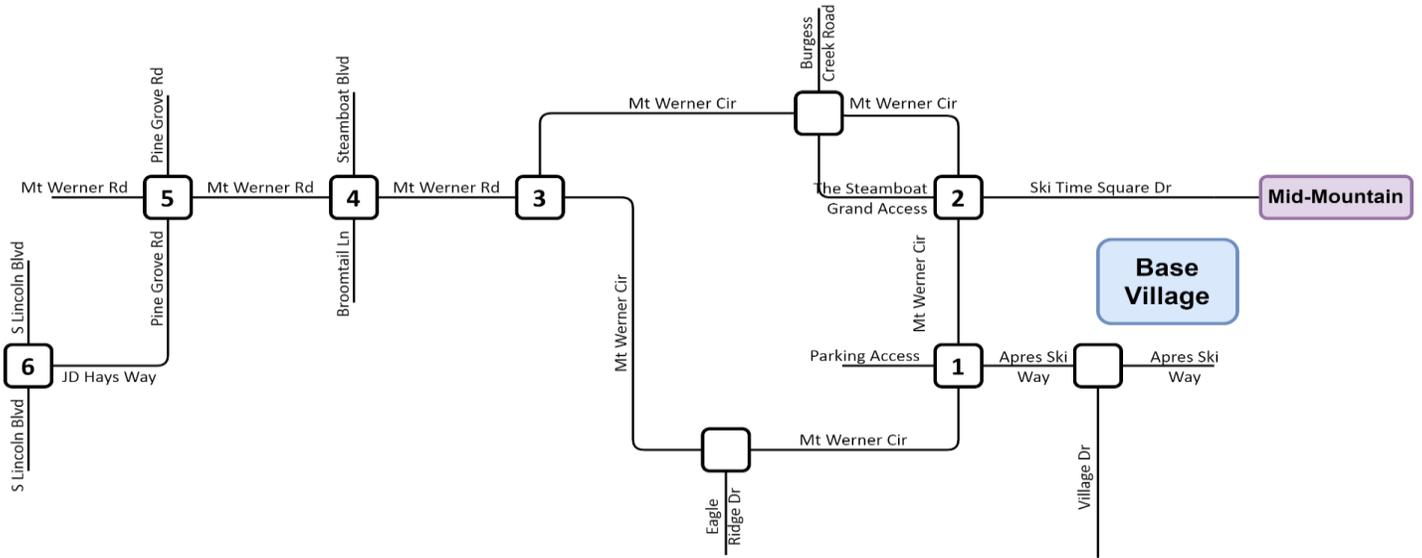


Figure 27: Year 2044 Total Traffic



<p>1</p> <p>2 / 6 75 / 163 136 / 208 2 / 6</p> <p>255 / 264 2 / 2 286 / 378 11 / 0</p> <p>0 / 0 0 / 11 0 / 2 11 / 27</p> <p>27 / 2 6 / 14 299 / 297 386 / 466</p>	<p>2</p> <p>19 / 10 146 / 139 282 / 203 2 / 0</p> <p>109 / 319 2 / 0 60 / 113 0 / 0</p> <p>0 / 0 22 / 61 11 / 32 17 / 17</p> <p>77 / 98 39 / 0 213 / 337 129 / 122</p>	<p>3</p> <p>347 / 564 39 / 52</p> <p>5 / 21 200 / 459</p> <p>344 / 414 488 / 612</p>
<p>4</p> <p>71 / 82 21 / 2 114 / 92</p> <p>81 / 137 457 / 1,010 2 / 3</p> <p>41 / 123 840 / 1,095 2 / 0</p> <p>3 / 0 0 / 0 5 / 5</p>	<p>5</p> <p>8 / 27 95 / 68 393 / 411</p> <p>317 / 821 269 / 635 143 / 152</p> <p>0 / 8 541 / 527 144 / 49</p> <p>9 / 226 68 / 197 168 / 154</p>	<p>6</p> <p>812 / 1,384 96 / 43</p> <p>22 / 59 28 / 67</p> <p>999 / 1,041 207 / 83</p>

LEGEND:

Directional Distribution = Inbound% (Outbound %)

Sat AM/Sat PM Volumes = XX/XX VPH (in PCEs)

Turning Movements

Project Number

M1529

Prepared By

GWS

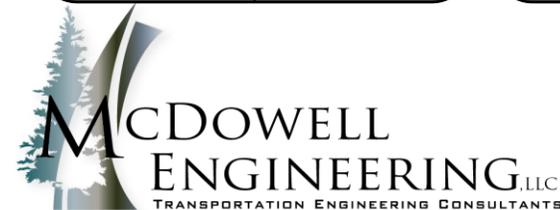
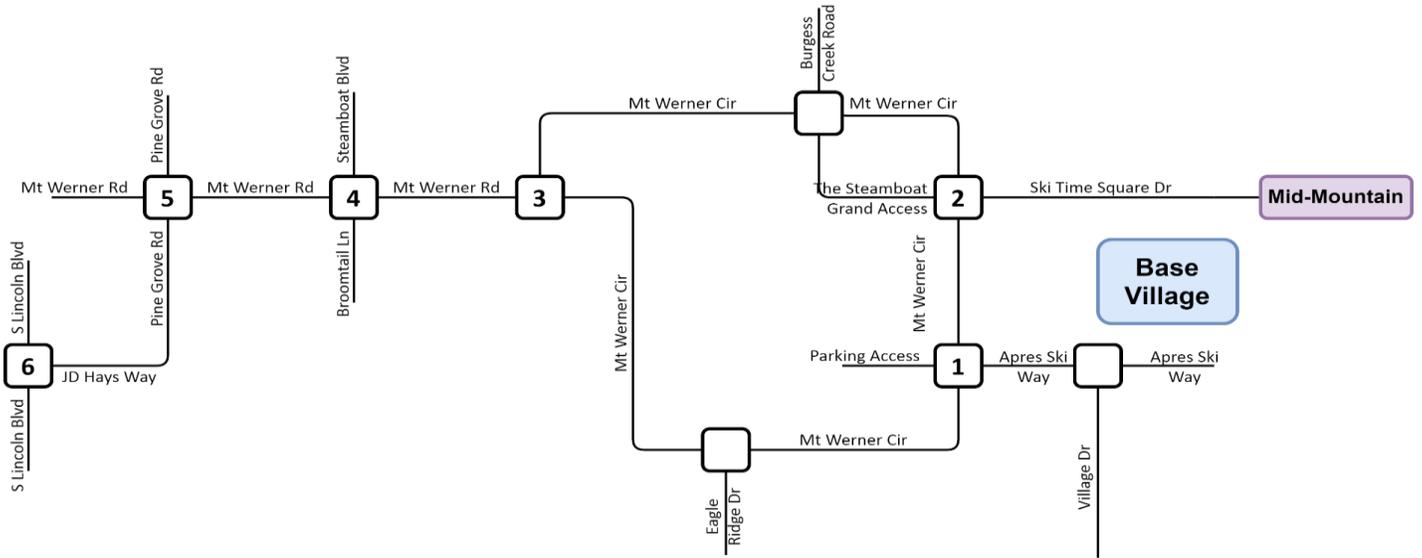


Figure 28: Year 2044 Total Traffic with GTC Alternate Improvements



<p>1</p> <p>2 / 6 47 / 82 55 / 85 2 / 6</p> <p>104 / 108 2 / 2 437 / 535 11 / 0</p> <p>0 / 0 0 / 11 0 / 2 11 / 27</p> <p>27 / 2 6 / 14 148 / 155 466 / 589</p>	<p>2</p> <p>19 / 10 456 / 453 301 / 221 2 / 0</p> <p>117 / 335 2 / 0 52 / 97 0 / 0</p> <p>0 / 0 22 / 61 11 / 32 17 / 17</p> <p>77 / 98 39 / 0 339 / 558 110 / 104</p>	<p>3</p> <p>393 / 664 127 / 191</p> <p>175 / 196 154 / 359</p> <p>503 / 572 330 / 455</p>
<p>4</p> <p>71 / 82 21 / 2 114 / 92</p> <p>81 / 137 457 / 1,010 2 / 3</p> <p>41 / 123 840 / 1,095 2 / 0</p> <p>3 / 0 0 / 0 5 / 5</p>	<p>5</p> <p>8 / 27 95 / 68 393 / 411</p> <p>317 / 821 269 / 635 143 / 152</p> <p>0 / 8 541 / 527 144 / 49</p> <p>9 / 226 68 / 197 168 / 154</p>	<p>6</p> <p>812 / 1,384 96 / 43</p> <p>22 / 59 28 / 67</p> <p>999 / 1,041 207 / 83</p>

LEGEND:

Directional Distribution = Inbound% (Outbound %)

Sat AM/Sat PM Volumes = XX/XX VPH (in PCEs)

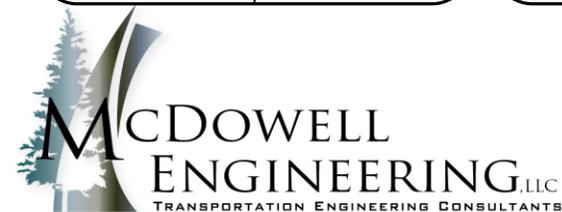
Turning Movements

Project Number

M1529

Prepared By

GWS



5.0 Year 2024 and 2044 Total Traffic Operational Analysis

Using *Highway Capacity Manual 2010* (HCM) methodology, Synchro Version 10 software was used to determine the delay and Level of Service (LOS) at the signalized and stop-controlled operations at the study area intersections. The resulting HCM LOS from the traffic model is included in the **Appendix**.

Intersection #1 - Mt. Werner Circle and Après Ski Way: This roundabout is currently operating at an overall acceptable LOS during normal operations. During peak events and heavy snowfall, minor to moderate delays are observed. With the additional traffic anticipated by the resort expansion, by Year 2044 some operational improvements may be required at this intersection. However, with the alternate scenario of GTC improvements, traffic on Mt. Werner Circle north of this roundabout is reduced and therefore minimal operational improvements are anticipated.

Intersection #2 - Mt. Werner Circle and Ski Time Square Drive: This roundabout is currently operating at an overall acceptable LOS during normal operations. During peak events and heavy snowfall, minor to moderate delays are observed. This roundabout is anticipated to operate well through long-term total traffic conditions.

Intersection #3 - Mt. Werner Road and Mt. Werner Circle: During peak events and heavy snowfall, minor to moderate delays are observed. As traffic on Mt. Werner Circle grows over time, the delay at this intersection will increase. This intersection will likely need to be constructed as a roundabout in the future.

If the GTC alternate scenario is constructed, more traffic will utilize Mt. Werner Circle to the north to pick up and drop off skiers. Therefore, an interim solution may be to improve the auxiliary turn lanes at this intersection. Long-term a roundabout would improve overall operations and reduce delay. This intersection has been identified and included in URAAC's future project list.

Intersection #4 - Mt. Werner Road and Steamboat Boulevard: The City of Steamboat Springs recently constructed a roundabout at the intersection of Mt. Werner Road and Steamboat Boulevard. It may need an additional eastbound circulating lane in the future to operate well through long term total traffic conditions.

Intersection #5 - Mt. Werner Road and Pine Grove Road: This signalized intersection is anticipated to operate at an acceptable LOS through Year 2044, with the exception of the northbound and southbound approaches. This approach is currently at LOS D in the existing conditions and is anticipated to degrade to LOS F though Year 2044. This signalized intersection will need operational improvements in the future. This could include revising the traffic signal timing to provide optimal service to Mt. Werner Road.

Intersection #6 – JD Hays Way and US 40: The westbound approach is anticipated to be operating at a LOS C and E during the total conditions for the morning and evening hours. It is anticipated to have substantial delay for the westbound approach due to higher through volumes on US 40. During evening peak hours in the future years, the

ability to make a left outbound turn will be difficult due to the southbound through volumes. This is an existing operational concern with background traffic. The *East Steamboat Springs US Highway 40 Access Study*⁸ recommends that this intersection be converted to a $\frac{3}{4}$ movement intersection that restricts the westbound left out movement.

6.0 Additional Analysis

6.1 Transit Service Requirements

The proposed Steamboat expansion is anticipated to increase the demand on the transit system. The transit system consists of City buses, Meadows Lot shuttles, individual hospitality shuttles, and the Wildhorse Gondola. Based upon the analysis in **Table 3**, it is anticipated that the proposed expansion will require an additional number of buses/shuttles per hour during a peak Saturday in December by Year 2044.

- City Bus – An additional 10-12 buses per hour.
- Small Shuttles – An additional 20-28 shuttles per hour. See alternate recommendations in **Section 8**.
- Medium Shuttles (Steamboat’s Meadows Lot Shuttles) – An additional 10-12 shuttles per hour.

The applicant will work with the City of Steamboat Springs to determine an appropriate contribution towards an expansion of transit infrastructure caused by the proposed mountain expansion.

6.2 Internal Circulation

The City of Steamboat Springs is currently working on a *Mountain Area Master Plan* to guide policy and future development of the Mountain Area. This plan will inform the desired internal configuration and circulation of the Mountain Area. This plan is still in the public approval process. Upon *MAMP* approval, the applicant will work with the City of Steamboat Springs to determine an appropriate participation in implementing the *MAMP*.

6.3 Summer Operations

As described in the *MDPA*¹, summer operations are expanding. However, summer operations are not anticipated to reach peak winter guest utilization at the resort. Transit service is not as robust during the summer season. Therefore, more summer visitors drive passenger cars to the Mountain Area. As future summer activities and visitors increase, additional transit services may need to be increased accordingly to accommodate remote parking.

6.4 State Highway Access Permit at US 40 and JD Hays Way

Section 2.6(3) of the *State Highway Access Code*⁹ requires a new access permit when there is a land use change and/or an access’s volume is anticipated to increase by more than twenty percent (20%). Existing traffic data from the intersection of JD Hays Way and S. Lincoln Ave (US 40) was compared to the forecasted Year 2044 traffic volume caused by the City’s 2.0% annual growth rate on Pine Grove Road. If this growth is realized, a new State Highway Access Permit will be required in the future for JD Hays Way.

7.0 Alternative Modes Summary

7.1 Transit Improvements

Refer to **Section 6.1**. The applicant will work with the City of Steamboat Springs to determine an appropriate contribution towards an expansion of transit infrastructure caused by the proposed mountain expansion.

7.2 Pedestrian Improvements

As part of the Base Village Project, Steamboat is proposing to improve a 'Gold Walk' leading visitors from the GTC to the main plaza area of the Base Village. Sidewalk and ADA considerations will be included in future development proposals and the associated site plans. Submittals will incorporate the proposed sidewalk and trail network improvements detailed in the *2016 Steamboat Springs Sidewalk Master Plan*¹⁰. Refer to the excerpted maps in the **Appendix**. City staff will have an opportunity to comment on plan specifics during the approval process.

7.3 Bicycle Improvements

Bicycles are popular at the resort during summer months. Bicycle connections and facilities will be included in future development proposals. City staff will have an opportunity to comment on plan specifics during the approval process.

8.0 Recommendations

8.1 Roadway Network Improvements

Intersection #1 - Mt. Werner Circle and Après Ski Way: With the additional traffic anticipated by the resort expansion, some operational improvements may be required at this intersection. However, with the alternate scenario of GTC improvements, traffic on Mt. Werner Circle north of this roundabout is reduced and therefore minimal operational improvements are anticipated.

Intersection #2 - Mt. Werner Circle and Ski Time Square Drive: This roundabout is anticipated to operate well through long-term total traffic conditions.

Intersection #3 - Mt. Werner Road and Mt. Werner Circle: With the growth of background traffic over time, southbound delays will increase. This intersection will likely need to be constructed as a roundabout in the future.

If the GTC alternate scenario is constructed, more traffic will utilize Mt. Werner Circle to the north to pick up and drop off skiers. Therefore, an interim solution may be to improve the auxiliary turn lanes at this intersection. For the long-term condition, a roundabout would improve overall operations and reduce delay. This intersection has been identified and included in URAAC's future project list.

Intersection #4 - Mt. Werner Road and Steamboat Boulevard: The City of Steamboat Springs recently constructed a roundabout at the intersection of Mt. Werner Road and Steamboat Boulevard. It may need an additional eastbound circulating lane in the future to operate well through long term total traffic conditions.

Intersection #5 - Mt. Werner Road and Pine Grove Road: This signalized intersection will need operational improvements in the future. This could include revising the traffic signal timing to provide optimal service to Mt. Werner Road.

Intersection #6 – JD Hays Way and US 40: During evening peak hours in the future years, the ability to make a left outbound turn will be difficult due to the southbound through volumes. This is an existing operational concern with background traffic.

As mentioned earlier in the background traffic level of service analysis, The *East Steamboat Springs US Highway 40 Access Study*⁸ recommends that this intersection be converted to a $\frac{3}{4}$ movement intersection that restricts the westbound left out movement. It is recommended that the City implement this access modification when background traffic volumes on S. Lincoln Ave increase to the point when a westbound left turn cannot be made without significant delay.

8.2 Transit Service Requirements

Refer to **Section 6.1**. The applicant will work with the City of Steamboat Springs to determine an appropriate contribution towards an expansion of transit infrastructure

caused by the proposed mountain expansion. This may include an expansion of the Meadows Lot facilities to accommodate additional parking and transit operations.

8.3 Parking Demand Management

The applicant addressed the parking demand management in the *Environmental Impact Statement*⁷, associated *Record of Decision*¹¹, *Environmental Assessment*¹², and associated *Decision Notice*¹³. These documents were approved by the USDA Forest Service. The applicant will work towards implementing a Parking Demand Management Plan. This could include some of the following:

- ITS/Real Time Wayfinding and Guidance Signage – Provide wayfinding signage prior to the Meadows Lot and before the Mt. Werner Road and Mt. Werner Circle intersection to direct vehicles to the appropriate location and reduce traffic recirculation. Signage could also include information on parking inventory, capacity, parking fees, etc.
- Paid Parking – Manage paid parking fees to promote transit use to make up for parking shortages.
- Carpool Incentives – Offer cost-based incentives for carpool vehicles. Provide preferred parking locations to carpool participants.
- Marketing & Messaging – Provide up to date information to guests and employees. Inform promotions or incentives for transit use or parking.
- Use Smartphone Apps – Provide the ability to inform guests and employees about parking options before they arrive at the Mountain Area. Integrate with other Parking Demand Management Techniques. Allow for text messaging capabilities.
- Enforcement - Enforce parking requirements and no-parking areas to increase compliance.

8.4 GTC Permit System for Shuttles

Steamboat may decide to support the establishment of a permitting system that will be required for vehicles to enter the GTC. The fees associated with such permit could be used to cover capital improvements and fund additional monitoring and directing traffic within the GTC. Also, a permitting system would require all permittees and their drivers to go through driver training on the operations of the GTC. A permit system may promote consolidation of multiple smaller shuttles into a medium shuttle with more capacity.

8.5 GTC Improvements

The City of Steamboat Springs is currently working on a *Mountain Area Master Plan* to guide policy and future development of the Mountain Area. The applicant will work

towards a public/private partnership with the City and lead the design and implementation process for the GTC Improvements.

8.6 State Highway Access Permit at US 40 and JD Hays Way

Section 2.6(3) of the *State Highway Access Code*⁹ requires a new access permit when there is a land use change and/or an access's volume is anticipated to increase by more than twenty percent (20%). Existing traffic data from the intersection of JD Hays Way and S. Lincoln Ave (US 40) was compared to the forecasted Year 2044 traffic volume caused by the City's 2.0% annual growth rate on Pine Grove Road. If this growth is realized, a new State Highway Access Permit will be required in the future for JD Hays Way.

8.7 Future Development Process

This study is intended to serve as a Master Transportation Impact Analysis for the Resort Area. As specific projects are submitted to the City for review and approval, the City will require a traffic memo stating that project complies with this Master Study or what the modifications and recommendations are to comply.

9.0 Conclusion

The proposed Steamboat expansion is anticipated to be successfully accommodated into the greater roadway system and City of Steamboat Springs if the recommendations within this report are implemented.

10.0 Appendices

Reference Documents

1. *Steamboat Resort 2019 Master Development Plan Amendment (MDPA)*. SE Group, July 2019.
2. *Steamboat Base Area Master Transportation Study*. Fehr & Peers, September 2008.
3. *Gondola Transit Center Data Collection (GTC Data Collection)*. McDowell Engineering, November 2019.
4. *Mountain Area Master Plan – Draft (MAMP)*. Cushing Terrell, 2021.
5. *City of Steamboat Springs Engineering Standards*. City of Steamboat Springs. Rev 5/15.
6. *ITE Trip Generation Manual, 10th Edition*. Institute of Transportation Engineers, 2017.
7. *Steamboat Resort Final Environmental Impact Statement*. USDA Forest Service, May 2018.
8. *East Steamboat Springs US Highway 40 Access Study⁸*. Colorado Department of Transportation, 2016.
9. *State Highway Access Code*. State of Colorado, 2002.
10. *Steamboat Springs Sidewalk Master Plan*. City of Steamboat Springs, 2016.
11. *Steamboat Resort Final Environmental Impact Statement Record of Decision*. USDA Forest Service, September 2018.
12. *Steamboat Resort Improvements Project and Project-Specific Forest Plan Amendment Environmental Assessment*. USDA Forest Service, April 2021.
13. *Steamboat Resort Improvements Project and Project-Specific Forest Plan Amendment Decision Notice*. USDA Forest Service, July 2021.

Included Documents

1. Approved City of Steamboat Springs Engineering Standards, *Traffic Impact Study – Scope Approval Form* and associated correspondence
2. Traffic Counts
3. City of Steamboat Springs Seasonal Adjustment Factors Table, from the City of Steamboat Springs Engineering Division
4. Study Area Growth Rates Figure
5. Methodology Summary for Normalizing Raw Traffic Data at Study Area Intersections
6. Steamboat’s Comfortable Carrying Capacity Calculations
7. Steamboat Sidewalks and Trails Master Plan – Excerpted Maps
8. Figures for Alternate GTC Scenario
9. HCM Level of Service Tables
10. HCM Analysis for Signalized and Unsignalized Intersections
11. Rodel Analysis for Roundabout Intersection

HCM 2010 Intersection Level-of-Service Criteria

LOS	Expected Delay to Minor Street Traffic	Average Signal Delay (seconds/vehicle)	Average Stop-Controlled Delay (seconds/vehicle)
A	Little or no delay.	0-10	0-10
B	Short traffic delays.	>10-20	>10-15
C	Average traffic delays.	>20-35	>15-25
D	Long traffic delays.	>35-55	>25-35
E	Very long traffic delays.	>55-80	>35-50
F	When volume exceeds the capacity of the lane extreme delays will be encountered with queuing that may cause severe congestion affecting other traffic movements in the intersection. This condition usually warrants improving the intersection.	>80	>50



Greg Schroeder <greg@mcdowelleng.com>

Steamboat Resort TIS Scoping Form

Ben Beall <bbeall@steamboatsprings.net>
To: Greg Schroeder <greg@mcdowelleng.com>
Cc: Kari McDowell Schroeder <kari@mcdowelleng.com>

Tue, Aug 31, 2021 at 7:41 AM

Greg,

Find the attached signed scope form.

I worry that we may be talking passed one another about the issues that I see using the pie chart mode split data in the overall area. Perhaps we should try to find 5-10minutes for me to try to explain my concern.

One more question – do the trips included in your proposed generation for the 25% additional on-mountain use forecast by the Ski Co master plan reflect that study time frame (December). Are the 16,000 +/- users an average day across the entire year? It seems that a 25% increase in December should perhaps be more of an increase than the 3,000 +/- forecast in your generation? Thoughts?

[Quoted text hidden]



2021-08-27 Revised Traffic Scope for Steamboat Resort Comprehensive Traffic Study.pdf
3603K

Attachment A
 TRAFFIC IMPACT STUDY – SCOPE APPROVAL FORM

Prior to starting a traffic impact study, a Scope Approval Form must be submitted for review and signed by the City Public Works Director. It shall be included in every traffic study submittal as Attachment A. This Scope Approval Form is for City requirements only. Consultants must contact CDOT to determine requirements related to access permits and work in CDOT right-of-way.

Project Information

Project Name:	Steamboat Resort Comprehensive TIS Alterra
Project Location:	2305 Mt Werner Cir, Steamboat Springs, CO 80487
Developer Name/ Contact Number:	Alterra Mountain Company traveldes@steamboat.com
Traffic Engineer Name/ Contact Number:	McDowell Engineering Attn. Kari McDowell Schroeder, PE, PTOE 970-623-0788

Study Parameters

Type of Study Required: Trip Generation Letter Long-term Traffic Study
 Short-term Traffic Study Trip Evaluation Letter

Traffic Counts discussion related to traffic when shuttle and transit service is not available - how does infrastructure work, remote parking without service

Winter Zone Summer Zone

Counts w/in last 2 years are available GTC Traffic Counts. IDAX is processing counts from the GTC project.

New counts will be collected on _____

Existing counts will be estimated based on:

Future counts will be estimated based on a _____% growth rate. Growth Rates from Steamboat Base Area Master Transportation Study, vary from 0% to 2%.

Peak Hours Analyzed provide map within TIS showing assumed growth rates in various areas

AM Peak Hour PM peak hour Other _____

Trip Generation Rates

From ITE Other (cite) See attached trip generation methodology / calculations _____

No passby or mode split (typical)

Passby or mode split (describe) _____

Trip Distribution – Attach sketch A-1

Study Parameters

List of Study Area Intersections

1.	Mt. Werner Cir/Mt. Werner Cir/Apres Ski Way	
2.	Mt. Werner Cir/Mt. Werner Cir/Ski Time Square	
3.	Mt. Werner Cir/Mt. Werner Cir/Mt. Werner Rd.	
4.	Mt. Werner Rd. / Steamboat Blvd.	
5.	Mt. Werner Rd. / Pine Grove Rd.	
6.	JD Hays/US40	CDOT access permit?
7.		

Key Analysis items

- Existing + site traffic at study intersections
- Peak Hour LOS at study intersections
- % Site contribution to signal at _____
- Auxiliary lane evaluation at _____
- Traffic signal warrants at _____
- Four-way stop sign warrants at _____
- Queuing Analysis at _____
- Other See attached methodology diagrams

Recommendations will include a separate parking Study and identification of ITS/Wayfinding needs. McDowell Engineering does specialize in these types of studies.

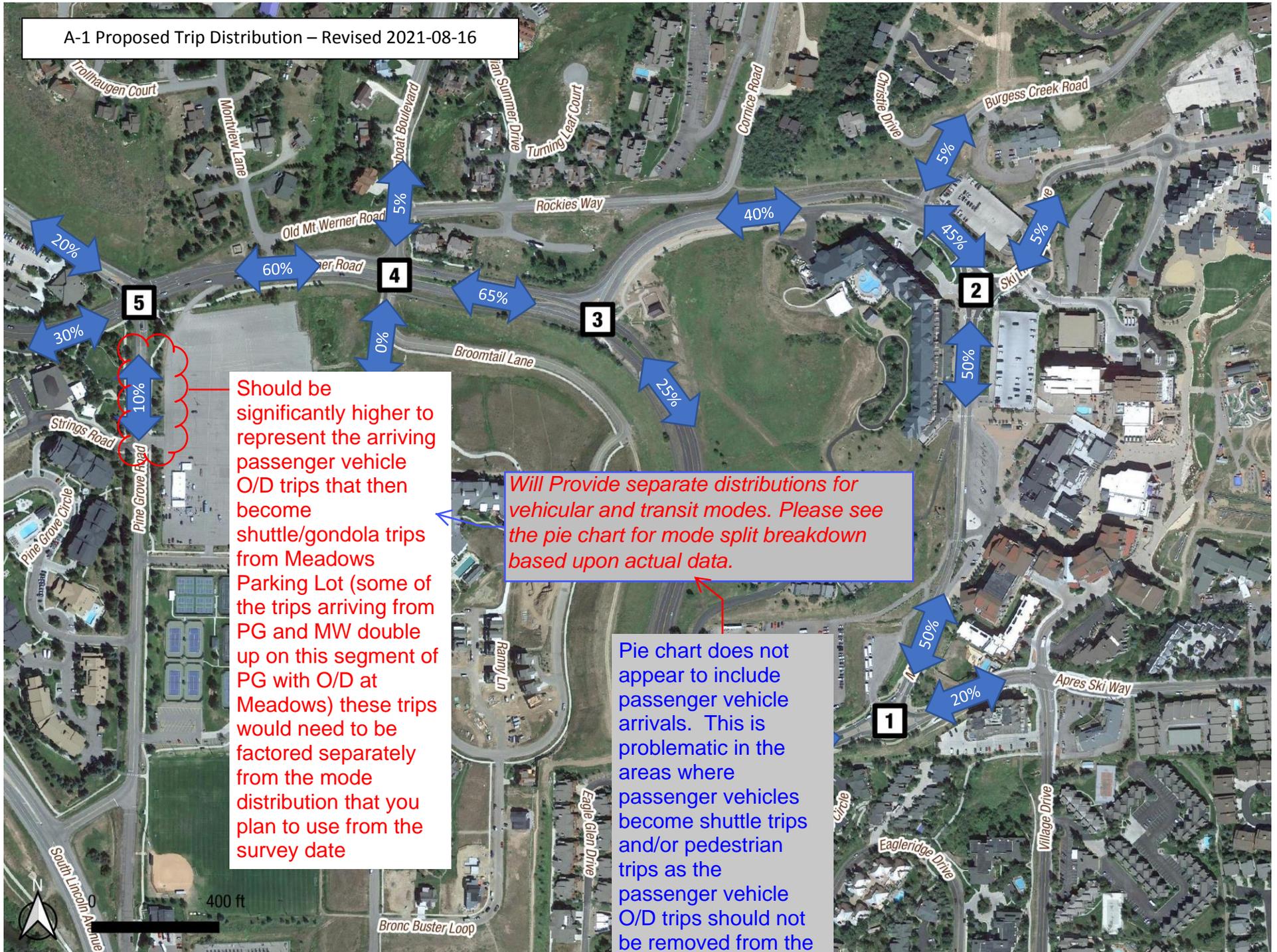
Eval of trips both with and without improvements (ie MW Circle closure and MW/MW improvements), Parking capacity and management, ITS/Wayfinding needs, Transit/Shuttle additional service needs

Approvals

Kari McDowell Schroeder, PE, PTOE	08/19/2021	970-623-0788
Prepared By:	Date	Phone
Ben Beall City Engineer	Date	Phone

Please note that the approval of this scope approval form shall not be construed as an approval of the proposed use, but rather a methodology for evaluation of the proposed use. During the city development review process, the proposed use will be reviewed by city staff for compliance with code, standards, and community planning documents.

A-1 Proposed Trip Distribution – Revised 2021-08-16



Should be significantly higher to represent the arriving passenger vehicle O/D trips that then become shuttle/gondola trips from Meadows Parking Lot (some of the trips arriving from PG and MW double up on this segment of PG with O/D at Meadows) these trips would need to be factored separately from the mode distribution that you plan to use from the survey date

Will Provide separate distributions for vehicular and transit modes. Please see the pie chart for mode split breakdown based upon actual data.

Pie chart does not appear to include passenger vehicle arrivals. This is problematic in the areas where passenger vehicles become shuttle trips and/or pedestrian trips as the passenger vehicle O/D trips should not be removed from the system

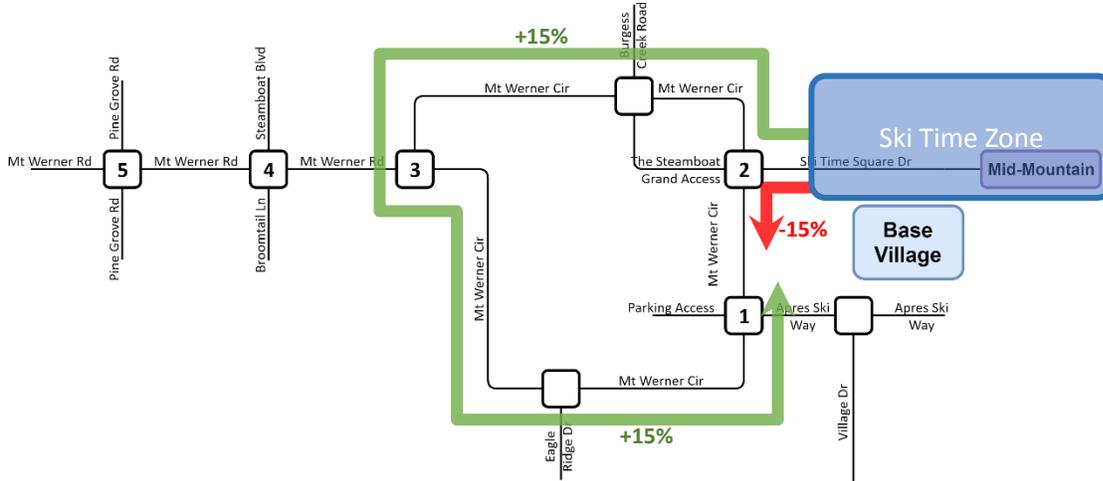


Figure 1: Ski Time Square Traffic Shift w/ GTC Improvements

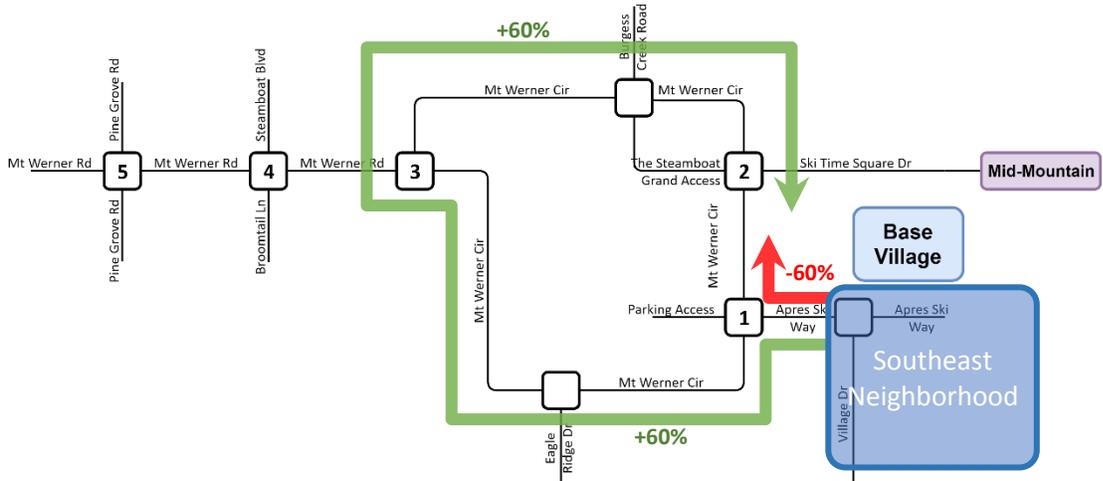


Figure 2: SE Neighborhood Traffic Shift w/ GTC Improvements

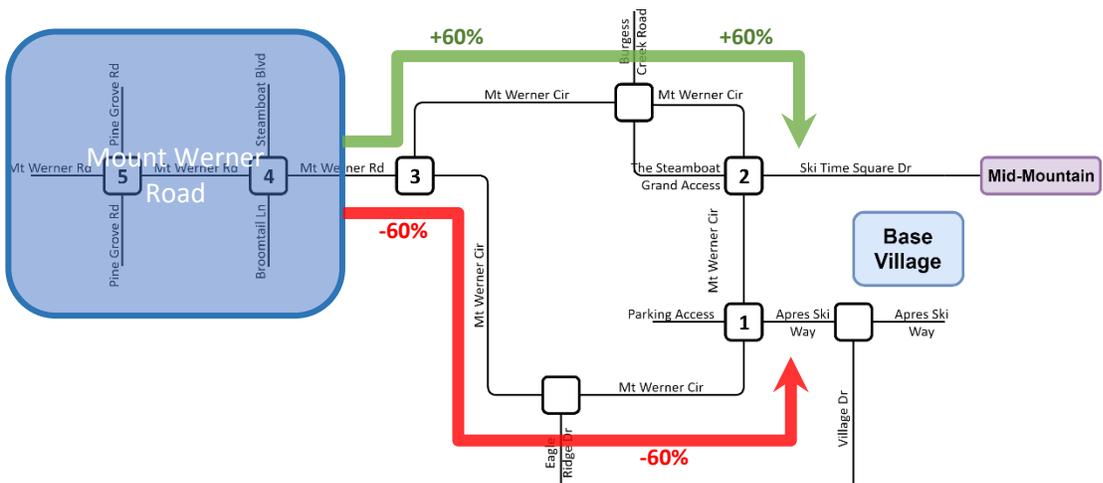


Figure 3: Mt Werner Road Traffic Shift w/ GTC Improvements

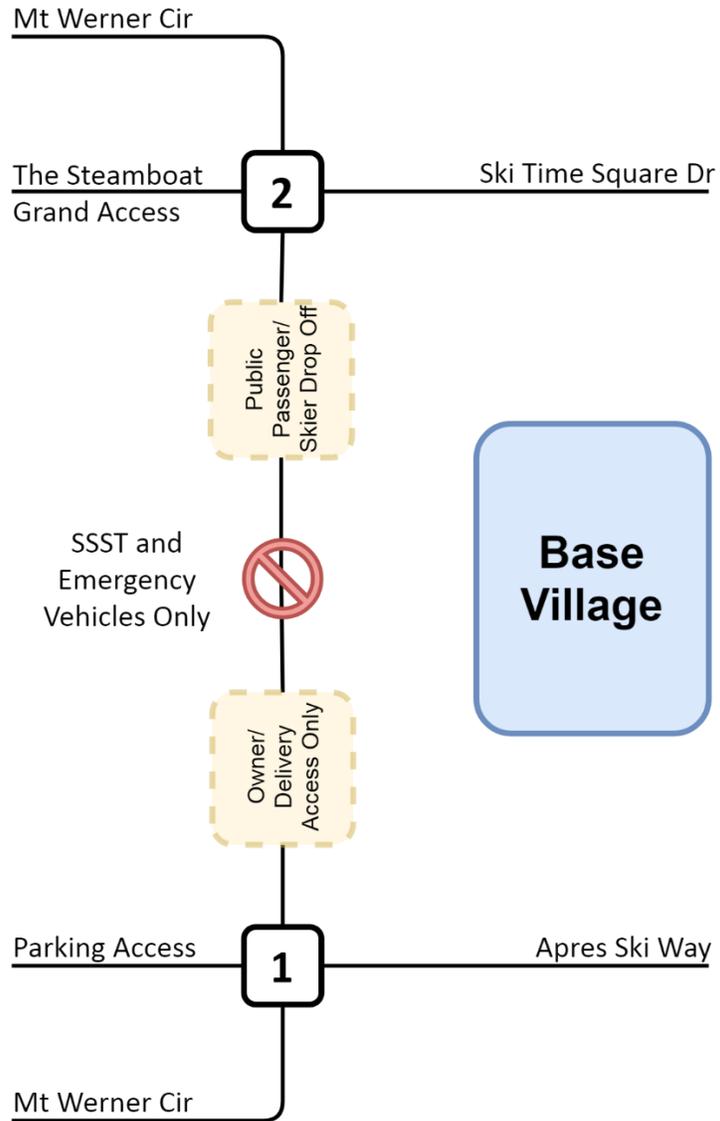


Figure 4: General GTC Improvement Assumptions

IDAX processed data from the GTC project for Intersections #1 and #2. We have December 2019 from #4, and February 2021 for #5 and #6. This is all post-IKON data. We will need to use these counts to inform necessary adjustments at #3

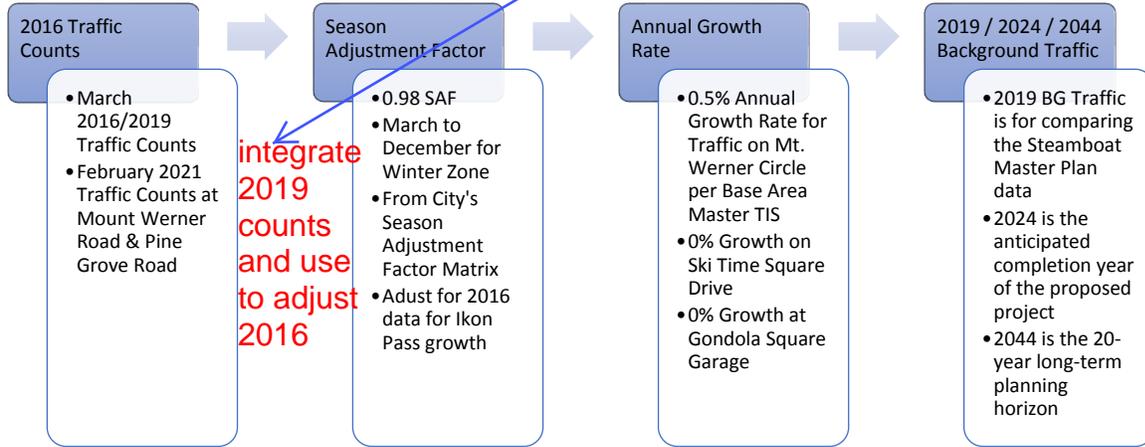


Figure 5: Background Traffic Forecast Methodology

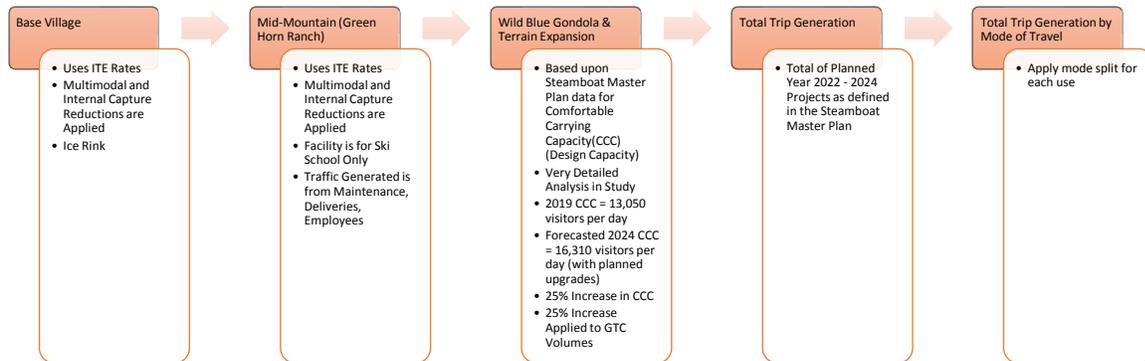


Figure 6: Trip Generation Methodology

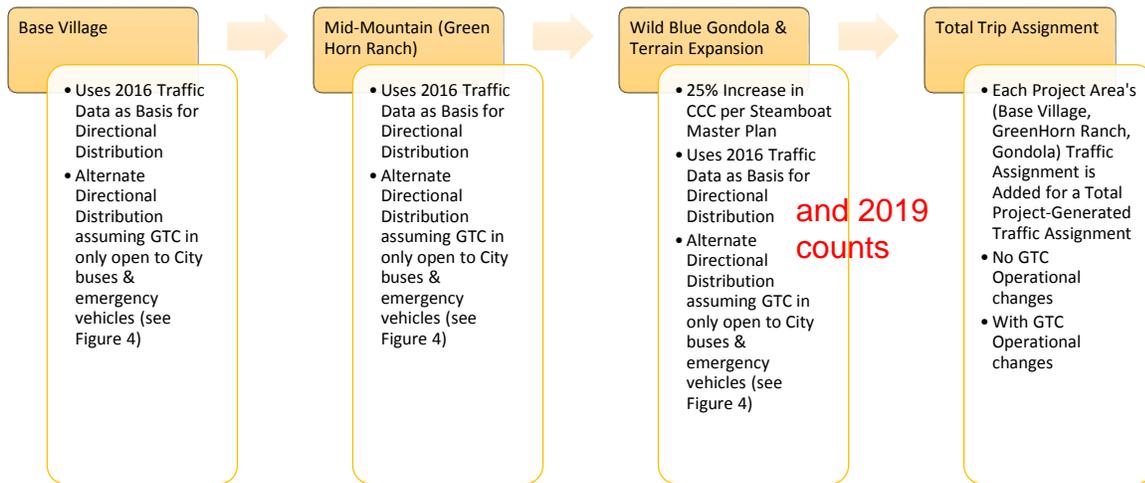


Figure 7: Project Traffic Assignment Methodology

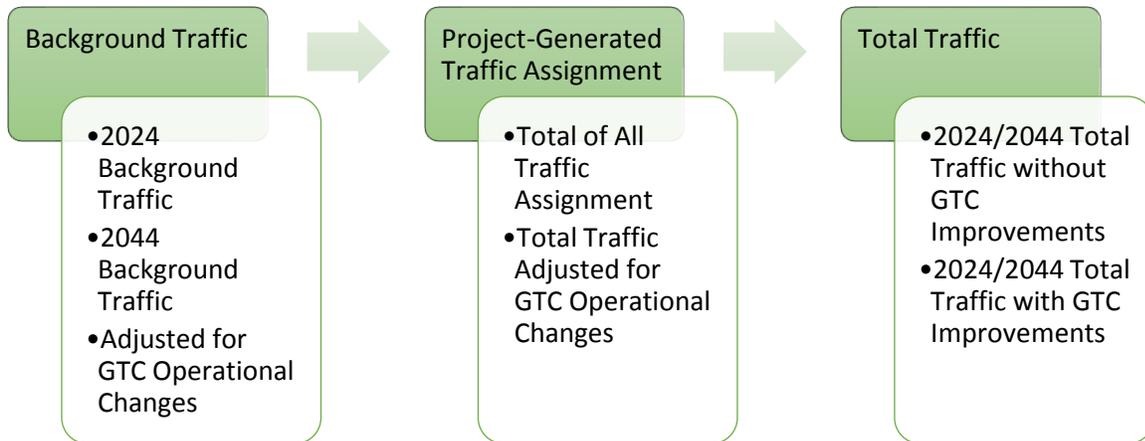


Figure 8: Total Traffic Methodology



Table 1 - Project Trip Generation
Estimated Project-Generated Traffic¹

ITE Code	Units ²		Eq. Coef	ITE Trip Generation Equation ³			Average Weekday Trips (vpd)	Morning Peak Hour		Evening Peak Hour					
				Avg. Weekday	AM Peak Hour	PM Peak Hour		% Trips	Trips (vph)	% Trips	Trips (vph)				
Steamboat Base Village															
Plaza Pavilion (Steamboat Base Village)															
Proposed Land Use															
#932 - High-Turnover (Sit Down) Restaurant 2nd Floor	12.9	kSF	Type a=b	Rate 112.18	A Rate 14.04	B Rate 17.41	1,447	57%	103	43%	78	52%	117	48%	108
<i>On-Site Reduction</i>	-30%						-434		-31		-23		-35		-32
Plaza Pavilion Proposed New Trips							1,013		72		55		82		76
Ticketing Building (Steamboat Base Village)															
Proposed Land Use															
#820 - Shopping Center	2.8	kSF	Type a=b	Rate 37.75	A Rate 2.76	B Rate 0.72	106	54%	46	46%	39	50%	22	50%	22
<i>On-Site Reduction</i>	-75%						-80		-35		-29		-17		-17
Ticketing Building Proposed New Trips							26		11		10		5		5
Building B (Steamboat Base Village)															
Proposed Land Use															
#712 - Small Office Building - Ground Floor	2.5	ksf	Type a=b	Rate 16.19	A Rate 3.26	B Rate 3.73	40	60%	5	40%	4	46%	5	54%	6
<i>On-Site Reduction</i>	-75%						-30		-4		-3		-4		-5
#932- High Turn-Over (Sit Down) Restaurant	7.5	ksf	Type a=b	Rate 112.18	A Rate 14.04	B Rate 17.41	841	57%	60	43%	45	52%	68	48%	63
<i>On-Site Reduction</i>	-30%						-252		-18		-14		-20		-19
#495 - Recreational Community Center - Ice Rink	17	kSF GFA	Type a=b	B Rate 0.98	B Rate 0.51	B Rate 0.58	491	67%	59	33%	29	40%	41	60%	62
<i>On-Site Reduction</i>	-75%						-368		-44		-22		-31		-47
#820 - Shopping Center - 3rd Floor	1.6	kSF	Type a=b	Rate 37.75	A Rate 2.76	B Rate 0.72	60	54%	44	46%	38	50%	14	50%	14
<i>On-Site Reduction</i>	-50%						-30		-22		-19		-7		-7
Building B Proposed New Trips							752		80		58		66		67
Subtotal - Steamboat Base Village							1,791		163		123		153		148
Greenhorn Ranch															
Proposed Land Use															
#710 - General Office Building - Maintenance/Office	6.2	kSF	Type a=b	B Rate 0.97	B Rate 0.88	Rate 1.42	72	88%	13	12%	2	18%	2	82%	8
<i>On-Site Reduction</i>	0%						0		0		0		0		0
#932 - High-Turnover (Sit Down) Restaurant - 2nd Floor	7.0	kSF	Type a=b	Rate 112.18	A Rate 14.04	B Rate 17.41	785	57%	56	43%	42	52%	63	48%	58
<i>On-Site Reduction</i>	-90%						-707		-50		-38		-57		-52
Subtotal - Mid Mountain							150		19		6		8		14
Gondola & Terrain Expansion															
Proposed Land Use															
New Gondola Line	25%			% of Existing Base Village Traffic Volumes			3,040		109		105		149		155
<i>On-Site Reduction</i>	0%						0		0		0		0		0
Subtotal - Gondola and Terrain Expansion							3,040		109		105		149		155
Totals - Steamboat Base Village, Greenhorn Ranch, and Gondola & Terrain Expansion							4,981		291		234		310		317

Notes:

- ¹ Values obtained from *Trip Generation, 10th Edition*, Institute of Transportation Engineers, 2017.
- ² DU = Dwelling Units, kSF = 1,000 Square Feet
- ³ Fitted curve equations from ITE Land Uses - Equation Type A is $T = a * X + b$, Equation Type B is $\ln(T) = a * \ln(X) + b$, Rate is $T = a * X$



Table 2 - Project Trip Generation with Mode Split
Estimated Project-Generated Traffic¹

problematic in the areas where passenger vehicles become shuttle trips and/or pedestrian trips as the passenger vehicle O/D trips should not be removed from the system

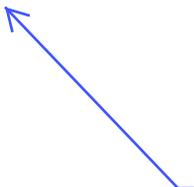
	ITE Code	Mode Split %	Passengers per Vehicle ¹	Normalized Carpool Rate ²	ITE Trip Generation Contributes Vehicle Trips?	Average	Morning Peak Hour		Evening Peak Hour	
						Weekday	Inbound	Outbound	Inbound	Outbound
						Trips (vpd)	Trips (vph)	Trips (vph)	Trips (vph)	Trips (vph)
Steamboat Base Village	Subtotal - Steamboat Base Village (From Table 1)					1,791	163	123	153	148
	Pedestrian Trips	30%	1.9	100%	No	537	49	37	46	44
	Gondola Square Garage	0%	1.9	100%	Yes	0	0	0	0	0
	Skier Drop Off / Pickup	10%	1.9	100%	Yes	179	16	12	15	15
	City Bus	20%	16.3	12%	Yes	42	4	3	4	3
	Small Shuttles	20%	4.7	40%	Yes	145	13	10	12	12
	Medium Shuttles	20%	11.1	17%	Yes	61	6	4	5	5
	Vehicle Trips					427	39	29	36	35
	Greenhorn Ranch	Greenhorn Ranch (From Table 1)					150	19	6	8
Pedestrian Trips		0%	1.9	100%	No	0	0	0	0	0
Gondola Square Garage		0%	1.9	100%	Yes	0	0	0	0	0
Skier Drop Off / Pickup		10%	1.9	100%	Yes	15	2	1	1	1
City Bus		30%	16.3	12%	Yes	5	1	0	0	0
Small Shuttles		30%	4.7	40%	Yes	18	2	1	1	2
Medium Shuttles		30%	11.1	17%	Yes	8	1	0	0	1
Vehicle Trips					46	6	2	2	4	
Gondola & Terrain Expansion	Gondola and Terrain Expansion (From Table 1)					3,040	109	105	149	155
	Pedestrian Trips	30%	1.9	100%	No	912	33	32	45	47
	Gondola Square Garage	0%	1.9	100%	Yes	0	0	0	0	0
	Skier Drop Off / Pickup	10%	1.9	100%	Yes	304	11	11	15	16
	City Bus	20%	16.3	12%	Yes	71	3	2	3	4
	Small Shuttles	20%	4.7	40%	Yes	246	9	8	12	13
	Medium Shuttles	20%	11.1	17%	Yes	104	4	4	5	5
	Vehicle Trips					725	26	25	36	37
Vehicle Trip Totals - Steamboat Base Village, Greenhorn Ranch, and Gondola & Terrain Expansion						1,198	71	56	74	77

Notes:

¹ Passengers per Vehicle is from the 2019 Steamboat Master Plan & 2019 GTC Data Collection.

² Normalized Carpool Rate = Number of Passengers per specific vehicle / 1.9 passengers per passenger car. Therefore, the adjustment factor for a car is 100%. The adjustment factor for a City bus is 12%, as it carries 8 times more people per vehicle.

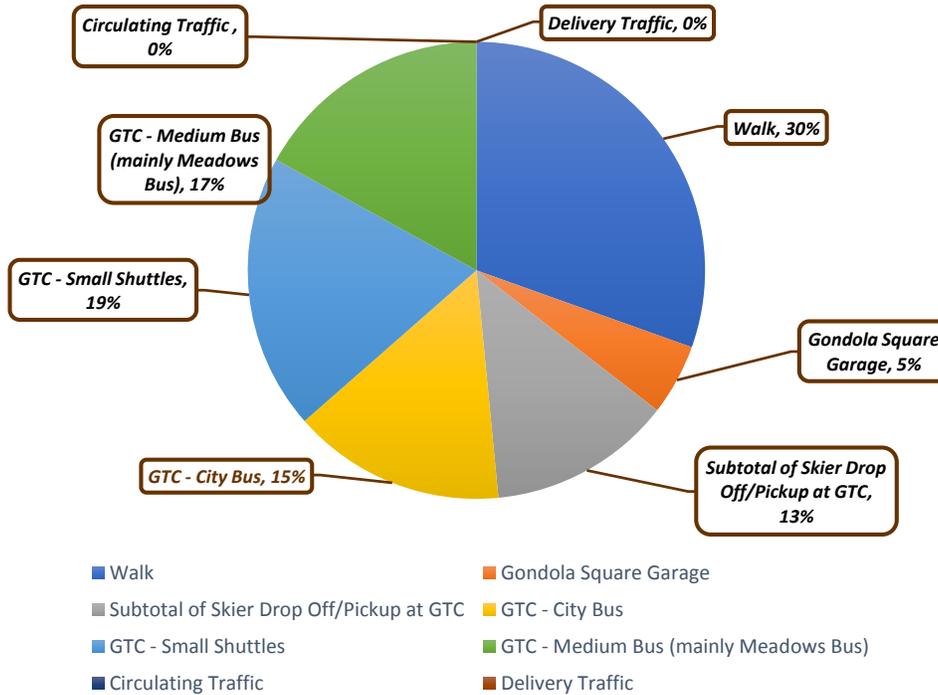
Where are passenger vehicles to Meadows and Knoll Parking Lot factored into this?



Will Provide separate distributions for vehicular and transit modes. Please see the pie chart for mode split breakdown based upon actual data.

Table 3 - Existing Conditions Comparison of GTC to
Steamboat Resort 2019
Master Development Plan Amendment

Mode of Travel	2019 Existing Conditions						
	Daily People	Mode Percentage	Passengers per Vehicle	Vehicles per Hour	Passengers per Hour	Percentage of Vehicular Traffic Attributing to GTC Traffic	Vehicular Traffic Attributing to GTC Traffic
Walk	3,975	30%	0	0	0	0%	0
Gondola Square Garage	656	5%	1.9	173	329	25%	43
Subtotal of Skier Drop Off/Pickup at GTC	1,693	13%	1.9	155	295	100%	155
GTC - City Bus	1,967	15%	16.3	28	456	100%	28
GTC - Small Shuttles	2,544	19%	4.7	135	635	150%	203
GTC - Medium Bus (mainly Meadows Bus)	2,214	17%	11.1	48	535	125%	60
Circulating Traffic	0	0%	N/A	354	N/A	100%	354
Delivery Traffic	0	0%	N/A	10	N/A	100%	10
Subtotal	13,049	100%		903			853

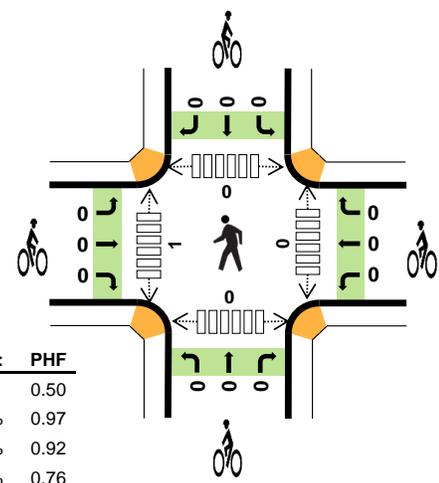
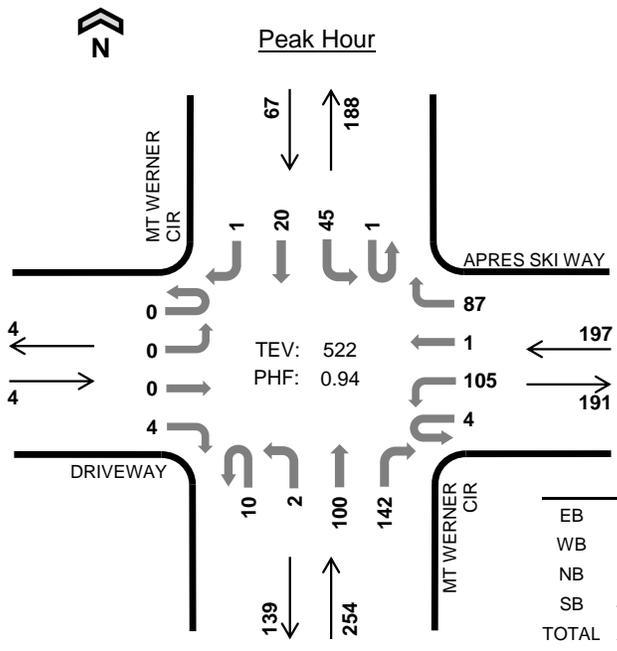


Existing Steamboat Resort Travel Demand
Existing CCC, per MP (page 48) 13,050
Upgrade CCC, per MP (page 71) 16,310

MT WERNER CIR APRES SKI WAY



Date: Fri, Dec 07, 2018
 Count Period: 8:00 AM to 11:00 AM
 Peak Hour: 8:00 AM to 9:00 AM



	HV %:	PHF
EB	0.0%	0.50
WB	18.8%	0.97
NB	18.9%	0.92
SB	46.3%	0.76
TOTAL	22.2%	0.94

Three-Hour Count Summaries

Interval Start	DRIVEWAY				APRES SKI WAY				MT WERNER CIR				MT WERNER CIR				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
8:00 AM	0	0	0	0	1	29	0	21	1	0	19	34	0	6	5	0	116	0	
8:15 AM	0	0	0	2	0	31	1	19	0	0	34	30	0	13	8	1	139	0	
8:30 AM	0	0	0	0	2	23	0	23	1	0	28	38	0	13	3	0	131	0	
8:45 AM	0	0	0	2	1	22	0	24	8	2	19	40	1	13	4	0	136	522	
Peak Hour	All	0	0	0	4	4	105	1	87	10	2	100	142	1	45	20	1	522	0
	HV	0	0	0	0	2	7	0	28	2	0	40	6	0	26	5	0	116	0
	HV%	-	-	-	0%	50%	7%	0%	32%	20%	0%	40%	4%	0%	58%	25%	0%	22%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
8:00 AM	0	9	10	5	24	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	5	16	10	31	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	11	10	9	30	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	12	12	7	31	0	0	0	0	0	0	1	0	0	1
Peak Hour	0	37	48	31	116	0	0	0	0	0	0	1	0	0	1

Three-Hour Count Summaries																			
Interval Start	DRIVEWAY				APRES SKI WAY				MT WERNER CIR				MT WERNER CIR				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
8:00 AM	0	0	0	0	1	29	0	21	1	0	19	34	0	6	5	0	116	0	
8:15 AM	0	0	0	2	0	31	1	19	0	0	34	30	0	13	8	1	139	0	
8:30 AM	0	0	0	0	2	23	0	23	1	0	28	38	0	13	3	0	131	0	
8:45 AM	0	0	0	2	1	22	0	24	8	2	19	40	1	13	4	0	136	522	
9:00 AM	0	0	0	0	0	32	0	14	4	2	26	20	1	6	7	0	112	518	
9:15 AM	0	0	0	0	0	25	0	15	5	1	23	36	0	7	3	3	118	497	
9:30 AM	0	0	0	2	0	25	0	14	3	1	19	26	0	7	12	2	111	477	
9:45 AM	0	0	0	0	0	32	0	22	2	1	22	28	0	13	6	0	126	467	
10:00 AM	0	0	0	0	0	31	0	13	3	2	15	26	0	17	2	0	109	464	
10:15 AM	0	0	0	1	0	24	1	14	0	2	22	21	1	10	6	1	103	449	
10:30 AM	0	1	0	0	0	26	0	15	2	2	19	34	0	12	7	0	118	456	
10:45 AM	0	0	0	1	0	26	0	19	3	1	26	42	0	14	9	1	142	472	
Count Total	0	1	0	8	4	326	2	213	32	14	272	375	3	131	72	8	1,461	0	
Peak Hour	All	0	0	0	4	4	105	1	87	10	2	100	142	1	45	20	1	522	0
	HV	0	0	0	0	2	7	0	28	2	0	40	6	0	26	5	0	116	0
	HV%	-	-	-	0%	50%	7%	0%	32%	20%	0%	40%	4%	0%	58%	25%	0%	22%	0

Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
8:00 AM	0	9	10	5	24	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	5	16	10	31	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	11	10	9	30	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	12	12	7	31	0	0	0	0	0	0	1	0	0	1
9:00 AM	0	5	12	4	21	0	0	0	0	0	0	1	0	0	1
9:15 AM	0	6	13	5	24	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	4	13	3	20	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	10	18	8	36	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	7	9	8	24	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	8	12	8	28	0	0	0	0	0	0	0	1	2	3
10:30 AM	0	9	11	8	28	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	10	9	6	25	0	0	0	0	0	0	0	0	0	0
Count Total	0	96	145	81	322	0	0	0	0	0	0	2	1	2	5
Peak Hour	0	37	48	31	116	0	0	0	0	0	0	1	0	0	1

Three-Hour Count Summaries - Heavy Vehicles																		
Interval Start	DRIVEWAY				APRES SKI WAY				MT WERNER CIR				MT WERNER CIR				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
8:00 AM	0	0	0	0	0	2	0	7	0	0	9	1	0	4	1	0	24	0
8:15 AM	0	0	0	0	0	0	0	5	0	0	14	2	0	7	3	0	31	0
8:30 AM	0	0	0	0	1	3	0	7	1	0	8	1	0	8	1	0	30	0
8:45 AM	0	0	0	0	1	2	0	9	1	0	9	2	0	7	0	0	31	116
9:00 AM	0	0	0	0	0	1	0	4	0	0	12	0	0	3	1	0	21	113
9:15 AM	0	0	0	0	0	0	0	6	0	0	12	1	0	5	0	0	24	106
9:30 AM	0	0	0	0	0	1	0	3	0	0	6	7	0	2	1	0	20	96
9:45 AM	0	0	0	0	0	4	0	6	0	0	12	6	0	8	0	0	36	101
10:00 AM	0	0	0	0	0	0	0	7	0	0	8	1	0	8	0	0	24	104
10:15 AM	0	0	0	0	0	2	0	6	0	0	10	2	1	4	3	0	28	108
10:30 AM	0	0	0	0	0	3	0	6	0	0	9	2	0	6	2	0	28	116
10:45 AM	0	0	0	0	0	2	0	8	0	0	9	0	0	5	1	0	25	105
Count Total	0	0	0	0	2	20	0	74	2	0	118	25	1	67	13	0	322	0
Peak Hour	0	0	0	0	2	7	0	28	2	0	40	6	0	26	5	0	116	0

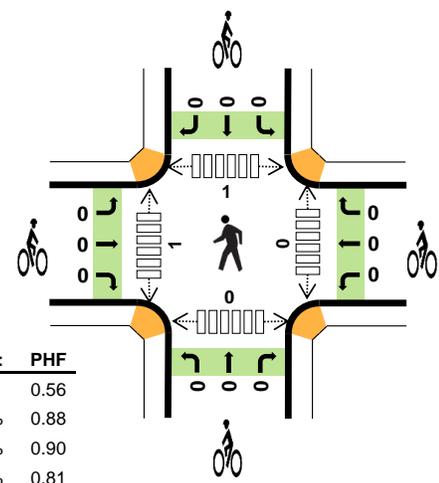
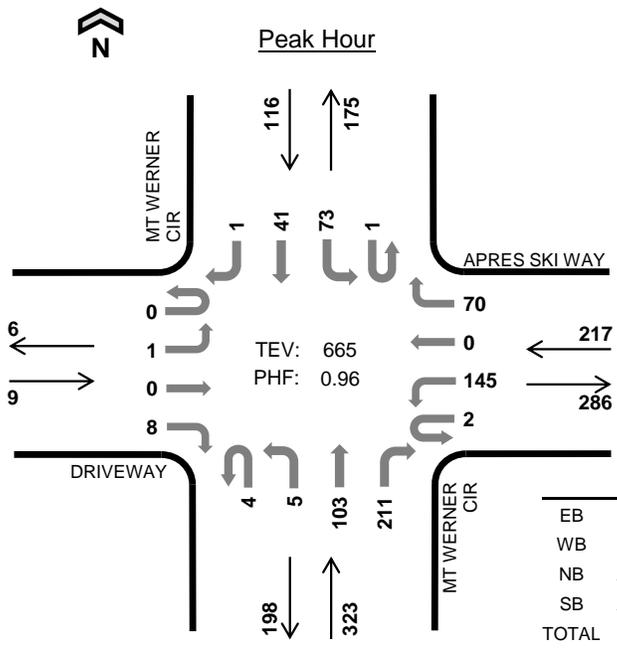
Three-Hour Count Summaries - Bikes																		
Interval Start	DRIVEWAY				APRES SKI WAY				MT WERNER CIR				MT WERNER CIR				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	LT	TH	RT		LT	TH	RT		LT	TH	RT		LT	TH	RT			
8:00 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
8:15 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
8:30 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
8:45 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
9:00 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
9:15 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
9:30 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
9:45 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
10:00 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
10:15 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
10:30 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
10:45 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
Count Total	0	0	0		0	0	0		0	0	0		0	0	0		0	0
Peak Hour	0	0	0		0	0	0		0	0	0		0	0	0		0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

MT WERNER CIR APRES SKI WAY



Date: Fri, Dec 07, 2018
 Count Period: 2:00 PM to 6:00 PM
 Peak Hour: 2:15 PM to 3:15 PM



	HV %:	PHF
EB	0.0%	0.56
WB	13.4%	0.88
NB	20.4%	0.90
SB	25.0%	0.81
TOTAL	18.6%	0.96

Four-Hour Count Summaries

Interval Start	DRIVEWAY				APRES SKI WAY				MT WERNER CIR				MT WERNER CIR				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
2:15 PM	0	0	0	3	0	32	0	19	2	1	23	58	0	26	10	0	174	0	
2:30 PM	0	0	0	1	1	39	0	22	1	2	23	52	0	14	12	0	167	0	
2:45 PM	0	1	0	3	0	32	0	16	1	2	34	53	1	14	10	1	168	0	
3:00 PM	0	0	0	1	1	42	0	13	0	0	23	48	0	19	9	0	156	665	
Peak Hour	All	0	1	0	8	2	145	0	70	4	5	103	211	1	73	41	1	665	0
	HV	0	0	0	0	0	3	0	26	0	0	40	26	0	20	9	0	124	0
	HV%	-	0%	-	0%	0%	2%	-	37%	0%	0%	39%	12%	0%	27%	22%	0%	19%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
2:15 PM	0	8	25	10	43	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	10	14	7	31	0	0	0	0	0	0	0	1	0	1
2:45 PM	0	6	13	5	24	0	0	0	0	0	0	1	0	0	1
3:00 PM	0	5	14	7	26	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	29	66	29	124	0	0	0	0	0	0	1	1	0	2

Four-Hour Count Summaries																			
Interval Start	DRIVEWAY				APRES SKI WAY				MT WERNER CIR				MT WERNER CIR				15-min Total	Rolling One Hour	
	Eastbound		RT		Westbound		RT		Northbound		RT		Southbound		RT				
2:00 PM	0	0	0	1	0	24	0	16	0	1	19	31	0	16	7	1	116	0	
2:15 PM	0	0	0	3	0	32	0	19	2	1	23	58	0	26	10	0	174	0	
2:30 PM	0	0	0	1	1	39	0	22	1	2	23	52	0	14	12	0	167	0	
2:45 PM	0	1	0	3	0	32	0	16	1	2	34	53	1	14	10	1	168	625	
3:00 PM	0	0	0	1	1	42	0	13	0	0	23	48	0	19	9	0	156	665	
3:15 PM	0	0	0	2	0	29	0	28	0	0	24	25	0	20	11	0	139	630	
3:30 PM	0	2	0	2	0	28	0	20	0	1	32	50	1	17	15	2	170	633	
3:45 PM	0	0	1	4	0	37	0	18	0	2	24	49	0	13	10	0	158	623	
4:00 PM	0	2	0	2	0	45	1	25	1	2	19	47	1	20	14	0	179	646	
4:15 PM	0	1	0	2	2	30	0	18	0	1	24	52	4	8	15	0	157	664	
4:30 PM	0	1	0	2	0	33	1	13	0	2	19	62	2	17	5	1	158	652	
4:45 PM	0	0	1	0	0	25	0	21	0	1	20	50	1	17	9	1	146	640	
5:00 PM	0	1	0	2	0	46	0	7	0	0	20	52	0	16	15	1	160	621	
5:15 PM	0	0	0	1	1	29	0	14	1	0	16	38	0	11	10	0	121	585	
5:30 PM	0	0	0	0	0	21	0	19	1	0	10	35	0	18	10	0	114	541	
5:45 PM	0	0	0	0	0	16	0	16	1	0	11	32	0	17	9	0	102	497	
Count Total	0	8	2	26	5	508	2	285	8	15	341	734	10	263	171	7	2,385	0	
Peak Hour	All	0	1	0	8	2	145	0	70	4	5	103	211	1	73	41	1	665	0
	HV	0	0	0	0	0	3	0	26	0	0	40	26	0	20	9	0	124	0
	HV%	-	0%	-	0%	0%	2%	-	37%	0%	0%	39%	12%	0%	27%	22%	0%	19%	0

Note: Four-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
2:00 PM	0	9	14	6	29	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	8	25	10	43	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	10	14	7	31	0	0	0	0	0	0	0	1	0	1
2:45 PM	0	6	13	5	24	0	0	0	0	0	0	1	0	0	1
3:00 PM	0	5	14	7	26	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	8	13	6	27	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	7	16	4	27	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	6	20	9	35	0	0	0	0	0	0	2	1	0	3
4:00 PM	0	9	16	8	33	0	0	0	0	0	0	5	4	0	9
4:15 PM	0	9	16	3	28	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	7	8	6	21	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	11	13	7	31	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	5	14	5	24	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	8	12	5	25	0	0	0	0	0	0	0	2	0	2
5:30 PM	0	8	9	7	24	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	6	8	7	21	0	0	0	0	0	0	0	0	0	0
Count Total	0	122	225	102	449	0	0	0	0	0	0	8	8	0	16
Peak Hour	0	29	66	29	124	0	0	0	0	0	0	1	1	0	2

Four-Hour Count Summaries - Heavy Vehicles																		
Interval Start	DRIVEWAY				APRES SKI WAY				MT WERNER CIR				MT WERNER CIR				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
2:00 PM	0	0	0	0	0	1	0	8	0	0	9	5	0	4	2	0	29	0
2:15 PM	0	0	0	0	0	1	0	7	0	0	12	13	0	7	3	0	43	0
2:30 PM	0	0	0	0	0	2	0	8	0	0	10	4	0	5	2	0	31	0
2:45 PM	0	0	0	0	0	0	0	6	0	0	10	3	0	3	2	0	24	127
3:00 PM	0	0	0	0	0	0	0	5	0	0	8	6	0	5	2	0	26	124
3:15 PM	0	0	0	0	0	0	0	8	0	0	11	2	0	5	1	0	27	108
3:30 PM	0	0	0	0	0	0	0	7	0	0	12	4	0	3	1	0	27	104
3:45 PM	0	0	0	0	0	0	0	6	0	0	10	10	0	8	1	0	35	115
4:00 PM	0	0	0	0	0	0	0	9	0	0	11	5	0	5	3	0	33	122
4:15 PM	0	0	0	0	1	0	0	8	0	0	9	7	0	2	1	0	28	123
4:30 PM	0	0	0	0	0	1	0	6	0	0	6	2	0	5	1	0	21	117
4:45 PM	0	0	0	0	0	2	0	9	0	0	9	4	0	6	1	0	31	113
5:00 PM	0	0	0	0	0	3	0	2	0	0	9	5	0	5	0	0	24	104
5:15 PM	0	0	0	0	1	0	0	7	0	0	7	5	0	4	1	0	25	101
5:30 PM	0	0	0	0	0	0	0	8	0	0	4	5	0	6	1	0	24	104
5:45 PM	0	0	0	0	0	0	0	6	0	0	5	3	0	6	1	0	21	94
Count Total	0	0	0	0	2	10	0	110	0	0	142	83	0	79	23	0	449	0
Peak Hour	0	0	0	0	0	3	0	26	0	0	40	26	0	20	9	0	124	0

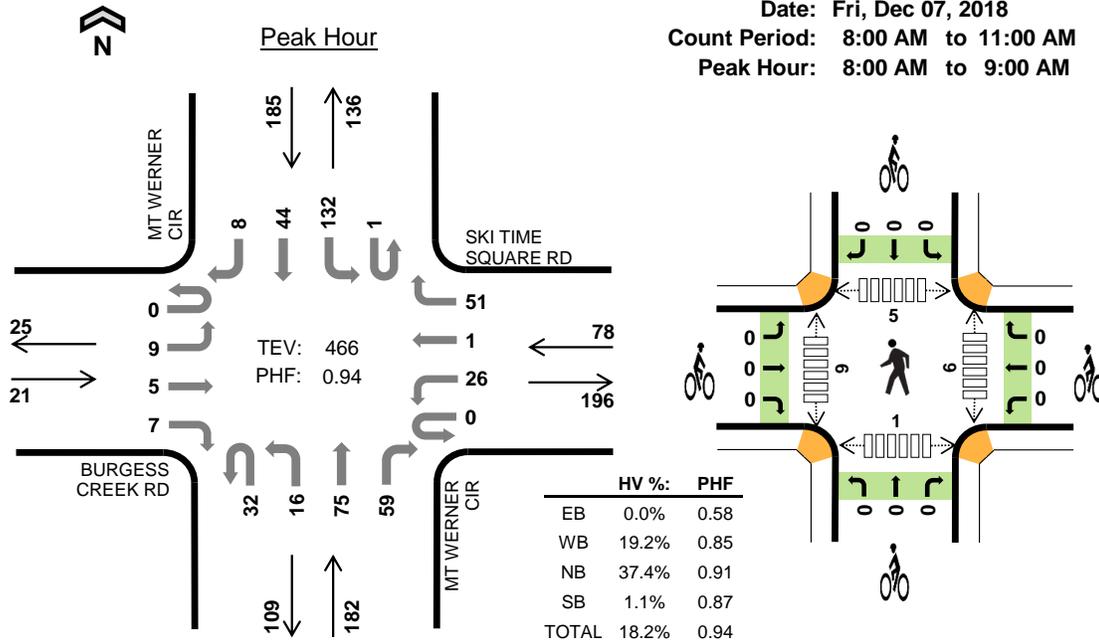
Four-Hour Count Summaries - Bikes																
Interval Start	DRIVEWAY			APRES SKI WAY			MT WERNER CIR			MT WERNER CIR			15-min Total	Rolling One Hour		
	Eastbound			Westbound			Northbound			Southbound						
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT				
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

MT WERNER CIR BURGESS CREEK RD



Date: Fri, Dec 07, 2018
 Count Period: 8:00 AM to 11:00 AM
 Peak Hour: 8:00 AM to 9:00 AM



Three-Hour Count Summaries

Interval Start	BURGESS CREEK RD				SKI TIME SQUARE RD				MT WERNER CIR				MT WERNER CIR				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
8:00 AM	0	1	0	0	0	7	0	8	5	4	15	13	0	38	12	3	106	0	
8:15 AM	0	2	0	3	0	8	1	12	9	4	19	15	1	37	10	3	124	0	
8:30 AM	0	2	5	2	0	4	0	15	10	4	20	16	0	32	11	1	122	0	
8:45 AM	0	4	0	2	0	7	0	16	8	4	21	15	0	25	11	1	114	466	
Peak Hour	All	0	9	5	7	0	26	1	51	32	16	75	59	1	132	44	8	466	0
	HV	0	0	0	0	0	9	0	6	23	1	32	12	0	2	0	0	85	0
	HV%	-	0%	0%	0%	-	35%	0%	12%	72%	6%	43%	20%	0%	2%	0%	0%	18%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
8:00 AM	0	4	18	1	23	0	0	0	0	0	1	1	1	0	3
8:15 AM	0	4	16	1	21	0	0	0	0	0	0	1	1	1	3
8:30 AM	0	4	16	0	20	0	0	0	0	0	2	5	1	0	8
8:45 AM	0	3	18	0	21	0	0	0	0	0	3	2	2	0	7
Peak Hour	0	15	68	2	85	0	0	0	0	0	6	9	5	1	21

Three-Hour Count Summaries																			
Interval Start	BURGESS CREEK RD				SKI TIME SQUARE RD				MT WERNER CIR				MT WERNER CIR				15-min Total	Rolling One Hour	
	Eastbound		Westbound		Northbound		Southbound		UT	LT	TH	RT	UT	LT	TH	RT			
8:00 AM	0	1	0	0	0	7	0	8	5	4	15	13	0	38	12	3	106	0	
8:15 AM	0	2	0	3	0	8	1	12	9	4	19	15	1	37	10	3	124	0	
8:30 AM	0	2	5	2	0	4	0	15	10	4	20	16	0	32	11	1	122	0	
8:45 AM	0	4	0	2	0	7	0	16	8	4	21	15	0	25	11	1	114	466	
9:00 AM	0	1	0	2	0	4	0	16	2	2	27	15	0	24	3	3	99	459	
9:15 AM	0	3	2	1	0	7	0	18	9	1	20	9	0	19	8	0	97	432	
9:30 AM	0	2	1	0	0	14	0	23	5	1	21	12	0	19	8	2	108	418	
9:45 AM	0	1	0	2	1	7	0	23	8	3	16	13	1	25	1	1	102	406	
10:00 AM	0	4	2	3	0	10	0	28	5	0	18	9	0	24	11	3	117	424	
10:15 AM	0	2	2	1	0	7	0	29	3	3	13	7	0	15	11	0	93	420	
10:30 AM	0	8	2	2	0	10	0	30	8	0	23	14	0	23	8	0	128	440	
10:45 AM	0	3	3	0	0	8	0	22	7	0	22	12	0	19	12	1	109	447	
Count Total	0	33	17	18	1	93	1	240	79	26	235	150	2	300	106	18	1,319	0	
Peak Hour	All	0	9	5	7	0	26	1	51	32	16	75	59	1	132	44	8	466	0
	HV	0	0	0	0	0	9	0	6	23	1	32	12	0	2	0	0	85	0
	HV%	-	0%	0%	0%	-	35%	0%	12%	72%	6%	43%	20%	0%	2%	0%	0%	18%	0

Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
8:00 AM	0	4	18	1	23	0	0	0	0	0	1	1	1	0	3
8:15 AM	0	4	16	1	21	0	0	0	0	0	0	1	1	1	3
8:30 AM	0	4	16	0	20	0	0	0	0	0	2	5	1	0	8
8:45 AM	0	3	18	0	21	0	0	0	0	0	3	2	2	0	7
9:00 AM	0	3	12	1	16	0	0	0	0	0	1	2	6	1	10
9:15 AM	0	1	18	2	21	0	0	0	0	0	0	0	1	2	3
9:30 AM	1	4	14	1	20	0	0	0	0	0	1	4	3	0	8
9:45 AM	0	4	17	1	22	0	0	0	0	0	0	1	0	5	6
10:00 AM	0	7	17	2	26	0	0	0	0	0	1	0	4	0	5
10:15 AM	1	7	14	2	24	0	0	0	0	0	4	0	0	0	4
10:30 AM	0	3	17	1	21	0	0	0	0	0	0	6	10	0	16
10:45 AM	0	2	16	1	19	0	0	0	0	0	1	3	5	3	12
Count Total	2	46	193	13	254	0	0	0	0	0	14	25	34	12	85
Peak Hour	0	15	68	2	85	0	0	0	0	0	6	9	5	1	21

Three-Hour Count Summaries - Heavy Vehicles														15-min Total	Rolling One Hour			
Interval Start	BURGESS CREEK RD				SKI TIME SQUARE RD				MT WERNER CIR				MT WERNER CIR					
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
8:00 AM	0	0	0	0	0	3	0	1	4	1	9	4	0	1	0	0	23	0
8:15 AM	0	0	0	0	0	1	0	3	7	0	5	4	0	1	0	0	21	0
8:30 AM	0	0	0	0	0	3	0	1	5	0	9	2	0	0	0	0	20	0
8:45 AM	0	0	0	0	0	2	0	1	7	0	9	2	0	0	0	0	21	85
9:00 AM	0	0	0	0	0	1	0	2	1	0	9	2	0	1	0	0	16	78
9:15 AM	0	0	0	0	0	0	0	1	5	0	11	2	0	2	0	0	21	78
9:30 AM	0	0	1	0	0	3	0	1	2	0	10	2	0	1	0	0	20	78
9:45 AM	0	0	0	0	0	2	0	2	6	0	7	4	0	1	0	0	22	79
10:00 AM	0	0	0	0	0	3	0	4	3	0	9	5	0	2	0	0	26	89
10:15 AM	0	0	0	1	0	4	0	3	3	0	9	2	0	1	1	0	24	92
10:30 AM	0	0	0	0	0	2	0	1	7	0	8	2	0	1	0	0	21	93
10:45 AM	0	0	0	0	0	1	0	1	5	0	10	1	0	0	1	0	19	90
Count Total	0	0	1	1	0	25	0	21	55	1	105	32	0	11	2	0	254	0
Peak Hour	0	0	0	0	0	9	0	6	23	1	32	12	0	2	0	0	85	0

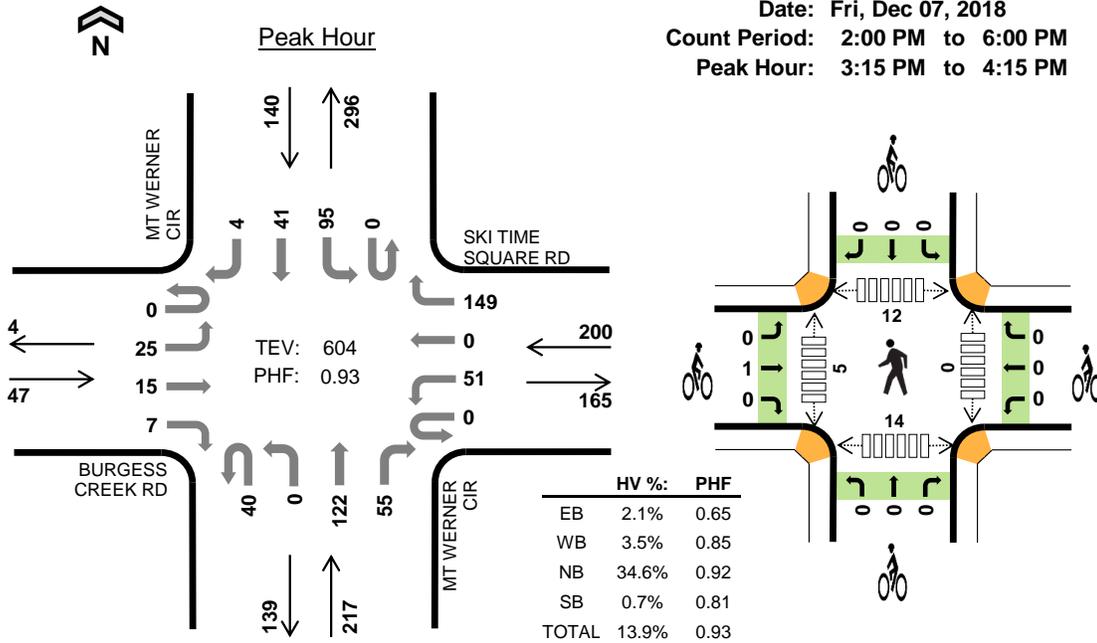
Three-Hour Count Summaries - Bikes														15-min Total	Rolling One Hour
Interval Start	BURGESS CREEK RD			SKI TIME SQUARE RD			MT WERNER CIR			MT WERNER CIR					
	Eastbound			Westbound			Northbound			Southbound					
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT			
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

MT WERNER CIR BURGESS CREEK RD



Date: Fri, Dec 07, 2018
 Count Period: 2:00 PM to 6:00 PM
 Peak Hour: 3:15 PM to 4:15 PM



Four-Hour Count Summaries

Interval Start	BURGESS CREEK RD				SKI TIME SQUARE RD				MT WERNER CIR				MT WERNER CIR				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
3:15 PM	0	5	6	4	0	15	0	30	10	0	32	17	0	23	9	1	152	0	
3:30 PM	0	6	2	0	0	19	0	40	11	0	34	14	0	26	11	0	163	0	
3:45 PM	0	3	1	2	0	6	0	41	9	0	21	11	0	32	11	0	137	0	
4:00 PM	0	11	6	1	0	11	0	38	10	0	35	13	0	14	10	3	152	604	
Peak Hour	All	0	25	15	7	0	51	0	149	40	0	122	55	0	95	41	4	604	0
	HV	0	1	0	0	0	4	0	3	22	0	41	12	0	0	1	0	84	0
	HV%	-	4%	0%	0%	-	8%	-	2%	55%	-	34%	22%	-	0%	2%	0%	14%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:15 PM	1	1	20	1	23	0	0	0	0	0	0	2	3	7	12
3:30 PM	0	2	19	0	21	0	0	0	0	0	0	2	6	4	12
3:45 PM	0	3	16	0	19	1	0	0	0	1	0	0	3	1	4
4:00 PM	0	1	20	0	21	0	0	0	0	0	0	1	0	2	3
Peak Hour	1	7	75	1	84	1	0	0	0	1	0	5	12	14	31

Four-Hour Count Summaries																			
Interval Start	BURGESS CREEK RD				SKI TIME SQUARE RD				MT WERNER CIR				MT WERNER CIR				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
2:00 PM	0	9	1	1	0	17	0	34	3	0	18	26	1	24	6	1	141	0	
2:15 PM	0	3	3	1	0	12	0	26	5	0	28	12	0	19	10	0	119	0	
2:30 PM	0	5	3	3	0	16	1	23	7	0	26	12	0	18	9	1	124	0	
2:45 PM	0	11	1	3	0	8	1	28	7	0	30	16	1	25	11	0	142	526	
3:00 PM	0	10	1	5	0	14	0	22	7	0	17	20	0	12	6	0	114	499	
3:15 PM	0	5	6	4	0	15	0	30	10	0	32	17	0	23	9	1	152	532	
3:30 PM	0	6	2	0	0	19	0	40	11	0	34	14	0	26	11	0	163	571	
3:45 PM	0	3	1	2	0	6	0	41	9	0	21	11	0	32	11	0	137	566	
4:00 PM	0	11	6	1	0	11	0	38	10	0	35	13	0	14	10	3	152	604	
4:15 PM	0	3	2	2	0	12	0	35	8	1	28	10	0	22	13	0	136	588	
4:30 PM	0	4	1	2	0	12	0	26	7	0	22	9	0	15	4	3	105	530	
4:45 PM	0	3	3	5	0	13	0	37	10	1	34	5	1	28	15	0	155	548	
5:00 PM	0	4	6	1	0	13	0	34	3	0	15	10	0	17	10	2	115	511	
5:15 PM	0	7	2	3	0	9	0	21	4	0	20	8	0	18	10	0	102	477	
5:30 PM	0	7	2	8	0	7	0	17	1	0	22	10	0	14	12	1	101	473	
5:45 PM	0	2	3	9	0	8	1	27	2	0	15	7	0	16	9	1	100	418	
Count Total	0	93	43	50	0	192	3	479	104	2	397	200	3	323	156	13	2,058	0	
Peak Hour	All	0	25	15	7	0	51	0	149	40	0	122	55	0	95	41	4	604	0
	HV	0	1	0	0	0	4	0	3	22	0	41	12	0	0	1	0	84	0
	HV%	-	4%	0%	0%	-	8%	-	2%	55%	-	34%	22%	-	0%	2%	0%	14%	0

Note: Four-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)					
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total	
2:00 PM	2	5	17	2	26	0	0	0	0	0	0	0	0	0	3	3
2:15 PM	0	4	18	1	23	0	0	0	0	0	0	6	5	0	0	11
2:30 PM	0	3	20	1	24	0	0	0	0	0	0	0	1	0	1	
2:45 PM	1	3	15	1	20	0	0	0	0	0	0	9	6	0	0	15
3:00 PM	1	4	12	2	19	1	1	0	0	2	0	5	7	4	0	16
3:15 PM	1	1	20	1	23	0	0	0	0	0	0	2	3	7	7	12
3:30 PM	0	2	19	0	21	0	0	0	0	0	0	2	6	4	4	12
3:45 PM	0	3	16	0	19	1	0	0	0	1	0	0	3	1	4	4
4:00 PM	0	1	20	0	21	0	0	0	0	0	0	1	0	2	3	3
4:15 PM	1	3	16	1	21	0	0	0	0	0	0	3	8	8	0	19
4:30 PM	0	3	15	1	19	0	0	0	0	0	0	7	16	10	0	33
4:45 PM	1	3	16	1	21	0	0	0	0	0	0	3	4	4	0	11
5:00 PM	1	4	11	2	18	0	0	0	0	0	0	3	8	7	0	18
5:15 PM	2	4	11	1	18	0	0	0	0	0	0	1	8	0	0	9
5:30 PM	7	6	14	1	28	0	0	0	0	0	0	4	2	0	0	6
5:45 PM	7	4	12	2	25	0	0	0	0	0	0	2	2	0	0	4
Count Total	24	53	252	17	346	2	1	0	0	3	0	48	79	50	0	177
Peak Hour	1	7	75	1	84	1	0	0	0	1	0	5	12	14	0	31

Four-Hour Count Summaries - Heavy Vehicles																		
Interval Start	BURGESS CREEK RD				SKI TIME SQUARE RD				MT WERNER CIR				MT WERNER CIR				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
2:00 PM	0	2	0	0	0	4	0	1	3	0	8	6	0	2	0	0	26	0
2:15 PM	0	0	0	0	0	3	0	1	4	0	12	2	0	0	1	0	23	0
2:30 PM	0	0	0	0	0	3	0	0	4	0	11	5	0	1	0	0	24	0
2:45 PM	0	1	0	0	0	1	0	2	4	0	10	1	0	0	1	0	20	93
3:00 PM	0	1	0	0	0	1	0	3	2	0	7	3	0	2	0	0	19	86
3:15 PM	0	1	0	0	0	0	0	1	6	0	11	3	0	0	1	0	23	86
3:30 PM	0	0	0	0	0	1	0	1	6	0	10	3	0	0	0	0	21	83
3:45 PM	0	0	0	0	0	3	0	0	6	0	8	2	0	0	0	0	19	82
4:00 PM	0	0	0	0	0	0	0	1	4	0	12	4	0	0	0	0	21	84
4:15 PM	0	1	0	0	0	1	0	2	4	0	11	1	0	0	1	0	21	82
4:30 PM	0	0	0	0	0	1	0	2	6	0	7	2	0	1	0	0	19	80
4:45 PM	0	1	0	0	0	2	0	1	4	0	11	1	0	0	1	0	21	82
5:00 PM	0	1	0	0	0	2	0	2	2	0	4	5	0	1	1	0	18	79
5:15 PM	0	1	0	1	0	1	0	3	1	0	8	2	0	1	0	0	18	76
5:30 PM	0	1	1	5	0	2	0	4	0	0	12	2	0	0	1	0	28	85
5:45 PM	0	1	1	5	0	2	0	2	1	0	10	1	0	2	0	0	25	89
Count Total	0	11	2	11	0	27	0	26	57	0	152	43	0	10	7	0	346	0
Peak Hour	0	1	0	0	0	4	0	3	22	0	41	12	0	0	1	0	84	0

Four-Hour Count Summaries - Bikes																		
Interval Start	BURGESS CREEK RD			SKI TIME SQUARE RD			MT WERNER CIR			MT WERNER CIR			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	2
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0
Peak Hour	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

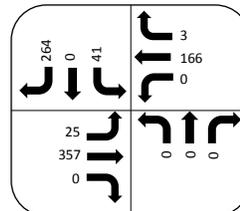
Mt. Werner Road & Mt. Werner Circle
 Steamboat Springs, Colorado
 Data Collection Date: Saturday, March 19, 2016
 Weather: Cloudy



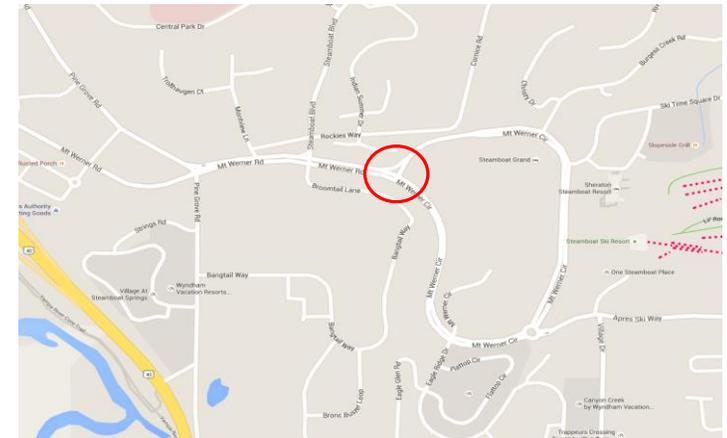
Weekend Traffic Counts

Start Time	Mt. Werner Road Eastbound												Mt. Werner Circle Westbound												N/A Northbound												Mt. Werner Circle Southbound											
	Left				Thru				Right				Left				Thru				Right				Left				Thru				Right															
	Car	Truck	Ped	Bike	Car	Truck	Ped	Bike	Car	Truck	Ped	Bike	Car	Truck	Ped	Bike	Car	Truck	Ped	Bike	Car	Truck	Ped	Bike	Car	Truck	Ped	Bike	Car	Truck	Ped	Bike	Car	Truck	Ped	Bike	Car	Truck	Ped	Bike								
8:00 AM	56	2	0	0	86	12	0	2					25	1	0	0	2	0	0	0					0	0	0	0	2	3	0	0					29	10	0	0								
8:15 AM	66	4	0	0	87	13	0	0					29	4	0	0	0	0	0	0					0	0	0	0	1	5	0	0					54	14	0	0								
8:30 AM	59	1	0	0	71	16	0	0					38	3	0	0	1	0	0	0					2	7	0	0					51	10	0	0												
8:45 AM	56	1	0	0	69	15	0	0					42	4	0	0	1	0	0	0					0	0	0	0	4	7	0	0					65	20	0	0								
9:00 AM	62	7	0	0	71	15	0	0					44	2	0	0	1	0	0	0					0	0	0	0	6	9	0	0					30	20	0	0								
9:15 AM	41	2	0	0	57	16	1	0					54	2	0	0	0	0	0	0					0	0	0	0	5	5	0	0					45	25	0	0								
9:30 AM	45	2	0	0	65	15	0	1					43	1	1	0	0	0	0	0					0	0	0	0	2	8	0	0					59	12	0	0								
9:45 AM	62	2	0	0	62	18	0	0					58	4	0	0	1	0	0	0					0	0	0	0	4	6	0	0					56	20	0	0								
Total	447	21	0	0	568	120	1	3	0	0	0	0	0	0	0	0	6	0	0	2	0	0	0	0	0	26	50	0	0	0	0	0	0	389	131	0	0											
Peak Hour Total	243	13	0	0	298	59	0	0	0	0	3	0	0	2	0	0	0	0	0	13	28	0	0	0	0	0	0	200	64	0	0																	
Peak Hour Total	256 vph	0 pph	0 pph	0 pph	357 vph	0 pph	0 pph	0 pph	0 vph	0 pph	0 pph	0 pph	0 vph	0 pph	0 pph	0 pph	3 vph	0 pph	0 pph	0 pph	0 vph	0 pph	0 pph	0 pph	0 vph	2 pph	0 vph	0 pph	0 vph	0 pph	0 pph	0 pph	41 vph	0 pph	0 pph	0 pph	0 vph	0 pph	264 vph	0 pph								

Total Peak Hour Vehicle Traffic at Intersection 1087 vph
 Total Peak Hour Peds/Bikes at Intersection 2 pph
 Total Peak Hour Traffic (All Modes) at Intersection 1089 pph
 Percentage Peak Hour Trucks at Intersection 16.3 %
 Peak Hour Factor 0.96



Peak Hour Data (Vehicular)



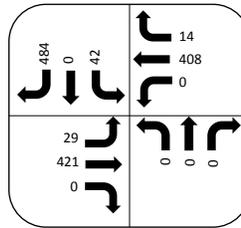
Mt. Werner Road & Mt. Werner Circle
 Steamboat Springs, Colorado
 Data Collection Date: Saturday, March 19, 2016
 Weather: Cloudy



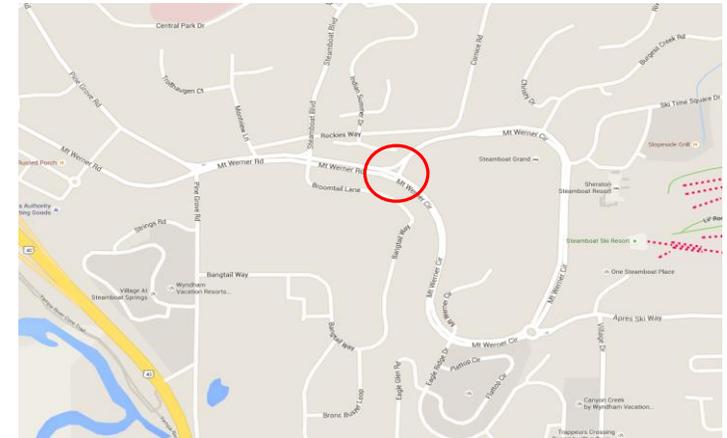
Weekend Traffic Counts

Start Time	Mt. Werner Road Eastbound												Mt. Werner Circle Westbound												N/A Northbound												Mt. Werner Circle Southbound											
	Left				Thru				Right				Left				Thru				Right				Left				Thru				Right															
	Car	Truck	Ped	Bike	Car	Truck	Ped	Bike	Car	Truck	Ped	Bike	Car	Truck	Ped	Bike	Car	Truck	Ped	Bike	Car	Truck	Ped	Bike	Car	Truck	Ped	Bike	Car	Truck	Ped	Bike	Car	Truck	Ped	Bike	Car	Truck	Ped	Bike								
3:00 PM	54	5	0	0	73	20	0	0					70	5	2	0	1	1	0	0									4	6	0	0					87	18	0	0								
3:15 PM	63	6	0	0	91	19	0	0					72	2	0	0	1	1	0	0									4	5	0	0					101	19	0	0								
3:30 PM	68	2	0	0	102	9	2	0					83	6	0	0	6	0	0	0									7	4	0	0					76	18	0	0								
3:45 PM	77	5	0	0	97	17	0	0					91	3	0	1	4	0	0	0									5	3	0	0					82	18	0	0								
4:00 PM	70	10	0	0	116	16	0	0					85	4	0	0	3	1	0	0									9	4	0	0					91	14	0	0								
4:15 PM	78	6	0	0	87	8	0	0					104	5	0	0	4	1	0	0									8	5	0	0					115	16	0	0								
4:30 PM	60	5	0	0	88	14	0	0					98	3	0	0	3	0	0	0									11	1	0	0					115	17	0	0								
4:45 PM	57	4	0	0	79	13	0	0					107	2	0	0	2	0	0	0									3	1	0	0					99	17	0	0								
Total	527	43	0	0	733	116	2	0	0	0	0	0	0	0	0	0	24	4	0	0	0	0	51	29	0	0	0	0	0	0	766	137	0	0														
Peak Hour Total	265	25	0	0	370	51	0	0	0	0	0	0	394	14	0	0	12	2	0	0	0	0	31	11	0	0	0	0	0	0	420	64	0	0														
Peak Hour Total	290 vph	0 pph	0 pph	0 pph	421 vph	0 pph	0 pph	0 pph	0 vph	0 pph	408 vph	0 pph	14 vph	0 pph	0 vph	0 pph	0 vph	0 pph	0 vph	0 pph	0 vph	0 pph	0 vph	0 pph	42 vph	0 pph	0 vph	0 pph	0 vph	0 pph	484 vph	0 pph																

Total Peak Hour Vehicle Traffic at Intersection 1659 vph
 Total Peak Hour Peds/Bikes at Intersection 0 pph
 Total Peak Hour Traffic (All Modes) at Intersection 1659 pph
 Percentage Peak Hour Trucks at Intersection 10.1 %
 Peak Hour Factor 1.08



Peak Hour Data (Vehicular)

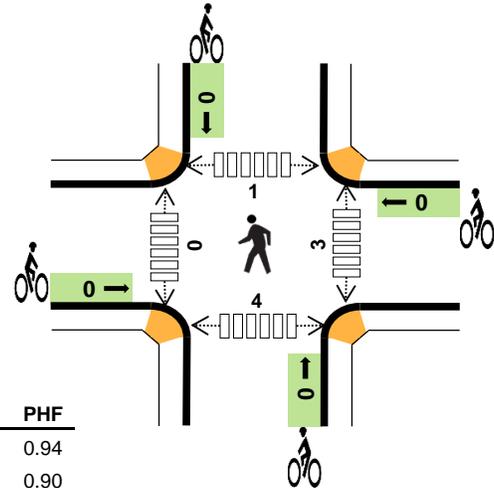
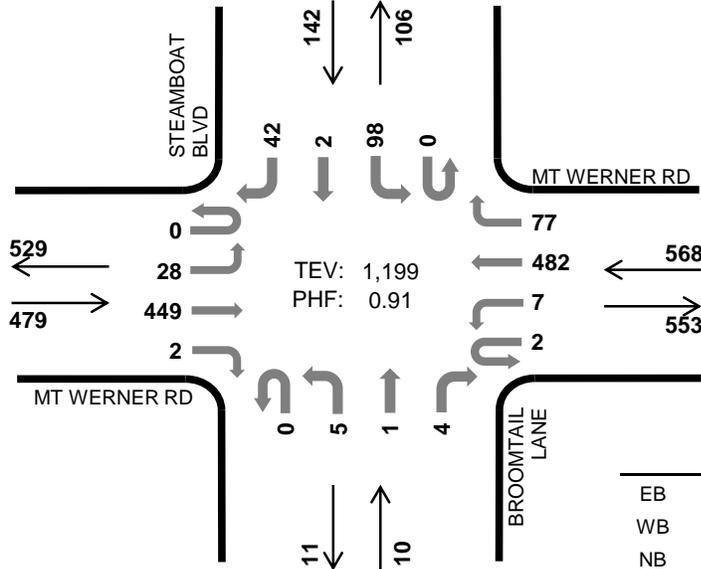


BROOMTAIL LANE MT WERNER RD



Peak Hour

Date: Thu, Dec 26, 2019
Count Period: 8:00 AM to 10:00 AM
Peak Hour: 9:00 AM to 10:00 AM



	HV %:	PHF
EB	9.6%	0.94
WB	13.4%	0.90
NB	0.0%	0.83
SB	7.7%	0.79
TOTAL	11.1%	0.91

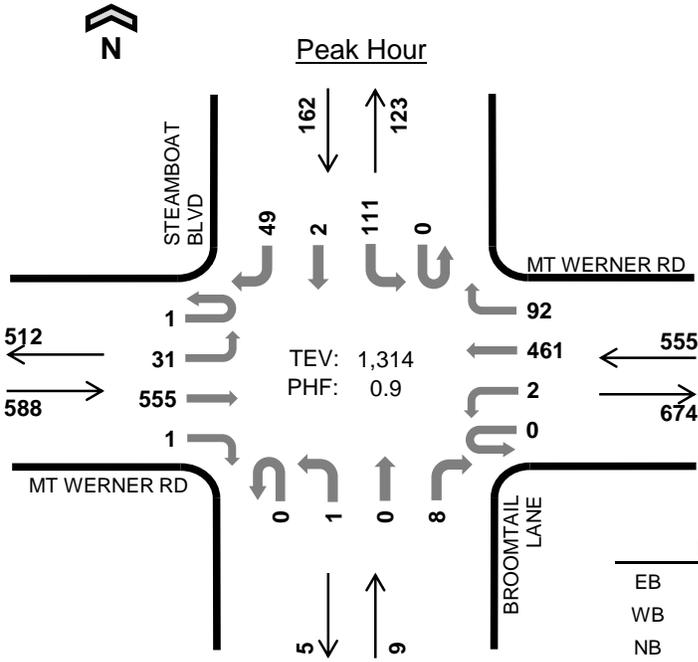
Two-Hour Count Summaries

Interval Start	MT WERNER RD Eastbound				MT WERNER RD Westbound				BROOMTAIL LANE Northbound				STEAMBOAT BLVD Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
8:00 AM	0	10	127	0	0	0	72	14	0	0	0	0	0	20	1	12	256	0
8:15 AM	0	3	125	0	0	2	89	14	0	0	0	3	0	23	0	10	269	0
8:30 AM	0	6	122	0	0	0	105	23	0	0	0	0	0	30	0	11	297	0
8:45 AM	0	6	116	1	0	0	109	19	0	2	0	1	0	26	0	11	291	1,113
9:00 AM	0	5	122	1	0	0	112	14	0	3	0	0	0	25	0	5	287	1,144
9:15 AM	0	8	112	0	0	3	120	17	0	1	0	2	0	18	1	12	294	1,169
9:30 AM	0	5	101	0	1	1	123	20	0	0	0	1	0	26	0	10	288	1,160
9:45 AM	0	10	114	1	1	3	127	26	0	1	1	1	0	29	1	15	330	1,199
Count Total	0	53	939	3	2	9	857	147	0	7	1	8	0	197	3	86	2,312	0
Peak Hour	0	28	449	2	2	7	482	77	0	5	1	4	0	98	2	42	1,199	0

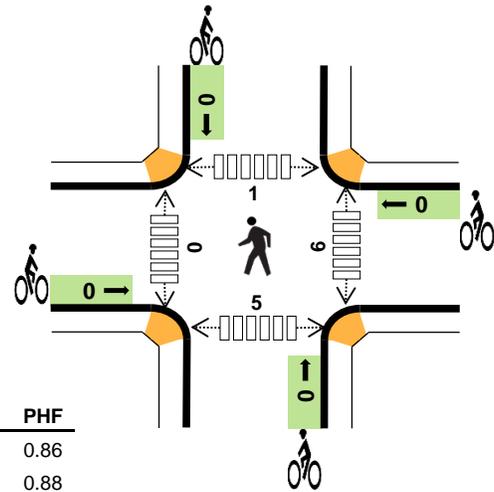
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
8:00 AM	13	13	0	1	27	0	0	0	0	0	0	0	0	0	0
8:15 AM	15	16	0	4	35	0	0	0	0	0	0	0	0	0	0
8:30 AM	12	22	0	2	36	0	0	0	0	0	0	0	0	0	0
8:45 AM	11	22	0	5	38	0	0	0	0	0	0	0	0	0	0
9:00 AM	12	16	0	3	31	0	0	0	0	0	0	0	0	0	0
9:15 AM	10	18	0	1	29	0	0	0	0	0	1	0	1	2	4
9:30 AM	8	21	0	3	32	0	0	0	0	0	0	0	0	0	0
9:45 AM	16	21	0	4	41	0	0	0	0	0	2	0	0	2	4
Count Total	97	149	0	23	269	0	0	0	0	0	3	0	1	4	8
Peak Hour	46	76	0	11	133	0	0	0	0	0	3	0	1	4	8

BROOMTAIL LANE MT WERNER RD



Date: Sat, Dec 28, 2019
 Count Period: 8:00 AM to 10:00 AM
 Peak Hour: 8:15 AM to 9:15 AM



	HV %:	PHF
EB	12.1%	0.86
WB	16.0%	0.88
NB	0.0%	0.75
SB	4.9%	0.83
TOTAL	12.8%	0.90

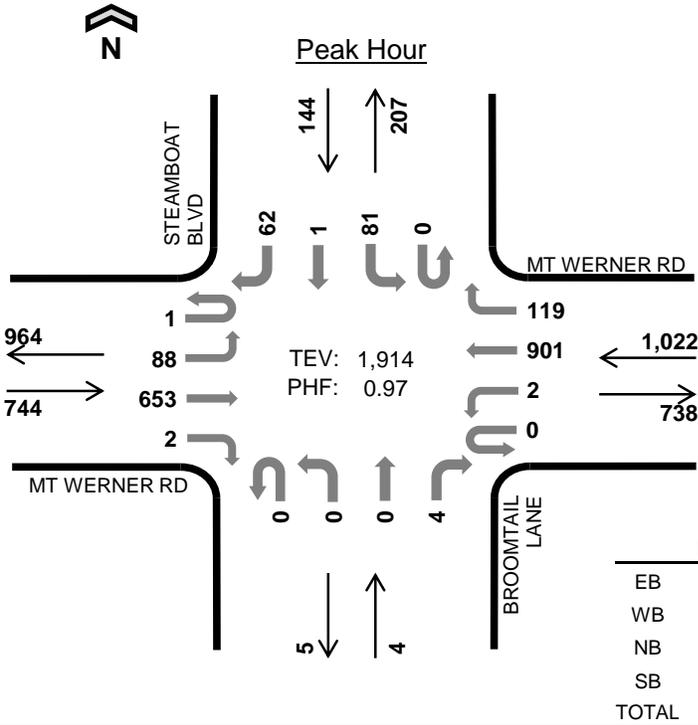
Two-Hour Count Summaries

Interval Start	MT WERNER RD Eastbound				MT WERNER RD Westbound				BROOMTAIL LANE Northbound				STEAMBOAT BLVD Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
8:00 AM	0	7	169	0	0	0	76	7	0	0	1	1	0	23	0	4	288	0
8:15 AM	0	7	160	0	0	0	93	20	0	0	0	3	0	39	1	9	332	0
8:30 AM	1	5	164	0	0	0	135	22	0	0	0	1	0	23	0	14	365	0
8:45 AM	0	8	125	1	0	1	112	23	0	0	0	3	0	24	0	15	312	1,297
9:00 AM	0	11	106	0	0	1	121	27	0	1	0	1	0	25	1	11	305	1,314
9:15 AM	0	7	101	0	0	1	95	23	0	0	0	0	0	35	0	13	275	1,257
9:30 AM	0	9	111	1	0	1	110	23	0	1	0	0	0	17	0	14	287	1,179
9:45 AM	0	12	102	1	0	1	163	19	0	0	0	2	0	23	0	12	335	1,202
Count Total	1	66	1,038	3	0	5	905	164	0	2	1	11	0	209	2	92	2,499	0
Peak Hour	1	31	555	1	0	2	461	92	0	1	0	8	0	111	2	49	1,314	0

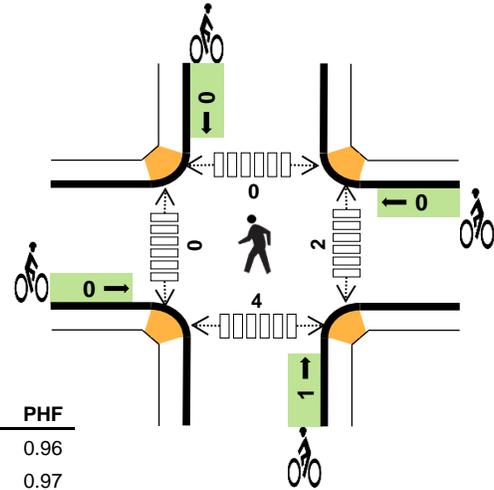
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
8:00 AM	14	15	0	2	31	0	0	0	0	0	0	0	0	1	1
8:15 AM	14	19	0	2	35	0	0	0	0	0	2	0	0	1	3
8:30 AM	16	26	0	4	46	0	0	0	0	0	0	0	1	0	1
8:45 AM	21	21	0	2	44	0	0	0	0	0	4	0	0	0	4
9:00 AM	20	23	0	0	43	0	0	0	0	0	0	0	0	4	4
9:15 AM	17	22	0	8	47	0	0	0	0	0	0	0	0	0	0
9:30 AM	14	20	0	3	37	0	0	0	0	0	0	0	0	1	1
9:45 AM	14	27	0	2	43	0	0	0	0	0	0	2	0	2	4
Count Total	130	173	0	23	326	0	0	0	0	0	6	2	1	9	18
Peak Hour	71	89	0	8	168	0	0	0	0	0	6	0	1	5	12

BROOMTAIL LANE MT WERNER RD



Date: Thu, Dec 26, 2019
Count Period: 3:00 PM to 5:00 PM
Peak Hour: 3:30 PM to 4:30 PM



	HV %:	PHF
EB	9.5%	0.96
WB	10.4%	0.97
NB	0.0%	0.50
SB	6.9%	0.95
TOTAL	9.8%	0.97

Two-Hour Count Summaries

Interval Start	MT WERNER RD				MT WERNER RD				BROOMTAIL LANE				STEAMBOAT BLVD				15-min Total	Rolling One Hour
	Eastbound		Westbound		Northbound		Southbound		Eastbound		Westbound		Northbound		Southbound			
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM	0	18	146	0	0	0	181	32	0	0	0	2	0	18	0	16	413	0
3:15 PM	0	17	151	0	1	1	187	24	0	0	0	1	0	11	0	15	408	0
3:30 PM	1	23	168	0	0	1	215	40	0	0	0	1	0	21	0	12	482	0
3:45 PM	0	19	174	0	0	1	229	33	0	0	0	2	0	23	1	13	495	1,798
4:00 PM	0	18	156	0	0	0	231	22	0	0	0	0	0	25	0	11	463	1,848
4:15 PM	0	28	155	2	0	0	226	24	0	0	0	1	0	12	0	26	474	1,914
4:30 PM	0	31	141	1	0	2	218	28	0	1	2	1	0	14	0	15	454	1,886
4:45 PM	0	13	149	0	0	1	201	23	0	1	0	1	0	18	2	19	428	1,819
Count Total	1	167	1,240	3	1	6	1,688	226	0	2	2	9	0	142	3	127	3,617	0
Peak Hour	1	88	653	2	0	2	901	119	0	0	0	4	0	81	1	62	1,914	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

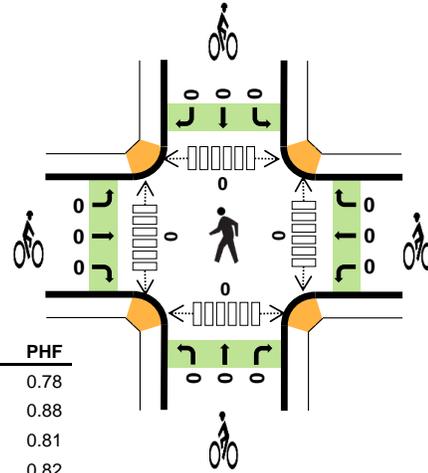
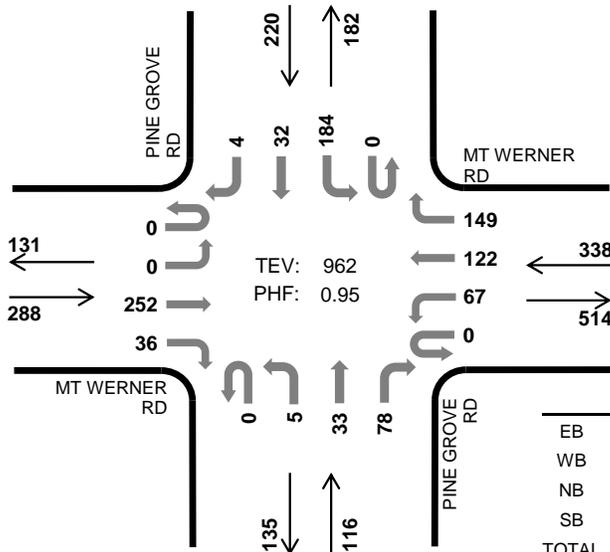
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:00 PM	20	24	0	1	45	0	0	0	0	0	0	0	0	0	0
3:15 PM	21	29	0	2	52	0	0	0	0	0	2	0	0	1	3
3:30 PM	18	29	0	3	50	0	0	0	0	0	0	0	0	0	0
3:45 PM	21	27	0	4	52	0	0	1	0	1	0	0	0	0	0
4:00 PM	18	20	0	1	39	0	0	0	0	0	2	0	0	3	5
4:15 PM	14	30	0	2	46	0	0	0	0	0	0	0	0	1	1
4:30 PM	15	25	0	2	42	0	0	0	0	0	0	0	0	1	1
4:45 PM	21	23	0	3	47	0	0	0	0	0	1	0	0	1	2
Count Total	148	207	0	18	373	0	0	1	0	1	5	0	0	7	12
Peak Hour	71	106	0	10	187	0	0	1	0	1	2	0	0	4	6

PINE GROVE RD MT WERNER RD



Peak Hour

Date: 02/23/2021
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM



	HV %:	PHF
EB	8.3%	0.78
WB	16.6%	0.88
NB	3.4%	0.81
SB	10.5%	0.82
TOTAL	11.1%	0.95

Two-Hour Count Summaries

Interval Start	MT WERNER RD				MT WERNER RD				PINE GROVE RD				PINE GROVE RD				15-min Total	Rolling One Hour	
	Eastbound		Westbound		Northbound		Southbound		UT		LT		TH		RT				
7:00 AM	0	0	45	2	0	3	21	15	0	0	1	8	0	17	3	1	116	0	
7:15 AM	0	0	50	3	0	4	14	14	0	0	3	15	0	33	1	0	137	0	
7:30 AM	0	1	47	6	0	7	19	25	0	1	9	24	0	22	6	2	169	0	
7:45 AM	0	0	62	3	0	9	26	38	0	3	9	19	0	30	3	0	202	624	
8:00 AM	0	0	59	7	0	19	36	41	0	0	5	18	0	40	4	1	230	738	
8:15 AM	0	0	85	7	0	17	24	32	0	2	7	18	0	42	9	0	243	844	
8:30 AM	0	0	55	13	0	16	30	36	0	1	6	23	0	50	7	0	237	912	
8:45 AM	0	0	53	9	0	15	32	40	0	2	15	19	0	52	12	3	252	962	
Count Total	0	1	456	50	0	90	202	241	0	9	55	144	0	286	45	7	1,586	0	
Peak Hour	All	0	0	252	36	0	67	122	149	0	5	33	78	0	184	32	4	962	0
	HV	0	0	24	0	0	27	18	11	0	0	0	4	0	19	4	0	107	0
	HV%	-	-	10%	0%	-	40%	15%	7%	-	0%	0%	5%	-	10%	13%	0%	11%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	3	4	0	0	7	0	0	0	0	0	0	0	0	1	1
7:15 AM	3	5	1	1	10	0	0	0	0	0	0	0	0	0	0
7:30 AM	7	9	1	6	23	0	0	0	0	0	0	0	0	0	0
7:45 AM	9	10	2	4	25	0	0	0	0	0	0	0	0	0	0
8:00 AM	3	16	1	3	23	0	0	0	0	0	0	0	0	0	0
8:15 AM	7	12	1	3	23	0	0	0	0	0	0	0	0	0	0
8:30 AM	5	14	1	12	32	0	0	0	0	0	0	0	0	0	0
8:45 AM	9	14	1	5	29	0	0	0	0	0	0	0	0	0	0
Count Total	46	84	8	34	172	0	0	0	0	0	0	0	0	1	1
Peak Hour	24	56	4	23	107	0	0	0	0	0	0	0	0	0	0

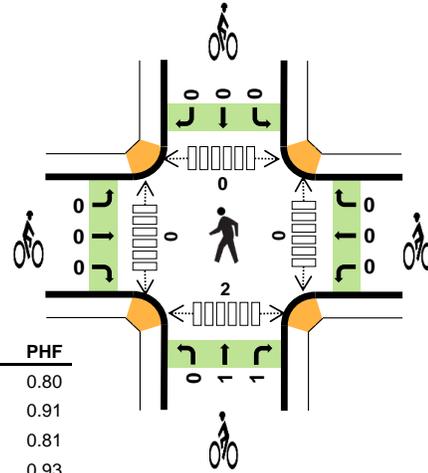
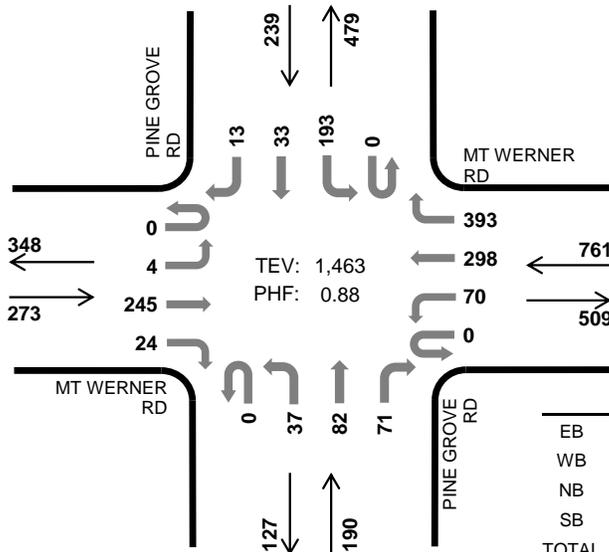
Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	MT WERNER RD				MT WERNER RD				PINE GROVE RD				PINE GROVE RD				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	3	0	0	1	3	0	0	0	0	0	0	0	0	7	0	
7:15 AM	0	0	3	0	0	2	3	0	0	0	0	1	0	1	0	10	0	
7:30 AM	0	0	7	0	0	3	3	3	0	0	0	1	0	5	1	23	0	
7:45 AM	0	0	9	0	0	3	6	1	0	1	0	1	0	4	0	25	65	
8:00 AM	0	0	3	0	0	8	5	3	0	0	0	1	0	3	0	23	81	
8:15 AM	0	0	7	0	0	5	5	2	0	0	0	1	0	1	2	23	94	
8:30 AM	0	0	5	0	0	6	4	4	0	0	0	1	0	10	2	32	103	
8:45 AM	0	0	9	0	0	8	4	2	0	0	0	1	0	5	0	29	107	
Count Total	0	0	46	0	0	36	33	15	0	1	0	7	0	29	5	172	0	
Peak Hour	0	0	24	0	0	27	18	11	0	0	0	4	0	19	4	107	0	
Two-Hour Count Summaries - Bikes																		
Interval Start	MT WERNER RD			MT WERNER RD			PINE GROVE RD			PINE GROVE RD			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<i>Note: U-Turn volumes for bikes are included in Left-Turn, if any.</i>																		

PINE GROVE RD MT WERNER RD



Peak Hour

Date: 02/23/2021
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM



	HV %:	PHF
EB	8.8%	0.80
WB	8.3%	0.91
NB	3.7%	0.81
SB	13.4%	0.93
TOTAL	8.6%	0.88

Two-Hour Count Summaries

Interval Start	MT WERNER RD				MT WERNER RD				PINE GROVE RD				PINE GROVE RD				15-min Total	Rolling One Hour	
	Eastbound		Westbound		Northbound		Southbound		UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	0	49	6	0	19	81	92	0	7	21	15	0	48	9	7	354	0	
4:15 PM	0	0	80	5	0	19	81	110	0	12	28	19	0	52	6	5	417	0	
4:30 PM	0	4	48	6	0	15	77	113	0	12	20	15	0	48	11	0	369	0	
4:45 PM	0	0	68	7	0	17	59	78	0	6	13	22	0	45	7	1	323	1,463	
5:00 PM	0	1	48	7	0	16	67	74	0	9	17	18	0	47	8	2	314	1,423	
5:15 PM	0	1	62	8	0	7	50	76	0	2	17	20	0	44	8	1	296	1,302	
5:30 PM	0	0	59	9	0	13	57	61	0	3	14	8	0	37	11	3	275	1,208	
5:45 PM	0	0	51	7	0	8	54	56	0	5	16	8	0	39	7	0	251	1,136	
Count Total	0	6	465	55	0	114	526	660	0	56	146	125	0	360	67	19	2,599	0	
Peak Hour	All	0	4	245	24	0	70	298	393	0	37	82	71	0	193	33	13	1,463	0
	HV	0	0	24	0	0	22	25	16	0	0	3	4	0	28	4	0	126	0
	HV%	-	0%	10%	0%	-	31%	8%	4%	-	0%	4%	6%	-	15%	12%	0%	9%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	5	22	1	6	34	0	0	0	0	0	0	0	0	0	0
4:15 PM	10	11	2	6	29	0	0	1	0	1	0	0	0	0	0
4:30 PM	4	15	2	10	31	0	0	0	0	0	0	0	0	0	0
4:45 PM	5	15	2	10	32	0	0	1	0	1	0	0	0	2	2
5:00 PM	5	17	6	3	31	0	0	0	0	0	0	0	0	5	5
5:15 PM	5	13	2	3	23	0	0	0	0	0	0	0	0	1	1
5:30 PM	6	12	0	4	22	0	1	0	0	1	0	0	0	1	1
5:45 PM	6	12	2	1	21	0	0	0	0	0	0	0	1	3	4
Count Total	46	117	17	43	223	0	1	2	0	3	0	0	1	12	13
Peak Hour	24	63	7	32	126	0	0	2	0	2	0	0	0	2	2

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	MT WERNER RD				MT WERNER RD				PINE GROVE RD				PINE GROVE RD				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	5	0	0	6	10	6	0	0	0	1	0	6	0	0	34	0
4:15 PM	0	0	10	0	0	4	4	3	0	0	1	1	0	5	1	0	29	0
4:30 PM	0	0	4	0	0	6	7	2	0	0	1	1	0	7	3	0	31	0
4:45 PM	0	0	5	0	0	6	4	5	0	0	1	1	0	10	0	0	32	126
5:00 PM	0	0	5	0	0	5	11	1	0	0	3	3	0	3	0	0	31	123
5:15 PM	0	0	5	0	0	3	4	6	0	0	0	2	0	3	0	0	23	117
5:30 PM	0	0	6	0	0	2	7	3	0	0	0	0	0	3	1	0	22	108
5:45 PM	0	0	6	0	0	1	8	3	0	0	2	0	0	1	0	0	21	97
Count Total	0	0	46	0	0	33	55	29	0	0	8	9	0	38	5	0	223	0
Peak Hour	0	0	24	0	0	22	25	16	0	0	3	4	0	28	4	0	126	0

Two-Hour Count Summaries - Bikes																		
Interval Start	MT WERNER RD			MT WERNER RD			PINE GROVE RD			PINE GROVE RD			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	3	0
Peak Hour	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	0

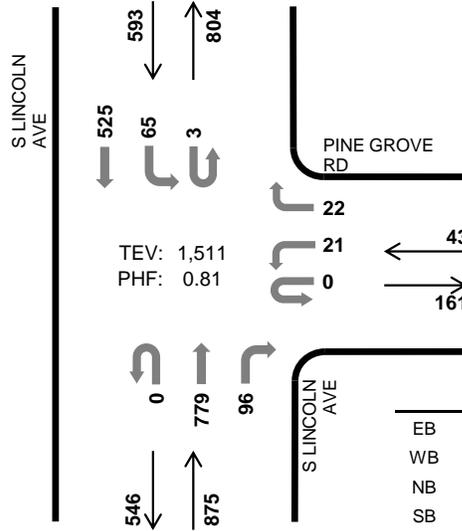
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

S LINCOLN AVE PINE GROVE RD

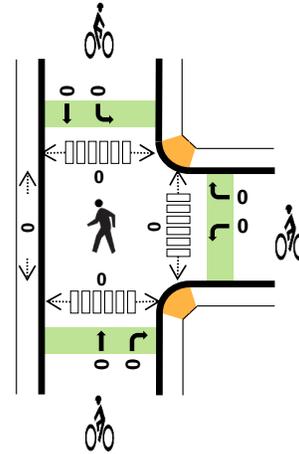


Peak Hour

Date: 02/23/2021
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM



TEV: 1,511
PHF: 0.81



	HV %:	PHF
EB	-	-
WB	7.0%	0.77
NB	2.6%	0.67
SB	9.6%	0.85
TOTAL	5.5%	0.81

Two-Hour Count Summaries

Interval Start	0				PINE GROVE RD				S LINCOLN AVE				S LINCOLN AVE				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	0	0	0	0	2	0	1	0	0	98	9	0	6	50	0	166	0	
7:15 AM	0	0	0	0	0	2	0	1	0	0	134	19	0	9	81	0	246	0	
7:30 AM	0	0	0	0	0	2	0	5	0	0	174	22	0	20	72	0	295	0	
7:45 AM	0	0	0	0	0	2	0	6	0	0	296	29	1	18	116	0	468	1,175	
8:00 AM	0	0	0	0	0	8	0	6	0	0	194	18	0	17	133	0	376	1,385	
8:15 AM	0	0	0	0	0	5	0	7	0	0	148	27	2	21	151	0	361	1,500	
8:30 AM	0	0	0	0	0	6	0	3	0	0	141	22	0	9	125	0	306	1,511	
8:45 AM	0	0	0	0	0	3	0	1	0	0	164	31	0	12	117	0	328	1,371	
Count Total	0	0	0	0	0	30	0	30	0	0	1,349	177	3	112	845	0	2,546	0	
Peak Hour	All	0	0	0	0	0	21	0	22	0	0	779	96	3	65	525	0	1,511	0
	HV	0	0	0	0	0	2	0	1	0	0	23	0	0	3	54	0	83	0
	HV%	-	-	-	-	-	10%	-	5%	-	-	3%	0%	0%	5%	10%	-	5%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	2	3	5	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	4	10	14	0	0	0	0	0	1	0	0	0	1
7:30 AM	0	0	4	6	10	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	1	9	13	23	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	3	20	23	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	1	6	10	17	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	5	14	20	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	17	11	28	0	0	0	0	0	0	0	0	0	0
Count Total	0	3	50	87	140	0	0	0	0	0	1	0	0	0	1
Peak Hr	0	3	23	57	83	0	0	0	0	0	0	0	0	0	0

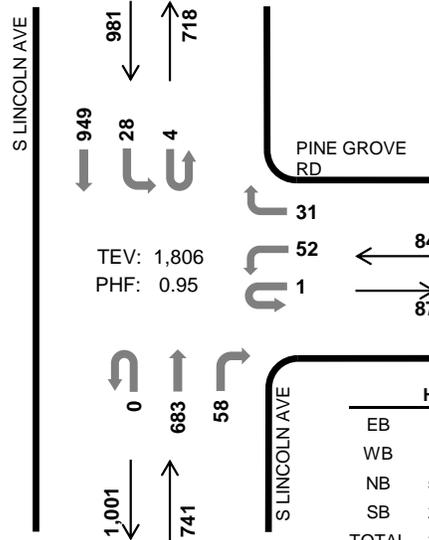
Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	0				PINE GROVE RD				S LINCOLN AVE				S LINCOLN AVE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	5	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	3	1	0	1	9	0	14	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	6	0	10	0
7:45 AM	0	0	0	0	0	1	0	0	0	0	9	0	0	1	12	0	23	52
8:00 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	2	18	0	23	70
8:15 AM	0	0	0	0	0	0	0	1	0	0	6	0	0	0	10	0	17	73
8:30 AM	0	0	0	0	0	1	0	0	0	0	5	0	0	0	14	0	20	83
8:45 AM	0	0	0	0	0	0	0	0	0	0	17	0	0	1	10	0	28	88
Count Total	0	0	0	0	0	2	0	1	0	0	49	1	0	5	82	0	140	0
Peak Hour	0	0	0	0	0	2	0	1	0	0	23	0	0	3	54	0	83	0
Two-Hour Count Summaries - Bikes																		
Interval Start	0			PINE GROVE RD			S LINCOLN AVE			S LINCOLN AVE			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Note: U-Turn volumes for bikes are included in Left-Turn, if any.																		

S LINCOLN AVE PINE GROVE RD

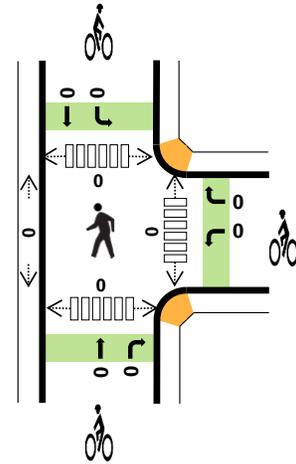


Peak Hour

Date: 02/23/2021
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM



TEV: 1,806
PHF: 0.95



	HV %:	PHF
EB	-	-
WB	1.2%	0.81
NB	5.4%	0.93
SB	2.5%	0.88
TOTAL	3.7%	0.95

Two-Hour Count Summaries

Interval Start	0				PINE GROVE RD				S LINCOLN AVE				S LINCOLN AVE				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	0	0	0	0	14	0	5	0	0	157	15	0	9	223	0	423	0	
4:15 PM	0	0	0	0	0	10	0	10	0	0	180	20	1	8	212	0	441	0	
4:30 PM	0	0	0	0	0	18	0	8	0	0	179	13	0	7	245	0	470	0	
4:45 PM	0	0	0	0	1	10	0	7	0	0	158	16	3	9	216	0	420	1,754	
5:00 PM	0	0	0	0	0	14	0	6	0	0	166	9	0	4	276	0	475	1,806	
5:15 PM	0	0	0	0	0	9	0	5	0	0	130	20	1	8	202	0	375	1,740	
5:30 PM	0	0	0	0	0	7	0	7	1	0	138	4	0	5	217	0	379	1,649	
5:45 PM	0	0	0	0	1	7	0	5	0	0	139	12	0	15	168	0	347	1,576	
Count Total	0	0	0	0	2	89	0	53	1	0	1,247	109	5	65	1,759	0	3,330	0	
Peak Hour	All	0	0	0	0	1	52	0	31	0	0	683	58	4	28	949	0	1,806	0
	HV	0	0	0	0	1	0	0	0	0	0	36	4	0	2	23	0	66	0
	HV%	-	-	-	-	100%	0%	-	0%	-	-	5%	7%	0%	7%	2%	-	4%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	1	5	6	12	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	13	5	18	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	12	7	19	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	1	6	6	13	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	9	7	16	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	2	5	7	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	1	2	11	14	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	2	7	5	14	0	0	0	0	0	0	0	0	0	0
Count Total	0	5	56	52	113	0	0	0	0	0	0	0	0	0	0
Peak Hr	0	1	40	25	66	0	0	0	0	0	0	0	0	0	0

Two-Hour Count Summaries - Heavy Vehicles														15-min Total	Rolling One Hour			
Interval Start	0				PINE GROVE RD				S LINCOLN AVE				S LINCOLN AVE					
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	1	0	0	0	0	5	0	0	0	6	0	12	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	11	2	0	1	4	0	18	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	11	1	0	0	7	0	19	0
4:45 PM	0	0	0	0	1	0	0	0	0	0	6	0	0	1	5	0	13	62
5:00 PM	0	0	0	0	0	0	0	0	0	0	8	1	0	0	7	0	16	66
5:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	1	4	0	7	55
5:30 PM	0	0	0	0	0	0	0	1	0	0	2	0	0	1	10	0	14	50
5:45 PM	0	0	0	0	1	1	0	0	0	0	7	0	0	0	5	0	14	51
Count Total	0	0	0	0	2	2	0	1	0	0	52	4	0	4	48	0	113	0
Peak Hour	0	0	0	0	1	0	0	0	0	0	36	4	0	2	23	0	66	0

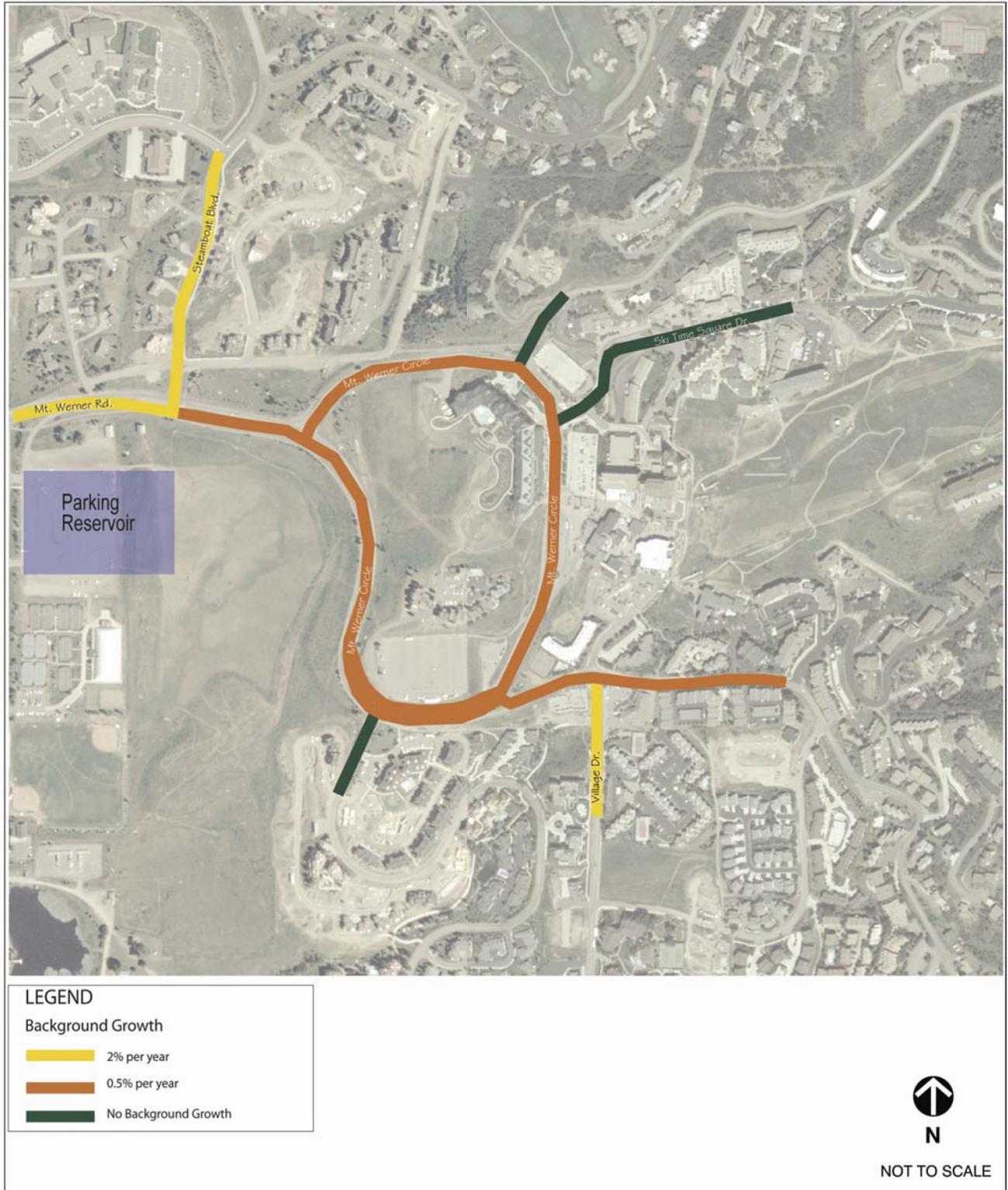
Two-Hour Count Summaries - Bikes														15-min Total	Rolling One Hour
Interval Start	0			PINE GROVE RD			S LINCOLN AVE			S LINCOLN AVE					
	Eastbound			Westbound			Northbound			Southbound					
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT			
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Table 1: Steamboat Springs Monthly ADT Data Conversion Table

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Jan	1	1.02	1.06	0.94	1.1	1.47	1.69	1.56	1.35	1.19	0.99	1.04
Feb	0.98	1	1.04	0.92	1.08	1.44	1.66	1.53	1.32	1.16	0.97	1.02
Mar	0.94	0.96	1	0.89	1.04	1.38	1.59	1.47	1.27	1.12	0.93	0.98
Apr	1.06	1.08	1.12	1	1.17	1.56	1.79	1.66	1.43	1.26	1.05	1.11
May	0.91	0.92	0.96	0.85	1	1.33	1.53	1.42	1.22	1.07	0.89	0.94
Jun	0.68	0.69	0.72	0.64	0.75	1	1.15	1.06	0.92	0.81	0.67	0.71
Jul	0.59	0.6	0.63	0.56	0.65	0.87	1	0.92	0.8	0.7	0.58	0.62
Aug	0.64	0.65	0.68	0.6	0.71	0.94	1.08	1	0.86	0.76	0.63	0.67
Sep	0.74	0.76	0.79	0.7	0.82	1.09	1.26	1.16	1	0.88	0.73	0.77
Oct	0.84	0.86	0.89	0.8	0.93	1.24	1.43	1.32	1.14	1	0.83	0.88
Nov	1.01	1.03	1.07	0.96	1.12	1.49	1.71	1.58	1.36	1.2	1	1.06
Dec	0.96	0.98	1.02	0.9	1.06	1.41	1.62	1.5	1.29	1.14	0.95	1

Figure 3: Background Traffic Growth Assumptions



Methodology Summary for Normalizing Raw Traffic Data at Study Area Intersections

Int #	Name	Existing Counts	Source	AM Peak	PM Peak	Notes	Adjustment Factor Methodology	SAF	Peak Saturday Adjustment Factor
Screenline	Screenline Counts from GTC (North of Int #1)	Dec 22, 27 & 29, 2018 (Sat, Thu, Sat)	GTC	Not Applicable	773 vph (3 Day Average)	Used for Calibration of intersections			
1	MWC/MWC/Apres Ski Way/Parking	Fri, Dec 7, 2018	GTC	8-9am	3:15-4:15pm		Adjust to Peak Sat (Use PM Screenlines)	1	2.39
2	MWC/Ski Time Sq/Steamboat Grand	Fri, Dec 7, 2018	GTC	8-9am	3:15-4:15pm		Adjust to Peak Sat (Use PM Screenlines)	1	2.14
3	MWR/WMC	Sat, Mar 19, 2016	Existing Steamboat Counts	8-9am	3:15-4:15pm		Apply SAF, Adjust to Peak Sat (Use #1 and #2 as guidance)	0.98	1.12
4	MWR/Steamboat Blvd/Broomtail Ln	Sat, Dec 28, 2019	Steamboat Blvd RAB Study	8-9am	3:15-4:15pm			1	
5	MWR/Pine Grove Rd	Tue, Feb 23, 2021	CS4L Study	8-9am	4-5pm	PM Peak Selected due to data availability	Apply SAF, Adjust to Peak Sat (Use #1 and #2 as guidance)	1.02	1.27
6	S Lincoln Blvd/JD Hays Wy	Tue, Feb 23, 2021	CS4L Study	8-9am	4-5pm	PM Peak Selected due to data availability	Apply SAF, Adjust to Peak Sat (Use #1 and #2 as guidance)	1.02	1.27 on JD Hays Way 1.35 from CDOT OTIS on Lincoln

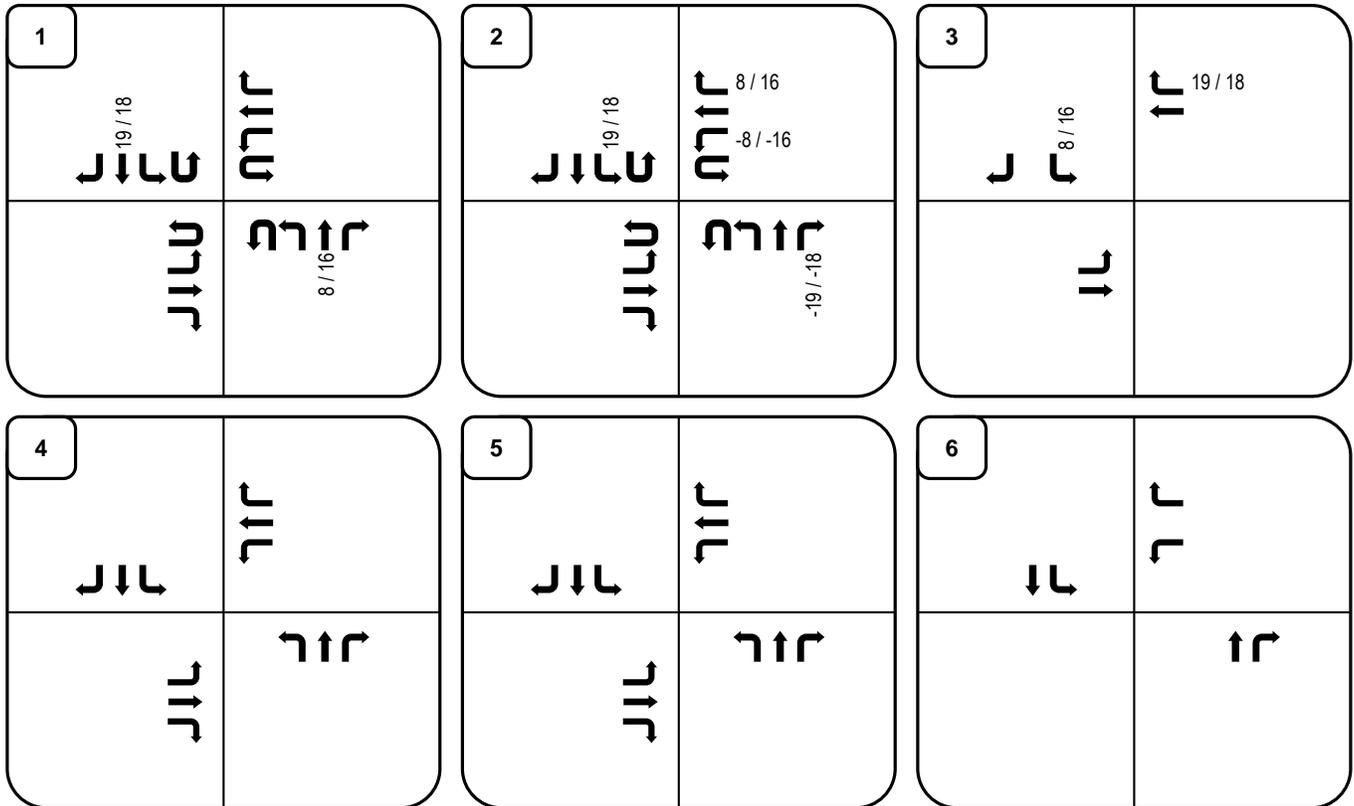
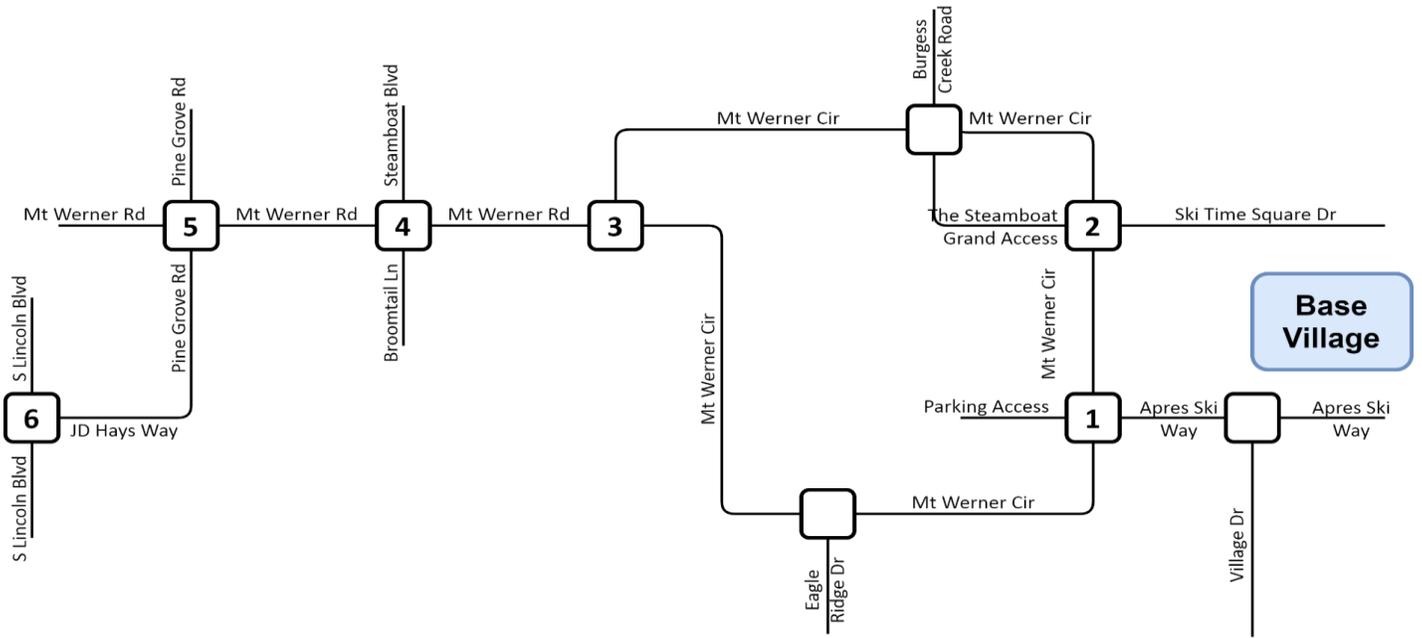
Steamboat Ski & Resort Corporation
9/3/2021

Lift	Notes	Confortable Carrying Capacity						
		2020/2021	+1 yr 2021/2022	+1 yr 2022/2023	+1 yr 2023/2024	+2 yrs 2025/2026	+2 yrs 2027/2028	+13 yrs 2040/2041
Bar-UE/C2	No change	420	420	420	420	420	420	420
Bashor/C2	removed when replaced by Bashor Bowl/C4	250	250	250	250	250	250	removed
Bashor Beginner/C	new carpet in GHR 2022 (1 of 5)	future	future	70	70	70	70	70
Bashor Bowl/C4	added when Bashor/C2 is removed	future	future	future	future	future	future	510
Buckaroo/C	remains in base area, not relocated as was shown in 2019 MDP	90	90	90	90	90	90	90
Burgess Creek/C3	No change	520	520	520	520	520	520	520
Christie III/C3	No change	430	430	430	430	430	430	430
Christie Peak Express/D6	No change	1,230	1,230	1,230	1,230	1,230	1,230	1,230
Desperado/C	relocated carpet from base area to GHR 2022 (2 of 5)	110	110	80	80	80	80	80
Easy Rider/C	Removed 2022	110	110	removed	removed	removed	removed	removed
Elkhead Express/D4	removed when replaced by Elkhead Express/D6	130	130	130	130	130	130	removed
Elkhead Express/D6	added when Elkhead express/D4 is removed	future	future	future	future	future	future	170
Four Points/C3	No change	520	520	520	520	520	520	520
Gondola	No change	2,100	2,100	2,100	2,100	2,100	2,100	2,100
Morning Side/C3	No change	450	450	450	450	450	450	450
Pioneer Ridge II/D4	added 2023	future	future	future	690	690	690	690
Pony Express/D4	change would be when additional chairs are added	450	450	450	450	450	450	610
Preview/C3	removed 2022	290	290	removed	removed	removed	removed	removed
Priest Creek/C2	removed 2021	430	removed	removed	removed	removed	removed	removed
Rough Rider/C4	added in GHR 2022	future	future	480	480	480	480	480
Rough Rider/S	relocated within GHR, not removing as was shown in the 2019 MDP	120	120	120	120	120	120	120
Sidewinder/C	new carpet in GHR 2022 (3 of 5)	future	future	70	70	70	70	70
South Peak/C3	removed when replaced by South Peak/D4	80	80	80	80	80	80	removed
South Peak/D4	added when South Peak/C3 is removed	future	future	future	future	future	future	110
Storm Peak Express/D4	No change	1,280	1,280	1,280	1,280	1,280	1,280	1,280
Sundance/C	relocated carpet from base area to GHR 2022 (4 of 5)	120	120	70	70	70	70	70
Sundown Express/D4	removed when replaced by Sundown Express/D6	1,250	1,250	1,250	1,250	1,250	1,250	removed
Sundown Express/D6	added when Sundown Express/D4 is removed	future	future	future	future	future	future	1,430
Sunshine Express/D4	No change	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Sunshine II/D4	future lift in Sunshine area	future	future	future	future	future	future	1,230
Thunderhead Express/D4	removed when replaced by Thunderhead Express/D6	1,060	1,060	1,060	1,060	1,060	1,060	removed
Thunderhead Express/D6	added when Thunderhead Express/D4 is removed	future	future	future	future	future	future	1,410
Wild Blue Gond. Stage 1/G8	new gondola added 2022	future	future	550	550	550	550	550
Wild Blue Gond. Stage 2/G8	new gondola added 2023	future	future	future	190	190	190	190
Wrangler/C	relocated carpet from base area to GHR 2022 (5 of 5)	110	110	130	130	130	130	130
RESORT TOTAL		13,050	12,620	13,330	14,210	14,210	14,210	16,460
% increase over current			-3.30%	2.15%	8.89%	8.89%	8.89%	26.13%
Facility Additions								
Plaza Food Hall				operational	operational	operational	operational	operational
B Building (Coffee/Restaurant/Retail)					operational	operational	operational	operational
Front Door Building Retail					operational	operational	operational	operational
Greenhorn Ranch Ski School Sprung				operational	operational	operational	operational	operational





Figure APP-1A: Year 2024 Background Adjust Traffic (STS Adj. for GTC Imp.)



LEGEND:

Directional Distribution = Inbound% (Outbound %)

Sat AM/Sat PM Volumes = XX/XX VPH (in PCEs)

Turning Movements זורח זורב

Project Number

M1529

Prepared By

GWS

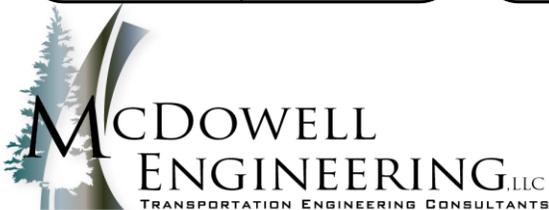
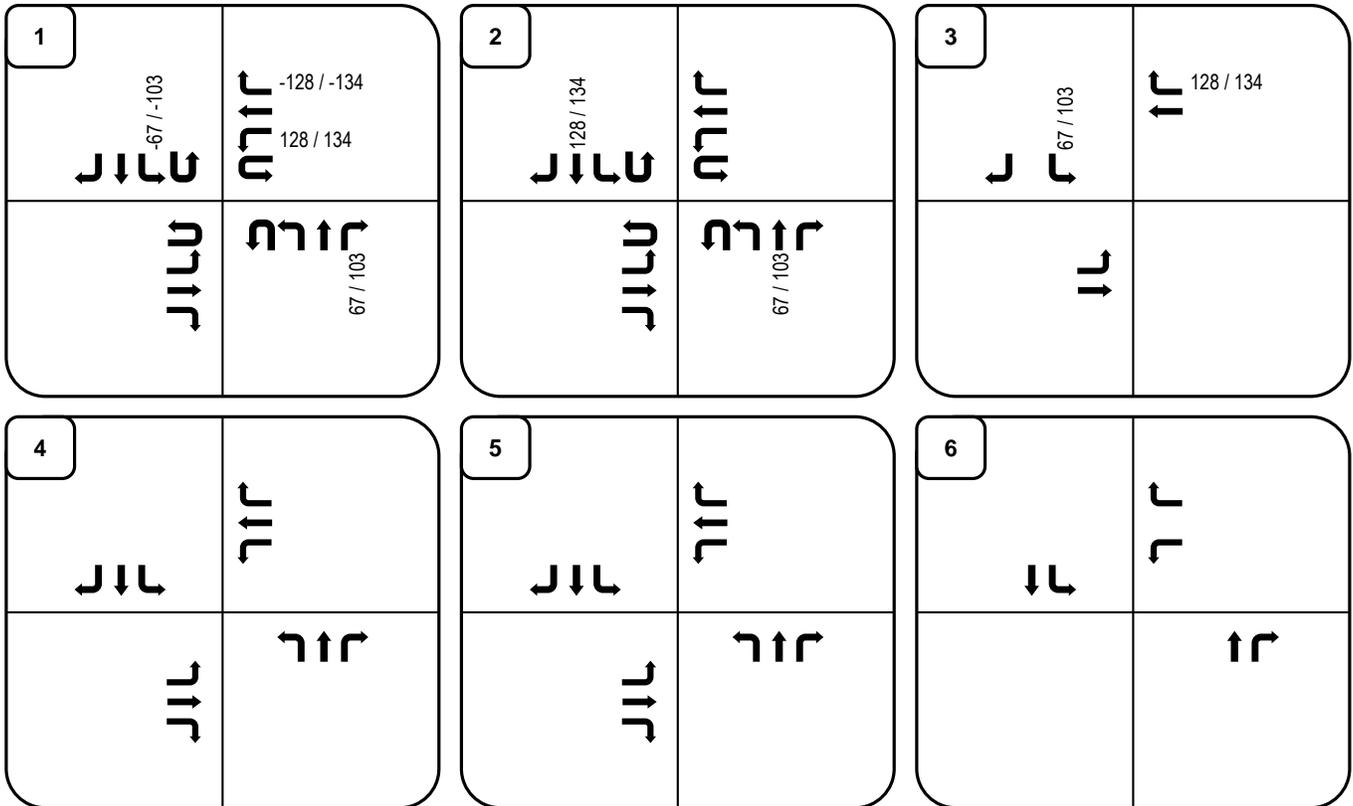
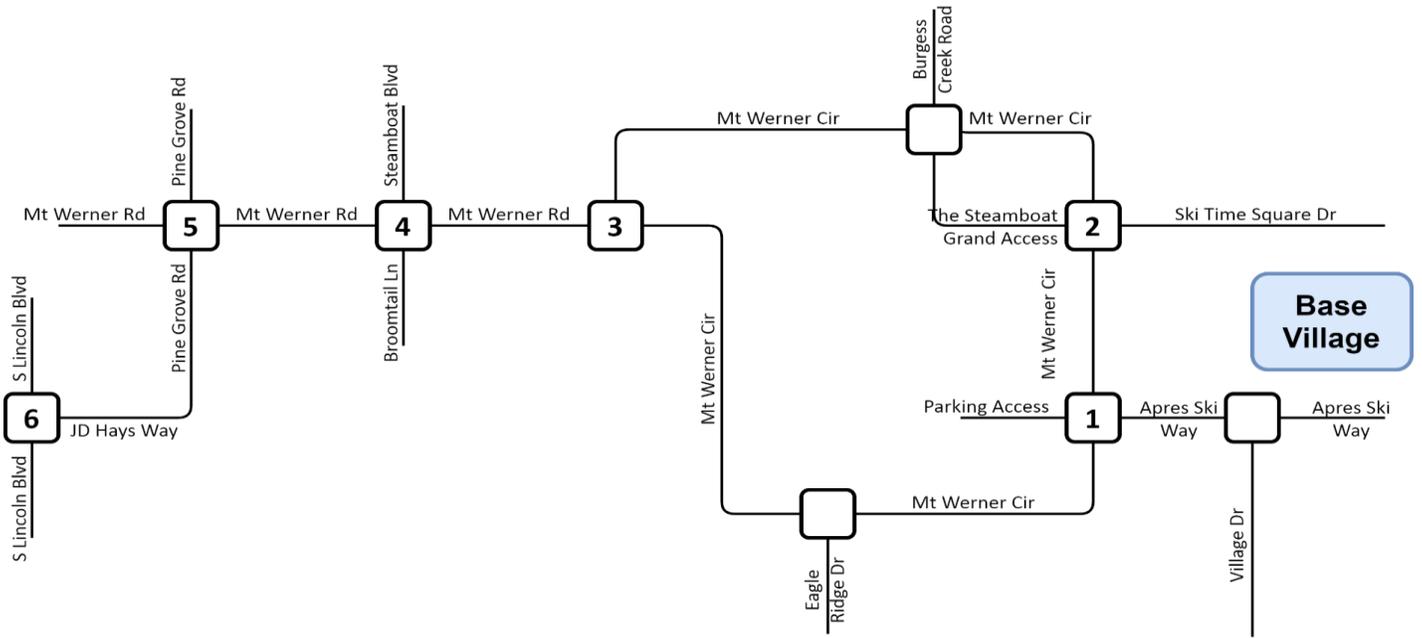


Figure APP-1B: Year 2024 Background Adjust Traffic (SE Neighb. Adjust for GTC Imp.)



LEGEND:

Directional Distribution = Inbound% (Outbound %)

Sat AM/Sat PM Volumes = XX/XX VPH (in PCEs)

Turning Movements

Project Number

M1529

Prepared By

GWS

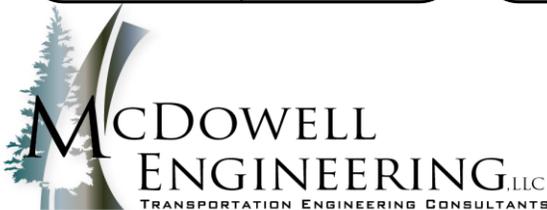
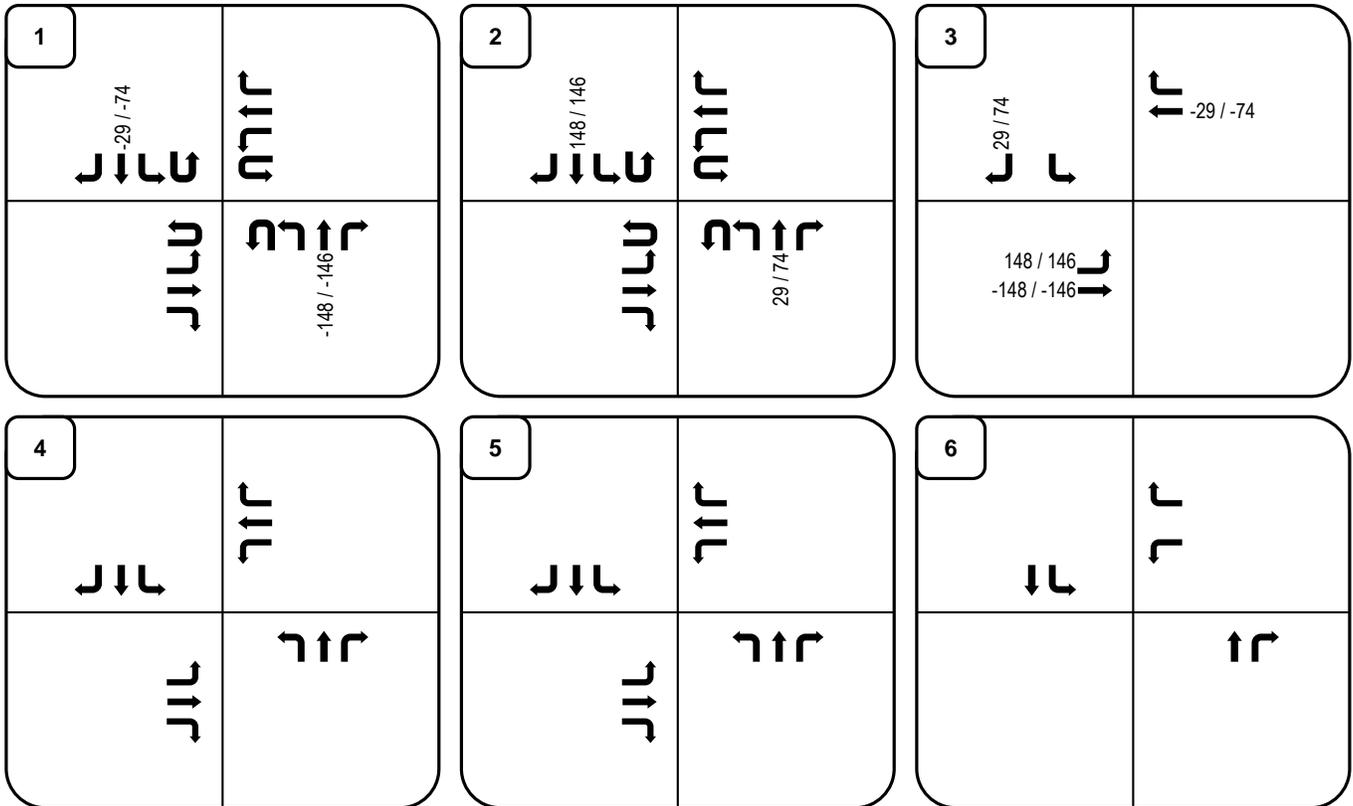
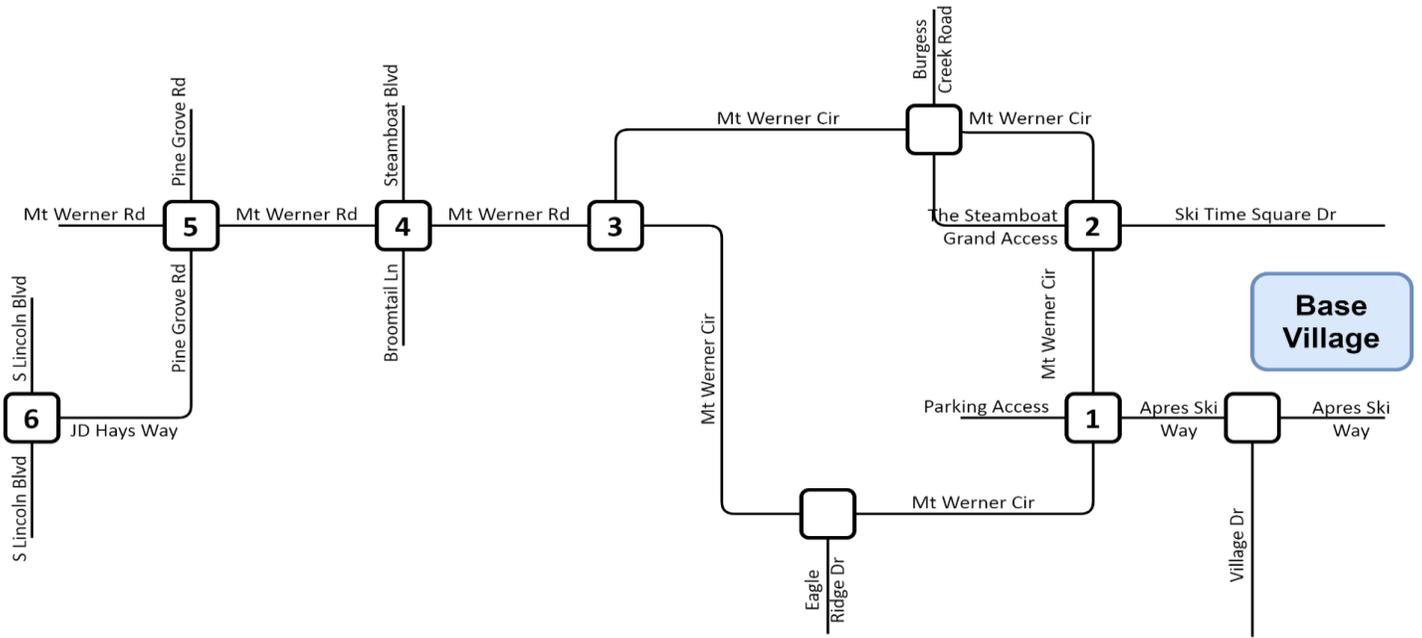


Figure APP-1C: Year 2024 Background Adjust Traffic (Mt. Werner Adj. for GTC Imp.)



LEGEND:

Directional Distribution = Inbound% (Outbound %)

Sat AM/Sat PM Volumes = XX/XX VPH (in PCEs)

Turning Movements

Project Number

M1529

Prepared By

GWS

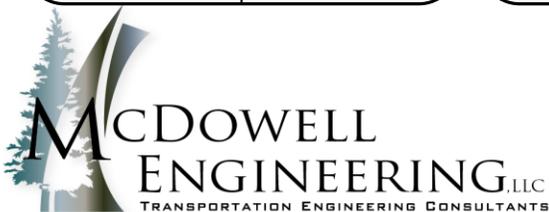
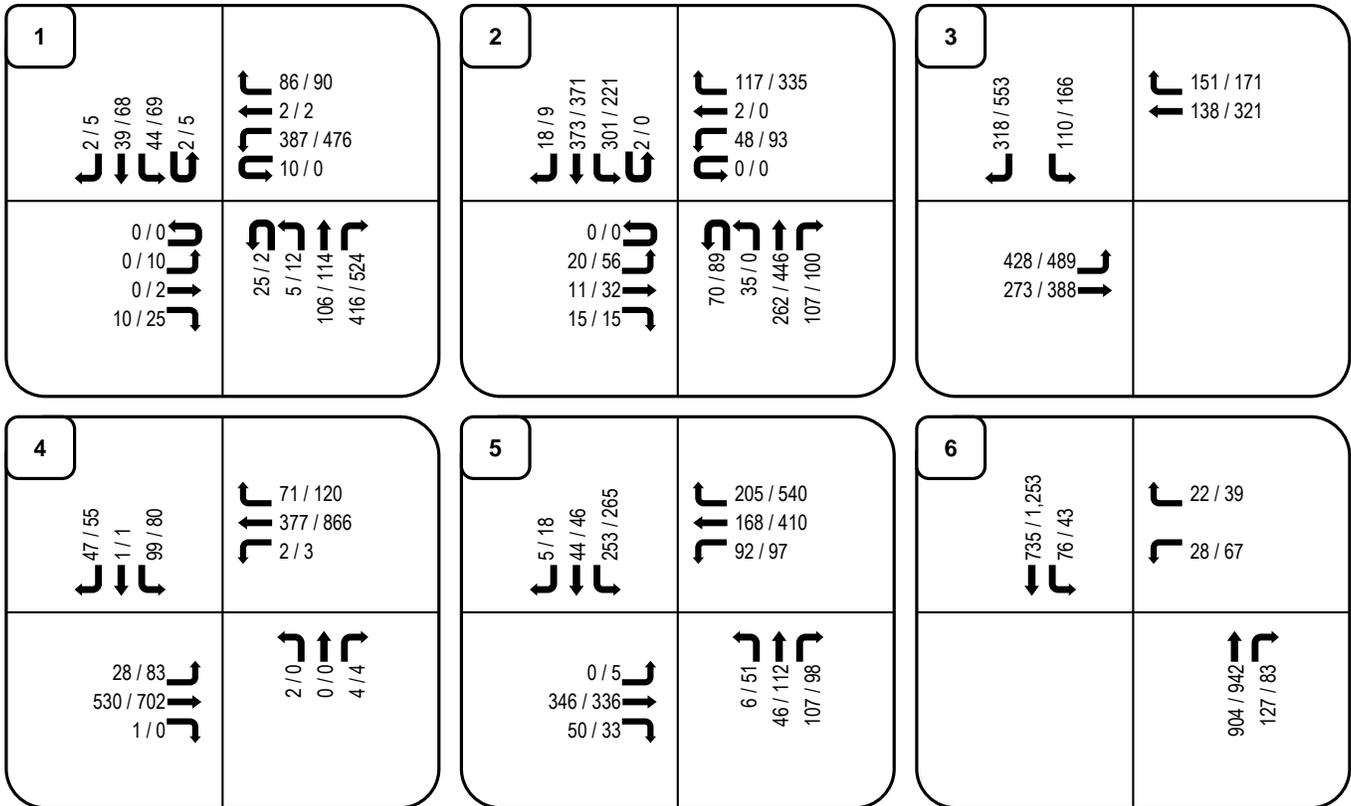
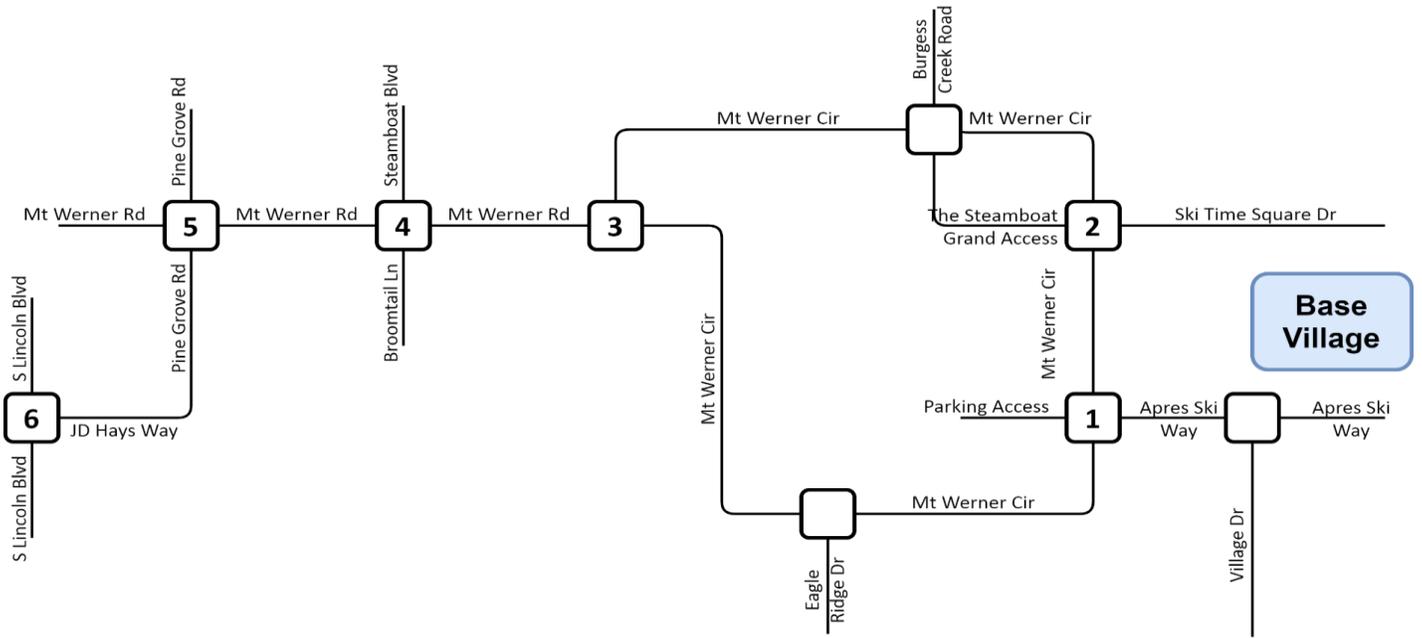


Figure APP-1D: Year 2024 Background Traffic (w/ GTC Improvements)



LEGEND:

Directional Distribution = Inbound% (Outbound %)

Sat AM/Sat PM Volumes = XX/XX VPH (in PCEs)

Turning Movements

Project Number

M1529

Prepared By

GWS

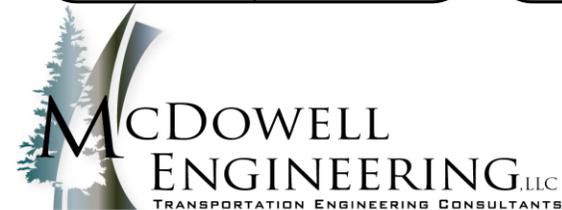
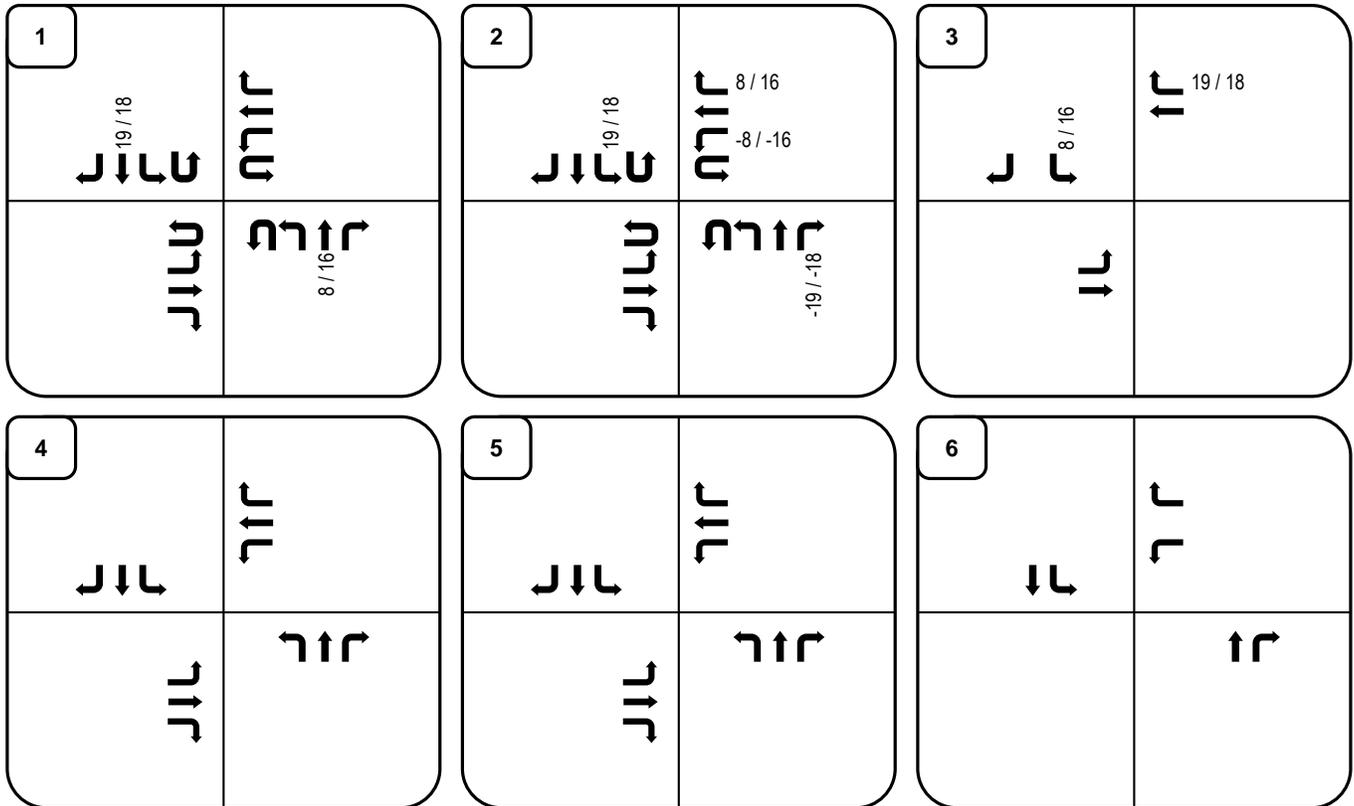
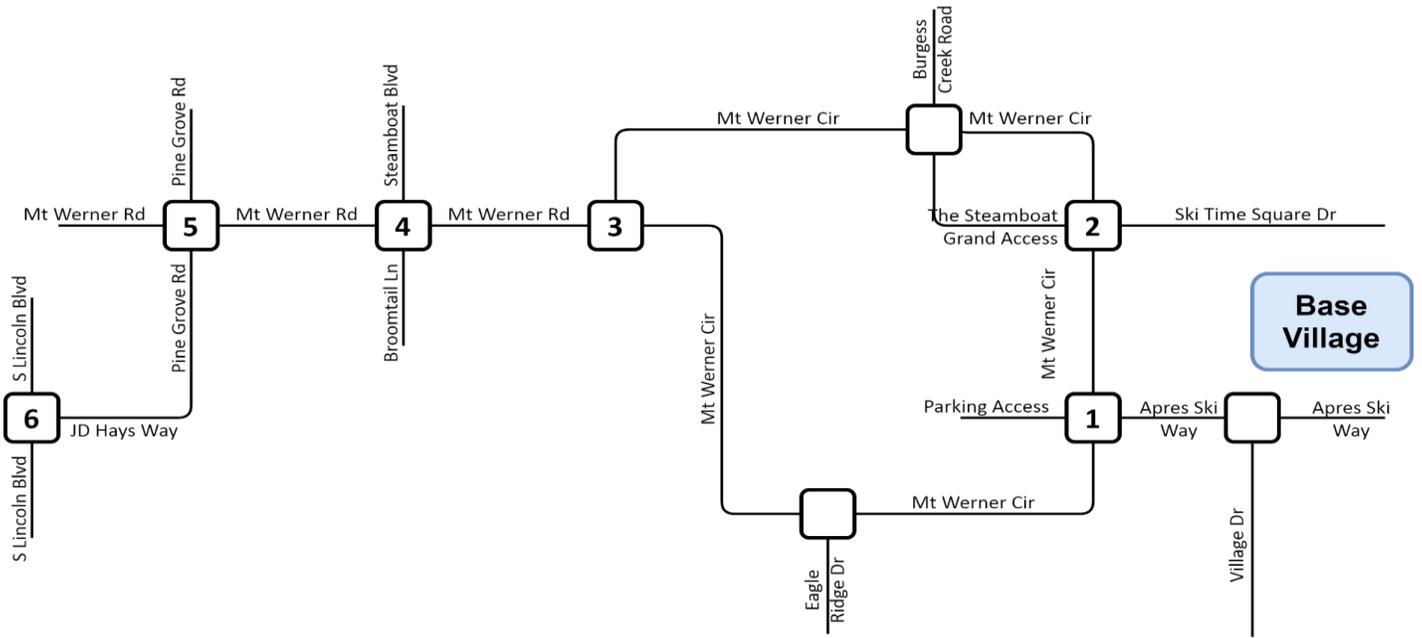


Figure APP-2A: Year 2044 Background Adjust Traffic (STS Adj. for GTC Imp.)



LEGEND:

Directional Distribution = Inbound% (Outbound %)

Sat AM/Sat PM Volumes = XX/XX VPH (in PCEs)

Turning Movements

Project Number

M1529

Prepared By

GWS

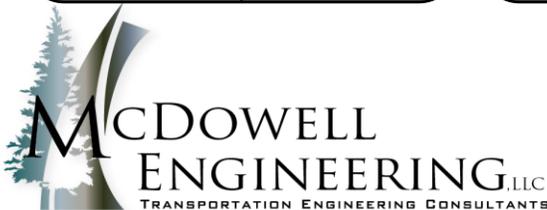
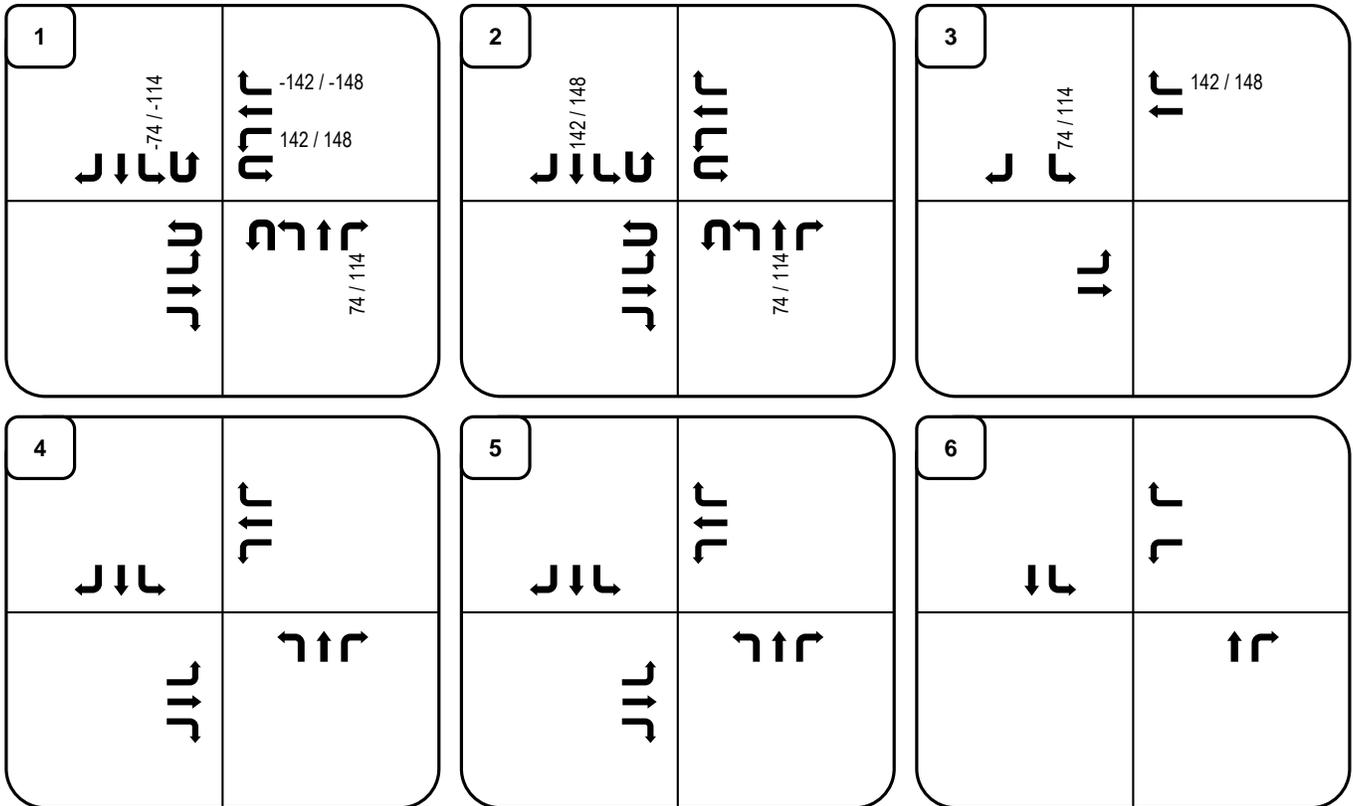
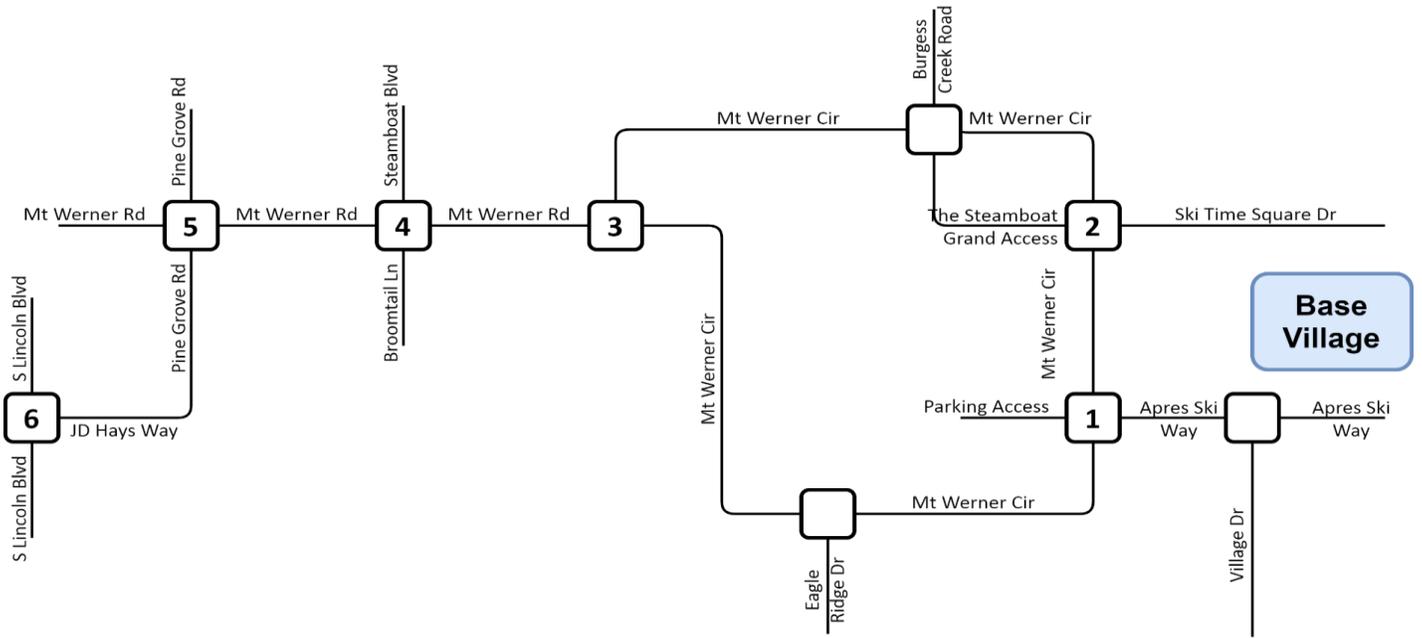


Figure APP-2B: Year 2044 Background Adjust Traffic (SE Neighb. Adjust for GTC Imp.)



LEGEND:

Directional Distribution = Inbound% (Outbound %)

Sat AM/Sat PM Volumes = XX/XX VPH (in PCEs)

Turning Movements

Project Number

M1529

Prepared By

GWS

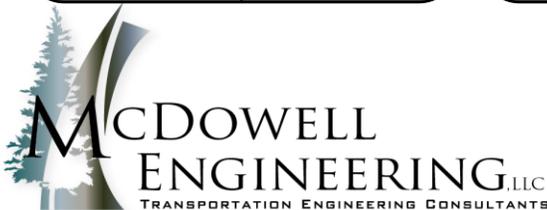
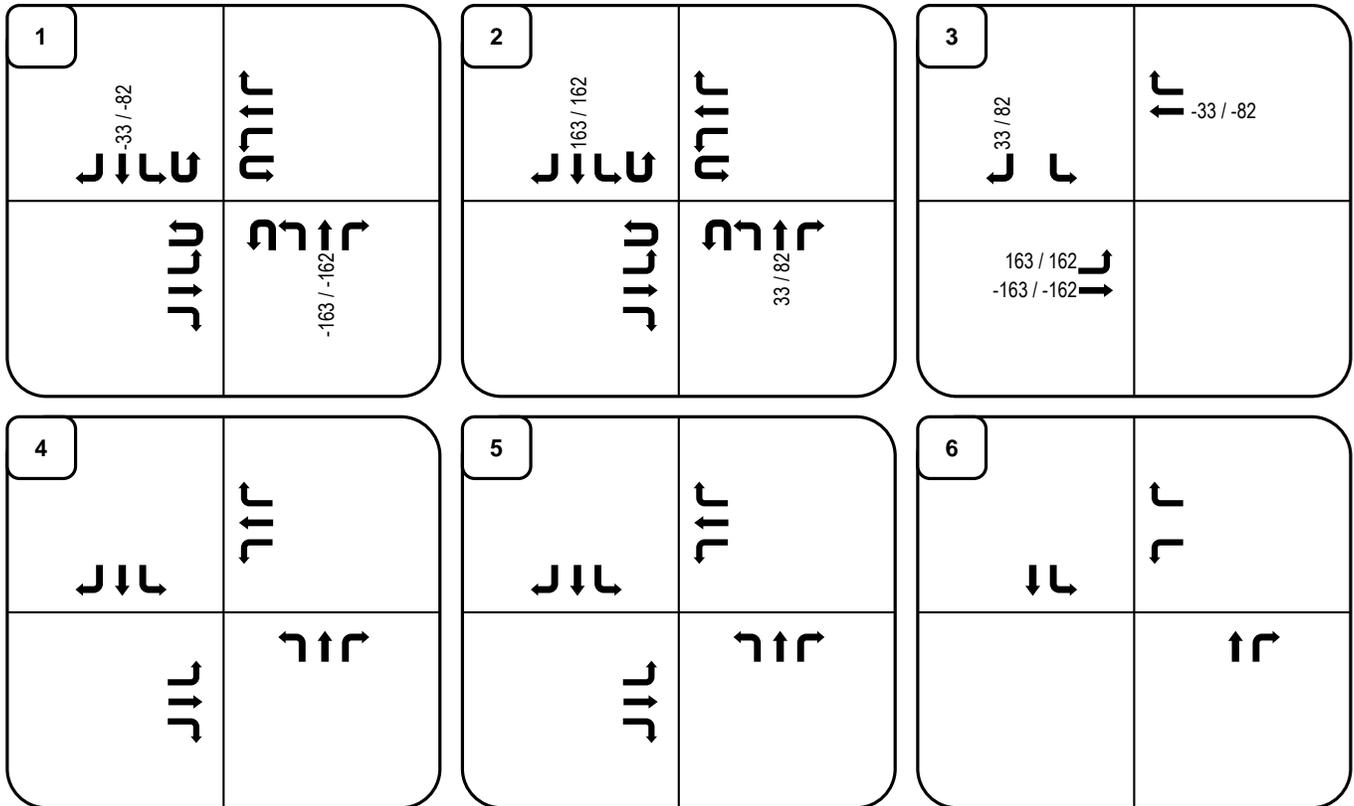
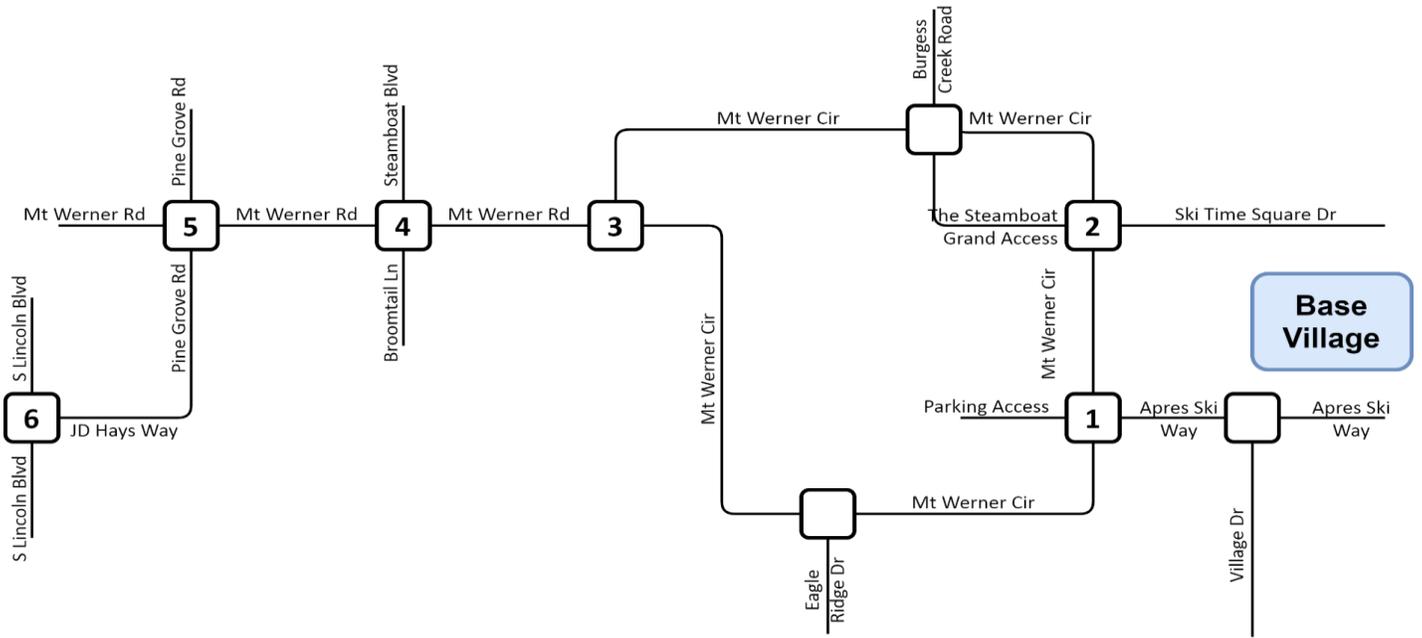


Figure APP-2C: Year 2044 Background Adjust Traffic (Mt. Werner Adj. for GTC Imp.)



LEGEND:

Directional Distribution = Inbound% (Outbound %)

Sat AM/Sat PM Volumes = XX/XX VPH (in PCEs)

Turning Movements

Project Number

M1529

Prepared By

GWS

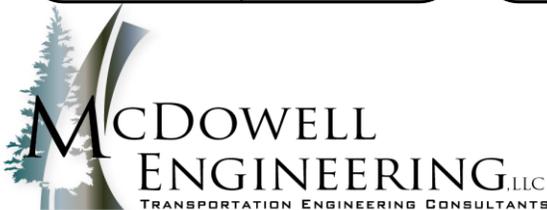
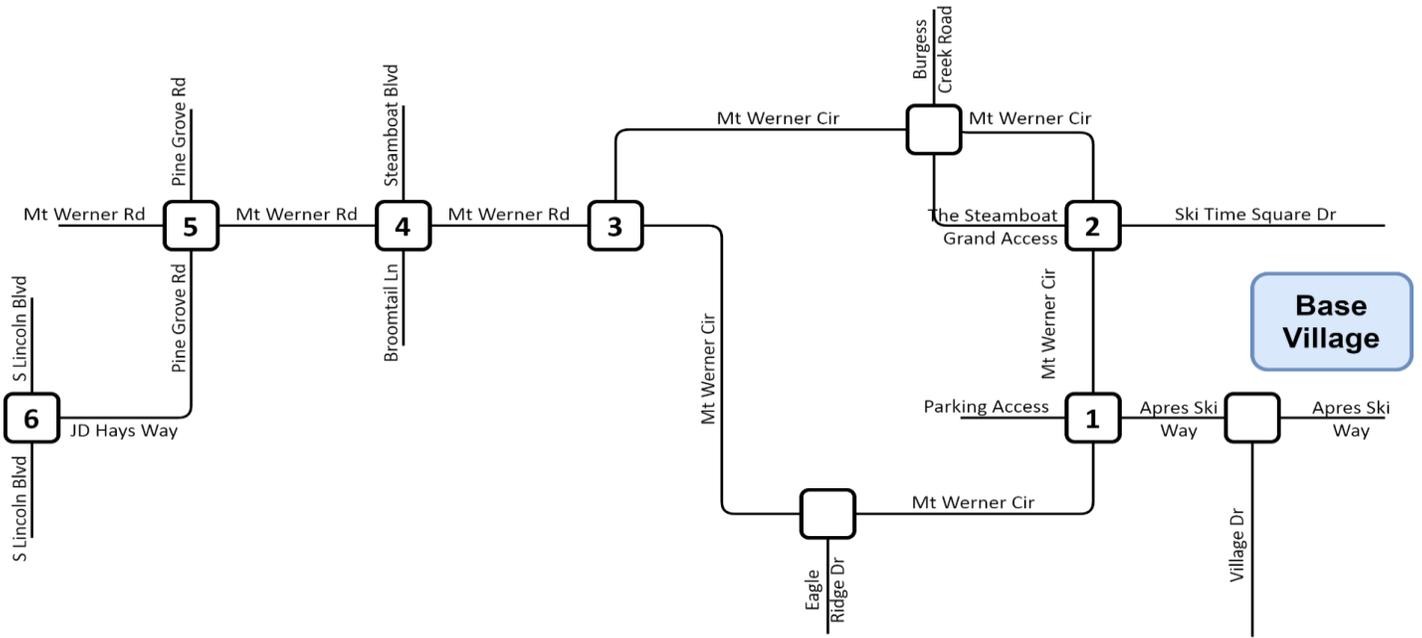
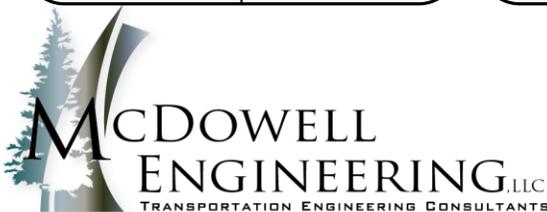


Figure APP-2D: Year 2044 Background Traffic (w/ GTC Improvements)



<p>1</p> <p>2 / 6 41 / 73 49 / 76 2 / 6</p> <p>95 / 99 2 / 2 428 / 526 11 / 0</p> <p>0 / 0 0 / 11 0 / 2 11 / 27</p> <p>27 / 2 6 / 14 117 / 124 460 / 580</p>	<p>2</p> <p>19 / 10 412 / 410 301 / 221 2 / 0</p> <p>117 / 335 2 / 0 48 / 93 0 / 0</p> <p>0 / 0 22 / 61 11 / 32 17 / 17</p> <p>77 / 98 39 / 0 290 / 493 107 / 100</p>	<p>3</p> <p>353 / 611 121 / 182</p> <p>166 / 187 151 / 355</p> <p>472 / 541 303 / 428</p>
<p>4</p> <p>71 / 82 2 / 2 110 / 88</p> <p>78 / 133 417 / 957 2 / 3</p> <p>41 / 123 787 / 1,043 2 / 0</p> <p>3 / 0 0 / 0 5 / 5</p>	<p>5</p> <p>8 / 27 65 / 68 375 / 394</p> <p>304 / 803 249 / 609 137 / 143</p> <p>0 / 8 514 / 500 74 / 49</p> <p>9 / 76 68 / 167 159 / 145</p>	<p>6</p> <p>812 / 1,384 76 / 43</p> <p>22 / 39 28 / 67</p> <p>999 / 1,041 127 / 83</p>

LEGEND:
 Directional Distribution = Inbound% (Outbound %)
 Sat AM/Sat PM Volumes = XX/XX VPH (in PCEs)
 Turning Movements



Project Number M1529
 Prepared By GWS

Background Traffic Level of Service

#	Int.	Traffic Control	Approach or Control Delay	Approach	Year 2024 Level of Service (Delay in Seconds)		Year 2044 Level of Service (Delay in Seconds)	
					Sat AM	Sat PM	Sat AM	Sat PM
					1	MWC/MWC/Apres Ski Way/Parking	RAB	A
			A	WB	A (6.38)	A (7.48)	A (7.28)	A (8.97)
			A	NB	A (7.21)	A (8.92)	A (8.51)	B (11.48)
			A	SB	A (4.15)	A (5.21)	A (4.32)	A (5.66)
2	MWC/Ski Time Sq/Steamboat Grand	RAB	A	EB	A (4.66)	A (4.98)	A (4.74)	A (5.10)
			A	WB	A (4.16)	A (6.86)	A (4.25)	A (7.20)
			A	NB	A (5.98)	A (6.74)	A (6.29)	A (7.32)
			A	SB	A (5.04)	A (4.54)	A (5.17)	A (4.63)
3	MWR/WMC	SB Stop	C	EBL	A (8.3)	A (9.9)	A (8.5)	B (10.5)
			C	SBL	E (37.3)	F (175.4)	F (50.6)	F (377.6)
4	MWR/Steamboat Blvd/Broomtail Ln	RAB	A	EB	A (6.70)	B (10.38)	B (12.16)	F (87.60)
			A	WB	A (2.44)	A (3.61)	A (2.53)	A (4.13)
			A	NB	A (0.00)	A (0.00)	A (3.94)	A (0.00)
			A	SB	A (3.06)	A (4.42)	A (3.56)	A (5.50)
5	MWR/Pine Grove Rd	Signal	A	EB	B (16.5)	B (16.9)	C (23.5)	C (23.6)
			A	WB	A (5.2)	A (5.3)	A (5.8)	B (10.4)
			A	NB	B (12.4)	C (20.8)	B (12.3)	C (25.2)
			A	SB	E (57.6)	F (133.5)	F (202.0)	F (605.6)
6	S. Lincoln Ave & JD Hays Wy	WB Stop	A	WB	F (53.0)	F (248.0)	F (73.7)	F (412.4)
			C	SBL	B (11.7)	B (11.2)	B (12.4)	B (11.9)

Total Traffic Level of Service

#	Int.	Traffic Control	Approach or Control Delay	Approach	Year 2024 Level of Service (Delay in Seconds)		Year 2044 Level of Service (Delay in Seconds)		With GTC Alt. Improvements Year 2024 Level of Service (Delay in Seconds)		With GTC Alt. Improvements Year 2044 Level of Service (Delay in Seconds)	
					Sat AM	Sat PM	Sat AM	Sat PM	Sat AM	Sat PM	Sat AM	Sat PM
					1	MWC/MWC/Apres Ski Way/Parking	RAB	A	EB	A (5.82)	A (7.28)	A (6.12)
			A	WB	A (6.65)	A (7.82)	A (7.84)	A (9.81)	A (5.78)	A (6.73)	A (6.55)	A (7.97)
			A	NB	A (7.56)	A (9.50)	A (9.31)	B (13.17)	A (6.14)	A (7.78)	A (7.07)	A (9.75)
			A	SB	A (4.25)	A (5.43)	A (4.51)	A (6.10)	A (4.18)	A (4.73)	A (4.38)	A (5.08)
2	MWC/Ski Time Sq/Steamboat Grand	RAB	A	EB	A (4.76)	A (5.09)	A (4.89)	A (5.28)	A (5.99)	A (6.50)	A (6.37)	A (7.04)
			A	WB	A (4.23)	A (7.10)	A (4.36)	A (7.63)	A (4.57)	A (9.19)	A (4.78)	B (10.61)
			A	NB	A (6.20)	A (7.14)	A (6.70)	A (8.08)	A (7.58)	B (11.73)	A (8.71)	C (16.77)
			A	SB	A (5.26)	A (4.70)	A (5.51)	A (4.90)	A (9.54)	A (7.79)	B (11.60)	A (9.07)
3	MWR/WMC	SB Stop	C	EBL	A (8.4)	B (10.2)	A (8.7)	B (11.0)	A (9.8)	B (12.6)	B (10.5)	B (15.0)
			C	SBL	E (43.4)	F (236.6)	F (68.2)	F (578.4)	F (323.1)	F (2180.9)	F (705.5)	F (4596.8)
4	MWR/Steamboat Blvd/Broomtail Ln	RAB	A	EB	A (7.13)	B (11.38)	B (14.56)	F (126.88)	A (7.13)	B (11.38)	B (14.56)	F (126.88)
			A	WB	A (2.47)	A (3.72)	A (2.58)	A (4.36)	A (2.47)	A (3.72)	A (2.58)	A (4.36)
			A	NB	A (0.00)	A (0.00)	A (4.07)	A (0.00)	A (0.00)	A (0.00)	A (4.07)	A (0.00)
			A	SB	A (3.08)	A (4.42)	A (3.59)	A (5.57)	A (3.08)	A (4.42)	A (3.59)	A (5.57)
5	MWR/Pine Grove Rd	Signal	A	EB	B (15.9)	B (17.4)	C (23.9)	C (25.4)	B (15.9)	B (17.4)	C (23.9)	C (25.4)
			A	WB	A (5.3)	A (5.8)	A (6.0)	B (12.0)	A (5.3)	A (5.8)	A (6.0)	B (12.0)
			A	NB	B (12.2)	D (51.9)	B (12.0)	E (73.0)	B (12.2)	D (51.9)	B (12.0)	E (73.0)
			A	SB	E (75.6)	F (703.7)	F (250.0)	F (2639.6)	E (75.6)	F (703.7)	F (250.0)	F (2639.6)
6	S. Lincoln Ave & JD Hays Wy	WB Stop	A	WB	F (67.1)	F (265.3)	F (98.9)	F (435.8)	F (67.1)	F (265.3)	F (98.9)	F (435.8)
			C	SBL	B (12.6)	B (11.2)	B (13.5)	B (11.9)	B (12.6)	B (11.2)	B (13.5)	B (11.9)

3: Mt Werner Rd & Mt Werner Cir
2024 Background Sat AM.syn

Intersection						
Int Delay, s/veh	4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↗	↗	↘	↘	↘
Traffic Vol, veh/h	280	421	167	4	35	289
Future Vol, veh/h	280	421	167	4	35	289
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Free
Storage Length	0	-	-	65	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	304	458	182	4	38	314

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	186	0	0 1248
Stage 1	-	-	- 182
Stage 2	-	-	- 1066
Critical Hdwy	4.12	-	- 6.42
Critical Hdwy Stg 1	-	-	- 5.42
Critical Hdwy Stg 2	-	-	- 5.42
Follow-up Hdwy	2.218	-	- 3.518
Pot Cap-1 Maneuver	1388	-	- 191 0
Stage 1	-	-	- 849 0
Stage 2	-	-	- 331 0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1388	-	- 149
Mov Cap-2 Maneuver	-	-	- 149
Stage 1	-	-	- 663
Stage 2	-	-	- 331

Approach	EB	WB	SB
HCM Control Delay, s	3.3	0	37.3
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1388	-	-	-	149	-
HCM Lane V/C Ratio	0.219	-	-	-	0.255	-
HCM Control Delay (s)	8.3	-	-	-	37.3	0
HCM Lane LOS	A	-	-	-	E	A
HCM 95th %tile Q(veh)	0.8	-	-	-	1	-

3: Mt Werner Rd & Mt Werner Cir
2024 Background Sat PM.syn

Intersection						
Int Delay, s/veh	8.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↗	↗	↘	↘	↘
Traffic Vol, veh/h	343	534	395	19	47	479
Future Vol, veh/h	343	534	395	19	47	479
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Free
Storage Length	0	-	-	65	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	373	580	429	21	51	521

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	450	0	-	0	1755
Stage 1	-	-	-	-	429
Stage 2	-	-	-	-	1326
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1110	-	-	-	94
Stage 1	-	-	-	-	657
Stage 2	-	-	-	-	248
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1110	-	-	-	62
Mov Cap-2 Maneuver	-	-	-	-	62
Stage 1	-	-	-	-	436
Stage 2	-	-	-	-	248

Approach	EB	WB	SB
HCM Control Delay, s	3.9	0	175.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1110	-	-	-	62	-
HCM Lane V/C Ratio	0.336	-	-	-	0.824	-
HCM Control Delay (s)	9.9	-	-	-	175.4	0
HCM Lane LOS	A	-	-	-	F	A
HCM 95th %tile Q(veh)	1.5	-	-	-	3.7	-

3: Mt Werner Rd & Mt Werner Cir
2044 Background Sat AM.syn

Intersection						
Int Delay, s/veh	4.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↗	↗	↘	↘	↘
Traffic Vol, veh/h	309	466	184	5	39	320
Future Vol, veh/h	309	466	184	5	39	320
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Free
Storage Length	0	-	-	65	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	336	507	200	5	42	348

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	205	0	-	0	1379
Stage 1	-	-	-	-	200
Stage 2	-	-	-	-	1179
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1366	-	-	-	159
Stage 1	-	-	-	-	834
Stage 2	-	-	-	-	292
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1366	-	-	-	120
Mov Cap-2 Maneuver	-	-	-	-	120
Stage 1	-	-	-	-	629
Stage 2	-	-	-	-	292

Approach	EB	WB	SB
HCM Control Delay, s	3.4	0	50.6
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1366	-	-	-	120	-
HCM Lane V/C Ratio	0.246	-	-	-	0.353	-
HCM Control Delay (s)	8.5	-	-	-	50.6	0
HCM Lane LOS	A	-	-	-	F	A
HCM 95th %tile Q(veh)	1	-	-	-	1.4	-

3: Mt Werner Rd & Mt Werner Cir
2044 Background Sat PM.syn

Intersection						
Int Delay, s/veh	16					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↗	↗	↘	↘	↘
Traffic Vol, veh/h	379	590	437	21	52	529
Future Vol, veh/h	379	590	437	21	52	529
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Free
Storage Length	0	-	-	65	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	412	641	475	23	57	575

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	498	0	-	0	1940
Stage 1	-	-	-	-	475
Stage 2	-	-	-	-	1465
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1066	-	-	-	72
Stage 1	-	-	-	-	626
Stage 2	-	-	-	-	212
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1066	-	-	-	~ 44
Mov Cap-2 Maneuver	-	-	-	-	~ 44
Stage 1	-	-	-	-	384
Stage 2	-	-	-	-	212

Approach	EB	WB	SB
HCM Control Delay, s	4.1	0	\$ 377.6
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1066	-	-	-	44	-
HCM Lane V/C Ratio	0.386	-	-	-	1.285	-
HCM Control Delay (s)	10.5	-	-	-	\$ 377.6	0
HCM Lane LOS	B	-	-	-	F	A
HCM 95th %tile Q(veh)	1.8	-	-	-	5.5	-

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

3: Mt Werner Rd & Mt Werner Cir
2024 Total Sat AM.syn

Intersection						
Int Delay, s/veh	4.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↗	↗	↘	↘	↘
Traffic Vol, veh/h	304	436	177	4	35	307
Future Vol, veh/h	304	436	177	4	35	307
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Free
Storage Length	0	-	-	65	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	330	474	192	4	38	334

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	196	0	-	0	1326
Stage 1	-	-	-	-	192
Stage 2	-	-	-	-	1134
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1377	-	-	-	172
Stage 1	-	-	-	-	841
Stage 2	-	-	-	-	307
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1377	-	-	-	131
Mov Cap-2 Maneuver	-	-	-	-	131
Stage 1	-	-	-	-	639
Stage 2	-	-	-	-	307

Approach	EB	WB	SB
HCM Control Delay, s	3.5	0	43.4
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1377	-	-	-	131	-
HCM Lane V/C Ratio	0.24	-	-	-	0.29	-
HCM Control Delay (s)	8.4	-	-	-	43.4	0
HCM Lane LOS	A	-	-	-	E	A
HCM 95th %tile Q(veh)	0.9	-	-	-	1.1	-

3: Mt Werner Rd & Mt Werner Cir
 2024 Total Sat PM.syn

Intersection						
Int Delay, s/veh	10.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↗	↗	↘	↘	↘
Traffic Vol, veh/h	366	548	409	19	47	502
Future Vol, veh/h	366	548	409	19	47	502
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Free
Storage Length	0	-	-	65	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	398	596	445	21	51	546

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	466	0	-	0	1837
Stage 1	-	-	-	-	445
Stage 2	-	-	-	-	1392
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1095	-	-	-	83
Stage 1	-	-	-	-	646
Stage 2	-	-	-	-	230
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1095	-	-	-	53
Mov Cap-2 Maneuver	-	-	-	-	53
Stage 1	-	-	-	-	412
Stage 2	-	-	-	-	230

Approach	EB	WB	SB
HCM Control Delay, s	4.1	0	236.6
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1095	-	-	-	53	-
HCM Lane V/C Ratio	0.363	-	-	-	0.964	-
HCM Control Delay (s)	10.2	-	-	-	236.6	0
HCM Lane LOS	B	-	-	-	F	A
HCM 95th %tile Q(veh)	1.7	-	-	-	4.3	-

3: Mt Werner Rd & Mt Werner Cir
2044 Total Sat AM.syn

Intersection						
Int Delay, s/veh	5.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↗	↗	↘	↘	↘
Traffic Vol, veh/h	344	488	200	5	39	347
Future Vol, veh/h	344	488	200	5	39	347
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Free
Storage Length	0	-	-	65	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	374	530	217	5	42	377

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	222	0	0 1495
Stage 1	-	-	- 217
Stage 2	-	-	- 1278
Critical Hdwy	4.12	-	- 6.42
Critical Hdwy Stg 1	-	-	- 5.42
Critical Hdwy Stg 2	-	-	- 5.42
Follow-up Hdwy	2.218	-	- 3.518
Pot Cap-1 Maneuver	1347	-	- 135 0
Stage 1	-	-	- 819 0
Stage 2	-	-	- 262 0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1347	-	- 97
Mov Cap-2 Maneuver	-	-	- 97
Stage 1	-	-	- 591
Stage 2	-	-	- 262

Approach	EB	WB	SB
HCM Control Delay, s	3.6	0	68.2
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1347	-	-	-	97	-
HCM Lane V/C Ratio	0.278	-	-	-	0.437	-
HCM Control Delay (s)	8.7	-	-	-	68.2	0
HCM Lane LOS	A	-	-	-	F	A
HCM 95th %tile Q(veh)	1.1	-	-	-	1.8	-

3: Mt Werner Rd & Mt Werner Cir
2044 Total Sat PM.syn

Intersection						
Int Delay, s/veh	22.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↗	↗	↘	↘	↘
Traffic Vol, veh/h	414	612	459	21	52	564
Future Vol, veh/h	414	612	459	21	52	564
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Free
Storage Length	0	-	-	65	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	450	665	499	23	57	613

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	522	0	-	0	2064
Stage 1	-	-	-	-	499
Stage 2	-	-	-	-	1565
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1044	-	-	-	60
Stage 1	-	-	-	-	610
Stage 2	-	-	-	-	189
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1044	-	-	-	~ 34
Mov Cap-2 Maneuver	-	-	-	-	~ 34
Stage 1	-	-	-	-	347
Stage 2	-	-	-	-	189

Approach	EB	WB	SB
HCM Control Delay, s	4.5	0	\$ 578.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1044	-	-	-	34	-
HCM Lane V/C Ratio	0.431	-	-	-	1.662	-
HCM Control Delay (s)	11	-	-	-	\$ 578.4	0
HCM Lane LOS	B	-	-	-	F	A
HCM 95th %tile Q(veh)	2.2	-	-	-	6.2	-

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

3: Mt Werner Rd & Mt Werner Cir
 2024 Total Sat AM with GTC Alt.syn

Intersection						
Int Delay, s/veh	35.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↗	↗	↘	↘	↘
Traffic Vol, veh/h	449	291	140	157	114	344
Future Vol, veh/h	449	291	140	157	114	344
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Free
Storage Length	0	-	-	65	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	488	316	152	171	124	374

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	323	0	-	0	1444
Stage 1	-	-	-	-	152
Stage 2	-	-	-	-	1292
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1237	-	-	-	145
Stage 1	-	-	-	-	876
Stage 2	-	-	-	-	258
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1237	-	-	-	88
Mov Cap-2 Maneuver	-	-	-	-	88
Stage 1	-	-	-	-	530
Stage 2	-	-	-	-	258

Approach	EB	WB	SB
HCM Control Delay, s	5.9	0	\$ 323.1
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1237	-	-	-	88	-
HCM Lane V/C Ratio	0.395	-	-	-	1.408	-
HCM Control Delay (s)	9.8	-	-	-	\$ 323.1	0
HCM Lane LOS	A	-	-	-	F	A
HCM 95th %tile Q(veh)	1.9	-	-	-	9.4	-

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

3: Mt Werner Rd & Mt Werner Cir
 2024 Total Sat PM with GTC Alt.syn

Intersection						
Int Delay, s/veh	240.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↗	↗	↘	↘	↘
Traffic Vol, veh/h	509	405	324	177	172	587
Future Vol, veh/h	509	405	324	177	172	587
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Free
Storage Length	0	-	-	65	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	553	440	352	192	187	638

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	544	0	-	0	1898
Stage 1	-	-	-	-	352
Stage 2	-	-	-	-	1546
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1025	-	-	-	~ 76
Stage 1	-	-	-	-	712
Stage 2	-	-	-	-	193
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1025	-	-	-	~ 35
Mov Cap-2 Maneuver	-	-	-	-	~ 35
Stage 1	-	-	-	-	328
Stage 2	-	-	-	-	193

Approach	EB	WB	SB
HCM Control Delay, s	7	0	\$ 2180.9
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1025	-	-	-	35	-
HCM Lane V/C Ratio	0.54	-	-	-	5.342	-
HCM Control Delay (s)	12.6	-	-	-	\$ 2180.9	0
HCM Lane LOS	B	-	-	-	F	A
HCM 95th %tile Q(veh)	3.3	-	-	-	22.2	-

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

3: Mt Werner Rd & Mt Werner Cir
 2044 Total Sat AM with GTC Alt.syn

Intersection						
Int Delay, s/veh	73.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↗	↗	↘	↘	↘
Traffic Vol, veh/h	503	330	154	175	127	393
Future Vol, veh/h	503	330	154	175	127	393
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Free
Storage Length	0	-	-	65	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	547	359	167	190	138	427

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	357	0	-	0	1620
Stage 1	-	-	-	-	167
Stage 2	-	-	-	-	1453
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1202	-	-	-	~ 113
Stage 1	-	-	-	-	863
Stage 2	-	-	-	-	215
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1202	-	-	-	~ 62
Mov Cap-2 Maneuver	-	-	-	-	~ 62
Stage 1	-	-	-	-	470
Stage 2	-	-	-	-	215

Approach	EB	WB	SB
HCM Control Delay, s	6.3	0	\$ 705.5
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1202	-	-	-	62	-
HCM Lane V/C Ratio	0.455	-	-	-	2.227	-
HCM Control Delay (s)	10.5	-	-	-	\$ 705.5	0
HCM Lane LOS	B	-	-	-	F	A
HCM 95th %tile Q(veh)	2.4	-	-	-	13.4	-

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

3: Mt Werner Rd & Mt Werner Cir
 2044 Total Sat PM with GTC Alt.syn

Intersection						
Int Delay, s/veh	500					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↗	↗	↘	↘	↘
Traffic Vol, veh/h	572	455	359	196	191	664
Future Vol, veh/h	572	455	359	196	191	664
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Free
Storage Length	0	-	-	65	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	622	495	390	213	208	722

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	603	0	0 2129
Stage 1	-	-	- 390
Stage 2	-	-	- 1739
Critical Hdwy	4.12	-	- 6.42
Critical Hdwy Stg 1	-	-	- 5.42
Critical Hdwy Stg 2	-	-	- 5.42
Follow-up Hdwy	2.218	-	- 3.518
Pot Cap-1 Maneuver	975	-	- ~ 55 0
Stage 1	-	-	- 684 0
Stage 2	-	-	- ~ 155 0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	975	-	- ~ 20 -
Mov Cap-2 Maneuver	-	-	- ~ 20 -
Stage 1	-	-	- 248 -
Stage 2	-	-	- ~ 155 -

Approach	EB	WB	SB
HCM Control Delay, s	8.3	0	\$ 4596.8
HCM LOS			F

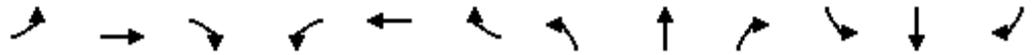
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	975	-	-	-	20	-
HCM Lane V/C Ratio	0.638	-	-	-	10.38	-
HCM Control Delay (s)	15	-	-	-	\$ 4596.8	0
HCM Lane LOS	B	-	-	-	F	A
HCM 95th %tile Q(veh)	4.8	-	-	-	26.4	-

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

5: Pine Grove Rd & Mt Werner Rd
2024 Background Sat AM.syn

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	346	50	92	168	205	6	46	107	253	44	5
Future Volume (vph)	0	346	50	92	168	205	6	46	107	253	44	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	70		70	85		60	150		60	150		150
Storage Lanes	1		1	1		1	0		1	0		0
Taper Length (ft)	85			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.998	
Flt Protected				0.950				0.994			0.960	
Satd. Flow (prot)	1863	1863	1583	1770	3539	1583	0	1852	1583	0	1785	0
Flt Permitted				0.393				0.954			0.721	
Satd. Flow (perm)	1863	1863	1583	732	3539	1583	0	1777	1583	0	1340	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			97			223			116			1
Link Speed (mph)		35			35			25				25
Link Distance (ft)		831			432			826				672
Travel Time (s)		16.2			8.4			22.5				18.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	376	54	100	183	223	0	57	116	0	328	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		2		1	6			8				4
Permitted Phases	2		2	6		6	8		8	4		
Detector Phase	2	2	2	1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	34.0	34.0	34.0	5.0	34.0	34.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	40.0	40.0	40.0	11.0	40.0	40.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (s)	40.0	40.0	40.0	20.0	60.0	60.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	44.4%	44.4%	44.4%	22.2%	66.7%	66.7%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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	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		0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		5.0	5.0		5.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Recall Mode	C-Max	C-Max	C-Max	None	Max	Max	Max	Max	Max	None	None	
Act Effect Green (s)		42.7	42.7	54.0	54.0	54.0		25.0	25.0		25.0	
Actuated g/C Ratio		0.47	0.47	0.60	0.60	0.60		0.28	0.28		0.28	
v/c Ratio		0.43	0.07	0.19	0.09	0.21		0.12	0.22		0.88	
Control Delay		18.7	1.1	8.6	7.7	1.7		25.1	6.2		57.6	
Queue Delay		0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay		18.7	1.1	8.6	7.7	1.7		25.1	6.2		57.6	
LOS		B	A	A	A	A		C	A		E	
Approach Delay		16.5			5.2			12.4			57.6	
Approach LOS		B			A			B			E	
Queue Length 50th (ft)		143	0	22	21	0		24	0		178	
Queue Length 95th (ft)		228	6	43	34	26		54	39		#334	
Internal Link Dist (ft)		751			352			746			592	

5: Pine Grove Rd & Mt Werner Rd
 2024 Background Sat AM.syn

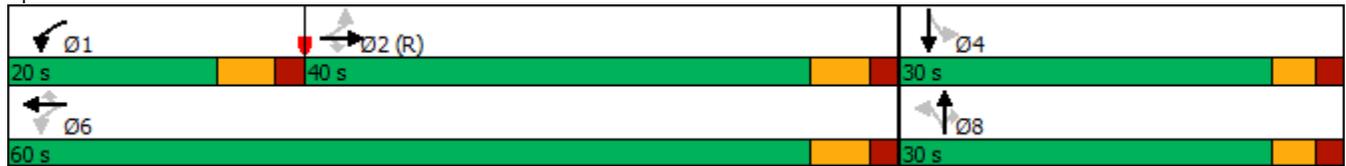


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)			70	85		60			60			
Base Capacity (vph)		883	802	600	2123	1039		493	523		372	
Starvation Cap Reductn		0	0	0	0	0		0	0		0	
Spillback Cap Reductn		0	0	0	0	0		0	0		0	
Storage Cap Reductn		0	0	0	0	0		0	0		0	
Reduced v/c Ratio		0.43	0.07	0.17	0.09	0.21		0.12	0.22		0.88	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 21.4
 Intersection LOS: C
 Intersection Capacity Utilization 94.1%
 ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

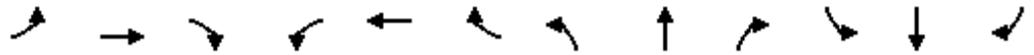
Splits and Phases: 5: Pine Grove Rd & Mt Werner Rd



5: Pine Grove Rd & Mt Werner Rd
2024 Background Sat PM.syn

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	336	33	97	410	540	51	112	98	265	46	18
Future Volume (vph)	5	336	33	97	410	540	51	112	98	265	46	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	70		70	85		60	150		60	150		150
Storage Lanes	1		1	1		1	0		1	0		0
Taper Length (ft)	85			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.992	
Flt Protected	0.950			0.950				0.985			0.961	
Satd. Flow (prot)	1770	1863	1583	1770	3539	1583	0	1835	1583	0	1776	0
Flt Permitted	0.494			0.402				0.865			0.599	
Satd. Flow (perm)	920	1863	1583	749	3539	1583	0	1611	1583	0	1107	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			97			587			109		3	
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		831			432			826			672	
Travel Time (s)		16.2			8.4			22.5			18.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	365	36	105	446	587	0	177	107	0	358	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		
Detector Phase	2	2	2	1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	34.0	34.0	34.0	5.0	34.0	34.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	40.0	40.0	40.0	11.0	40.0	40.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (s)	40.0	40.0	40.0	20.0	60.0	60.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	44.4%	44.4%	44.4%	22.2%	66.7%	66.7%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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	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		0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		5.0	5.0		5.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Recall Mode	C-Max	C-Max	C-Max	None	Max	Max	Max	Max	Max	None	None	
Act Effect Green (s)	42.6	42.6	42.6	54.0	54.0	54.0		25.0	25.0		25.0	
Actuated g/C Ratio	0.47	0.47	0.47	0.60	0.60	0.60		0.28	0.28		0.28	
v/c Ratio	0.01	0.41	0.04	0.20	0.21	0.50		0.40	0.21		1.16	
Control Delay	14.8	18.6	0.1	8.6	8.5	2.3		29.6	6.1		133.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay	14.8	18.6	0.1	8.6	8.5	2.3		29.6	6.1		133.5	
LOS	B	B	A	A	A	A		C	A		F	
Approach Delay		16.9			5.3			20.8			133.5	
Approach LOS		B			A			C			F	
Queue Length 50th (ft)	2	138	0	23	55	0		82	0		~243	
Queue Length 95th (ft)	8	222	0	45	78	39		141	37		#416	
Internal Link Dist (ft)		751			352			746			592	

5: Pine Grove Rd & Mt Werner Rd
 2024 Background Sat PM.syn

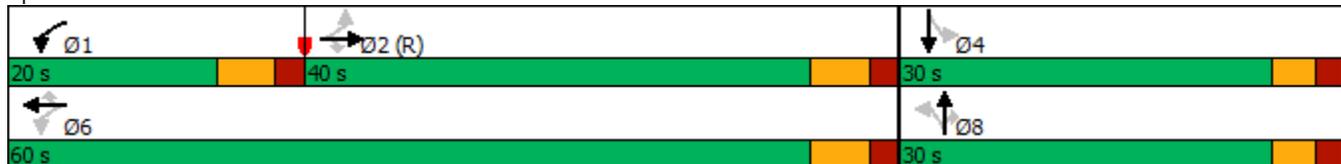


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)	70		70	85		60			60			
Base Capacity (vph)	435	882	800	608	2123	1184		447	518		309	
Starvation Cap Reductn	0	0	0	0	0	0		0	0		0	
Spillback Cap Reductn	0	0	0	0	0	0		0	0		0	
Storage Cap Reductn	0	0	0	0	0	0		0	0		0	
Reduced v/c Ratio	0.01	0.41	0.04	0.17	0.21	0.50		0.40	0.21		1.16	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.16
 Intersection Signal Delay: 30.5
 Intersection LOS: C
 Intersection Capacity Utilization 95.7%
 ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

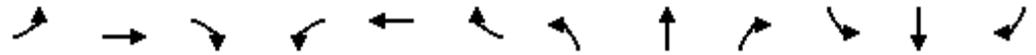
Splits and Phases: 5: Pine Grove Rd & Mt Werner Rd



5: Pine Grove Rd & Mt Werner Rd
2044 Background Sat AM.syn

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	514	74	137	249	304	9	68	159	375	65	8
Future Volume (vph)	0	514	74	137	249	304	9	68	159	375	65	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	70		70	85		60	150		60	150		150
Storage Lanes	1		1	1		1	0		1	0		0
Taper Length (ft)	85			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.998	
Flt Protected				0.950				0.994			0.960	
Satd. Flow (prot)	1863	1863	1583	1770	3539	1583	0	1852	1583	0	1785	0
Flt Permitted				0.225				0.961			0.703	
Satd. Flow (perm)	1863	1863	1583	419	3539	1583	0	1790	1583	0	1307	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			97			330			173			1
Link Speed (mph)		35			35			25				25
Link Distance (ft)		831			432			826				672
Travel Time (s)		16.2			8.4			22.5				18.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	559	80	149	271	330	0	84	173	0	488	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		2		1	6			8				4
Permitted Phases	2		2	6		6	8		8	4		
Detector Phase	2	2	2	1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	34.0	34.0	34.0	5.0	34.0	34.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	40.0	40.0	40.0	11.0	40.0	40.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (s)	40.0	40.0	40.0	20.0	60.0	60.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	44.4%	44.4%	44.4%	22.2%	66.7%	66.7%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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	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		0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		5.0	5.0		5.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Recall Mode	C-Max	C-Max	C-Max	None	Max	Max	Max	Max	Max	None	None	
Act Effect Green (s)		39.2	39.2	54.0	54.0	54.0		25.0	25.0		25.0	
Actuated g/C Ratio		0.44	0.44	0.60	0.60	0.60		0.28	0.28		0.28	
v/c Ratio		0.69	0.11	0.39	0.13	0.31		0.17	0.31		1.34	
Control Delay		26.5	3.1	11.0	8.0	1.7		25.8	5.8		202.0	
Queue Delay		0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay		26.5	3.1	11.0	8.0	1.7		25.8	5.8		202.0	
LOS		C	A	B	A	A		C	A		F	
Approach Delay		23.5			5.8			12.3			202.0	
Approach LOS		C			A			B			F	
Queue Length 50th (ft)		249	0	34	32	0		36	0		~369	
Queue Length 95th (ft)		390	20	60	49	31		73	47		#562	
Internal Link Dist (ft)		751			352			746			592	

5: Pine Grove Rd & Mt Werner Rd
 2044 Background Sat AM.syn

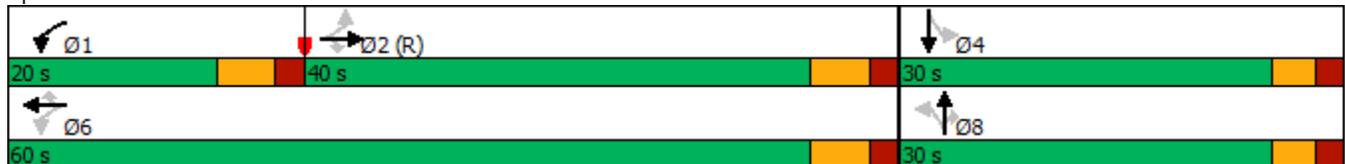


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)			70	85		60			60			
Base Capacity (vph)		810	743	461	2123	1081		497	564		363	
Starvation Cap Reductn		0	0	0	0	0		0	0		0	
Spillback Cap Reductn		0	0	0	0	0		0	0		0	
Storage Cap Reductn		0	0	0	0	0		0	0		0	
Reduced v/c Ratio		0.69	0.11	0.32	0.13	0.31		0.17	0.31		1.34	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.34
 Intersection Signal Delay: 56.8
 Intersection LOS: E
 Intersection Capacity Utilization 102.2%
 ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

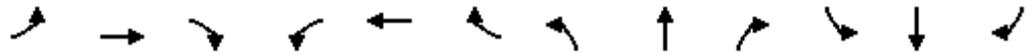
Splits and Phases: 5: Pine Grove Rd & Mt Werner Rd



5: Pine Grove Rd & Mt Werner Rd
2044 Background Sat PM.syn

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	500	49	143	609	803	76	167	145	394	68	27
Future Volume (vph)	8	500	49	143	609	803	76	167	145	394	68	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	70		70	85		60	150		60	150		150
Storage Lanes	1		1	1		1	0		1	0		0
Taper Length (ft)	85			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.993	
Flt Protected	0.950			0.950				0.985			0.961	
Satd. Flow (prot)	1770	1863	1583	1770	3539	1583	0	1835	1583	0	1778	0
Flt Permitted	0.400			0.236				0.889			0.453	
Satd. Flow (perm)	745	1863	1583	440	3539	1583	0	1656	1583	0	838	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			97			470			112			3
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		831			432			826			672	
Travel Time (s)		16.2			8.4			22.5			18.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	543	53	155	662	873	0	265	158	0	531	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		
Detector Phase	2	2	2	1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	34.0	34.0	34.0	5.0	34.0	34.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	40.0	40.0	40.0	11.0	40.0	40.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (s)	40.0	40.0	40.0	20.0	60.0	60.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	44.4%	44.4%	44.4%	22.2%	66.7%	66.7%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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	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		0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		5.0	5.0		5.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Recall Mode	C-Max	C-Max	C-Max	None	Max	Max	Max	Max	Max	None	None	
Act Effect Green (s)	39.0	39.0	39.0	54.0	54.0	54.0		25.0	25.0		25.0	
Actuated g/C Ratio	0.43	0.43	0.43	0.60	0.60	0.60		0.28	0.28		0.28	
v/c Ratio	0.03	0.67	0.07	0.39	0.31	0.77		0.58	0.30		2.27	
Control Delay	16.0	26.0	1.1	10.9	9.3	11.1		33.8	10.7		605.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay	16.0	26.0	1.1	10.9	9.3	11.1		33.8	10.7		605.6	
LOS	B	C	A	B	A	B		C	B		F	
Approach Delay		23.6			10.4			25.2			605.6	
Approach LOS		C			B			C			F	
Queue Length 50th (ft)	3	239	0	35	89	144		129	19		~501	
Queue Length 95th (ft)	13	376	6	63	120	317		210	67		#700	
Internal Link Dist (ft)		751			352			746			592	

5: Pine Grove Rd & Mt Werner Rd
 2044 Background Sat PM.syn

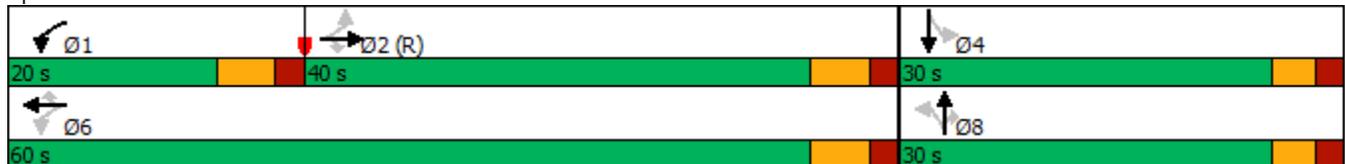


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)	70		70	85		60			60			
Base Capacity (vph)	323	808	741	470	2123	1137		460	520		234	
Starvation Cap Reductn	0	0	0	0	0	0		0	0		0	
Spillback Cap Reductn	0	0	0	0	0	0		0	0		0	
Storage Cap Reductn	0	0	0	0	0	0		0	0		0	
Reduced v/c Ratio	0.03	0.67	0.07	0.33	0.31	0.77		0.58	0.30		2.27	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	0 (0%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle:	105
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	2.27
Intersection Signal Delay:	112.1
Intersection LOS:	F
Intersection Capacity Utilization	115.0%
ICU Level of Service	H
Analysis Period (min)	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

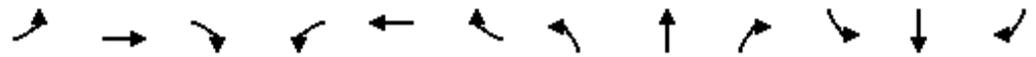
Splits and Phases: 5: Pine Grove Rd & Mt Werner Rd



5: Pine Grove Rd & Mt Werner Rd
2024 Total Sat AM.syn

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	364	120	96	182	213	6	46	113	265	74	5
Future Volume (vph)	0	364	120	96	182	213	6	46	113	265	74	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	70		70	85		60	150		60	150		150
Storage Lanes	1		1	1		1	0		1	0		0
Taper Length (ft)	85			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.998	
Flt Protected				0.950				0.994			0.963	
Satd. Flow (prot)	1863	1863	1583	1770	3539	1583	0	1852	1583	0	1790	0
Flt Permitted				0.376				0.953			0.737	
Satd. Flow (perm)	1863	1863	1583	700	3539	1583	0	1775	1583	0	1370	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			97			232			123		1	
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		831			432			826			672	
Travel Time (s)		16.2			8.4			22.5			18.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	396	130	104	198	232	0	57	123	0	373	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		
Detector Phase	2	2	2	1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	34.0	34.0	34.0	5.0	34.0	34.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	40.0	40.0	40.0	11.0	40.0	40.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (s)	40.0	40.0	40.0	20.0	60.0	60.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	44.4%	44.4%	44.4%	22.2%	66.7%	66.7%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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	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		0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		5.0	5.0		5.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Recall Mode	C-Max	C-Max	C-Max	None	Max	Max	Max	Max	Max	None	None	
Act Effect Green (s)		42.6	42.6	54.0	54.0	54.0		25.0	25.0		25.0	
Actuated g/C Ratio		0.47	0.47	0.60	0.60	0.60		0.28	0.28		0.28	
v/c Ratio		0.45	0.16	0.20	0.09	0.22		0.12	0.23		0.98	
Control Delay		19.1	5.9	8.7	7.8	1.7		25.1	6.1		75.6	
Queue Delay		0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay		19.1	5.9	8.7	7.8	1.7		25.1	6.1		75.6	
LOS		B	A	A	A	A		C	A		E	
Approach Delay		15.9			5.3			12.2			75.6	
Approach LOS		B			A			B			E	
Queue Length 50th (ft)		153	10	23	23	0		24	0		210	
Queue Length 95th (ft)		243	44	44	37	27		54	40		#393	
Internal Link Dist (ft)		751			352			746			592	

5: Pine Grove Rd & Mt Werner Rd
 2024 Total Sat AM.syn

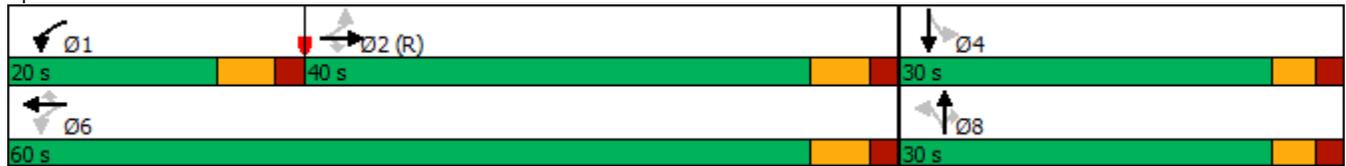


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)			70	85		60			60			
Base Capacity (vph)		882	801	586	2123	1042		493	528		381	
Starvation Cap Reductn		0	0	0	0	0		0	0		0	
Spillback Cap Reductn		0	0	0	0	0		0	0		0	
Storage Cap Reductn		0	0	0	0	0		0	0		0	
Reduced v/c Ratio		0.45	0.16	0.18	0.09	0.22		0.12	0.23		0.98	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	0 (0%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle:	85
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.98
Intersection Signal Delay:	25.8
Intersection LOS:	C
Intersection Capacity Utilization	96.4%
ICU Level of Service	F
Analysis Period (min)	15
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

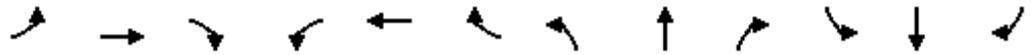
Splits and Phases: 5: Pine Grove Rd & Mt Werner Rd



5: Pine Grove Rd & Mt Werner Rd
2024 Total Sat PM.syn

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	353	33	103	427	551	201	142	104	275	46	18
Future Volume (vph)	5	353	33	103	427	551	201	142	104	275	46	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	70		70	85		60	150		60	150		150
Storage Lanes	1		1	1		1	0		1	0		0
Taper Length (ft)	85			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.993	
Flt Protected	0.950			0.950				0.972			0.961	
Satd. Flow (prot)	1770	1863	1583	1770	3539	1583	0	1811	1583	0	1778	0
Flt Permitted	0.485			0.385				0.768			0.286	
Satd. Flow (perm)	903	1863	1583	717	3539	1583	0	1431	1583	0	529	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			97			535			109			3
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		831			432			826			672	
Travel Time (s)		16.2			8.4			22.5			18.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	384	36	112	464	599	0	372	113	0	369	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		
Detector Phase	2	2	2	1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	34.0	34.0	34.0	5.0	34.0	34.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	40.0	40.0	40.0	11.0	40.0	40.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (s)	40.0	40.0	40.0	20.0	60.0	60.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	44.4%	44.4%	44.4%	22.2%	66.7%	66.7%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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	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		0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		5.0	5.0		5.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Recall Mode	C-Max	C-Max	C-Max	None	Max	Max	Max	Max	Max	None	None	
Act Effect Green (s)	42.5	42.5	42.5	54.0	54.0	54.0		25.0	25.0		25.0	
Actuated g/C Ratio	0.47	0.47	0.47	0.60	0.60	0.60		0.28	0.28		0.28	
v/c Ratio	0.01	0.44	0.05	0.21	0.22	0.52		0.94	0.22		2.48	
Control Delay	15.0	19.1	0.1	8.8	8.6	3.0		65.6	6.8		703.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay	15.0	19.1	0.1	8.8	8.6	3.0		65.6	6.8		703.7	
LOS	B	B	A	A	A	A		E	A		F	
Approach Delay		17.4			5.8			51.9			703.7	
Approach LOS		B			A			D			F	
Queue Length 50th (ft)	2	148	0	25	58	14		206	2		~357	
Queue Length 95th (ft)	8	236	0	47	82	57		#379	41		#531	
Internal Link Dist (ft)		751			352			746			592	

5: Pine Grove Rd & Mt Werner Rd
 2024 Total Sat PM.syn

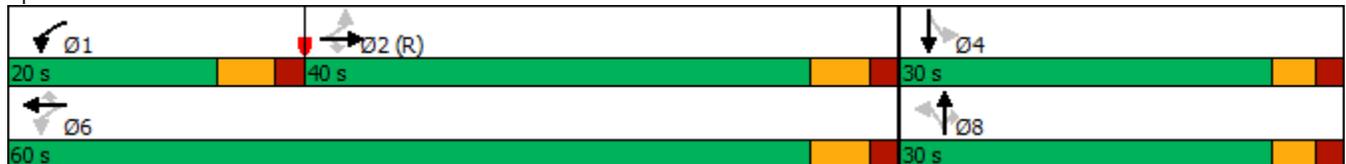


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)	70		70	85		60			60			
Base Capacity (vph)	426	878	798	594	2123	1163		397	518		149	
Starvation Cap Reductn	0	0	0	0	0	0		0	0		0	
Spillback Cap Reductn	0	0	0	0	0	0		0	0		0	
Storage Cap Reductn	0	0	0	0	0	0		0	0		0	
Reduced v/c Ratio	0.01	0.44	0.05	0.19	0.22	0.52		0.94	0.22		2.48	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 2.48
 Intersection Signal Delay: 121.9 Intersection LOS: F
 Intersection Capacity Utilization 112.3% ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

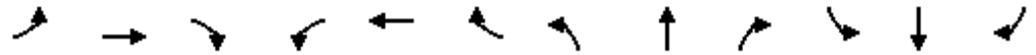
Splits and Phases: 5: Pine Grove Rd & Mt Werner Rd



5: Pine Grove Rd & Mt Werner Rd
2044 Total Sat AM.syn

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	541	144	143	269	317	9	68	168	393	95	8
Future Volume (vph)	0	541	144	143	269	317	9	68	168	393	95	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	70		70	85		60	150		60	150		150
Storage Lanes	1		1	1		1	0		1	0		0
Taper Length (ft)	85			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.998	
Flt Protected				0.950				0.994			0.962	
Satd. Flow (prot)	1863	1863	1583	1770	3539	1583	0	1852	1583	0	1788	0
Flt Permitted				0.199				0.964			0.715	
Satd. Flow (perm)	1863	1863	1583	371	3539	1583	0	1796	1583	0	1329	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			97			345			183		1	
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		831			432			826			672	
Travel Time (s)		16.2			8.4			22.5			18.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	588	157	155	292	345	0	84	183	0	539	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		
Detector Phase	2	2	2	1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	34.0	34.0	34.0	5.0	34.0	34.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	40.0	40.0	40.0	11.0	40.0	40.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (s)	40.0	40.0	40.0	20.0	60.0	60.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	44.4%	44.4%	44.4%	22.2%	66.7%	66.7%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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	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		0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		5.0	5.0		5.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Recall Mode	C-Max	C-Max	C-Max	None	Max	Max	Max	Max	Max	None	None	
Act Effect Green (s)		39.0	39.0	54.0	54.0	54.0		25.0	25.0		25.0	
Actuated g/C Ratio		0.43	0.43	0.60	0.60	0.60		0.28	0.28		0.28	
v/c Ratio		0.73	0.21	0.43	0.14	0.32		0.17	0.32		1.46	
Control Delay		28.2	7.9	11.7	8.1	1.8		25.8	5.7		250.0	
Queue Delay		0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay		28.2	7.9	11.7	8.1	1.8		25.8	5.7		250.0	
LOS		C	A	B	A	A		C	A		F	
Approach Delay		23.9			6.0			12.0			250.0	
Approach LOS		C			A			B			F	
Queue Length 50th (ft)		268	19	35	34	0		36	0		~427	
Queue Length 95th (ft)		#421	59	63	52	32		73	48		#628	
Internal Link Dist (ft)		751			352			746			592	

5: Pine Grove Rd & Mt Werner Rd
 2044 Total Sat AM.syn

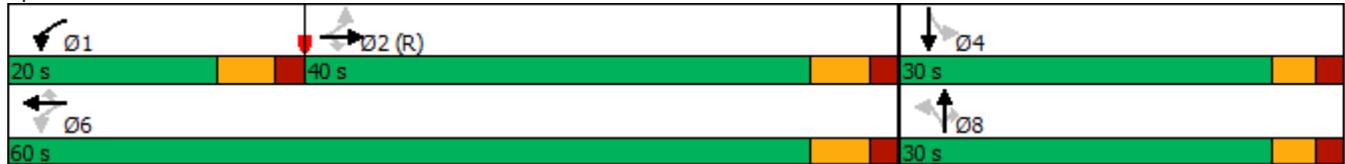


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)			70	85		60			60			
Base Capacity (vph)		808	741	440	2123	1087		498	571		369	
Starvation Cap Reductn		0	0	0	0	0		0	0		0	
Spillback Cap Reductn		0	0	0	0	0		0	0		0	
Storage Cap Reductn		0	0	0	0	0		0	0		0	
Reduced v/c Ratio		0.73	0.21	0.35	0.14	0.32		0.17	0.32		1.46	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.46
 Intersection Signal Delay: 68.5
 Intersection LOS: E
 Intersection Capacity Utilization 104.7%
 ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

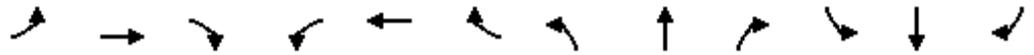
Splits and Phases: 5: Pine Grove Rd & Mt Werner Rd



5: Pine Grove Rd & Mt Werner Rd
2044 Total Sat PM.syn

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	527	49	152	635	821	226	197	154	411	68	27
Future Volume (vph)	8	527	49	152	635	821	226	197	154	411	68	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	70		70	85		60	150		60	150		150
Storage Lanes	1		1	1		1	0		1	0		0
Taper Length (ft)	85			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.993	
Flt Protected	0.950			0.950				0.974			0.961	
Satd. Flow (prot)	1770	1863	1583	1770	3539	1583	0	1814	1583	0	1778	0
Flt Permitted	0.389			0.209				0.836			0.155	
Satd. Flow (perm)	725	1863	1583	389	3539	1583	0	1557	1583	0	287	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			97			403			109			3
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		831			432			826			672	
Travel Time (s)		16.2			8.4			22.5			18.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	573	53	165	690	892	0	460	167	0	550	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		
Detector Phase	2	2	2	1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	34.0	34.0	34.0	5.0	34.0	34.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	40.0	40.0	40.0	11.0	40.0	40.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (s)	40.0	40.0	40.0	20.0	60.0	60.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	44.4%	44.4%	44.4%	22.2%	66.7%	66.7%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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	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		0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		5.0	5.0		5.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Recall Mode	C-Max	C-Max	C-Max	None	Max	Max	Max	Max	Max	None	None	
Act Effect Green (s)	38.8	38.8	38.8	54.0	54.0	54.0		25.0	25.0		25.0	
Actuated g/C Ratio	0.43	0.43	0.43	0.60	0.60	0.60		0.28	0.28		0.28	
v/c Ratio	0.03	0.71	0.07	0.44	0.33	0.80		1.06	0.32		6.79	
Control Delay	16.4	27.8	1.1	11.8	9.5	14.0		95.1	12.0		2639.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay	16.4	27.8	1.1	11.8	9.5	14.0		95.1	12.0		2639.6	
LOS	B	C	A	B	A	B		F	B		F	
Approach Delay		25.4			12.0			73.0			2639.6	
Approach LOS		C			B			E			F	
Queue Length 50th (ft)	3	260	0	38	94	196		~291	25		~578	
Queue Length 95th (ft)	13	409	6	66	125	396		#477	75		#780	
Internal Link Dist (ft)		751			352			746			592	

5: Pine Grove Rd & Mt Werner Rd
 2044 Total Sat PM.syn

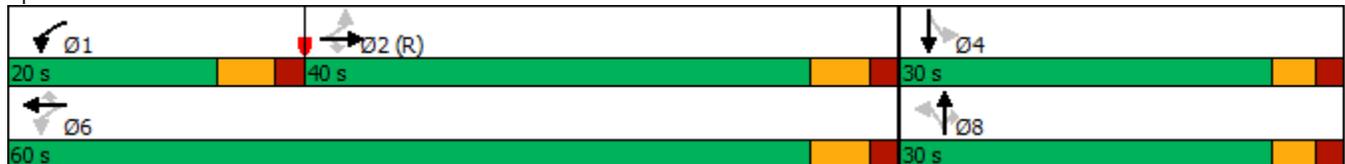


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)	70		70	85		60			60			
Base Capacity (vph)	312	802	737	448	2123	1111		432	518		81	
Starvation Cap Reductn	0	0	0	0	0	0		0	0		0	
Spillback Cap Reductn	0	0	0	0	0	0		0	0		0	
Storage Cap Reductn	0	0	0	0	0	0		0	0		0	
Reduced v/c Ratio	0.03	0.71	0.07	0.37	0.33	0.80		1.06	0.32		6.79	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 115
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 6.79
 Intersection Signal Delay: 431.2 Intersection LOS: F
 Intersection Capacity Utilization 125.9% ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

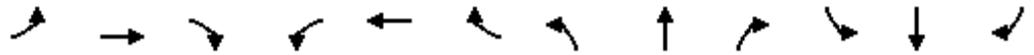
Splits and Phases: 5: Pine Grove Rd & Mt Werner Rd



5: Pine Grove Rd & Mt Werner Rd
 2024 Total Sat AM with GTC Alt.syn

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	364	120	96	182	213	6	46	113	265	74	5
Future Volume (vph)	0	364	120	96	182	213	6	46	113	265	74	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	70		70	85		60	150		60	150		150
Storage Lanes	1		1	1		1	0		1	0		0
Taper Length (ft)	85			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.998	
Flt Protected				0.950				0.994			0.963	
Satd. Flow (prot)	1863	1863	1583	1770	3539	1583	0	1852	1583	0	1790	0
Flt Permitted				0.376				0.953			0.737	
Satd. Flow (perm)	1863	1863	1583	700	3539	1583	0	1775	1583	0	1370	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			97			232			123			1
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		831			432			826			672	
Travel Time (s)		16.2			8.4			22.5			18.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	396	130	104	198	232	0	57	123	0	373	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		
Detector Phase	2	2	2	1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	34.0	34.0	34.0	5.0	34.0	34.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	40.0	40.0	40.0	11.0	40.0	40.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (s)	40.0	40.0	40.0	20.0	60.0	60.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	44.4%	44.4%	44.4%	22.2%	66.7%	66.7%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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	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		0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		5.0	5.0		5.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Recall Mode	C-Max	C-Max	C-Max	None	Max	Max	Max	Max	Max	None	None	
Act Effect Green (s)		42.6	42.6	54.0	54.0	54.0		25.0	25.0		25.0	
Actuated g/C Ratio		0.47	0.47	0.60	0.60	0.60		0.28	0.28		0.28	
v/c Ratio		0.45	0.16	0.20	0.09	0.22		0.12	0.23		0.98	
Control Delay		19.1	5.9	8.7	7.8	1.7		25.1	6.1		75.6	
Queue Delay		0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay		19.1	5.9	8.7	7.8	1.7		25.1	6.1		75.6	
LOS		B	A	A	A	A		C	A		E	
Approach Delay		15.9			5.3			12.2			75.6	
Approach LOS		B			A			B			E	
Queue Length 50th (ft)		153	10	23	23	0		24	0		210	
Queue Length 95th (ft)		243	44	44	37	27		54	40		#393	
Internal Link Dist (ft)		751			352			746			592	

5: Pine Grove Rd & Mt Werner Rd
 2024 Total Sat AM with GTC Alt.syn

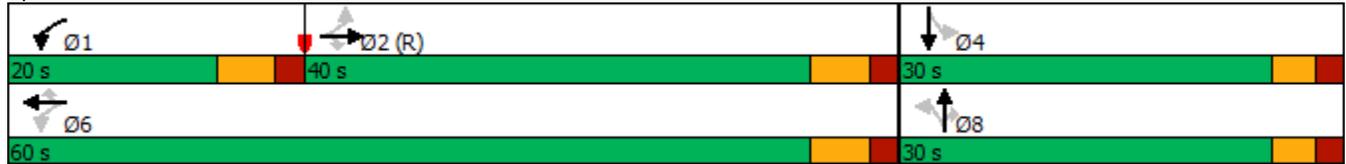


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)			70	85		60			60			
Base Capacity (vph)		882	801	586	2123	1042		493	528		381	
Starvation Cap Reductn		0	0	0	0	0		0	0		0	
Spillback Cap Reductn		0	0	0	0	0		0	0		0	
Storage Cap Reductn		0	0	0	0	0		0	0		0	
Reduced v/c Ratio		0.45	0.16	0.18	0.09	0.22		0.12	0.23		0.98	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	0 (0%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle:	85
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.98
Intersection Signal Delay:	25.8
Intersection LOS:	C
Intersection Capacity Utilization	96.4%
ICU Level of Service	F
Analysis Period (min)	15
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

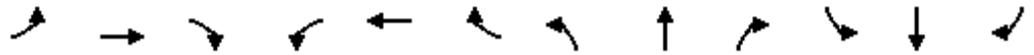
Splits and Phases: 5: Pine Grove Rd & Mt Werner Rd



5: Pine Grove Rd & Mt Werner Rd
 2024 Total Sat PM with GTC Alt.syn

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	353	33	103	427	551	201	142	104	275	46	18
Future Volume (vph)	5	353	33	103	427	551	201	142	104	275	46	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	70		70	85		60	150		60	150		150
Storage Lanes	1		1	1		1	0		1	0		0
Taper Length (ft)	85			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.993	
Flt Protected	0.950			0.950				0.972			0.961	
Satd. Flow (prot)	1770	1863	1583	1770	3539	1583	0	1811	1583	0	1778	0
Flt Permitted	0.485			0.385				0.768			0.286	
Satd. Flow (perm)	903	1863	1583	717	3539	1583	0	1431	1583	0	529	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			97			535			109			3
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		831			432			826			672	
Travel Time (s)		16.2			8.4			22.5			18.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	384	36	112	464	599	0	372	113	0	369	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		
Detector Phase	2	2	2	1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	34.0	34.0	34.0	5.0	34.0	34.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	40.0	40.0	40.0	11.0	40.0	40.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (s)	40.0	40.0	40.0	20.0	60.0	60.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	44.4%	44.4%	44.4%	22.2%	66.7%	66.7%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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	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		0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		5.0	5.0		5.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Recall Mode	C-Max	C-Max	C-Max	None	Max	Max	Max	Max	Max	None	None	
Act Effect Green (s)	42.5	42.5	42.5	54.0	54.0	54.0		25.0	25.0		25.0	
Actuated g/C Ratio	0.47	0.47	0.47	0.60	0.60	0.60		0.28	0.28		0.28	
v/c Ratio	0.01	0.44	0.05	0.21	0.22	0.52		0.94	0.22		2.48	
Control Delay	15.0	19.1	0.1	8.8	8.6	3.0		65.6	6.8		703.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay	15.0	19.1	0.1	8.8	8.6	3.0		65.6	6.8		703.7	
LOS	B	B	A	A	A	A		E	A		F	
Approach Delay		17.4			5.8			51.9			703.7	
Approach LOS		B			A			D			F	
Queue Length 50th (ft)	2	148	0	25	58	14		206	2		~357	
Queue Length 95th (ft)	8	236	0	47	82	57		#379	41		#531	
Internal Link Dist (ft)		751			352			746			592	

5: Pine Grove Rd & Mt Werner Rd
 2024 Total Sat PM with GTC Alt.syn

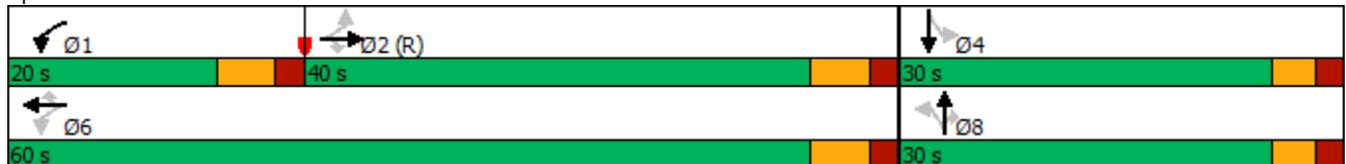


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)	70		70	85		60			60			
Base Capacity (vph)	426	878	798	594	2123	1163		397	518		149	
Starvation Cap Reductn	0	0	0	0	0	0		0	0		0	
Spillback Cap Reductn	0	0	0	0	0	0		0	0		0	
Storage Cap Reductn	0	0	0	0	0	0		0	0		0	
Reduced v/c Ratio	0.01	0.44	0.05	0.19	0.22	0.52		0.94	0.22		2.48	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	0 (0%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle:	95
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	2.48
Intersection Signal Delay:	121.9
Intersection LOS:	F
Intersection Capacity Utilization	112.3%
ICU Level of Service	H
Analysis Period (min)	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

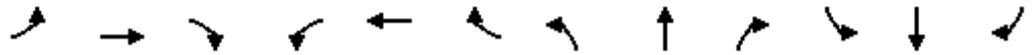
Splits and Phases: 5: Pine Grove Rd & Mt Werner Rd



5: Pine Grove Rd & Mt Werner Rd
 2044 Total Sat AM with GTC Alt.syn

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	541	144	143	269	317	9	68	168	393	95	8
Future Volume (vph)	0	541	144	143	269	317	9	68	168	393	95	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	70		70	85		60	150		60	150		150
Storage Lanes	1		1	1		1	0		1	0		0
Taper Length (ft)	85			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.998	
Flt Protected				0.950				0.994			0.962	
Satd. Flow (prot)	1863	1863	1583	1770	3539	1583	0	1852	1583	0	1788	0
Flt Permitted				0.199				0.964			0.715	
Satd. Flow (perm)	1863	1863	1583	371	3539	1583	0	1796	1583	0	1329	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			97			345			183			1
Link Speed (mph)		35			35			25				25
Link Distance (ft)		831			432			826				672
Travel Time (s)		16.2			8.4			22.5				18.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	588	157	155	292	345	0	84	183	0	539	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		2		1	6			8				4
Permitted Phases	2		2	6		6	8		8	4		
Detector Phase	2	2	2	1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	34.0	34.0	34.0	5.0	34.0	34.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	40.0	40.0	40.0	11.0	40.0	40.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (s)	40.0	40.0	40.0	20.0	60.0	60.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	44.4%	44.4%	44.4%	22.2%	66.7%	66.7%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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	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		0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		5.0	5.0		5.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Recall Mode	C-Max	C-Max	C-Max	None	Max	Max	Max	Max	Max	None	None	
Act Effect Green (s)		39.0	39.0	54.0	54.0	54.0		25.0	25.0		25.0	
Actuated g/C Ratio		0.43	0.43	0.60	0.60	0.60		0.28	0.28		0.28	
v/c Ratio		0.73	0.21	0.43	0.14	0.32		0.17	0.32		1.46	
Control Delay		28.2	7.9	11.7	8.1	1.8		25.8	5.7		250.0	
Queue Delay		0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay		28.2	7.9	11.7	8.1	1.8		25.8	5.7		250.0	
LOS		C	A	B	A	A		C	A		F	
Approach Delay		23.9			6.0			12.0			250.0	
Approach LOS		C			A			B			F	
Queue Length 50th (ft)		268	19	35	34	0		36	0		~427	
Queue Length 95th (ft)		#421	59	63	52	32		73	48		#628	
Internal Link Dist (ft)		751			352			746			592	

5: Pine Grove Rd & Mt Werner Rd
 2044 Total Sat AM with GTC Alt.syn

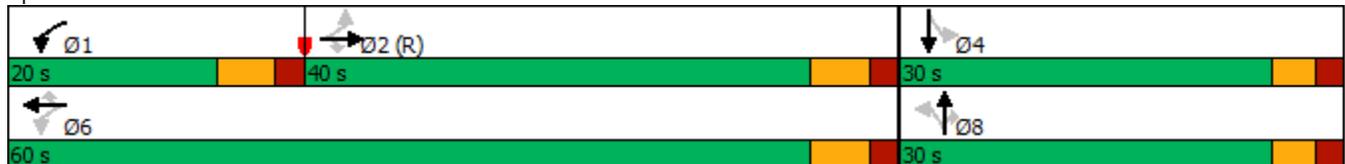


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)			70	85		60			60			
Base Capacity (vph)		808	741	440	2123	1087		498	571		369	
Starvation Cap Reductn		0	0	0	0	0		0	0		0	
Spillback Cap Reductn		0	0	0	0	0		0	0		0	
Storage Cap Reductn		0	0	0	0	0		0	0		0	
Reduced v/c Ratio		0.73	0.21	0.35	0.14	0.32		0.17	0.32		1.46	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.46
 Intersection Signal Delay: 68.5
 Intersection LOS: E
 Intersection Capacity Utilization 104.7%
 ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

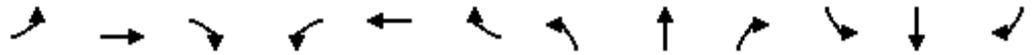
Splits and Phases: 5: Pine Grove Rd & Mt Werner Rd



5: Pine Grove Rd & Mt Werner Rd
 2044 Total Sat PM with GTC Alt.syn

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	527	49	152	635	821	226	197	154	411	68	27
Future Volume (vph)	8	527	49	152	635	821	226	197	154	411	68	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	70		70	85		60	150		60	150		150
Storage Lanes	1		1	1		1	0		1	0		0
Taper Length (ft)	85			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850		0.993	
Flt Protected	0.950			0.950				0.974			0.961	
Satd. Flow (prot)	1770	1863	1583	1770	3539	1583	0	1814	1583	0	1778	0
Flt Permitted	0.389			0.209				0.836			0.155	
Satd. Flow (perm)	725	1863	1583	389	3539	1583	0	1557	1583	0	287	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			97			403			109			3
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		831			432			826			672	
Travel Time (s)		16.2			8.4			22.5			18.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	573	53	165	690	892	0	460	167	0	550	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		
Detector Phase	2	2	2	1	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	34.0	34.0	34.0	5.0	34.0	34.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	40.0	40.0	40.0	11.0	40.0	40.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (s)	40.0	40.0	40.0	20.0	60.0	60.0	30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	44.4%	44.4%	44.4%	22.2%	66.7%	66.7%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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	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		0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		5.0	5.0		5.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Recall Mode	C-Max	C-Max	C-Max	None	Max	Max	Max	Max	Max	None	None	
Act Effect Green (s)	38.8	38.8	38.8	54.0	54.0	54.0		25.0	25.0		25.0	
Actuated g/C Ratio	0.43	0.43	0.43	0.60	0.60	0.60		0.28	0.28		0.28	
v/c Ratio	0.03	0.71	0.07	0.44	0.33	0.80		1.06	0.32		6.79	
Control Delay	16.4	27.8	1.1	11.8	9.5	14.0		95.1	12.0		2639.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay	16.4	27.8	1.1	11.8	9.5	14.0		95.1	12.0		2639.6	
LOS	B	C	A	B	A	B		F	B		F	
Approach Delay		25.4			12.0			73.0			2639.6	
Approach LOS		C			B			E			F	
Queue Length 50th (ft)	3	260	0	38	94	196		~291	25		~578	
Queue Length 95th (ft)	13	409	6	66	125	396		#477	75		#780	
Internal Link Dist (ft)		751			352			746			592	

5: Pine Grove Rd & Mt Werner Rd
 2044 Total Sat PM with GTC Alt.syn

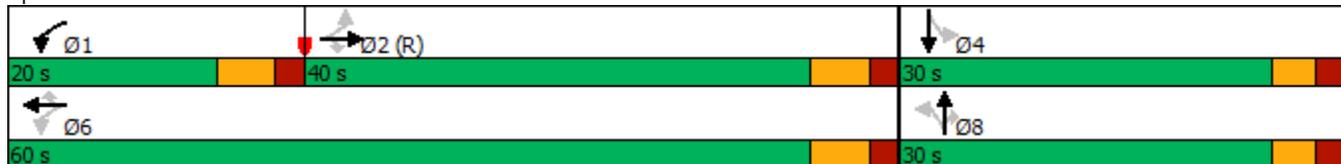


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)	70		70	85		60			60			
Base Capacity (vph)	312	802	737	448	2123	1111		432	518		81	
Starvation Cap Reductn	0	0	0	0	0	0		0	0		0	
Spillback Cap Reductn	0	0	0	0	0	0		0	0		0	
Storage Cap Reductn	0	0	0	0	0	0		0	0		0	
Reduced v/c Ratio	0.03	0.71	0.07	0.37	0.33	0.80		1.06	0.32		6.79	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 115
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 6.79
 Intersection Signal Delay: 431.2 Intersection LOS: F
 Intersection Capacity Utilization 125.9% ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 5: Pine Grove Rd & Mt Werner Rd



6: S Lincoln Ave (SH40) & JD Hays Way
2024 Background Sat AM.syn

Intersection						
Int Delay, s/veh	1.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Traffic Vol, veh/h	28	22	904	127	76	735
Future Vol, veh/h	28	22	904	127	76	735
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	24	983	138	83	799

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1618	1052	0	0	1121
Stage 1	1052	-	-	-	-
Stage 2	566	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219
Pot Cap-1 Maneuver	103	274	-	-	621
Stage 1	335	-	-	-	-
Stage 2	533	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	89	274	-	-	621
Mov Cap-2 Maneuver	89	-	-	-	-
Stage 1	290	-	-	-	-
Stage 2	533	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	53	0	1.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	127	621
HCM Lane V/C Ratio	-	-	0.428	0.133
HCM Control Delay (s)	-	-	53	11.7
HCM Lane LOS	-	-	F	B
HCM 95th %tile Q(veh)	-	-	1.9	0.5

6: S Lincoln Ave (SH40) & JD Hays Way
 2024 Background Sat PM.syn

Intersection						
Int Delay, s/veh	11					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Traffic Vol, veh/h	67	39	942	83	43	1253
Future Vol, veh/h	67	39	942	83	43	1253
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	73	42	1024	90	47	1362

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1844	1069	0	0	1114
Stage 1	1069	-	-	-	-
Stage 2	775	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219
Pot Cap-1 Maneuver	74	268	-	-	625
Stage 1	329	-	-	-	-
Stage 2	416	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 68	268	-	-	625
Mov Cap-2 Maneuver	~ 68	-	-	-	-
Stage 1	304	-	-	-	-
Stage 2	416	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	248	0	0.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	94	625
HCM Lane V/C Ratio	-	-	1.226	0.075
HCM Control Delay (s)	-	-	248	11.2
HCM Lane LOS	-	-	F	B
HCM 95th %tile Q(veh)	-	-	8	0.2

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

6: S Lincoln Ave (SH40) & JD Hays Way
2044 Background Sat AM.syn

Intersection						
Int Delay, s/veh	2.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Traffic Vol, veh/h	28	22	999	127	76	812
Future Vol, veh/h	28	22	999	127	76	812
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	24	1086	138	83	883

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1763	1155	0	0	1224
Stage 1	1155	-	-	-	-
Stage 2	608	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219
Pot Cap-1 Maneuver	83	239	-	-	567
Stage 1	299	-	-	-	-
Stage 2	507	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	71	239	-	-	567
Mov Cap-2 Maneuver	71	-	-	-	-
Stage 1	255	-	-	-	-
Stage 2	507	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	73.7	0	1.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	103	567
HCM Lane V/C Ratio	-	-	0.528	0.146
HCM Control Delay (s)	-	-	73.7	12.4
HCM Lane LOS	-	-	F	B
HCM 95th %tile Q(veh)	-	-	2.4	0.5

6: S Lincoln Ave (SH40) & JD Hays Way
2044 Background Sat PM.syn

Intersection						
Int Delay, s/veh	16.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Traffic Vol, veh/h	67	39	1041	83	43	1384
Future Vol, veh/h	67	39	1041	83	43	1384
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	73	42	1132	90	47	1504

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	2023	1177	0	0	1222	0
Stage 1	1177	-	-	-	-	-
Stage 2	846	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	~ 57	232	-	-	568	-
Stage 1	292	-	-	-	-	-
Stage 2	382	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	~ 52	232	-	-	568	-
Mov Cap-2 Maneuver	~ 52	-	-	-	-	-
Stage 1	268	-	-	-	-	-
Stage 2	382	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s\$	412.4	0	0.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	73	568
HCM Lane V/C Ratio	-	-	1.578	0.082
HCM Control Delay (s)	-	-	\$ 412.4	11.9
HCM Lane LOS	-	-	F	B
HCM 95th %tile Q(veh)	-	-	9.7	0.3

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

6: S Lincoln Ave (SH40) & JD Hays Way
2024 Total Sat AM.syn

Intersection						
Int Delay, s/veh	2.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Traffic Vol, veh/h	28	22	904	207	96	735
Future Vol, veh/h	28	22	904	207	96	735
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	24	983	225	104	799

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1704	1096	0	0	1208
Stage 1	1096	-	-	-	-
Stage 2	608	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219
Pot Cap-1 Maneuver	91	259	-	-	575
Stage 1	319	-	-	-	-
Stage 2	507	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	75	259	-	-	575
Mov Cap-2 Maneuver	75	-	-	-	-
Stage 1	261	-	-	-	-
Stage 2	507	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	67.1	0	1.5
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	109	575
HCM Lane V/C Ratio	-	-	0.499	0.181
HCM Control Delay (s)	-	-	67.1	12.6
HCM Lane LOS	-	-	F	B
HCM 95th %tile Q(veh)	-	-	2.2	0.7

6: S Lincoln Ave (SH40) & JD Hays Way
 2024 Total Sat PM.syn

Intersection						
Int Delay, s/veh	13.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Traffic Vol, veh/h	67	59	942	83	43	1253
Future Vol, veh/h	67	59	942	83	43	1253
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	73	64	1024	90	47	1362

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1844	1069	0	0	1114
Stage 1	1069	-	-	-	-
Stage 2	775	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219
Pot Cap-1 Maneuver	74	268	-	-	625
Stage 1	329	-	-	-	-
Stage 2	416	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 68	268	-	-	625
Mov Cap-2 Maneuver	~ 68	-	-	-	-
Stage 1	304	-	-	-	-
Stage 2	416	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	265.3	0	0.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	105	625
HCM Lane V/C Ratio	-	-	1.304	0.075
HCM Control Delay (s)	-	-	265.3	11.2
HCM Lane LOS	-	-	F	B
HCM 95th %tile Q(veh)	-	-	9.4	0.2

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

6: S Lincoln Ave (SH40) & JD Hays Way
2044 Total Sat AM.syn

Intersection						
Int Delay, s/veh	2.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Traffic Vol, veh/h	28	22	999	207	96	812
Future Vol, veh/h	28	22	999	207	96	812
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	24	1086	225	104	883

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1849	1199	0	0	1311
Stage 1	1199	-	-	-	-
Stage 2	650	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219
Pot Cap-1 Maneuver	73	225	-	-	526
Stage 1	285	-	-	-	-
Stage 2	482	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	59	225	-	-	526
Mov Cap-2 Maneuver	59	-	-	-	-
Stage 1	229	-	-	-	-
Stage 2	482	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	98.9	0	1.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	87	526
HCM Lane V/C Ratio	-	-	0.625	0.198
HCM Control Delay (s)	-	-	98.9	13.5
HCM Lane LOS	-	-	F	B
HCM 95th %tile Q(veh)	-	-	2.9	0.7

6: S Lincoln Ave (SH40) & JD Hays Way
2044 Total Sat PM.syn

Intersection						
Int Delay, s/veh	20.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Traffic Vol, veh/h	67	59	1041	83	43	1384
Future Vol, veh/h	67	59	1041	83	43	1384
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	73	64	1132	90	47	1504

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	2023	1177	0	0	1222	0
Stage 1	1177	-	-	-	-	-
Stage 2	846	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	~ 57	232	-	-	568	-
Stage 1	292	-	-	-	-	-
Stage 2	382	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	~ 52	232	-	-	568	-
Mov Cap-2 Maneuver	~ 52	-	-	-	-	-
Stage 1	268	-	-	-	-	-
Stage 2	382	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s\$	435.8	0	0.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	82	568
HCM Lane V/C Ratio	-	-	1.67	0.082
HCM Control Delay (s)	-	-	\$ 435.8	11.9
HCM Lane LOS	-	-	F	B
HCM 95th %tile Q(veh)	-	-	11.4	0.3

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

6: S Lincoln Ave (SH40) & JD Hays Way
 2024 Total Sat AM with GTC Alt.syn

Intersection						
Int Delay, s/veh	2.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Traffic Vol, veh/h	28	22	904	207	96	735
Future Vol, veh/h	28	22	904	207	96	735
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	24	983	225	104	799

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1704	1096	0	0	1208
Stage 1	1096	-	-	-	-
Stage 2	608	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219
Pot Cap-1 Maneuver	91	259	-	-	575
Stage 1	319	-	-	-	-
Stage 2	507	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	75	259	-	-	575
Mov Cap-2 Maneuver	75	-	-	-	-
Stage 1	261	-	-	-	-
Stage 2	507	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	67.1	0	1.5
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	109	575
HCM Lane V/C Ratio	-	-	0.499	0.181
HCM Control Delay (s)	-	-	67.1	12.6
HCM Lane LOS	-	-	F	B
HCM 95th %tile Q(veh)	-	-	2.2	0.7

6: S Lincoln Ave (SH40) & JD Hays Way
 2024 Total Sat PM with GTC Alt.syn

Intersection						
Int Delay, s/veh	13.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Traffic Vol, veh/h	67	59	942	83	43	1253
Future Vol, veh/h	67	59	942	83	43	1253
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	73	64	1024	90	47	1362

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1844	1069	0	0	1114	0
Stage 1	1069	-	-	-	-	-
Stage 2	775	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	74	268	-	-	625	-
Stage 1	329	-	-	-	-	-
Stage 2	416	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	~ 68	268	-	-	625	-
Mov Cap-2 Maneuver	~ 68	-	-	-	-	-
Stage 1	304	-	-	-	-	-
Stage 2	416	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	265.3	0	0.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	105	625
HCM Lane V/C Ratio	-	-	1.304	0.075
HCM Control Delay (s)	-	-	265.3	11.2
HCM Lane LOS	-	-	F	B
HCM 95th %tile Q(veh)	-	-	9.4	0.2

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

6: S Lincoln Ave (SH40) & JD Hays Way
 2044 Total Sat AM with GTC Alt.syn

Intersection						
Int Delay, s/veh	2.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Traffic Vol, veh/h	28	22	999	207	96	812
Future Vol, veh/h	28	22	999	207	96	812
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	24	1086	225	104	883

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1849	1199	0	0	1311
Stage 1	1199	-	-	-	-
Stage 2	650	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219
Pot Cap-1 Maneuver	73	225	-	-	526
Stage 1	285	-	-	-	-
Stage 2	482	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	59	225	-	-	526
Mov Cap-2 Maneuver	59	-	-	-	-
Stage 1	229	-	-	-	-
Stage 2	482	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	98.9	0	1.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	87	526
HCM Lane V/C Ratio	-	-	0.625	0.198
HCM Control Delay (s)	-	-	98.9	13.5
HCM Lane LOS	-	-	F	B
HCM 95th %tile Q(veh)	-	-	2.9	0.7

6: S Lincoln Ave (SH40) & JD Hays Way
 2044 Total Sat PM with GTC Alt.syn

Intersection						
Int Delay, s/veh	20.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Traffic Vol, veh/h	67	59	1041	83	43	1384
Future Vol, veh/h	67	59	1041	83	43	1384
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	73	64	1132	90	47	1504

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	2023	1177	0	0	1222	0
Stage 1	1177	-	-	-	-	-
Stage 2	846	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	~ 57	232	-	-	568	-
Stage 1	292	-	-	-	-	-
Stage 2	382	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	~ 52	232	-	-	568	-
Mov Cap-2 Maneuver	~ 52	-	-	-	-	-
Stage 1	268	-	-	-	-	-
Stage 2	382	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s\$	435.8	0	0.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	82	568
HCM Lane V/C Ratio	-	-	1.67	0.082
HCM Control Delay (s)	-	-	\$ 435.8	11.9
HCM Lane LOS	-	-	F	B
HCM 95th %tile Q(veh)	-	-	11.4	0.3

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

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2024 Synthetic Flow Profile (veh)
Background	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
AM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - MWC (SB)	0	0	12.00	1	19.50	1	42.00	63.00	30.00
2	West Leg - Parking Access (EB)	62	0	12.00	1	10.00	1	10.00	42.00	30.00
3	South Leg - MWC (NB)	135	0	12.00	1	18.00	1	30.00	72.00	30.00
4	East Leg - Apres Ski Way (WB)	296	0	12.00	1	19.00	1	30.00	95.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - MWC (SB)	120.00	20.00	1	19.00	1	12.00	1
2	West Leg - Parking Access (EB)	120.00	20.00	1	13.00	1	10.00	1
3	South Leg - MWC (NB)	120.00	20.00	1	17.00	1	12.00	1
4	East Leg - Apres Ski Way (WB)	120.00	20.00	1	17.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - MWC (SB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	West Leg - Parking Access (EB)	0	1.000	0	1.000	20.00	1792	0	10.00	1494	0
3	South Leg - MWC (NB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	East Leg - Apres Ski Way (WB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2024 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - MWC (SB)	2	111	49	2	0	5.0	1.00
2	West Leg - Parking Access (EB)	0	0	0	10	0	5.0	1.00
3	South Leg - MWC (NB)	25	5	246	349	0	5.0	1.00
4	East Leg - Apres Ski Way (WB)	10	259	2	214	0	5.0	1.00

2024 AM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - MWC (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - Parking Access (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - MWC (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - Apres Ski Way (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2024 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	164		301		462	991		0.1655
2	West Leg - Parking Access (EB)	None	10		456		9	607		0.0165
3	South Leg - MWC (NB)	None	625		123		343	1086		0.5754
4	East Leg - Apres Ski Way (WB)	None	485		278		470	1013		0.4786

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	4.15		4.15	0.59		A		A
2	West Leg - Parking Access (EB)	None	5.72		5.72	0.05		A		A
3	South Leg - MWC (NB)	None	7.21		7.21	4.12		A		A
4	East Leg - Apres Ski Way (WB)	None	6.38		6.38	2.81		A		A

2024 AM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	185		339		521	970			0.1906
2	West Leg - Parking Access (EB)	None	11		514		10	581			0.0194
3	South Leg - MWC (NB)	None	705		139		387	1078			0.6539
4	East Leg - Apres Ski Way (WB)	None	547		313		530	994			0.5502

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	4.25		4.25	0.59		A		A
2	West Leg - Parking Access (EB)	None	5.85		5.85	0.05		A		A
3	South Leg - MWC (NB)	None	7.98		7.98	4.12		A		A
4	East Leg - Apres Ski Way (WB)	None	6.95		6.95	2.81		A		A

Approach Flow Profile

2024 AM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Parking Access (EB)	South Leg - MWC (NB)	East Leg - Apres Ski Way (WB)
0.0 - 7.5	17.05	1.04	65.00	50.44
7.5 - 15.0	19.86	1.21	75.67	58.72
15.0 - 22.5	21.97	1.34	83.74	64.98
22.5 - 30.0	23.12	1.41	88.09	68.36
30.0 - 37.5	23.12	1.41	88.09	68.36
37.5 - 45.0	21.97	1.34	83.74	64.98
45.0 - 52.5	19.86	1.21	75.67	58.72
52.5 - 60.0	17.05	1.04	65.00	50.44
Peak 15 min	23.12	1.41	88.09	68.36
Peak 60 min	20.50	1.25	78.13	60.62

Exit Flow Profile

2024 AM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Parking Access (EB)	South Leg - MWC (NB)	East Leg - Apres Ski Way (WB)
0.0 - 7.5	48.00	0.94	35.64	48.84
7.5 - 15.0	55.83	1.09	41.46	56.81
15.0 - 22.5	61.80	1.20	45.90	62.88
22.5 - 30.0	65.05	1.27	48.31	66.18
30.0 - 37.5	65.11	1.27	48.34	66.24
37.5 - 45.0	61.95	1.21	45.99	63.02
45.0 - 52.5	56.04	1.09	41.59	57.01
52.5 - 60.0	48.15	0.94	35.74	48.98
0-60	462	9	343	470
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2024 Synthetic Flow Profile (veh)
Background	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
PM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - MWC (SB)	0	0	12.00	1	19.50	1	42.00	63.00	30.00
2	West Leg - Parking Access (EB)	62	0	12.00	1	10.00	1	10.00	42.00	30.00
3	South Leg - MWC (NB)	135	0	12.00	1	18.00	1	30.00	72.00	30.00
4	East Leg - Apres Ski Way (WB)	296	0	12.00	1	19.00	1	30.00	95.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - MWC (SB)	120.00	20.00	1	19.00	1	12.00	1
2	West Leg - Parking Access (EB)	120.00	20.00	1	13.00	1	10.00	1
3	South Leg - MWC (NB)	120.00	20.00	1	17.00	1	12.00	1
4	East Leg - Apres Ski Way (WB)	120.00	20.00	1	17.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - MWC (SB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	West Leg - Parking Access (EB)	0	1.000	0	1.000	20.00	1792	0	10.00	1494	0
3	South Leg - MWC (NB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	East Leg - Apres Ski Way (WB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2024 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - MWC (SB)	5	172	124	5	0	5.0	1.00
2	West Leg - Parking Access (EB)	0	10	2	25	0	5.0	1.00
3	South Leg - MWC (NB)	2	12	244	421	0	5.0	1.00
4	East Leg - Apres Ski Way (WB)	0	342	2	224	0	5.0	1.00

2024 PM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - MWC (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - Parking Access (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - MWC (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - Apres Ski Way (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2024 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	306		358		483	960			0.3186
2	West Leg - Parking Access (EB)	None	37		645		19	521			0.0710
3	South Leg - MWC (NB)	None	679		189		493	1051			0.6463
4	East Leg - Apres Ski Way (WB)	None	568		273		595	1016			0.5590

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	5.21		5.21	1.41		A		A
2	West Leg - Parking Access (EB)	None	7.08		7.08	0.23		A		A
3	South Leg - MWC (NB)	None	8.92		8.92	5.71		A		A
4	East Leg - Apres Ski Way (WB)	None	7.48		7.48	3.94		A		A

2024 PM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	345		403		544	936			0.3687
2	West Leg - Parking Access (EB)	None	42		727		21	484			0.0863
3	South Leg - MWC (NB)	None	766		213		556	1038			0.7379
4	East Leg - Apres Ski Way (WB)	None	640		308		670	997			0.6423

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	5.50		5.50	1.41		A		A
2	West Leg - Parking Access (EB)	None	7.45		7.45	0.23		A		A
3	South Leg - MWC (NB)	None	10.23		10.23	5.71		B		B
4	East Leg - Apres Ski Way (WB)	None	8.36		8.36	3.94		A		A

Approach Flow Profile

2024 PM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Parking Access (EB)	South Leg - MWC (NB)	East Leg - Apres Ski Way (WB)
0.0 - 7.5	31.82	3.85	70.61	59.07
7.5 - 15.0	37.05	4.48	82.21	68.77
15.0 - 22.5	41.00	4.96	90.98	76.10
22.5 - 30.0	43.13	5.22	95.71	80.06
30.0 - 37.5	43.13	5.22	95.71	80.06
37.5 - 45.0	41.00	4.96	90.98	76.10
45.0 - 52.5	37.05	4.48	82.21	68.77
52.5 - 60.0	31.82	3.85	70.61	59.07
Peak 15 min	43.13	5.22	95.71	80.06
Peak 60 min	38.25	4.63	84.88	71.00

Exit Flow Profile

2024 PM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Parking Access (EB)	South Leg - MWC (NB)	East Leg - Apres Ski Way (WB)
0.0 - 7.5	50.17	1.97	51.22	61.81
7.5 - 15.0	58.34	2.30	59.58	71.88
15.0 - 22.5	64.57	2.54	65.95	79.55
22.5 - 30.0	67.97	2.67	69.41	83.74
30.0 - 37.5	68.06	2.68	69.48	83.85
37.5 - 45.0	64.78	2.55	66.11	79.80
45.0 - 52.5	58.64	2.31	59.81	72.23
52.5 - 60.0	50.38	1.98	51.39	62.05
0-60	483	19	493	595
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2044 Synthetic Flow Profile (veh)
Background	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
AM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - MWC (SB)	0	0	12.00	1	19.50	1	42.00	63.00	30.00
2	West Leg - Parking Access (EB)	62	0	12.00	1	10.00	1	10.00	42.00	30.00
3	South Leg - MWC (NB)	135	0	12.00	1	18.00	1	30.00	72.00	30.00
4	East Leg - Apres Ski Way (WB)	296	0	12.00	1	19.00	1	30.00	95.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - MWC (SB)	120.00	20.00	1	19.00	1	12.00	1
2	West Leg - Parking Access (EB)	120.00	20.00	1	13.00	1	10.00	1
3	South Leg - MWC (NB)	120.00	20.00	1	17.00	1	12.00	1
4	East Leg - Apres Ski Way (WB)	120.00	20.00	1	17.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - MWC (SB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	West Leg - Parking Access (EB)	0	1.000	0	1.000	20.00	1792	0	10.00	1494	0
3	South Leg - MWC (NB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	East Leg - Apres Ski Way (WB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2044 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - MWC (SB)	2	123	55	2	0	5.0	1.00
2	West Leg - Parking Access (EB)	0	0	0	11	0	5.0	1.00
3	South Leg - MWC (NB)	27	6	272	386	0	5.0	1.00
4	East Leg - Apres Ski Way (WB)	11	286	2	237	0	5.0	1.00

2044 AM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - MWC (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - Parking Access (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - MWC (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - Apres Ski Way (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2044 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	182		332		511	974		0.1868
2	West Leg - Parking Access (EB)	None	11		504		10	585		0.0188
3	South Leg - MWC (NB)	None	691		136		379	1079		0.6403
4	East Leg - Apres Ski Way (WB)	None	536		307		520	998		0.5373

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	4.32		4.32	0.68		A		A
2	West Leg - Parking Access (EB)	None	5.95		5.95	0.06		A		A
3	South Leg - MWC (NB)	None	8.51		8.51	5.50		A		A
4	East Leg - Apres Ski Way (WB)	None	7.28		7.28	3.61		A		A

2044 AM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	205		374		576	952			0.2156
2	West Leg - Parking Access (EB)	None	12		568		11	556			0.0223
3	South Leg - MWC (NB)	None	779		153		427	1070			0.7283
4	East Leg - Apres Ski Way (WB)	None	604		346		586	976			0.6191

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	4.46		4.46	0.68		A		A
2	West Leg - Parking Access (EB)	None	6.12		6.12	0.06		A		A
3	South Leg - MWC (NB)	None	9.68		9.68	5.50		A		A
4	East Leg - Apres Ski Way (WB)	None	8.11		8.11	3.61		A		A

Approach Flow Profile

2044 AM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Parking Access (EB)	South Leg - MWC (NB)	East Leg - Apres Ski Way (WB)
0.0 - 7.5	18.93	1.14	71.86	55.74
7.5 - 15.0	22.03	1.33	83.66	64.89
15.0 - 22.5	24.39	1.47	92.58	71.82
22.5 - 30.0	25.65	1.55	97.40	75.55
30.0 - 37.5	25.65	1.55	97.40	75.55
37.5 - 45.0	24.39	1.47	92.58	71.82
45.0 - 52.5	22.03	1.33	83.66	64.89
52.5 - 60.0	18.93	1.14	71.86	55.74
Peak 15 min	25.65	1.55	97.40	75.55
Peak 60 min	22.75	1.38	86.38	67.00

Exit Flow Profile

2044 AM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Parking Access (EB)	South Leg - MWC (NB)	East Leg - Apres Ski Way (WB)
0.0 - 7.5	53.08	1.04	39.38	54.02
7.5 - 15.0	61.73	1.21	45.80	62.83
15.0 - 22.5	68.32	1.34	50.70	69.54
22.5 - 30.0	71.92	1.41	53.36	73.20
30.0 - 37.5	72.01	1.41	53.41	73.28
37.5 - 45.0	68.53	1.34	50.82	69.73
45.0 - 52.5	62.03	1.21	45.98	63.11
52.5 - 60.0	53.29	1.04	39.51	54.22
0-60	511	10	379	520
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2044 Synthetic Flow Profile (veh)
Background	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
PM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - MWC (SB)	0	0	12.00	1	19.50	1	42.00	63.00	30.00
2	West Leg - Parking Access (EB)	62	0	12.00	1	10.00	1	10.00	42.00	30.00
3	South Leg - MWC (NB)	135	0	12.00	1	18.00	1	30.00	72.00	30.00
4	East Leg - Apres Ski Way (WB)	296	0	12.00	1	19.00	1	30.00	95.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - MWC (SB)	120.00	20.00	1	19.00	1	12.00	1
2	West Leg - Parking Access (EB)	120.00	20.00	1	13.00	1	10.00	1
3	South Leg - MWC (NB)	120.00	20.00	1	17.00	1	12.00	1
4	East Leg - Apres Ski Way (WB)	120.00	20.00	1	17.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - MWC (SB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	West Leg - Parking Access (EB)	0	1.000	0	1.000	20.00	1792	0	10.00	1494	0
3	South Leg - MWC (NB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	East Leg - Apres Ski Way (WB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2044 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - MWC (SB)	6	190	137	6	0	5.0	1.00
2	West Leg - Parking Access (EB)	0	11	2	27	0	5.0	1.00
3	South Leg - MWC (NB)	2	14	270	466	0	5.0	1.00
4	East Leg - Apres Ski Way (WB)	0	378	2	247	0	5.0	1.00

2044 PM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - MWC (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - Parking Access (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - MWC (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - Apres Ski Way (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2044 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	339		396		534	940			0.3607
2	West Leg - Parking Access (EB)	None	40		713		22	490			0.0816
3	South Leg - MWC (NB)	None	752		209		544	1040			0.7232
4	East Leg - Apres Ski Way (WB)	None	627		303		658	1000			0.6272

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	5.66		5.66	1.72		A		A
2	West Leg - Parking Access (EB)	None	7.63		7.63	0.28		A		A
3	South Leg - MWC (NB)	None	11.48		11.48	8.43		B		B
4	East Leg - Apres Ski Way (WB)	None	8.97		8.97	5.35		A		A

2044 PM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	382		446		601	913			0.4187
2	West Leg - Parking Access (EB)	None	45		803		25	449			0.1005
3	South Leg - MWC (NB)	None	848		236		613	1025			0.8269
4	East Leg - Apres Ski Way (WB)	None	707		341		741	979			0.7223

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	6.06		6.06	1.72		A		A
2	West Leg - Parking Access (EB)	None	8.12		8.12	0.28		A		A
3	South Leg - MWC (NB)	None	13.72		13.72	8.43		B		B
4	East Leg - Apres Ski Way (WB)	None	10.33		10.33	5.35		B		B

Approach Flow Profile

2044 PM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Parking Access (EB)	South Leg - MWC (NB)	East Leg - Apres Ski Way (WB)
0.0 - 7.5	35.25	4.16	78.20	65.20
7.5 - 15.0	41.04	4.84	91.04	75.91
15.0 - 22.5	45.42	5.36	100.76	84.01
22.5 - 30.0	47.78	5.64	106.00	88.38
30.0 - 37.5	47.78	5.64	106.00	88.38
37.5 - 45.0	45.42	5.36	100.76	84.01
45.0 - 52.5	41.04	4.84	91.04	75.91
52.5 - 60.0	35.25	4.16	78.20	65.20
Peak 15 min	47.78	5.64	106.00	88.38
Peak 60 min	42.37	5.00	94.00	78.38

Exit Flow Profile

2044 PM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Parking Access (EB)	South Leg - MWC (NB)	East Leg - Apres Ski Way (WB)
0.0 - 7.5	55.46	2.28	56.51	68.34
7.5 - 15.0	64.46	2.66	65.71	79.44
15.0 - 22.5	71.31	2.94	72.73	87.89
22.5 - 30.0	75.08	3.09	76.56	92.52
30.0 - 37.5	75.23	3.10	76.66	92.70
37.5 - 45.0	71.66	2.95	72.96	88.29
45.0 - 52.5	64.94	2.67	66.05	80.01
52.5 - 60.0	55.76	2.30	56.74	68.70
0-60	534	22	544	658
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2024 Synthetic Flow Profile (veh)
Total	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
AM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - MWC (SB)	0	0	12.00	1	19.50	1	42.00	63.00	30.00
2	West Leg - Parking Access (EB)	62	0	12.00	1	10.00	1	10.00	42.00	30.00
3	South Leg - MWC (NB)	135	0	12.00	1	18.00	1	30.00	72.00	30.00
4	East Leg - Apres Ski Way (WB)	296	0	12.00	1	19.00	1	30.00	95.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - MWC (SB)	120.00	20.00	1	19.00	1	12.00	1
2	West Leg - Parking Access (EB)	120.00	20.00	1	13.00	1	10.00	1
3	South Leg - MWC (NB)	120.00	20.00	1	17.00	1	12.00	1
4	East Leg - Apres Ski Way (WB)	120.00	20.00	1	17.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - MWC (SB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	West Leg - Parking Access (EB)	0	1.000	0	1.000	20.00	1792	0	10.00	1494	0
3	South Leg - MWC (NB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	East Leg - Apres Ski Way (WB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2024 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - MWC (SB)	2	119	63	2	0	5.0	1.00
2	West Leg - Parking Access (EB)	0	0	0	10	0	5.0	1.00
3	South Leg - MWC (NB)	25	5	264	349	0	5.0	1.00
4	East Leg - Apres Ski Way (WB)	10	259	2	226	0	5.0	1.00

2024 AM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - MWC (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - Parking Access (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - MWC (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - Apres Ski Way (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2024 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	186		301		492	991			0.1877
2	West Leg - Parking Access (EB)	None	10		478		9	597			0.0167
3	South Leg - MWC (NB)	None	643		131		357	1082			0.5943
4	East Leg - Apres Ski Way (WB)	None	497		296		478	1004			0.4953

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	4.25		4.25	0.68		A		A
2	West Leg - Parking Access (EB)	None	5.82		5.82	0.05		A		A
3	South Leg - MWC (NB)	None	7.56		7.56	4.47		A		A
4	East Leg - Apres Ski Way (WB)	None	6.65		6.65	3.02		A		A

2024 AM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	210		339		554	970			0.2161
2	West Leg - Parking Access (EB)	None	11		539		10	570			0.0198
3	South Leg - MWC (NB)	None	725		148		402	1073			0.6758
4	East Leg - Apres Ski Way (WB)	None	560		334		539	983			0.5701

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	4.38		4.38	0.68		A		A
2	West Leg - Parking Access (EB)	None	5.96		5.96	0.05		A		A
3	South Leg - MWC (NB)	None	8.44		8.44	4.47		A		A
4	East Leg - Apres Ski Way (WB)	None	7.29		7.29	3.02		A		A

Approach Flow Profile

2024 AM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Parking Access (EB)	South Leg - MWC (NB)	East Leg - Apres Ski Way (WB)
0.0 - 7.5	19.34	1.04	66.87	51.68
7.5 - 15.0	22.52	1.21	77.85	60.17
15.0 - 22.5	24.92	1.34	86.15	66.59
22.5 - 30.0	26.22	1.41	90.63	70.05
30.0 - 37.5	26.22	1.41	90.63	70.05
37.5 - 45.0	24.92	1.34	86.15	66.59
45.0 - 52.5	22.52	1.21	77.85	60.17
52.5 - 60.0	19.34	1.04	66.87	51.68
Peak 15 min	26.22	1.41	90.63	70.05
Peak 60 min	23.25	1.25	80.38	62.13

Exit Flow Profile

2024 AM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Parking Access (EB)	South Leg - MWC (NB)	East Leg - Apres Ski Way (WB)
0.0 - 7.5	51.12	0.94	37.10	49.67
7.5 - 15.0	59.45	1.09	43.15	57.77
15.0 - 22.5	65.81	1.20	47.77	63.94
22.5 - 30.0	69.27	1.27	50.28	67.30
30.0 - 37.5	69.34	1.27	50.31	67.37
37.5 - 45.0	65.97	1.21	47.86	64.09
45.0 - 52.5	59.69	1.09	43.29	57.99
52.5 - 60.0	51.29	0.94	37.20	49.82
0-60	492	9	357	478
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2024 Synthetic Flow Profile (veh)
Total	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
PM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - MWC (SB)	0	0	12.00	1	19.50	1	42.00	63.00	30.00
2	West Leg - Parking Access (EB)	62	0	12.00	1	10.00	1	10.00	42.00	30.00
3	South Leg - MWC (NB)	135	0	12.00	1	18.00	1	30.00	72.00	30.00
4	East Leg - Apres Ski Way (WB)	296	0	12.00	1	19.00	1	30.00	95.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - MWC (SB)	120.00	20.00	1	19.00	1	12.00	1
2	West Leg - Parking Access (EB)	120.00	20.00	1	13.00	1	10.00	1
3	South Leg - MWC (NB)	120.00	20.00	1	17.00	1	12.00	1
4	East Leg - Apres Ski Way (WB)	120.00	20.00	1	17.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - MWC (SB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	West Leg - Parking Access (EB)	0	1.000	0	1.000	20.00	1792	0	10.00	1494	0
3	South Leg - MWC (NB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	East Leg - Apres Ski Way (WB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2024 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - MWC (SB)	5	183	141	5	0	5.0	1.00
2	West Leg - Parking Access (EB)	0	10	2	25	0	5.0	1.00
3	South Leg - MWC (NB)	2	12	261	421	0	5.0	1.00
4	East Leg - Apres Ski Way (WB)	0	342	2	234	0	5.0	1.00

2024 PM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - MWC (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - Parking Access (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - MWC (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - Apres Ski Way (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2024 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	334		358		510	960			0.3478
2	West Leg - Parking Access (EB)	None	37		673		19	508			0.0728
3	South Leg - MWC (NB)	None	696		200		510	1045			0.6662
4	East Leg - Apres Ski Way (WB)	None	578		290		606	1007			0.5741

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	5.43		5.43	1.62		A		A
2	West Leg - Parking Access (EB)	None	7.28		7.28	0.24		A		A
3	South Leg - MWC (NB)	None	9.50		9.50	6.29		A		A
4	East Leg - Apres Ski Way (WB)	None	7.82		7.82	4.21		A		A

2024 PM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	377		403		574	936			0.4024
2	West Leg - Parking Access (EB)	None	42		758		21	469			0.0889
3	South Leg - MWC (NB)	None	785		225		575	1031			0.7613
4	East Leg - Apres Ski Way (WB)	None	652		327		683	987			0.6605

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	5.77		5.77	1.62		A		A
2	West Leg - Parking Access (EB)	None	7.69		7.69	0.24		A		A
3	South Leg - MWC (NB)	None	11.01		11.01	6.29		B		B
4	East Leg - Apres Ski Way (WB)	None	8.80		8.80	4.21		A		A

Approach Flow Profile

2024 PM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Parking Access (EB)	South Leg - MWC (NB)	East Leg - Apres Ski Way (WB)
0.0 - 7.5	34.73	3.85	72.38	60.11
7.5 - 15.0	40.44	4.48	84.26	69.98
15.0 - 22.5	44.75	4.96	93.25	77.44
22.5 - 30.0	47.08	5.22	98.10	81.47
30.0 - 37.5	47.08	5.22	98.10	81.47
37.5 - 45.0	44.75	4.96	93.25	77.44
45.0 - 52.5	40.44	4.48	84.26	69.98
52.5 - 60.0	34.73	3.85	72.38	60.11
Peak 15 min	47.08	5.22	98.10	81.47
Peak 60 min	41.75	4.63	87.00	72.25

Exit Flow Profile

2024 PM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Parking Access (EB)	South Leg - MWC (NB)	East Leg - Apres Ski Way (WB)
0.0 - 7.5	52.98	1.97	52.99	62.95
7.5 - 15.0	61.59	2.29	61.63	73.20
15.0 - 22.5	68.16	2.54	68.21	81.01
22.5 - 30.0	71.76	2.67	71.80	85.27
30.0 - 37.5	71.86	2.68	71.87	85.39
37.5 - 45.0	68.41	2.55	68.39	81.28
45.0 - 52.5	61.94	2.31	61.88	73.59
52.5 - 60.0	53.21	1.98	53.17	63.22
0-60	510	19	510	606
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2044 Synthetic Flow Profile (veh)
Total	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
AM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - MWC (SB)	0	0	12.00	1	19.50	1	42.00	63.00	30.00
2	West Leg - Parking Access (EB)	62	0	12.00	1	10.00	1	10.00	42.00	30.00
3	South Leg - MWC (NB)	135	0	12.00	1	18.00	1	30.00	72.00	30.00
4	East Leg - Apres Ski Way (WB)	296	0	12.00	1	19.00	1	30.00	95.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - MWC (SB)	120.00	20.00	1	19.00	1	12.00	1
2	West Leg - Parking Access (EB)	120.00	20.00	1	13.00	1	10.00	1
3	South Leg - MWC (NB)	120.00	20.00	1	17.00	1	12.00	1
4	East Leg - Apres Ski Way (WB)	120.00	20.00	1	17.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - MWC (SB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	West Leg - Parking Access (EB)	0	1.000	0	1.000	20.00	1792	0	10.00	1494	0
3	South Leg - MWC (NB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	East Leg - Apres Ski Way (WB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2044 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - MWC (SB)	2	136	75	2	0	5.0	1.00
2	West Leg - Parking Access (EB)	0	0	0	11	0	5.0	1.00
3	South Leg - MWC (NB)	27	6	299	386	0	5.0	1.00
4	East Leg - Apres Ski Way (WB)	11	286	2	255	0	5.0	1.00

2044 AM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - MWC (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - Parking Access (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - MWC (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - Apres Ski Way (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2044 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	215		332		556	974		0.2207	
2	West Leg - Parking Access (EB)	None	11		537		10	570		0.0193	
3	South Leg - MWC (NB)	None	718		149		399	1072		0.6696	
4	East Leg - Apres Ski Way (WB)	None	554		334		533	983		0.5637	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	4.51		4.51	0.84		A		A
2	West Leg - Parking Access (EB)	None	6.12		6.12	0.06		A		A
3	South Leg - MWC (NB)	None	9.31		9.31	6.33		A		A
4	East Leg - Apres Ski Way (WB)	None	7.84		7.84	4.06		A		A

2044 AM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	242		374		626	952			0.2547
2	West Leg - Parking Access (EB)	None	12		605		11	539			0.0230
3	South Leg - MWC (NB)	None	810		168		450	1062			0.7624
4	East Leg - Apres Ski Way (WB)	None	625		376		600	960			0.6509

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	4.67		4.67	0.84		A		A
2	West Leg - Parking Access (EB)	None	6.31		6.31	0.06		A		A
3	South Leg - MWC (NB)	None	10.75		10.75	6.33		B		B
4	East Leg - Apres Ski Way (WB)	None	8.83		8.83	4.06		A		A

Approach Flow Profile

2044 AM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Parking Access (EB)	South Leg - MWC (NB)	East Leg - Apres Ski Way (WB)
0.0 - 7.5	22.36	1.14	74.67	57.61
7.5 - 15.0	26.03	1.33	86.93	67.07
15.0 - 22.5	28.81	1.47	96.20	74.23
22.5 - 30.0	30.30	1.55	101.20	78.09
30.0 - 37.5	30.30	1.55	101.20	78.09
37.5 - 45.0	28.81	1.47	96.20	74.23
45.0 - 52.5	26.03	1.33	86.93	67.07
52.5 - 60.0	22.36	1.14	74.67	57.61
Peak 15 min	30.30	1.55	101.20	78.09
Peak 60 min	26.87	1.38	89.75	69.25

Exit Flow Profile

2044 AM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Parking Access (EB)	South Leg - MWC (NB)	East Leg - Apres Ski Way (WB)
0.0 - 7.5	57.75	1.04	41.45	55.37
7.5 - 15.0	67.15	1.21	48.21	64.38
15.0 - 22.5	74.31	1.34	53.36	71.25
22.5 - 30.0	78.23	1.41	56.17	75.01
30.0 - 37.5	78.35	1.41	56.23	75.11
37.5 - 45.0	74.58	1.34	53.51	71.49
45.0 - 52.5	67.53	1.21	48.42	64.72
52.5 - 60.0	58.01	1.04	41.60	55.59
0-60	556	10	399	533
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2044 Synthetic Flow Profile (veh)
Total	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
PM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - MWC (SB)	0	0	12.00	1	19.50	1	42.00	63.00	30.00
2	West Leg - Parking Access (EB)	62	0	12.00	1	10.00	1	10.00	42.00	30.00
3	South Leg - MWC (NB)	135	0	12.00	1	18.00	1	30.00	72.00	30.00
4	East Leg - Apres Ski Way (WB)	296	0	12.00	1	19.00	1	30.00	95.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - MWC (SB)	120.00	20.00	1	19.00	1	12.00	1
2	West Leg - Parking Access (EB)	120.00	20.00	1	13.00	1	10.00	1
3	South Leg - MWC (NB)	120.00	20.00	1	17.00	1	12.00	1
4	East Leg - Apres Ski Way (WB)	120.00	20.00	1	17.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - MWC (SB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	West Leg - Parking Access (EB)	0	1.000	0	1.000	20.00	1792	0	10.00	1494	0
3	South Leg - MWC (NB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	East Leg - Apres Ski Way (WB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2044 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - MWC (SB)	6	208	163	6	0	5.0	1.00
2	West Leg - Parking Access (EB)	0	11	2	27	0	5.0	1.00
3	South Leg - MWC (NB)	2	14	297	466	0	5.0	1.00
4	East Leg - Apres Ski Way (WB)	0	378	2	264	0	5.0	1.00

2044 PM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - MWC (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - Parking Access (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - MWC (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - Apres Ski Way (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2044 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	383		396		578	940			0.4074
2	West Leg - Parking Access (EB)	None	40		757		22	470			0.0851
3	South Leg - MWC (NB)	None	779		227		570	1030			0.7562
4	East Leg - Apres Ski Way (WB)	None	644		330		676	985			0.6538

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	6.10		6.10	2.11		A		A
2	West Leg - Parking Access (EB)	None	8.00		8.00	0.29		A		A
3	South Leg - MWC (NB)	None	13.17		13.17	10.22		B		B
4	East Leg - Apres Ski Way (WB)	None	9.81		9.81	6.10		A		A

2044 PM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	432		445		649	913		0.4729
2	West Leg - Parking Access (EB)	None	45		852		25	427		0.1057
3	South Leg - MWC (NB)	None	878		256		641	1015		0.8658
4	East Leg - Apres Ski Way (WB)	None	726		370		760	963		0.7542

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	6.58		6.58	2.11		A		A
2	West Leg - Parking Access (EB)	None	8.56		8.56	0.29		A		A
3	South Leg - MWC (NB)	None	16.08		16.08	10.22		C		C
4	East Leg - Apres Ski Way (WB)	None	11.45		11.45	6.10		B		B

Approach Flow Profile

2044 PM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Parking Access (EB)	South Leg - MWC (NB)	East Leg - Apres Ski Way (WB)
0.0 - 7.5	39.83	4.16	81.01	66.97
7.5 - 15.0	46.37	4.84	94.31	77.97
15.0 - 22.5	51.32	5.36	104.37	86.29
22.5 - 30.0	53.98	5.64	109.80	90.77
30.0 - 37.5	53.98	5.64	109.80	90.77
37.5 - 45.0	51.32	5.36	104.37	86.29
45.0 - 52.5	46.37	4.84	94.31	77.97
52.5 - 60.0	39.83	4.16	81.01	66.97
Peak 15 min	53.98	5.64	109.80	90.77
Peak 60 min	47.88	5.00	97.37	80.50

Exit Flow Profile

2044 PM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Parking Access (EB)	South Leg - MWC (NB)	East Leg - Apres Ski Way (WB)
0.0 - 7.5	60.02	2.28	59.21	70.20
7.5 - 15.0	69.74	2.65	68.84	81.58
15.0 - 22.5	76.83	2.93	75.99	89.89
22.5 - 30.0	80.94	3.08	80.05	94.68
30.0 - 37.5	81.41	3.10	80.32	95.21
37.5 - 45.0	77.58	2.95	76.46	90.73
45.0 - 52.5	70.79	2.69	69.46	82.76
52.5 - 60.0	60.41	2.30	59.47	70.63
0-60	578	22	570	676
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2024 Synthetic Flow Profile (veh)
Total with GTC Alternate Improvements	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
AM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - MWC (SB)	0	0	12.00	1	19.50	1	42.00	63.00	30.00
2	West Leg - Parking Access (EB)	62	0	12.00	1	10.00	1	10.00	42.00	30.00
3	South Leg - MWC (NB)	135	0	12.00	1	18.00	1	30.00	72.00	30.00
4	East Leg - Apres Ski Way (WB)	296	0	12.00	1	19.00	1	30.00	95.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - MWC (SB)	120.00	20.00	1	19.00	1	12.00	1
2	West Leg - Parking Access (EB)	120.00	20.00	1	13.00	1	10.00	1
3	South Leg - MWC (NB)	120.00	20.00	1	17.00	1	12.00	1
4	East Leg - Apres Ski Way (WB)	120.00	20.00	1	17.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - MWC (SB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	West Leg - Parking Access (EB)	0	1.000	0	1.000	20.00	1792	0	10.00	1494	0
3	South Leg - MWC (NB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	East Leg - Apres Ski Way (WB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2024 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - MWC (SB)	2	48	43	2	0	5.0	1.00
2	West Leg - Parking Access (EB)	0	0	0	10	0	5.0	1.00
3	South Leg - MWC (NB)	25	5	127	420	0	5.0	1.00
4	East Leg - Apres Ski Way (WB)	10	393	2	92	0	5.0	1.00

2024 AM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - MWC (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - Parking Access (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - MWC (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - Apres Ski Way (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2024 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	95		435		221	919		0.1034	
2	West Leg - Parking Access (EB)	None	10		521		9	578		0.0173	
3	South Leg - MWC (NB)	None	577		60		471	1120		0.5150	
4	East Leg - Apres Ski Way (WB)	None	497		159		478	1078		0.4609	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	4.18		4.18	0.34		A		A
2	West Leg - Parking Access (EB)	None	6.02		6.02	0.05		A		A
3	South Leg - MWC (NB)	None	6.14		6.14	3.17		A		A
4	East Leg - Apres Ski Way (WB)	None	5.78		5.78	2.57		A		A

2024 AM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	107		490		249	889		0.1205	
2	West Leg - Parking Access (EB)	None	11		587		10	547		0.0206	
3	South Leg - MWC (NB)	None	651		68		531	1116		0.5829	
4	East Leg - Apres Ski Way (WB)	None	560		179		539	1067		0.5251	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	4.29		4.29	0.34		A		A
2	West Leg - Parking Access (EB)	None	6.20		6.20	0.05		A		A
3	South Leg - MWC (NB)	None	6.63		6.63	3.17		A		A
4	East Leg - Apres Ski Way (WB)	None	6.20		6.20	2.57		A		A

Approach Flow Profile

2024 AM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Parking Access (EB)	South Leg - MWC (NB)	East Leg - Apres Ski Way (WB)
0.0 - 7.5	9.88	1.04	60.00	51.68
7.5 - 15.0	11.50	1.21	69.86	60.17
15.0 - 22.5	12.73	1.34	77.31	66.59
22.5 - 30.0	13.39	1.41	81.33	70.05
30.0 - 37.5	13.39	1.41	81.33	70.05
37.5 - 45.0	12.73	1.34	77.31	66.59
45.0 - 52.5	11.50	1.21	69.86	60.17
52.5 - 60.0	9.88	1.04	60.00	51.68
Peak 15 min	13.39	1.41	81.33	70.05
Peak 60 min	11.88	1.25	72.12	62.13

Exit Flow Profile

2024 AM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Parking Access (EB)	South Leg - MWC (NB)	East Leg - Apres Ski Way (WB)
0.0 - 7.5	22.96	0.94	48.95	49.67
7.5 - 15.0	26.72	1.09	56.95	57.79
15.0 - 22.5	29.57	1.20	63.04	63.97
22.5 - 30.0	31.13	1.27	66.34	67.32
30.0 - 37.5	31.15	1.27	66.38	67.37
37.5 - 45.0	29.63	1.21	63.14	64.08
45.0 - 52.5	26.80	1.09	57.10	57.96
52.5 - 60.0	23.02	0.94	49.06	49.80
0-60	221	9	471	478
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2024 Synthetic Flow Profile (veh)
Total with GTC Alternate Improvements	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
PM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - MWC (SB)	0	0	12.00	1	19.50	1	42.00	63.00	30.00
2	West Leg - Parking Access (EB)	62	0	12.00	1	10.00	1	10.00	42.00	30.00
3	South Leg - MWC (NB)	135	0	12.00	1	18.00	1	30.00	72.00	30.00
4	East Leg - Apres Ski Way (WB)	296	0	12.00	1	19.00	1	30.00	95.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - MWC (SB)	120.00	20.00	1	19.00	1	12.00	1
2	West Leg - Parking Access (EB)	120.00	20.00	1	13.00	1	10.00	1
3	South Leg - MWC (NB)	120.00	20.00	1	17.00	1	12.00	1
4	East Leg - Apres Ski Way (WB)	120.00	20.00	1	17.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - MWC (SB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	West Leg - Parking Access (EB)	0	1.000	0	1.000	20.00	1792	0	10.00	1494	0
3	South Leg - MWC (NB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	East Leg - Apres Ski Way (WB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2024 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - MWC (SB)	5	75	74	5	0	5.0	1.00
2	West Leg - Parking Access (EB)	0	10	2	25	0	5.0	1.00
3	South Leg - MWC (NB)	2	12	134	530	0	5.0	1.00
4	East Leg - Apres Ski Way (WB)	0	482	2	96	0	5.0	1.00

2024 PM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - MWC (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - Parking Access (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - MWC (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - Apres Ski Way (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2024 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	159		498		245	885			0.1797
2	West Leg - Parking Access (EB)	None	37		638		19	524			0.0706
3	South Leg - MWC (NB)	None	678		92		583	1103			0.6147
4	East Leg - Apres Ski Way (WB)	None	580		163		607	1076			0.5390

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	4.73		4.73	0.66		A		A
2	West Leg - Parking Access (EB)	None	7.03		7.03	0.23		A		A
3	South Leg - MWC (NB)	None	7.78		7.78	4.86		A		A
4	East Leg - Apres Ski Way (WB)	None	6.73		6.73	3.55		A		A

2024 PM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	179		561		276	851		0.2107	
2	West Leg - Parking Access (EB)	None	42		719		21	487		0.0856	
3	South Leg - MWC (NB)	None	765		104		657	1097		0.6971	
4	East Leg - Apres Ski Way (WB)	None	654		184		684	1065		0.6142	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	4.94		4.94	0.66		A		A
2	West Leg - Parking Access (EB)	None	7.39		7.39	0.23		A		A
3	South Leg - MWC (NB)	None	8.72		8.72	4.86		A		A
4	East Leg - Apres Ski Way (WB)	None	7.39		7.39	3.55		A		A

Approach Flow Profile

2024 PM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Parking Access (EB)	South Leg - MWC (NB)	East Leg - Apres Ski Way (WB)
0.0 - 7.5	16.53	3.85	70.51	60.32
7.5 - 15.0	19.25	4.48	82.09	70.22
15.0 - 22.5	21.30	4.96	90.84	77.71
22.5 - 30.0	22.41	5.22	95.57	81.75
30.0 - 37.5	22.41	5.22	95.57	81.75
37.5 - 45.0	21.30	4.96	90.84	77.71
45.0 - 52.5	19.25	4.48	82.09	70.22
52.5 - 60.0	16.53	3.85	70.51	60.32
Peak 15 min	22.41	5.22	95.57	81.75
Peak 60 min	19.87	4.63	84.75	72.50

Exit Flow Profile

2024 PM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Parking Access (EB)	South Leg - MWC (NB)	East Leg - Apres Ski Way (WB)
0.0 - 7.5	25.45	1.97	60.58	63.06
7.5 - 15.0	29.60	2.30	70.47	73.34
15.0 - 22.5	32.77	2.54	78.00	81.18
22.5 - 30.0	34.49	2.68	82.10	85.45
30.0 - 37.5	34.53	2.68	82.17	85.54
37.5 - 45.0	32.85	2.55	78.17	81.40
45.0 - 52.5	29.73	2.31	70.71	73.66
52.5 - 60.0	25.54	1.98	60.75	63.29
0-60	245	19	583	607
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2044 Synthetic Flow Profile (veh)
Total with GTC Alternate Improvements	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
AM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - MWC (SB)	0	0	12.00	1	19.50	1	42.00	63.00	30.00
2	West Leg - Parking Access (EB)	62	0	12.00	1	10.00	1	10.00	42.00	30.00
3	South Leg - MWC (NB)	135	0	12.00	1	18.00	1	30.00	72.00	30.00
4	East Leg - Apres Ski Way (WB)	296	0	12.00	1	19.00	1	30.00	95.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - MWC (SB)	120.00	20.00	1	19.00	1	12.00	1
2	West Leg - Parking Access (EB)	120.00	20.00	1	13.00	1	10.00	1
3	South Leg - MWC (NB)	120.00	20.00	1	17.00	1	12.00	1
4	East Leg - Apres Ski Way (WB)	120.00	20.00	1	17.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - MWC (SB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	West Leg - Parking Access (EB)	0	1.000	0	1.000	20.00	1792	0	10.00	1494	0
3	South Leg - MWC (NB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	East Leg - Apres Ski Way (WB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2044 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - MWC (SB)	2	55	47	2	0	5.0	1.00
2	West Leg - Parking Access (EB)	0	0	0	11	0	5.0	1.00
3	South Leg - MWC (NB)	27	6	148	466	0	5.0	1.00
4	East Leg - Apres Ski Way (WB)	11	437	2	104	0	5.0	1.00

2044 AM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - MWC (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - Parking Access (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - MWC (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - Apres Ski Way (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2044 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	106		483		254	893		0.1187	
2	West Leg - Parking Access (EB)	None	11		579		10	551		0.0200	
3	South Leg - MWC (NB)	None	647		68		522	1116		0.5798	
4	East Leg - Apres Ski Way (WB)	None	554		183		532	1065		0.5201	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	4.38		4.38	0.40		A		A
2	West Leg - Parking Access (EB)	None	6.34		6.34	0.06		A		A
3	South Leg - MWC (NB)	None	7.07		7.07	4.16		A		A
4	East Leg - Apres Ski Way (WB)	None	6.55		6.55	3.29		A		A

2044 AM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	120		544		286	860		0.1390
2	West Leg - Parking Access (EB)	None	12		653		11	518		0.0240
3	South Leg - MWC (NB)	None	730		77		588	1111		0.6565
4	East Leg - Apres Ski Way (WB)	None	625		206		600	1053		0.5935

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	4.52		4.52	0.40		A		A
2	West Leg - Parking Access (EB)	None	6.57		6.57	0.06		A		A
3	South Leg - MWC (NB)	None	7.80		7.80	4.16		A		A
4	East Leg - Apres Ski Way (WB)	None	7.16		7.16	3.29		A		A

Approach Flow Profile

2044 AM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Parking Access (EB)	South Leg - MWC (NB)	East Leg - Apres Ski Way (WB)
0.0 - 7.5	11.02	1.14	67.28	57.61
7.5 - 15.0	12.83	1.33	78.33	67.07
15.0 - 22.5	14.20	1.47	86.69	74.23
22.5 - 30.0	14.94	1.55	91.20	78.09
30.0 - 37.5	14.94	1.55	91.20	78.09
37.5 - 45.0	14.20	1.47	86.69	74.23
45.0 - 52.5	12.83	1.33	78.33	67.07
52.5 - 60.0	11.02	1.14	67.28	57.61
Peak 15 min	14.94	1.55	91.20	78.09
Peak 60 min	13.25	1.38	80.88	69.25

Exit Flow Profile

2044 AM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Parking Access (EB)	South Leg - MWC (NB)	East Leg - Apres Ski Way (WB)
0.0 - 7.5	26.39	1.04	54.24	55.28
7.5 - 15.0	30.70	1.21	63.10	64.30
15.0 - 22.5	33.98	1.34	69.84	71.17
22.5 - 30.0	35.76	1.41	73.51	74.91
30.0 - 37.5	35.80	1.41	73.57	74.98
37.5 - 45.0	34.06	1.34	69.99	71.33
45.0 - 52.5	30.81	1.21	63.31	64.53
52.5 - 60.0	26.47	1.04	54.40	55.45
0-60	254	10	522	532
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2044 Synthetic Flow Profile (veh)
Total with GTC Alternate Improvements	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
PM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - MWC (SB)	0	0	12.00	1	19.50	1	42.00	63.00	30.00
2	West Leg - Parking Access (EB)	62	0	12.00	1	10.00	1	10.00	42.00	30.00
3	South Leg - MWC (NB)	135	0	12.00	1	18.00	1	30.00	72.00	30.00
4	East Leg - Apres Ski Way (WB)	296	0	12.00	1	19.00	1	30.00	95.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - MWC (SB)	120.00	20.00	1	19.00	1	12.00	1
2	West Leg - Parking Access (EB)	120.00	20.00	1	13.00	1	10.00	1
3	South Leg - MWC (NB)	120.00	20.00	1	17.00	1	12.00	1
4	East Leg - Apres Ski Way (WB)	120.00	20.00	1	17.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - MWC (SB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	West Leg - Parking Access (EB)	0	1.000	0	1.000	20.00	1792	0	10.00	1494	0
3	South Leg - MWC (NB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	East Leg - Apres Ski Way (WB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2044 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - MWC (SB)	6	85	82	6	0	5.0	1.00
2	West Leg - Parking Access (EB)	0	11	2	27	0	5.0	1.00
3	South Leg - MWC (NB)	2	14	155	589	0	5.0	1.00
4	East Leg - Apres Ski Way (WB)	0	535	2	108	0	5.0	1.00

2044 PM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - MWC (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - Parking Access (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - MWC (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - Apres Ski Way (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2044 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	179		553		280	855			0.2093
2	West Leg - Parking Access (EB)	None	40		710		22	491			0.0814
3	South Leg - MWC (NB)	None	760		104		646	1097			0.6931
4	East Leg - Apres Ski Way (WB)	None	645		188		676	1062			0.6071

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	5.08		5.08	0.81		A		A
2	West Leg - Parking Access (EB)	None	7.61		7.61	0.28		A		A
3	South Leg - MWC (NB)	None	9.75		9.75	7.04		A		A
4	East Leg - Apres Ski Way (WB)	None	7.97		7.97	4.78		A		A

2044 PM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	202		623		315	818		0.2468	
2	West Leg - Parking Access (EB)	None	45		800		25	450		0.1001	
3	South Leg - MWC (NB)	None	857		117		728	1089		0.7867	
4	East Leg - Apres Ski Way (WB)	None	727		212		761	1049		0.6930	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	5.36		5.36	0.81		A		A
2	West Leg - Parking Access (EB)	None	8.09		8.09	0.28		A		A
3	South Leg - MWC (NB)	None	11.33		11.33	7.04		B		B
4	East Leg - Apres Ski Way (WB)	None	8.98		8.98	4.78		A		A

Approach Flow Profile

2044 PM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Parking Access (EB)	South Leg - MWC (NB)	East Leg - Apres Ski Way (WB)
0.0 - 7.5	18.61	4.16	79.03	67.08
7.5 - 15.0	21.67	4.84	92.01	78.09
15.0 - 22.5	23.98	5.36	101.83	86.42
22.5 - 30.0	25.23	5.64	107.12	90.91
30.0 - 37.5	25.23	5.64	107.12	90.91
37.5 - 45.0	23.98	5.36	101.83	86.42
45.0 - 52.5	21.67	4.84	92.01	78.09
52.5 - 60.0	18.61	4.16	79.03	67.08
Peak 15 min	25.23	5.64	107.12	90.91
Peak 60 min	22.38	5.00	95.00	80.63

Exit Flow Profile

2044 PM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Parking Access (EB)	South Leg - MWC (NB)	East Leg - Apres Ski Way (WB)
0.0 - 7.5	29.08	2.29	67.11	70.21
7.5 - 15.0	33.81	2.66	78.05	81.63
15.0 - 22.5	37.42	2.94	86.38	90.33
22.5 - 30.0	39.39	3.10	90.93	95.09
30.0 - 37.5	39.45	3.10	91.04	95.25
37.5 - 45.0	37.56	2.95	86.63	90.68
45.0 - 52.5	34.01	2.67	78.40	82.14
52.5 - 60.0	29.22	2.30	67.36	70.55
0-60	280	22	646	676
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2024 Synthetic Flow Profile (veh)
Background	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
AM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - MWC (SB)	0	0	12.00	1	17.00	1	43.00	102.00	30.00
2	West Leg - Steamboat Grand (EB)	63	0	12.00	1	13.00	1	19.00	35.00	30.00
3	South Leg - MWC (NB)	150	0	12.00	1	16.00	1	40.00	59.00	30.00
4	East Leg - Ski Time Square (WB)	264	0	12.00	1	17.00	1	48.00	73.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - MWC (SB)	120.00	18.00	1	16.00	1	12.00	1
2	West Leg - Steamboat Grand (EB)	120.00	18.00	1	13.00	1	10.00	1
3	South Leg - MWC (NB)	120.00	18.00	1	17.00	1	12.00	1
4	East Leg - Ski Time Square (WB)	120.00	18.00	1	15.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - MWC (SB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	West Leg - Steamboat Grand (EB)	0	1.000	0	1.000	20.00	1792	0	10.00	1494	0
3	South Leg - MWC (NB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	East Leg - Ski Time Square (WB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2024 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - MWC (SB)	2	282	97	18	0	5.0	1.00
2	West Leg - Steamboat Grand (EB)	0	20	11	15	0	5.0	1.00
3	South Leg - MWC (NB)	70	35	166	126	0	5.0	1.00
4	East Leg - Ski Time Square (WB)	0	56	2	109	0	5.0	1.00

2024 AM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - MWC (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - Steamboat Grand (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - MWC (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - Ski Time Square (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2024 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	399		163		297	1062		0.3756
2	West Leg - Steamboat Grand (EB)	None	46		507		55	779		0.0591
3	South Leg - MWC (NB)	None	397		315		238	957		0.4148
4	East Leg - Ski Time Square (WB)	None	167		293		419	981		0.1702

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	5.04		5.04	1.77		A		A
2	West Leg - Steamboat Grand (EB)	None	4.66		4.66	0.19		A		A
3	South Leg - MWC (NB)	None	5.98		5.98	2.13		A		A
4	East Leg - Ski Time Square (WB)	None	4.16		4.16	0.60		A		A

2024 AM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	450		184		335	1051		0.4281	
2	West Leg - Steamboat Grand (EB)	None	52		572		62	746		0.0695	
3	South Leg - MWC (NB)	None	448		355		268	936		0.4783	
4	East Leg - Ski Time Square (WB)	None	188		330		472	961		0.1959	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	5.30		5.30	1.77		A		A
2	West Leg - Steamboat Grand (EB)	None	4.79		4.79	0.19		A		A
3	South Leg - MWC (NB)	None	6.43		6.43	2.13		A		A
4	East Leg - Ski Time Square (WB)	None	4.27		4.27	0.60		A		A

Approach Flow Profile

2024 AM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Steamboat Grand (EB)	South Leg - MWC (NB)	East Leg - Ski Time Square (WB)
0.0 - 7.5	41.49	4.78	41.29	17.37
7.5 - 15.0	48.31	5.57	48.06	20.22
15.0 - 22.5	53.46	6.16	53.19	22.38
22.5 - 30.0	56.24	6.48	55.96	23.54
30.0 - 37.5	56.24	6.48	55.96	23.54
37.5 - 45.0	53.46	6.16	53.19	22.38
45.0 - 52.5	48.31	5.57	48.06	20.22
52.5 - 60.0	41.49	4.78	41.29	17.37
Peak 15 min	56.24	6.48	55.96	23.54
Peak 60 min	49.88	5.75	49.63	20.88

Exit Flow Profile

2024 AM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Steamboat Grand (EB)	South Leg - MWC (NB)	East Leg - Ski Time Square (WB)
0.0 - 7.5	30.87	5.72	24.73	43.54
7.5 - 15.0	35.91	6.65	28.78	50.67
15.0 - 22.5	39.76	7.36	31.86	56.08
22.5 - 30.0	41.84	7.75	33.53	59.02
30.0 - 37.5	41.86	7.75	33.54	59.06
37.5 - 45.0	39.81	7.37	31.90	56.17
45.0 - 52.5	36.00	6.67	28.85	50.79
52.5 - 60.0	30.93	5.73	24.78	43.64
0-60	297	55	238	419
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2024 Synthetic Flow Profile (veh)
Background	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
PM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - MWC (SB)	0	0	12.00	1	17.00	1	43.00	102.00	30.00
2	West Leg - Steamboat Grand (EB)	63	0	12.00	1	13.00	1	19.00	35.00	30.00
3	South Leg - MWC (NB)	150	0	12.00	1	16.00	1	40.00	59.00	30.00
4	East Leg - Ski Time Square (WB)	264	0	12.00	1	17.00	1	48.00	73.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - MWC (SB)	120.00	18.00	1	16.00	1	12.00	1
2	West Leg - Steamboat Grand (EB)	120.00	18.00	1	13.00	1	10.00	1
3	South Leg - MWC (NB)	120.00	18.00	1	17.00	1	12.00	1
4	East Leg - Ski Time Square (WB)	120.00	18.00	1	15.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - MWC (SB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	West Leg - Steamboat Grand (EB)	0	1.000	0	1.000	20.00	1792	0	10.00	1494	0
3	South Leg - MWC (NB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	East Leg - Ski Time Square (WB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2024 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - MWC (SB)	0	203	91	9	0	5.0	1.00
2	West Leg - Steamboat Grand (EB)	0	56	32	15	0	5.0	1.00
3	South Leg - MWC (NB)	89	0	269	118	0	5.0	1.00
4	East Leg - Ski Time Square (WB)	0	109	0	319	0	5.0	1.00

2024 PM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - MWC (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - Steamboat Grand (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - MWC (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - Ski Time Square (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2024 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	303		198		644	1043		0.2904
2	West Leg - Steamboat Grand (EB)	None	103		492		9	786		0.1310
3	South Leg - MWC (NB)	None	476		291		304	970		0.4909
4	East Leg - Ski Time Square (WB)	None	428		414		353	917		0.4669

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	4.54		4.54	1.20		A		A
2	West Leg - Steamboat Grand (EB)	None	4.98		4.98	0.45		A		A
3	South Leg - MWC (NB)	None	6.74		6.74	2.93		A		A
4	East Leg - Ski Time Square (WB)	None	6.86		6.86	2.70		A		A

2024 PM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	342		223		726	1030			0.3318
2	West Leg - Steamboat Grand (EB)	None	116		555		10	755			0.1539
3	South Leg - MWC (NB)	None	537		328		343	950			0.5649
4	East Leg - Ski Time Square (WB)	None	483		467		398	889			0.5432

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	4.72		4.72	1.20		A		A
2	West Leg - Steamboat Grand (EB)	None	5.16		5.16	0.45		A		A
3	South Leg - MWC (NB)	None	7.38		7.38	2.93		A		A
4	East Leg - Ski Time Square (WB)	None	7.55		7.55	2.70		A		A

Approach Flow Profile

2024 PM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Steamboat Grand (EB)	South Leg - MWC (NB)	East Leg - Ski Time Square (WB)
0.0 - 7.5	31.51	10.71	49.50	44.51
7.5 - 15.0	36.68	12.47	57.63	51.82
15.0 - 22.5	40.60	13.80	63.78	57.35
22.5 - 30.0	42.71	14.52	67.09	60.33
30.0 - 37.5	42.71	14.52	67.09	60.33
37.5 - 45.0	40.60	13.80	63.78	57.35
45.0 - 52.5	36.68	12.47	57.63	51.82
52.5 - 60.0	31.51	10.71	49.50	44.51
Peak 15 min	42.71	14.52	67.09	60.33
Peak 60 min	37.88	12.88	59.50	53.50

Exit Flow Profile

2024 PM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Steamboat Grand (EB)	South Leg - MWC (NB)	East Leg - Ski Time Square (WB)
0.0 - 7.5	66.91	0.94	31.59	36.69
7.5 - 15.0	77.84	1.09	36.75	42.68
15.0 - 22.5	86.16	1.20	40.68	47.25
22.5 - 30.0	90.69	1.27	42.81	49.73
30.0 - 37.5	90.76	1.27	42.85	49.75
37.5 - 45.0	86.35	1.21	40.76	47.32
45.0 - 52.5	78.11	1.09	36.86	42.79
52.5 - 60.0	67.12	0.94	31.67	36.77
0-60	644	9	304	353
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2044 Synthetic Flow Profile (veh)
Background	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
AM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - MWC (SB)	0	0	12.00	1	17.00	1	43.00	102.00	30.00
2	West Leg - Steamboat Grand (EB)	63	0	12.00	1	13.00	1	19.00	35.00	30.00
3	South Leg - MWC (NB)	150	0	12.00	1	16.00	1	40.00	59.00	30.00
4	East Leg - Ski Time Square (WB)	264	0	12.00	1	17.00	1	48.00	73.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - MWC (SB)	120.00	18.00	1	16.00	1	12.00	1
2	West Leg - Steamboat Grand (EB)	120.00	18.00	1	13.00	1	10.00	1
3	South Leg - MWC (NB)	120.00	18.00	1	17.00	1	12.00	1
4	East Leg - Ski Time Square (WB)	120.00	18.00	1	15.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - MWC (SB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	West Leg - Steamboat Grand (EB)	0	1.000	0	1.000	20.00	1792	0	10.00	1494	0
3	South Leg - MWC (NB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	East Leg - Ski Time Square (WB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2044 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - MWC (SB)	2	282	107	19	0	5.0	1.00
2	West Leg - Steamboat Grand (EB)	0	22	11	17	0	5.0	1.00
3	South Leg - MWC (NB)	77	39	183	126	0	5.0	1.00
4	East Leg - Ski Time Square (WB)	0	56	2	109	0	5.0	1.00

2044 AM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - MWC (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - Steamboat Grand (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - MWC (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - Ski Time Square (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2044 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	410		174		316	1056		0.3882
2	West Leg - Steamboat Grand (EB)	None	50		524		60	770		0.0649
3	South Leg - MWC (NB)	None	425		317		257	956		0.4446
4	East Leg - Ski Time Square (WB)	None	167		323		419	965		0.1730

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	5.17		5.17	1.87		A		A
2	West Leg - Steamboat Grand (EB)	None	4.74		4.74	0.21		A		A
3	South Leg - MWC (NB)	None	6.29		6.29	2.42		A		A
4	East Leg - Ski Time Square (WB)	None	4.25		4.25	0.61		A		A

2044 AM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)			Capacity (veh/hr)					
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	462		196		356	1044		0.4427	
2	West Leg - Steamboat Grand (EB)	None	56		591		68	737		0.0765	
3	South Leg - MWC (NB)	None	479		357		290	935		0.5127	
4	East Leg - Ski Time Square (WB)	None	188		364		472	943		0.1996	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	5.46		5.46	1.87		A		A
2	West Leg - Steamboat Grand (EB)	None	4.88		4.88	0.21		A		A
3	South Leg - MWC (NB)	None	6.82		6.82	2.42		A		A
4	East Leg - Ski Time Square (WB)	None	4.37		4.37	0.61		A		A

Approach Flow Profile

2044 AM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Steamboat Grand (EB)	South Leg - MWC (NB)	East Leg - Ski Time Square (WB)
0.0 - 7.5	42.64	5.20	44.20	17.37
7.5 - 15.0	49.64	6.05	51.45	20.22
15.0 - 22.5	54.93	6.70	56.94	22.38
22.5 - 30.0	57.79	7.05	59.90	23.54
30.0 - 37.5	57.79	7.05	59.90	23.54
37.5 - 45.0	54.93	6.70	56.94	22.38
45.0 - 52.5	49.64	6.05	51.45	20.22
52.5 - 60.0	42.64	5.20	44.20	17.37
Peak 15 min	57.79	7.05	59.90	23.54
Peak 60 min	51.25	6.25	53.13	20.88

Exit Flow Profile

2044 AM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Steamboat Grand (EB)	South Leg - MWC (NB)	East Leg - Ski Time Square (WB)
0.0 - 7.5	32.84	6.23	26.71	43.54
7.5 - 15.0	38.21	7.25	31.08	50.66
15.0 - 22.5	42.29	8.03	34.40	56.08
22.5 - 30.0	44.51	8.45	36.20	59.02
30.0 - 37.5	44.54	8.46	36.22	59.06
37.5 - 45.0	42.36	8.04	34.45	56.17
45.0 - 52.5	38.31	7.27	31.15	50.79
52.5 - 60.0	32.91	6.25	26.77	43.64
0-60	316	60	257	419
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2044 Synthetic Flow Profile (veh)
Background	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
PM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - MWC (SB)	0	0	12.00	1	17.00	1	43.00	102.00	30.00
2	West Leg - Steamboat Grand (EB)	63	0	12.00	1	13.00	1	19.00	35.00	30.00
3	South Leg - MWC (NB)	150	0	12.00	1	16.00	1	40.00	59.00	30.00
4	East Leg - Ski Time Square (WB)	264	0	12.00	1	17.00	1	48.00	73.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - MWC (SB)	120.00	18.00	1	16.00	1	12.00	1
2	West Leg - Steamboat Grand (EB)	120.00	18.00	1	13.00	1	10.00	1
3	South Leg - MWC (NB)	120.00	18.00	1	17.00	1	12.00	1
4	East Leg - Ski Time Square (WB)	120.00	18.00	1	15.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - MWC (SB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	West Leg - Steamboat Grand (EB)	0	1.000	0	1.000	20.00	1792	0	10.00	1494	0
3	South Leg - MWC (NB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	East Leg - Ski Time Square (WB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2044 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - MWC (SB)	0	203	100	10	0	5.0	1.00
2	West Leg - Steamboat Grand (EB)	0	61	32	17	0	5.0	1.00
3	South Leg - MWC (NB)	98	0	297	118	0	5.0	1.00
4	East Leg - Ski Time Square (WB)	0	109	0	319	0	5.0	1.00

2044 PM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - MWC (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - Steamboat Grand (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - MWC (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - Ski Time Square (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2044 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	313		207		677	1038		0.3014
2	West Leg - Steamboat Grand (EB)	None	110		510		10	777		0.1416
3	South Leg - MWC (NB)	None	513		296		324	967		0.5305
4	East Leg - Ski Time Square (WB)	None	428		456		353	894		0.4786

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	4.63		4.63	1.26		A		A
2	West Leg - Steamboat Grand (EB)	None	5.10		5.10	0.49		A		A
3	South Leg - MWC (NB)	None	7.32		7.32	3.46		A		A
4	East Leg - Ski Time Square (WB)	None	7.20		7.20	2.86		A		A

2044 PM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	353		233		763	1024		0.3446	
2	West Leg - Steamboat Grand (EB)	None	124		575		11	745		0.1665	
3	South Leg - MWC (NB)	None	578		334		365	947		0.6107	
4	East Leg - Ski Time Square (WB)	None	483		514		398	863		0.5590	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	4.82		4.82	1.26		A		A
2	West Leg - Steamboat Grand (EB)	None	5.30		5.30	0.49		A		A
3	South Leg - MWC (NB)	None	8.11		8.11	3.46		A		A
4	East Leg - Ski Time Square (WB)	None	7.99		7.99	2.86		A		A

Approach Flow Profile

2044 PM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Steamboat Grand (EB)	South Leg - MWC (NB)	East Leg - Ski Time Square (WB)
0.0 - 7.5	32.55	11.44	53.35	44.51
7.5 - 15.0	37.89	13.32	62.11	51.82
15.0 - 22.5	41.94	14.74	68.73	57.35
22.5 - 30.0	44.12	15.50	72.31	60.33
30.0 - 37.5	44.12	15.50	72.31	60.33
37.5 - 45.0	41.94	14.74	68.73	57.35
45.0 - 52.5	37.89	13.32	62.11	51.82
52.5 - 60.0	32.55	11.44	53.35	44.51
Peak 15 min	44.12	15.50	72.31	60.33
Peak 60 min	39.12	13.75	64.13	53.50

Exit Flow Profile

2044 PM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Steamboat Grand (EB)	South Leg - MWC (NB)	East Leg - Ski Time Square (WB)
0.0 - 7.5	70.34	1.04	33.67	36.68
7.5 - 15.0	81.81	1.21	39.16	42.68
15.0 - 22.5	90.55	1.34	43.35	47.24
22.5 - 30.0	95.32	1.41	45.63	49.72
30.0 - 37.5	95.41	1.41	45.66	49.75
37.5 - 45.0	90.78	1.34	43.44	47.32
45.0 - 52.5	82.13	1.21	39.29	42.79
52.5 - 60.0	70.57	1.04	33.76	36.77
0-60	677	10	324	353
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2024 Synthetic Flow Profile (veh)
Total	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
AM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - MWC (SB)	0	0	12.00	1	17.00	1	43.00	102.00	30.00
2	West Leg - Steamboat Grand (EB)	63	0	12.00	1	13.00	1	19.00	35.00	30.00
3	South Leg - MWC (NB)	150	0	12.00	1	16.00	1	40.00	59.00	30.00
4	East Leg - Ski Time Square (WB)	264	0	12.00	1	17.00	1	48.00	73.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - MWC (SB)	120.00	18.00	1	16.00	1	12.00	1
2	West Leg - Steamboat Grand (EB)	120.00	18.00	1	13.00	1	10.00	1
3	South Leg - MWC (NB)	120.00	18.00	1	17.00	1	12.00	1
4	East Leg - Ski Time Square (WB)	120.00	18.00	1	15.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - MWC (SB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	West Leg - Steamboat Grand (EB)	0	1.000	0	1.000	20.00	1792	0	10.00	1494	0
3	South Leg - MWC (NB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	East Leg - Ski Time Square (WB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2024 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - MWC (SB)	2	282	124	18	0	5.0	1.00
2	West Leg - Steamboat Grand (EB)	0	20	11	15	0	5.0	1.00
3	South Leg - MWC (NB)	70	35	185	128	0	5.0	1.00
4	East Leg - Ski Time Square (WB)	0	59	2	109	0	5.0	1.00

2024 AM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - MWC (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - Steamboat Grand (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - MWC (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - Ski Time Square (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2024 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)			Capacity (veh/hr)				
			Arrival Flow		Opposing Flow	Capacity		Average VCR		
			Entry	Bypass	Entry	Bypass	Exit Flow	Entry	Bypass	Entry
1	North Leg - MWC (SB)	None	426		166		316	1061		0.4017
2	West Leg - Steamboat Grand (EB)	None	46		537		55	764		0.0602
3	South Leg - MWC (NB)	None	418		315		268	957		0.4367
4	East Leg - Ski Time Square (WB)	None	170		312		421	971		0.1751

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	5.26		5.26	1.98		A		A
2	West Leg - Steamboat Grand (EB)	None	4.76		4.76	0.19		A		A
3	South Leg - MWC (NB)	None	6.20		6.20	2.34		A		A
4	East Leg - Ski Time Square (WB)	None	4.23		4.23	0.62		A		A

2024 AM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)			Capacity (veh/hr)				
			Arrival Flow		Opposing Flow	Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	480		187		356	1049		0.4578
2	West Leg - Steamboat Grand (EB)	None	52		605		62	730		0.0711
3	South Leg - MWC (NB)	None	471		355		302	936		0.5036
4	East Leg - Ski Time Square (WB)	None	192		352		475	950		0.2018

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	5.57		5.57	1.98		A		A
2	West Leg - Steamboat Grand (EB)	None	4.90		4.90	0.19		A		A
3	South Leg - MWC (NB)	None	6.70		6.70	2.34		A		A
4	East Leg - Ski Time Square (WB)	None	4.35		4.35	0.62		A		A

Approach Flow Profile

2024 AM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Steamboat Grand (EB)	South Leg - MWC (NB)	East Leg - Ski Time Square (WB)
0.0 - 7.5	44.30	4.78	43.47	17.68
7.5 - 15.0	51.58	5.57	50.61	20.58
15.0 - 22.5	57.08	6.16	56.01	22.78
22.5 - 30.0	60.05	6.48	58.92	23.96
30.0 - 37.5	60.05	6.48	58.92	23.96
37.5 - 45.0	57.08	6.16	56.01	22.78
45.0 - 52.5	51.58	5.57	50.61	20.58
52.5 - 60.0	44.30	4.78	43.47	17.68
Peak 15 min	60.05	6.48	58.92	23.96
Peak 60 min	53.25	5.75	52.25	21.25

Exit Flow Profile

2024 AM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Steamboat Grand (EB)	South Leg - MWC (NB)	East Leg - Ski Time Square (WB)
0.0 - 7.5	32.84	5.72	27.85	43.75
7.5 - 15.0	38.21	6.65	32.41	50.90
15.0 - 22.5	42.29	7.36	35.87	56.35
22.5 - 30.0	44.51	7.75	37.75	59.30
30.0 - 37.5	44.54	7.75	37.77	59.34
37.5 - 45.0	42.36	7.37	35.92	56.44
45.0 - 52.5	38.31	6.67	32.48	51.04
52.5 - 60.0	32.91	5.73	27.91	43.85
0-60	316	55	268	421
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2024 Synthetic Flow Profile (veh)
Total	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
PM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - MWC (SB)	0	0	12.00	1	17.00	1	43.00	102.00	30.00
2	West Leg - Steamboat Grand (EB)	63	0	12.00	1	13.00	1	19.00	35.00	30.00
3	South Leg - MWC (NB)	150	0	12.00	1	16.00	1	40.00	59.00	30.00
4	East Leg - Ski Time Square (WB)	264	0	12.00	1	17.00	1	48.00	73.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - MWC (SB)	120.00	18.00	1	16.00	1	12.00	1
2	West Leg - Steamboat Grand (EB)	120.00	18.00	1	13.00	1	10.00	1
3	South Leg - MWC (NB)	120.00	18.00	1	17.00	1	12.00	1
4	East Leg - Ski Time Square (WB)	120.00	18.00	1	15.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - MWC (SB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	West Leg - Steamboat Grand (EB)	0	1.000	0	1.000	20.00	1792	0	10.00	1494	0
3	South Leg - MWC (NB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	East Leg - Ski Time Square (WB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2024 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - MWC (SB)	0	203	115	9	0	5.0	1.00
2	West Leg - Steamboat Grand (EB)	0	56	32	15	0	5.0	1.00
3	South Leg - MWC (NB)	89	0	294	121	0	5.0	1.00
4	East Leg - Ski Time Square (WB)	0	112	0	319	0	5.0	1.00

2024 PM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - MWC (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - Steamboat Grand (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - MWC (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - Ski Time Square (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2024 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	327		201		669	1042		0.3139
2	West Leg - Steamboat Grand (EB)	None	103		519		9	773		0.1333
3	South Leg - MWC (NB)	None	504		291		331	970		0.5197
4	East Leg - Ski Time Square (WB)	None	431		439		356	903		0.4772

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	4.70		4.70	1.34		A		A
2	West Leg - Steamboat Grand (EB)	None	5.09		5.09	0.46		A		A
3	South Leg - MWC (NB)	None	7.14		7.14	3.31		A		A
4	East Leg - Ski Time Square (WB)	None	7.10		7.10	2.83		A		A

2024 PM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)			Capacity (veh/hr)				
			Arrival Flow		Opposing Flow	Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	369		227		754	1028		0.3587
2	West Leg - Steamboat Grand (EB)	None	116		585		10	740		0.1570
3	South Leg - MWC (NB)	None	568		328		373	950		0.5981
4	East Leg - Ski Time Square (WB)	None	486		495		401	874		0.5564

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	4.90		4.90	1.34		A		A
2	West Leg - Steamboat Grand (EB)	None	5.28		5.28	0.46		A		A
3	South Leg - MWC (NB)	None	7.88		7.88	3.31		A		A
4	East Leg - Ski Time Square (WB)	None	7.86		7.86	2.83		A		A

Approach Flow Profile

2024 PM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Steamboat Grand (EB)	South Leg - MWC (NB)	East Leg - Ski Time Square (WB)
0.0 - 7.5	34.01	10.71	52.41	44.82
7.5 - 15.0	39.59	12.47	61.02	52.18
15.0 - 22.5	43.81	13.80	67.53	57.75
22.5 - 30.0	46.09	14.52	71.04	60.75
30.0 - 37.5	46.09	14.52	71.04	60.75
37.5 - 45.0	43.81	13.80	67.53	57.75
45.0 - 52.5	39.59	12.47	61.02	52.18
52.5 - 60.0	34.01	10.71	52.41	44.82
Peak 15 min	46.09	14.52	71.04	60.75
Peak 60 min	40.88	12.88	63.00	53.88

Exit Flow Profile

2024 PM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Steamboat Grand (EB)	South Leg - MWC (NB)	East Leg - Ski Time Square (WB)
0.0 - 7.5	69.51	0.94	34.39	37.00
7.5 - 15.0	80.85	1.09	40.01	43.04
15.0 - 22.5	89.49	1.20	44.29	47.65
22.5 - 30.0	94.20	1.27	46.61	50.14
30.0 - 37.5	94.28	1.27	46.65	50.18
37.5 - 45.0	89.71	1.21	44.38	47.72
45.0 - 52.5	81.16	1.09	40.14	43.16
52.5 - 60.0	69.73	0.94	34.49	37.08
0-60	669	9	331	356
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2044 Synthetic Flow Profile (veh)
Total	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
AM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - MWC (SB)	0	0	12.00	1	17.00	1	43.00	102.00	30.00
2	West Leg - Steamboat Grand (EB)	63	0	12.00	1	13.00	1	19.00	35.00	30.00
3	South Leg - MWC (NB)	150	0	12.00	1	16.00	1	40.00	59.00	30.00
4	East Leg - Ski Time Square (WB)	264	0	12.00	1	17.00	1	48.00	73.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - MWC (SB)	120.00	18.00	1	16.00	1	12.00	1
2	West Leg - Steamboat Grand (EB)	120.00	18.00	1	13.00	1	10.00	1
3	South Leg - MWC (NB)	120.00	18.00	1	17.00	1	12.00	1
4	East Leg - Ski Time Square (WB)	120.00	18.00	1	15.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - MWC (SB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	West Leg - Steamboat Grand (EB)	0	1.000	0	1.000	20.00	1792	0	10.00	1494	0
3	South Leg - MWC (NB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	East Leg - Ski Time Square (WB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2044 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - MWC (SB)	2	282	146	19	0	5.0	1.00
2	West Leg - Steamboat Grand (EB)	0	22	11	17	0	5.0	1.00
3	South Leg - MWC (NB)	77	39	213	129	0	5.0	1.00
4	East Leg - Ski Time Square (WB)	0	60	2	109	0	5.0	1.00

2044 AM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - MWC (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - Steamboat Grand (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - MWC (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - Ski Time Square (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2044 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	449		178		346	1054		0.4259
2	West Leg - Steamboat Grand (EB)	None	50		567		60	749		0.0668
3	South Leg - MWC (NB)	None	458		317		300	956		0.4791
4	East Leg - Ski Time Square (WB)	None	171		353		422	949		0.1802

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	5.51		5.51	2.20		A		A
2	West Leg - Steamboat Grand (EB)	None	4.89		4.89	0.21		A		A
3	South Leg - MWC (NB)	None	6.70		6.70	2.80		A		A
4	East Leg - Ski Time Square (WB)	None	4.36		4.36	0.65		A		A

2044 AM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	506		201		390	1042		0.4859	
2	West Leg - Steamboat Grand (EB)	None	56		639		68	713		0.0791	
3	South Leg - MWC (NB)	None	516		357		338	935		0.5525	
4	East Leg - Ski Time Square (WB)	None	193		398		476	925		0.2084	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	5.87		5.87	2.20		A		A
2	West Leg - Steamboat Grand (EB)	None	5.05		5.05	0.21		A		A
3	South Leg - MWC (NB)	None	7.33		7.33	2.80		A		A
4	East Leg - Ski Time Square (WB)	None	4.49		4.49	0.65		A		A

Approach Flow Profile

2044 AM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Steamboat Grand (EB)	South Leg - MWC (NB)	East Leg - Ski Time Square (WB)
0.0 - 7.5	46.69	5.20	47.63	17.78
7.5 - 15.0	54.36	6.05	55.45	20.70
15.0 - 22.5	60.16	6.70	61.37	22.91
22.5 - 30.0	63.29	7.05	64.56	24.10
30.0 - 37.5	63.29	7.05	64.56	24.10
37.5 - 45.0	60.16	6.70	61.37	22.91
45.0 - 52.5	54.36	6.05	55.45	20.70
52.5 - 60.0	46.69	5.20	47.63	17.78
Peak 15 min	63.29	7.05	64.56	24.10
Peak 60 min	56.13	6.25	57.25	21.38

Exit Flow Profile

2044 AM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Steamboat Grand (EB)	South Leg - MWC (NB)	East Leg - Ski Time Square (WB)
0.0 - 7.5	35.95	6.23	31.18	43.85
7.5 - 15.0	41.83	7.25	36.27	51.02
15.0 - 22.5	46.30	8.03	40.15	56.47
22.5 - 30.0	48.73	8.45	42.26	59.44
30.0 - 37.5	48.77	8.46	42.28	59.48
37.5 - 45.0	46.39	8.04	40.22	56.57
45.0 - 52.5	41.95	7.28	36.37	51.16
52.5 - 60.0	36.04	6.25	31.25	43.96
0-60	346	60	300	422
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2044 Synthetic Flow Profile (veh)
Total	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
PM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - MWC (SB)	0	0	12.00	1	17.00	1	43.00	102.00	30.00
2	West Leg - Steamboat Grand (EB)	63	0	12.00	1	13.00	1	19.00	35.00	30.00
3	South Leg - MWC (NB)	150	0	12.00	1	16.00	1	40.00	59.00	30.00
4	East Leg - Ski Time Square (WB)	264	0	12.00	1	17.00	1	48.00	73.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - MWC (SB)	120.00	18.00	1	16.00	1	12.00	1
2	West Leg - Steamboat Grand (EB)	120.00	18.00	1	13.00	1	10.00	1
3	South Leg - MWC (NB)	120.00	18.00	1	17.00	1	12.00	1
4	East Leg - Ski Time Square (WB)	120.00	18.00	1	15.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - MWC (SB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	West Leg - Steamboat Grand (EB)	0	1.000	0	1.000	20.00	1792	0	10.00	1494	0
3	South Leg - MWC (NB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	East Leg - Ski Time Square (WB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2044 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - MWC (SB)	0	203	139	10	0	5.0	1.00
2	West Leg - Steamboat Grand (EB)	0	61	32	17	0	5.0	1.00
3	South Leg - MWC (NB)	98	0	337	122	0	5.0	1.00
4	East Leg - Ski Time Square (WB)	0	113	0	319	0	5.0	1.00

2044 PM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - MWC (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - Steamboat Grand (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - MWC (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - Ski Time Square (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2044 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	352		211		717	1036		0.3397
2	West Leg - Steamboat Grand (EB)	None	110		553		10	756		0.1456
3	South Leg - MWC (NB)	None	557		296		367	967		0.5759
4	East Leg - Ski Time Square (WB)	None	432		496		357	873		0.4949

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	4.90		4.90	1.51		A		A
2	West Leg - Steamboat Grand (EB)	None	5.28		5.28	0.51		A		A
3	South Leg - MWC (NB)	None	8.08		8.08	4.21		A		A
4	East Leg - Ski Time Square (WB)	None	7.63		7.63	3.09		A		A

2044 PM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)			Capacity (veh/hr)				
			Arrival Flow		Opposing Flow	Average VCR				
			Entry	Bypass	Entry	Bypass	Exit Flow	Entry	Bypass	
1	North Leg - MWC (SB)	None	397		238		808	1022		0.3884
2	West Leg - Steamboat Grand (EB)	None	124		623		11	721		0.1721
3	South Leg - MWC (NB)	None	628		334		414	947		0.6631
4	East Leg - Ski Time Square (WB)	None	487		559		402	839		0.5804

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	5.14		5.14	1.51		A		A
2	West Leg - Steamboat Grand (EB)	None	5.51		5.51	0.51		A		A
3	South Leg - MWC (NB)	None	9.10		9.10	4.21		A		A
4	East Leg - Ski Time Square (WB)	None	8.55		8.55	3.09		A		A

Approach Flow Profile

2044 PM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Steamboat Grand (EB)	South Leg - MWC (NB)	East Leg - Ski Time Square (WB)
0.0 - 7.5	36.61	11.44	57.92	44.92
7.5 - 15.0	42.62	13.32	67.44	52.30
15.0 - 22.5	47.16	14.74	74.63	57.88
22.5 - 30.0	49.62	15.50	78.51	60.89
30.0 - 37.5	49.62	15.50	78.51	60.89
37.5 - 45.0	47.16	14.74	74.63	57.88
45.0 - 52.5	42.62	13.32	67.44	52.30
52.5 - 60.0	36.61	11.44	57.92	44.92
Peak 15 min	49.62	15.50	78.51	60.89
Peak 60 min	44.00	13.75	69.63	54.00

Exit Flow Profile

2044 PM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Steamboat Grand (EB)	South Leg - MWC (NB)	East Leg - Ski Time Square (WB)
0.0 - 7.5	74.49	1.04	38.13	37.10
7.5 - 15.0	86.63	1.21	44.36	43.16
15.0 - 22.5	95.88	1.34	49.10	47.77
22.5 - 30.0	100.93	1.41	51.68	50.28
30.0 - 37.5	101.04	1.41	51.72	50.31
37.5 - 45.0	96.16	1.34	49.21	47.86
45.0 - 52.5	87.02	1.21	44.52	43.29
52.5 - 60.0	74.76	1.04	38.25	37.20
0-60	717	10	367	357
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2024 Synthetic Flow Profile (veh)
Total with GTC Alternate Improvements	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
AM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - MWC (SB)	0	0	12.00	1	17.00	1	43.00	102.00	30.00
2	West Leg - Steamboat Grand (EB)	63	0	12.00	1	13.00	1	19.00	35.00	30.00
3	South Leg - MWC (NB)	150	0	12.00	1	16.00	1	40.00	59.00	30.00
4	East Leg - Ski Time Square (WB)	264	0	12.00	1	17.00	1	48.00	73.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - MWC (SB)	120.00	18.00	1	16.00	1	12.00	1
2	West Leg - Steamboat Grand (EB)	120.00	18.00	1	13.00	1	10.00	1
3	South Leg - MWC (NB)	120.00	18.00	1	17.00	1	12.00	1
4	East Leg - Ski Time Square (WB)	120.00	18.00	1	15.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - MWC (SB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	West Leg - Steamboat Grand (EB)	0	1.000	0	1.000	20.00	1792	0	10.00	1494	0
3	South Leg - MWC (NB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	East Leg - Ski Time Square (WB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2024 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - MWC (SB)	2	301	402	18	0	5.0	1.00
2	West Leg - Steamboat Grand (EB)	0	20	11	15	0	5.0	1.00
3	South Leg - MWC (NB)	70	35	294	109	0	5.0	1.00
4	East Leg - Ski Time Square (WB)	0	51	2	117	0	5.0	1.00

2024 AM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - MWC (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - Steamboat Grand (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - MWC (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - Ski Time Square (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2024 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	723		158		433	1065		0.6789
2	West Leg - Steamboat Grand (EB)	None	46		826		55	620		0.0742
3	South Leg - MWC (NB)	None	508		334		538	947		0.5364
4	East Leg - Ski Time Square (WB)	None	170		421		421	913		0.1862

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	9.54		9.54	6.57		A		A
2	West Leg - Steamboat Grand (EB)	None	5.99		5.99	0.25		A		A
3	South Leg - MWC (NB)	None	7.58		7.58	3.57		A		A
4	East Leg - Ski Time Square (WB)	None	4.57		4.57	0.68		A		A

2024 AM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)			Capacity (veh/hr)				
			Arrival Flow		Opposing Flow	Capacity		Average VCR		
			Entry	Bypass	Entry	Bypass	Exit Flow	Entry	Bypass	Entry
1	North Leg - MWC (SB)	None	815		178		488	1054		0.7734
2	West Leg - Steamboat Grand (EB)	None	52		930		62	568		0.0913
3	South Leg - MWC (NB)	None	573		376		606	925		0.6194
4	East Leg - Ski Time Square (WB)	None	192		474		474	884		0.2168

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	11.08		11.08	6.57		B		B
2	West Leg - Steamboat Grand (EB)	None	6.37		6.37	0.25		A		A
3	South Leg - MWC (NB)	None	8.45		8.45	3.57		A		A
4	East Leg - Ski Time Square (WB)	None	4.74		4.74	0.68		A		A

Approach Flow Profile

2024 AM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Steamboat Grand (EB)	South Leg - MWC (NB)	East Leg - Ski Time Square (WB)
0.0 - 7.5	75.19	4.78	52.83	17.68
7.5 - 15.0	87.53	5.57	61.50	20.58
15.0 - 22.5	96.87	6.16	68.06	22.78
22.5 - 30.0	101.91	6.48	71.60	23.96
30.0 - 37.5	101.91	6.48	71.60	23.96
37.5 - 45.0	96.87	6.16	68.06	22.78
45.0 - 52.5	87.53	5.57	61.50	20.58
52.5 - 60.0	75.19	4.78	52.83	17.68
Peak 15 min	101.91	6.48	71.60	23.96
Peak 60 min	90.37	5.75	63.50	21.25

Exit Flow Profile

2024 AM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Steamboat Grand (EB)	South Leg - MWC (NB)	East Leg - Ski Time Square (WB)
0.0 - 7.5	44.99	5.71	55.88	43.73
7.5 - 15.0	52.33	6.64	64.97	50.84
15.0 - 22.5	57.92	7.35	71.90	56.26
22.5 - 30.0	60.97	7.74	75.69	59.23
30.0 - 37.5	61.02	7.75	75.81	59.32
37.5 - 45.0	58.06	7.38	72.17	56.48
45.0 - 52.5	52.52	6.68	65.35	51.15
52.5 - 60.0	45.13	5.74	56.14	43.93
0-60	433	55	538	421
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2024 Synthetic Flow Profile (veh)
Total with GTC Alternate Improvements	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
PM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - MWC (SB)	0	0	12.00	1	17.00	1	43.00	102.00	30.00
2	West Leg - Steamboat Grand (EB)	63	0	12.00	1	13.00	1	19.00	35.00	30.00
3	South Leg - MWC (NB)	150	0	12.00	1	16.00	1	40.00	59.00	30.00
4	East Leg - Ski Time Square (WB)	264	0	12.00	1	17.00	1	48.00	73.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - MWC (SB)	120.00	18.00	1	16.00	1	12.00	1
2	West Leg - Steamboat Grand (EB)	120.00	18.00	1	13.00	1	10.00	1
3	South Leg - MWC (NB)	120.00	18.00	1	17.00	1	12.00	1
4	East Leg - Ski Time Square (WB)	120.00	18.00	1	15.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - MWC (SB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	West Leg - Steamboat Grand (EB)	0	1.000	0	1.000	20.00	1792	0	10.00	1494	0
3	South Leg - MWC (NB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	East Leg - Ski Time Square (WB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2024 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - MWC (SB)	0	221	398	9	0	5.0	1.00
2	West Leg - Steamboat Grand (EB)	0	56	32	15	0	5.0	1.00
3	South Leg - MWC (NB)	89	0	487	103	0	5.0	1.00
4	East Leg - Ski Time Square (WB)	0	96	0	335	0	5.0	1.00

2024 PM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - MWC (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - Steamboat Grand (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - MWC (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - Ski Time Square (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2024 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	628		185		878	1050		0.5979
2	West Leg - Steamboat Grand (EB)	None	103		804		9	631		0.1632
3	South Leg - MWC (NB)	None	679		309		598	960		0.7071
4	East Leg - Ski Time Square (WB)	None	431		632		356	800		0.5384

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	7.79		7.79	4.54		A		A
2	West Leg - Steamboat Grand (EB)	None	6.50		6.50	0.61		A		A
3	South Leg - MWC (NB)	None	11.73		11.73	7.85		B		B
4	East Leg - Ski Time Square (WB)	None	9.19		9.19	3.85		A		A

2024 PM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)			Capacity (veh/hr)				
			Arrival Flow		Opposing Flow	Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	708		208		987	1038		0.6823
2	West Leg - Steamboat Grand (EB)	None	116		905		10	581		0.2000
3	South Leg - MWC (NB)	None	766		348		673	940		0.8148
4	East Leg - Ski Time Square (WB)	None	486		710		401	758		0.6408

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	8.74		8.74	4.54		A		A
2	West Leg - Steamboat Grand (EB)	None	7.00		7.00	0.61		A		A
3	South Leg - MWC (NB)	None	14.06		14.06	7.85		B		B
4	East Leg - Ski Time Square (WB)	None	10.62		10.62	3.85		B		B

Approach Flow Profile

2024 PM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Steamboat Grand (EB)	South Leg - MWC (NB)	East Leg - Ski Time Square (WB)
0.0 - 7.5	65.31	10.71	70.61	44.82
7.5 - 15.0	76.03	12.47	82.21	52.18
15.0 - 22.5	84.14	13.80	90.98	57.75
22.5 - 30.0	88.52	14.52	95.71	60.75
30.0 - 37.5	88.52	14.52	95.71	60.75
37.5 - 45.0	84.14	13.80	90.98	57.75
45.0 - 52.5	76.03	12.47	82.21	52.18
52.5 - 60.0	65.31	10.71	70.61	44.82
Peak 15 min	88.52	14.52	95.71	60.75
Peak 60 min	78.50	12.88	84.88	53.88

Exit Flow Profile

2024 PM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Steamboat Grand (EB)	South Leg - MWC (NB)	East Leg - Ski Time Square (WB)
0.0 - 7.5	91.18	0.93	62.12	36.98
7.5 - 15.0	105.97	1.09	72.22	42.99
15.0 - 22.5	117.24	1.20	79.93	47.58
22.5 - 30.0	123.11	1.27	84.00	49.99
30.0 - 37.5	123.69	1.27	84.26	50.16
37.5 - 45.0	117.83	1.21	80.22	47.76
45.0 - 52.5	106.80	1.09	72.63	43.25
52.5 - 60.0	91.70	0.94	62.39	37.15
0-60	878	9	598	356
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2044 Synthetic Flow Profile (veh)
Total with GTC Alternate Improvements	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
AM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - MWC (SB)	0	0	12.00	1	17.00	1	43.00	102.00	30.00
2	West Leg - Steamboat Grand (EB)	63	0	12.00	1	13.00	1	19.00	35.00	30.00
3	South Leg - MWC (NB)	150	0	12.00	1	16.00	1	40.00	59.00	30.00
4	East Leg - Ski Time Square (WB)	264	0	12.00	1	17.00	1	48.00	73.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - MWC (SB)	120.00	18.00	1	16.00	1	12.00	1
2	West Leg - Steamboat Grand (EB)	120.00	18.00	1	13.00	1	10.00	1
3	South Leg - MWC (NB)	120.00	18.00	1	17.00	1	12.00	1
4	East Leg - Ski Time Square (WB)	120.00	18.00	1	15.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - MWC (SB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	West Leg - Steamboat Grand (EB)	0	1.000	0	1.000	20.00	1792	0	10.00	1494	0
3	South Leg - MWC (NB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	East Leg - Ski Time Square (WB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2044 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - MWC (SB)	2	301	456	19	0	5.0	1.00
2	West Leg - Steamboat Grand (EB)	0	22	11	17	0	5.0	1.00
3	South Leg - MWC (NB)	77	39	339	110	0	5.0	1.00
4	East Leg - Ski Time Square (WB)	0	52	2	117	0	5.0	1.00

2044 AM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - MWC (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - Steamboat Grand (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - MWC (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - Ski Time Square (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2044 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	778		170		480	1058		0.7350
2	West Leg - Steamboat Grand (EB)	None	50		888		60	589		0.0849
3	South Leg - MWC (NB)	None	565		336		602	946		0.5972
4	East Leg - Ski Time Square (WB)	None	171		479		422	882		0.1939

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	11.60		11.60	8.82		B		B
2	West Leg - Steamboat Grand (EB)	None	6.39		6.39	0.29		A		A
3	South Leg - MWC (NB)	None	8.71		8.71	4.65		A		A
4	East Leg - Ski Time Square (WB)	None	4.78		4.78	0.72		A		A

2044 AM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)			Capacity (veh/hr)				
			Arrival Flow		Opposing Flow	Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	877		192		541	1047		0.8381
2	West Leg - Steamboat Grand (EB)	None	56		999		68	534		0.1057
3	South Leg - MWC (NB)	None	637		378		678	924		0.6897
4	East Leg - Ski Time Square (WB)	None	193		540		475	850		0.2270

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	13.89		13.89	8.82		B		B
2	West Leg - Steamboat Grand (EB)	None	6.86		6.86	0.29		A		A
3	South Leg - MWC (NB)	None	9.93		9.93	4.65		A		A
4	East Leg - Ski Time Square (WB)	None	4.99		4.99	0.72		A		A

Approach Flow Profile

2044 AM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Steamboat Grand (EB)	South Leg - MWC (NB)	East Leg - Ski Time Square (WB)
0.0 - 7.5	80.91	5.20	58.76	17.78
7.5 - 15.0	94.19	6.05	68.40	20.70
15.0 - 22.5	104.24	6.70	75.70	22.91
22.5 - 30.0	109.66	7.05	79.64	24.10
30.0 - 37.5	109.66	7.05	79.64	24.10
37.5 - 45.0	104.24	6.70	75.70	22.91
45.0 - 52.5	94.19	6.05	68.40	20.70
52.5 - 60.0	80.91	5.20	58.76	17.78
Peak 15 min	109.66	7.05	79.64	24.10
Peak 60 min	97.25	6.25	70.63	21.38

Exit Flow Profile

2044 AM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Steamboat Grand (EB)	South Leg - MWC (NB)	East Leg - Ski Time Square (WB)
0.0 - 7.5	49.87	6.23	62.52	43.82
7.5 - 15.0	57.99	7.24	72.66	50.93
15.0 - 22.5	64.18	8.02	80.38	56.34
22.5 - 30.0	67.56	8.44	84.62	59.31
30.0 - 37.5	67.64	8.45	84.80	59.45
37.5 - 45.0	64.37	8.05	80.79	56.63
45.0 - 52.5	58.26	7.29	73.24	51.35
52.5 - 60.0	50.05	6.26	62.88	44.08
0-60	480	60	602	422
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2044 Synthetic Flow Profile (veh)
Total with GTC Alternate Improvements	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
PM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - MWC (SB)	0	0	12.00	1	17.00	1	43.00	102.00	30.00
2	West Leg - Steamboat Grand (EB)	63	0	12.00	1	13.00	1	19.00	35.00	30.00
3	South Leg - MWC (NB)	150	0	12.00	1	16.00	1	40.00	59.00	30.00
4	East Leg - Ski Time Square (WB)	264	0	12.00	1	17.00	1	48.00	73.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - MWC (SB)	120.00	18.00	1	16.00	1	12.00	1
2	West Leg - Steamboat Grand (EB)	120.00	18.00	1	13.00	1	10.00	1
3	South Leg - MWC (NB)	120.00	18.00	1	17.00	1	12.00	1
4	East Leg - Ski Time Square (WB)	120.00	18.00	1	15.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - MWC (SB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	West Leg - Steamboat Grand (EB)	0	1.000	0	1.000	20.00	1792	0	10.00	1494	0
3	South Leg - MWC (NB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	East Leg - Ski Time Square (WB)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2044 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - MWC (SB)	0	221	453	10	0	5.0	1.00
2	West Leg - Steamboat Grand (EB)	0	61	32	17	0	5.0	1.00
3	South Leg - MWC (NB)	98	0	558	104	0	5.0	1.00
4	East Leg - Ski Time Square (WB)	0	97	0	335	0	5.0	1.00

2044 PM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - MWC (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - Steamboat Grand (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - MWC (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - Ski Time Square (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2044 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)			Capacity (veh/hr)				
			Arrival Flow		Opposing Flow	Capacity		Average VCR		
			Entry	Bypass	Entry	Bypass	Exit Flow	Entry	Bypass	Entry
1	North Leg - MWC (SB)	None	684		195		954	1045		0.6546
2	West Leg - Steamboat Grand (EB)	None	110		869		10	599		0.1838
3	South Leg - MWC (NB)	None	760		314		665	958		0.7936
4	East Leg - Ski Time Square (WB)	None	432		717		357	755		0.5722

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	9.07		9.07	5.88		A		A
2	West Leg - Steamboat Grand (EB)	None	7.04		7.04	0.72		A		A
3	South Leg - MWC (NB)	None	16.77		16.77	13.18		C		C
4	East Leg - Ski Time Square (WB)	None	10.61		10.61	4.58		B		B

2044 PM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)			Capacity (veh/hr)				
			Arrival Flow		Opposing Flow	Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - MWC (SB)	None	771		219		1070		1032	0.7473
2	West Leg - Steamboat Grand (EB)	None	124		977		11		545	0.2277
3	South Leg - MWC (NB)	None	857		353		748		937	0.9148
4	East Leg - Ski Time Square (WB)	None	487		803		401		709	0.6869

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - MWC (SB)	None	10.43		10.43	5.88		B		B
2	West Leg - Steamboat Grand (EB)	None	7.67		7.67	0.72		A		A
3	South Leg - MWC (NB)	None	21.14		21.14	13.18		C		C
4	East Leg - Ski Time Square (WB)	None	12.51		12.51	4.58		B		B

Approach Flow Profile

2044 PM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Steamboat Grand (EB)	South Leg - MWC (NB)	East Leg - Ski Time Square (WB)
0.0 - 7.5	71.13	11.44	79.03	44.92
7.5 - 15.0	82.81	13.32	92.01	52.30
15.0 - 22.5	91.65	14.74	101.83	57.88
22.5 - 30.0	96.41	15.50	107.12	60.89
30.0 - 37.5	96.41	15.50	107.12	60.89
37.5 - 45.0	91.65	14.74	101.83	57.88
45.0 - 52.5	82.81	13.32	92.01	52.30
52.5 - 60.0	71.13	11.44	79.03	44.92
Peak 15 min	96.41	15.50	107.12	60.89
Peak 60 min	85.50	13.75	95.00	54.00

Exit Flow Profile

2044 PM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - MWC (SB)	West Leg - Steamboat Grand (EB)	South Leg - MWC (NB)	East Leg - Ski Time Square (WB)
0.0 - 7.5	99.04	1.04	69.06	37.07
7.5 - 15.0	115.01	1.21	80.26	43.08
15.0 - 22.5	126.46	1.33	88.50	47.47
22.5 - 30.0	133.14	1.40	93.22	49.99
30.0 - 37.5	134.26	1.41	93.67	50.28
37.5 - 45.0	128.43	1.34	89.37	47.99
45.0 - 52.5	117.53	1.22	81.30	43.73
52.5 - 60.0	99.86	1.04	69.46	37.30
0-60	954	10	665	357
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2024 Synthetic Flow Profile (veh)
Background	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
AM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - Steamboat Blvd (SB)	0	0	22.00	2	25.00	2	50.00	66.00	30.00
2	West Leg - MWR (EB)	90	0	11.00	1	15.20	1	50.00	66.00	30.00
3	South Leg - Broomtail Ln (NB)	180	0	10.00	1	14.00	1	25.00	66.00	30.00
4	East Leg - MWR (WB)	270	0	23.00	2	25.70	2	50.00	66.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - Steamboat Blvd (SB)	156.00	32.00	2	13.00	1	12.00	1
2	West Leg - MWR (EB)	130.00	32.00	2	25.00	2	23.00	2
3	South Leg - Broomtail Ln (NB)	130.00	32.00	2	13.50	1	10.00	1
4	East Leg - MWR (WB)	156.00	20.00	1	13.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - Steamboat Blvd (SB)	0	1.000	0	1.000	20.00	3286	0	12.00	1792	0
2	West Leg - MWR (EB)	0	1.000	0	1.000	20.00	1643	0	23.00	3435	0
3	South Leg - Broomtail Ln (NB)	0	1.000	0	1.000	20.00	1494	0	10.00	1494	0
4	East Leg - MWR (WB)	0	1.000	0	1.000	20.00	3435	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2024 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - Steamboat Blvd (SB)	0	99	1	47	0	5.0	1.00
2	West Leg - MWR (EB)	0	28	530	1	0	5.0	1.00
3	South Leg - Broomtail Ln (NB)	0	2	0	4	0	5.0	1.00
4	East Leg - MWR (WB)	0	2	377	71	0	5.0	1.00

2024 AM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - Steamboat Blvd (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - MWR (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - Broomtail Ln (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - MWR (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2024 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - Steamboat Blvd (SB)	None	147		381		99	1791		0.0821
2	West Leg - MWR (EB)	None	559		102		426	1155		0.4840
3	South Leg - Broomtail Ln (NB)	None	6		657		4	819		0.0073
4	East Leg - MWR (WB)	None	450		30		633	2090		0.2153

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - Steamboat Blvd (SB)	None	3.06		3.06	0.38		A		A
2	West Leg - MWR (EB)	None	6.70		6.70	3.31		A		A
3	South Leg - Broomtail Ln (NB)	None	0.00		0.00	0.00		A		A
4	East Leg - MWR (WB)	None	2.44		2.44	0.93		A		A

2024 AM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Exit Flow	Entry	Bypass	Entry
1	North Leg - Steamboat Blvd (SB)	None	166		430		112	1757		0.0943
2	West Leg - MWR (EB)	None	630		115		480	1149		0.5484
3	South Leg - Broomtail Ln (NB)	None	7		741		5	789		0.0086
4	East Leg - MWR (WB)	None	507		34		713	2086		0.2432

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - Steamboat Blvd (SB)	None	3.10		3.10	0.38		A		A
2	West Leg - MWR (EB)	None	7.17		7.17	3.31		A		A
3	South Leg - Broomtail Ln (NB)	None	0.00		0.00	0.00		A		A
4	East Leg - MWR (WB)	None	2.48		2.48	0.93		A		A

Approach Flow Profile

2024 AM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - Steamboat Blvd (SB)	West Leg - MWR (EB)	South Leg - Broomtail Ln (NB)	East Leg - MWR (WB)
0.0 - 7.5	15.29	58.13	0.62	46.80
7.5 - 15.0	17.80	67.68	0.73	54.48
15.0 - 22.5	19.70	74.90	0.80	60.29
22.5 - 30.0	20.72	78.79	0.85	63.43
30.0 - 37.5	20.72	78.79	0.85	63.43
37.5 - 45.0	19.70	74.90	0.80	60.29
45.0 - 52.5	17.80	67.68	0.73	54.48
52.5 - 60.0	15.29	58.13	0.62	46.80
Peak 15 min	20.72	78.79	0.85	63.43
Peak 60 min	18.38	69.87	0.75	56.25

Exit Flow Profile

2024 AM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - Steamboat Blvd (SB)	West Leg - MWR (EB)	South Leg - Broomtail Ln (NB)	East Leg - MWR (WB)
0.0 - 7.5	10.29	44.29	0.42	65.78
7.5 - 15.0	11.98	51.55	0.48	76.53
15.0 - 22.5	13.26	57.06	0.54	84.71
22.5 - 30.0	13.95	60.03	0.56	89.16
30.0 - 37.5	13.95	60.04	0.56	89.21
37.5 - 45.0	13.27	57.09	0.54	84.86
45.0 - 52.5	11.99	51.60	0.48	76.75
52.5 - 60.0	10.31	44.33	0.42	65.95
0-60	99	426	4	633
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2024 Synthetic Flow Profile (veh)
Background	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
PM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - Steamboat Blvd (SB)	0	0	22.00	2	25.00	2	50.00	66.00	30.00
2	West Leg - MWR (EB)	90	0	11.00	1	15.20	1	50.00	66.00	30.00
3	South Leg - Broomtail Ln (NB)	180	0	10.00	1	14.00	1	25.00	66.00	30.00
4	East Leg - MWR (WB)	270	0	23.00	2	25.70	2	50.00	66.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - Steamboat Blvd (SB)	156.00	32.00	2	13.00	1	12.00	1
2	West Leg - MWR (EB)	130.00	32.00	2	25.00	2	23.00	2
3	South Leg - Broomtail Ln (NB)	130.00	32.00	2	13.50	1	10.00	1
4	East Leg - MWR (WB)	156.00	20.00	1	13.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - Steamboat Blvd (SB)	0	1.000	0	1.000	20.00	3286	0	12.00	1792	0
2	West Leg - MWR (EB)	0	1.000	0	1.000	20.00	1643	0	23.00	3435	0
3	South Leg - Broomtail Ln (NB)	0	1.000	0	1.000	20.00	1494	0	10.00	1494	0
4	East Leg - MWR (WB)	0	1.000	0	1.000	20.00	3435	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2024 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - Steamboat Blvd (SB)	0	80	1	55	0	5.0	1.00
2	West Leg - MWR (EB)	1	83	702	0	0	5.0	1.00
3	South Leg - Broomtail Ln (NB)	0	0	0	4	0	5.0	1.00
4	East Leg - MWR (WB)	1	3	866	120	0	5.0	1.00

2024 PM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - Steamboat Blvd (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - MWR (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - Broomtail Ln (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - MWR (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2024 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - Steamboat Blvd (SB)	None	136		871		203	1451		0.0937
2	West Leg - MWR (EB)	None	786		85		922	1162		0.6764
3	South Leg - Broomtail Ln (NB)	None	4		867		4	742		0.0054
4	East Leg - MWR (WB)	None	990		84		787	2037		0.4861

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - Steamboat Blvd (SB)	None	4.42		4.42	0.53		A		A
2	West Leg - MWR (EB)	None	10.38		10.38	7.55		B		B
3	South Leg - Broomtail Ln (NB)	None	0.00		0.00	0.00		A		A
4	East Leg - MWR (WB)	None	3.61		3.61	3.17		A		A

2024 PM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - Steamboat Blvd (SB)	None	153		982		229	1374		0.1116
2	West Leg - MWR (EB)	None	886		96		1039	1157		0.7657
3	South Leg - Broomtail Ln (NB)	None	5		976		5	702		0.0064
4	East Leg - MWR (WB)	None	1116		95		886	2026		0.5509

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - Steamboat Blvd (SB)	None	4.61		4.61	0.53		A		A
2	West Leg - MWR (EB)	None	11.87		11.87	7.55		B		B
3	South Leg - Broomtail Ln (NB)	None	0.00		0.00	0.00		A		A
4	East Leg - MWR (WB)	None	3.89		3.89	3.17		A		A

Approach Flow Profile

2024 PM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - Steamboat Blvd (SB)	West Leg - MWR (EB)	South Leg - Broomtail Ln (NB)	East Leg - MWR (WB)
0.0 - 7.5	14.14	81.74	0.42	102.95
7.5 - 15.0	16.47	95.16	0.48	119.86
15.0 - 22.5	18.22	105.31	0.54	132.65
22.5 - 30.0	19.17	110.79	0.56	139.54
30.0 - 37.5	19.17	110.79	0.56	139.54
37.5 - 45.0	18.22	105.31	0.54	132.65
45.0 - 52.5	16.47	95.16	0.48	119.86
52.5 - 60.0	14.14	81.74	0.42	102.95
Peak 15 min	19.17	110.79	0.56	139.54
Peak 60 min	17.00	98.25	0.50	123.75

Exit Flow Profile

2024 PM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - Steamboat Blvd (SB)	West Leg - MWR (EB)	South Leg - Broomtail Ln (NB)	East Leg - MWR (WB)
0.0 - 7.5	21.09	95.84	0.42	81.74
7.5 - 15.0	24.53	111.53	0.48	95.02
15.0 - 22.5	27.15	123.44	0.54	105.15
22.5 - 30.0	28.58	129.90	0.56	110.71
30.0 - 37.5	28.61	129.95	0.56	110.89
37.5 - 45.0	27.22	123.58	0.54	105.56
45.0 - 52.5	24.63	111.72	0.48	95.63
52.5 - 60.0	21.16	95.99	0.42	82.15
0-60	203	922	4	787
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2044 Synthetic Flow Profile (veh)
Background	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
AM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - Steamboat Blvd (SB)	0	0	22.00	2	25.00	2	50.00	66.00	30.00
2	West Leg - MWR (EB)	90	0	11.00	1	15.20	1	50.00	66.00	30.00
3	South Leg - Broomtail Ln (NB)	180	0	10.00	1	14.00	1	25.00	66.00	30.00
4	East Leg - MWR (WB)	270	0	23.00	2	25.70	2	50.00	66.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - Steamboat Blvd (SB)	156.00	32.00	2	13.00	1	12.00	1
2	West Leg - MWR (EB)	130.00	32.00	2	25.00	2	23.00	2
3	South Leg - Broomtail Ln (NB)	130.00	32.00	2	13.50	1	10.00	1
4	East Leg - MWR (WB)	156.00	20.00	1	13.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - Steamboat Blvd (SB)	0	1.000	0	1.000	20.00	3286	0	12.00	1792	0
2	West Leg - MWR (EB)	0	1.000	0	1.000	20.00	1643	0	23.00	3435	0
3	South Leg - Broomtail Ln (NB)	0	1.000	0	1.000	20.00	1494	0	10.00	1494	0
4	East Leg - MWR (WB)	0	1.000	0	1.000	20.00	3435	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2044 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - Steamboat Blvd (SB)	0	110	2	71	0	5.0	1.00
2	West Leg - MWR (EB)	0	41	787	2	0	5.0	1.00
3	South Leg - Broomtail Ln (NB)	0	3	0	5	0	5.0	1.00
4	East Leg - MWR (WB)	0	2	417	78	0	5.0	1.00

2044 AM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - Steamboat Blvd (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - MWR (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - Broomtail Ln (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - MWR (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2044 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - Steamboat Blvd (SB)	None	183		422		119	1762		0.1038
2	West Leg - MWR (EB)	None	830		114		491	1150		0.7219
3	South Leg - Broomtail Ln (NB)	None	8		938		6	716		0.0112
4	East Leg - MWR (WB)	None	497		44		902	2076		0.2394

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - Steamboat Blvd (SB)	None	3.56		3.56	0.56		A		A
2	West Leg - MWR (EB)	None	12.16		12.16	9.50		B		B
3	South Leg - Broomtail Ln (NB)	None	3.94		3.94	0.03		A		A
4	East Leg - MWR (WB)	None	2.53		2.53	1.07		A		A

2044 AM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - Steamboat Blvd (SB)	None	206		476		134	1725		0.1196
2	West Leg - MWR (EB)	None	936		129		554	1144		0.8184
3	South Leg - Broomtail Ln (NB)	None	9		1056		7	673		0.0134
4	East Leg - MWR (WB)	None	560		50		1015	2071		0.2706

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - Steamboat Blvd (SB)	None	3.63		3.63	0.56		A		A
2	West Leg - MWR (EB)	None	14.24		14.24	9.50		B		B
3	South Leg - Broomtail Ln (NB)	None	5.01		5.01	0.03		A		A
4	East Leg - MWR (WB)	None	2.58		2.58	1.07		A		A

Approach Flow Profile

2044 AM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - Steamboat Blvd (SB)	West Leg - MWR (EB)	South Leg - Broomtail Ln (NB)	East Leg - MWR (WB)
0.0 - 7.5	19.03	86.31	0.83	51.68
7.5 - 15.0	22.16	100.49	0.97	60.17
15.0 - 22.5	24.52	111.21	1.07	66.59
22.5 - 30.0	25.79	116.99	1.13	70.05
30.0 - 37.5	25.79	116.99	1.13	70.05
37.5 - 45.0	24.52	111.21	1.07	66.59
45.0 - 52.5	22.16	100.49	0.97	60.17
52.5 - 60.0	19.03	86.31	0.83	51.68
Peak 15 min	25.79	116.99	1.13	70.05
Peak 60 min	22.87	103.75	1.00	62.13

Exit Flow Profile

2044 AM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - Steamboat Blvd (SB)	West Leg - MWR (EB)	South Leg - Broomtail Ln (NB)	East Leg - MWR (WB)
0.0 - 7.5	12.37	51.04	0.62	93.67
7.5 - 15.0	14.38	59.41	0.73	108.85
15.0 - 22.5	15.92	65.76	0.80	120.43
22.5 - 30.0	16.75	69.19	0.84	126.80
30.0 - 37.5	16.77	69.21	0.85	127.06
37.5 - 45.0	15.95	65.80	0.80	121.02
45.0 - 52.5	14.44	59.47	0.73	109.74
52.5 - 60.0	12.40	51.09	0.63	94.24
0-60	119	491	6	902
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2044 Synthetic Flow Profile (veh)
Background	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
PM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - Steamboat Blvd (SB)	0	0	22.00	2	25.00	2	50.00	66.00	30.00
2	West Leg - MWR (EB)	90	0	11.00	1	15.20	1	50.00	66.00	30.00
3	South Leg - Broomtail Ln (NB)	180	0	10.00	1	14.00	1	25.00	66.00	30.00
4	East Leg - MWR (WB)	270	0	23.00	2	25.70	2	50.00	66.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - Steamboat Blvd (SB)	156.00	32.00	2	13.00	1	12.00	1
2	West Leg - MWR (EB)	130.00	32.00	2	25.00	2	23.00	2
3	South Leg - Broomtail Ln (NB)	130.00	32.00	2	13.50	1	10.00	1
4	East Leg - MWR (WB)	156.00	20.00	1	13.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - Steamboat Blvd (SB)	0	1.000	0	1.000	20.00	3286	0	12.00	1792	0
2	West Leg - MWR (EB)	0	1.000	0	1.000	20.00	1643	0	23.00	3435	0
3	South Leg - Broomtail Ln (NB)	0	1.000	0	1.000	20.00	1494	0	10.00	1494	0
4	East Leg - MWR (WB)	0	1.000	0	1.000	20.00	3435	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2044 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - Steamboat Blvd (SB)	0	88	2	82	0	5.0	1.00
2	West Leg - MWR (EB)	2	123	1043	0	0	5.0	1.00
3	South Leg - Broomtail Ln (NB)	0	0	0	5	0	5.0	1.00
4	East Leg - MWR (WB)	1	3	957	133	0	5.0	1.00

2044 PM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - Steamboat Blvd (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - MWR (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - Broomtail Ln (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - MWR (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2044 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - Steamboat Blvd (SB)	None	172		963		252	1387		0.1240
2	West Leg - MWR (EB)	None	1168		94		1041	1158		1.0084
3	South Leg - Broomtail Ln (NB)	None	5		1217		5	614		0.0081
4	East Leg - MWR (WB)	None	1094		121		1101	2001		0.5468

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - Steamboat Blvd (SB)	None	5.50		5.50	0.84		A		A
2	West Leg - MWR (EB)	None	87.60		87.60	106.15		F		F
3	South Leg - Broomtail Ln (NB)	None	0.00		0.00	0.00		A		A
4	East Leg - MWR (WB)	None	4.13		4.13	4.05		A		A

2044 PM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - Steamboat Blvd (SB)	None	194		1085		271	1303		0.1489
2	West Leg - MWR (EB)	None	1317		106		1173	1153		1.1421
3	South Leg - Broomtail Ln (NB)	None	6		1253		6	600		0.0094
4	East Leg - MWR (WB)	None	1234		123		1136	1998		0.6174

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - Steamboat Blvd (SB)	None	5.79		5.79	0.84		A		A
2	West Leg - MWR (EB)	None	93.07		93.07	94.64		F		F
3	South Leg - Broomtail Ln (NB)	None	0.00		0.00	0.00		A		A
4	East Leg - MWR (WB)	None	4.52		4.52	4.05		A		A

Approach Flow Profile

2044 PM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - Steamboat Blvd (SB)	West Leg - MWR (EB)	South Leg - Broomtail Ln (NB)	East Leg - MWR (WB)
0.0 - 7.5	17.89	121.46	0.52	113.77
7.5 - 15.0	20.82	141.41	0.61	132.45
15.0 - 22.5	23.05	156.50	0.67	146.58
22.5 - 30.0	24.24	164.63	0.70	154.20
30.0 - 37.5	24.24	164.63	0.70	154.20
37.5 - 45.0	23.05	156.50	0.67	146.58
45.0 - 52.5	20.82	141.41	0.61	132.45
52.5 - 60.0	17.89	121.46	0.52	113.77
Peak 15 min	24.24	164.63	0.70	154.20
Peak 60 min	21.50	146.00	0.63	136.75

Exit Flow Profile

2044 PM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - Steamboat Blvd (SB)	West Leg - MWR (EB)	South Leg - Broomtail Ln (NB)	East Leg - MWR (WB)
0.0 - 7.5	26.55	108.19	0.52	117.73
7.5 - 15.0	30.73	125.89	0.60	135.53
15.0 - 22.5	33.01	139.33	0.67	141.55
22.5 - 30.0	33.92	146.61	0.70	141.96
30.0 - 37.5	33.93	146.69	0.70	141.97
37.5 - 45.0	33.04	139.52	0.67	141.57
45.0 - 52.5	31.40	126.31	0.61	140.82
52.5 - 60.0	29.20	108.59	0.52	139.83
0-60	252	1041	5	1101
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2024 Synthetic Flow Profile (veh)
Total	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
AM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - Steamboat Blvd (SB)	0	0	22.00	2	25.00	2	50.00	66.00	30.00
2	West Leg - MWR (EB)	90	0	11.00	1	15.20	1	50.00	66.00	30.00
3	South Leg - Broomtail Ln (NB)	180	0	10.00	1	14.00	1	25.00	66.00	30.00
4	East Leg - MWR (WB)	270	0	23.00	2	25.70	2	50.00	66.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - Steamboat Blvd (SB)	156.00	32.00	2	13.00	1	12.00	1
2	West Leg - MWR (EB)	130.00	32.00	2	25.00	2	23.00	2
3	South Leg - Broomtail Ln (NB)	130.00	32.00	2	13.50	1	10.00	1
4	East Leg - MWR (WB)	156.00	20.00	1	13.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - Steamboat Blvd (SB)	0	1.000	0	1.000	20.00	3286	0	12.00	1792	0
2	West Leg - MWR (EB)	0	1.000	0	1.000	20.00	1643	0	23.00	3435	0
3	South Leg - Broomtail Ln (NB)	0	1.000	0	1.000	20.00	1494	0	10.00	1494	0
4	East Leg - MWR (WB)	0	1.000	0	1.000	20.00	3435	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2024 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - Steamboat Blvd (SB)	0	102	1	47	0	5.0	1.00
2	West Leg - MWR (EB)	0	28	566	1	0	5.0	1.00
3	South Leg - Broomtail Ln (NB)	0	2	0	4	0	5.0	1.00
4	East Leg - MWR (WB)	0	2	403	73	0	5.0	1.00

2024 AM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - Steamboat Blvd (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - MWR (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - Broomtail Ln (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - MWR (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2024 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Exit Flow	Entry	Bypass	Entry
1	North Leg - Steamboat Blvd (SB)	None	150		407		101	1773		0.0846
2	West Leg - MWR (EB)	None	595		105		452	1154		0.5158
3	South Leg - Broomtail Ln (NB)	None	6		696		4	805		0.0075
4	East Leg - MWR (WB)	None	478		30		672	2090		0.2287

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - Steamboat Blvd (SB)	None	3.08		3.08	0.39		A		A
2	West Leg - MWR (EB)	None	7.13		7.13	3.77		A		A
3	South Leg - Broomtail Ln (NB)	None	0.00		0.00	0.00		A		A
4	East Leg - MWR (WB)	None	2.47		2.47	1.00		A		A

2024 AM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - Steamboat Blvd (SB)	None	169		459		114	1737		0.0974
2	West Leg - MWR (EB)	None	671		118		510	1148		0.5845
3	South Leg - Broomtail Ln (NB)	None	7		784		5	772		0.0088
4	East Leg - MWR (WB)	None	539		34		757	2086		0.2584

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - Steamboat Blvd (SB)	None	3.13		3.13	0.39		A		A
2	West Leg - MWR (EB)	None	7.70		7.70	3.77		A		A
3	South Leg - Broomtail Ln (NB)	None	0.00		0.00	0.00		A		A
4	East Leg - MWR (WB)	None	2.52		2.52	1.00		A		A

Approach Flow Profile

2024 AM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - Steamboat Blvd (SB)	West Leg - MWR (EB)	South Leg - Broomtail Ln (NB)	East Leg - MWR (WB)
0.0 - 7.5	15.60	61.88	0.62	49.71
7.5 - 15.0	18.16	72.04	0.73	57.87
15.0 - 22.5	20.10	79.72	0.80	64.05
22.5 - 30.0	21.14	83.87	0.85	67.37
30.0 - 37.5	21.14	83.87	0.85	67.37
37.5 - 45.0	20.10	79.72	0.80	64.05
45.0 - 52.5	18.16	72.04	0.73	57.87
52.5 - 60.0	15.60	61.88	0.62	49.71
Peak 15 min	21.14	83.87	0.85	67.37
Peak 60 min	18.75	74.38	0.75	59.75

Exit Flow Profile

2024 AM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - Steamboat Blvd (SB)	West Leg - MWR (EB)	South Leg - Broomtail Ln (NB)	East Leg - MWR (WB)
0.0 - 7.5	10.50	46.99	0.42	69.83
7.5 - 15.0	12.22	54.70	0.48	81.23
15.0 - 22.5	13.52	60.54	0.54	89.92
22.5 - 30.0	14.23	63.70	0.56	94.64
30.0 - 37.5	14.24	63.71	0.56	94.71
37.5 - 45.0	13.54	60.57	0.54	90.09
45.0 - 52.5	12.24	54.75	0.48	81.49
52.5 - 60.0	10.51	47.03	0.42	70.02
0-60	101	452	4	672
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2024 Synthetic Flow Profile (veh)
Total	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
PM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - Steamboat Blvd (SB)	0	0	22.00	2	25.00	2	50.00	66.00	30.00
2	West Leg - MWR (EB)	90	0	11.00	1	15.20	1	50.00	66.00	30.00
3	South Leg - Broomtail Ln (NB)	180	0	10.00	1	14.00	1	25.00	66.00	30.00
4	East Leg - MWR (WB)	270	0	23.00	2	25.70	2	50.00	66.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - Steamboat Blvd (SB)	156.00	32.00	2	13.00	1	12.00	1
2	West Leg - MWR (EB)	130.00	32.00	2	25.00	2	23.00	2
3	South Leg - Broomtail Ln (NB)	130.00	32.00	2	13.50	1	10.00	1
4	East Leg - MWR (WB)	156.00	20.00	1	13.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - Steamboat Blvd (SB)	0	1.000	0	1.000	20.00	3286	0	12.00	1792	0
2	West Leg - MWR (EB)	0	1.000	0	1.000	20.00	1643	0	23.00	3435	0
3	South Leg - Broomtail Ln (NB)	0	1.000	0	1.000	20.00	1494	0	10.00	1494	0
4	East Leg - MWR (WB)	0	1.000	0	1.000	20.00	3435	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2024 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - Steamboat Blvd (SB)	0	83	1	55	0	5.0	1.00
2	West Leg - MWR (EB)	1	83	735	0	0	5.0	1.00
3	South Leg - Broomtail Ln (NB)	0	0	0	4	0	5.0	1.00
4	East Leg - MWR (WB)	1	3	900	123	0	5.0	1.00

2024 PM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - Steamboat Blvd (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - MWR (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - Broomtail Ln (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - MWR (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2024 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - Steamboat Blvd (SB)	None	139		905		206	1428		0.0974
2	West Leg - MWR (EB)	None	819		88		956	1161		0.7055
3	South Leg - Broomtail Ln (NB)	None	4		903		4	729		0.0055
4	East Leg - MWR (WB)	None	1027		84		823	2037		0.5042

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - Steamboat Blvd (SB)	None	4.42		4.42	0.54		A		A
2	West Leg - MWR (EB)	None	11.38		11.38	8.71		B		B
3	South Leg - Broomtail Ln (NB)	None	0.00		0.00	0.00		A		A
4	East Leg - MWR (WB)	None	3.72		3.72	3.41		A		A

2024 PM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - Steamboat Blvd (SB)	None	157		1020		232	1348		0.1163
2	West Leg - MWR (EB)	None	924		99		1078	1156		0.7989
3	South Leg - Broomtail Ln (NB)	None	5		1017		5	687		0.0066
4	East Leg - MWR (WB)	None	1158		95		927	2026		0.5715

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - Steamboat Blvd (SB)	None	4.62		4.62	0.54		A		A
2	West Leg - MWR (EB)	None	13.19		13.19	8.71		B		B
3	South Leg - Broomtail Ln (NB)	None	0.00		0.00	0.00		A		A
4	East Leg - MWR (WB)	None	4.04		4.04	3.41		A		A

Approach Flow Profile

2024 PM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - Steamboat Blvd (SB)	West Leg - MWR (EB)	South Leg - Broomtail Ln (NB)	East Leg - MWR (WB)
0.0 - 7.5	14.45	85.17	0.42	106.80
7.5 - 15.0	16.83	99.16	0.48	124.34
15.0 - 22.5	18.62	109.73	0.54	137.60
22.5 - 30.0	19.59	115.44	0.56	144.76
30.0 - 37.5	19.59	115.44	0.56	144.76
37.5 - 45.0	18.62	109.73	0.54	137.60
45.0 - 52.5	16.83	99.16	0.48	124.34
52.5 - 60.0	14.45	85.17	0.42	106.80
Peak 15 min	19.59	115.44	0.56	144.76
Peak 60 min	17.37	102.38	0.50	128.38

Exit Flow Profile

2024 PM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - Steamboat Blvd (SB)	West Leg - MWR (EB)	South Leg - Broomtail Ln (NB)	East Leg - MWR (WB)
0.0 - 7.5	21.40	99.37	0.42	85.47
7.5 - 15.0	24.89	115.63	0.48	99.33
15.0 - 22.5	27.55	127.99	0.54	109.92
22.5 - 30.0	29.00	134.68	0.56	115.72
30.0 - 37.5	29.03	134.74	0.56	115.94
37.5 - 45.0	27.62	128.14	0.54	110.41
45.0 - 52.5	25.00	115.85	0.48	100.08
52.5 - 60.0	21.48	99.53	0.42	85.96
0-60	206	956	4	823
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2044 Synthetic Flow Profile (veh)
Total	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
AM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - Steamboat Blvd (SB)	0	0	22.00	2	25.00	2	50.00	66.00	30.00
2	West Leg - MWR (EB)	90	0	11.00	1	15.20	1	50.00	66.00	30.00
3	South Leg - Broomtail Ln (NB)	180	0	10.00	1	14.00	1	25.00	66.00	30.00
4	East Leg - MWR (WB)	270	0	23.00	2	25.70	2	50.00	66.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - Steamboat Blvd (SB)	156.00	32.00	2	13.00	1	12.00	1
2	West Leg - MWR (EB)	130.00	32.00	2	25.00	2	23.00	2
3	South Leg - Broomtail Ln (NB)	130.00	32.00	2	13.50	1	10.00	1
4	East Leg - MWR (WB)	156.00	20.00	1	13.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - Steamboat Blvd (SB)	0	1.000	0	1.000	20.00	3286	0	12.00	1792	0
2	West Leg - MWR (EB)	0	1.000	0	1.000	20.00	1643	0	23.00	3435	0
3	South Leg - Broomtail Ln (NB)	0	1.000	0	1.000	20.00	1494	0	10.00	1494	0
4	East Leg - MWR (WB)	0	1.000	0	1.000	20.00	3435	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2044 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - Steamboat Blvd (SB)	0	114	2	71	0	5.0	1.00
2	West Leg - MWR (EB)	0	41	840	2	0	5.0	1.00
3	South Leg - Broomtail Ln (NB)	0	3	0	5	0	5.0	1.00
4	East Leg - MWR (WB)	0	2	457	81	0	5.0	1.00

2044 AM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - Steamboat Blvd (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - MWR (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - Broomtail Ln (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - MWR (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2044 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - Steamboat Blvd (SB)	None	187		462		122	1735		0.1078
2	West Leg - MWR (EB)	None	883		118		531	1148		0.7691
3	South Leg - Broomtail Ln (NB)	None	8		995		6	695		0.0115
4	East Leg - MWR (WB)	None	540		44		959	2076		0.2601

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - Steamboat Blvd (SB)	None	3.59		3.59	0.58		A		A
2	West Leg - MWR (EB)	None	14.56		14.56	12.35		B		B
3	South Leg - Broomtail Ln (NB)	None	4.07		4.07	0.04		A		A
4	East Leg - MWR (WB)	None	2.58		2.58	1.19		A		A

2044 AM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - Steamboat Blvd (SB)	None	211		521		137	1694		0.1245
2	West Leg - MWR (EB)	None	996		133		599	1142		0.8722
3	South Leg - Broomtail Ln (NB)	None	9		1119		7	650		0.0139
4	East Leg - MWR (WB)	None	609		49		1079	2071		0.2941

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - Steamboat Blvd (SB)	None	3.66		3.66	0.58		A		A
2	West Leg - MWR (EB)	None	17.51		17.51	12.35		C		C
3	South Leg - Broomtail Ln (NB)	None	5.19		5.19	0.04		A		A
4	East Leg - MWR (WB)	None	2.64		2.64	1.19		A		A

Approach Flow Profile

2044 AM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - Steamboat Blvd (SB)	West Leg - MWR (EB)	South Leg - Broomtail Ln (NB)	East Leg - MWR (WB)
0.0 - 7.5	19.45	91.83	0.83	56.16
7.5 - 15.0	22.64	106.90	0.97	65.38
15.0 - 22.5	25.06	118.31	1.07	72.35
22.5 - 30.0	26.36	124.46	1.13	76.11
30.0 - 37.5	26.36	124.46	1.13	76.11
37.5 - 45.0	25.06	118.31	1.07	72.35
45.0 - 52.5	22.64	106.90	0.97	65.38
52.5 - 60.0	19.45	91.83	0.83	56.16
Peak 15 min	26.36	124.46	1.13	76.11
Peak 60 min	23.37	110.38	1.00	67.50

Exit Flow Profile

2044 AM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - Steamboat Blvd (SB)	West Leg - MWR (EB)	South Leg - Broomtail Ln (NB)	East Leg - MWR (WB)
0.0 - 7.5	12.68	55.20	0.62	99.56
7.5 - 15.0	14.74	64.25	0.73	115.65
15.0 - 22.5	16.31	71.12	0.80	127.90
22.5 - 30.0	17.17	74.83	0.84	134.65
30.0 - 37.5	17.19	74.84	0.85	135.03
37.5 - 45.0	16.36	71.16	0.80	128.71
45.0 - 52.5	14.81	64.32	0.73	116.93
52.5 - 60.0	12.72	55.26	0.63	100.33
0-60	122	531	6	959
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2044 Synthetic Flow Profile (veh)
Total	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
PM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - Steamboat Blvd (SB)	0	0	22.00	2	25.00	2	50.00	66.00	30.00
2	West Leg - MWR (EB)	90	0	11.00	1	15.20	1	50.00	66.00	30.00
3	South Leg - Broomtail Ln (NB)	180	0	10.00	1	14.00	1	25.00	66.00	30.00
4	East Leg - MWR (WB)	270	0	23.00	2	25.70	2	50.00	66.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - Steamboat Blvd (SB)	156.00	32.00	2	13.00	1	12.00	1
2	West Leg - MWR (EB)	130.00	32.00	2	25.00	2	23.00	2
3	South Leg - Broomtail Ln (NB)	130.00	32.00	2	13.50	1	10.00	1
4	East Leg - MWR (WB)	156.00	20.00	1	13.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - Steamboat Blvd (SB)	0	1.000	0	1.000	20.00	3286	0	12.00	1792	0
2	West Leg - MWR (EB)	0	1.000	0	1.000	20.00	1643	0	23.00	3435	0
3	South Leg - Broomtail Ln (NB)	0	1.000	0	1.000	20.00	1494	0	10.00	1494	0
4	East Leg - MWR (WB)	0	1.000	0	1.000	20.00	3435	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2044 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - Steamboat Blvd (SB)	0	92	2	82	0	5.0	1.00
2	West Leg - MWR (EB)	2	123	1095	0	0	5.0	1.00
3	South Leg - Broomtail Ln (NB)	0	0	0	5	0	5.0	1.00
4	East Leg - MWR (WB)	1	3	1010	137	0	5.0	1.00

2044 PM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - Steamboat Blvd (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - MWR (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - Broomtail Ln (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - MWR (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2044 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - Steamboat Blvd (SB)	None	176		1016		252	1351		0.1303
2	West Leg - MWR (EB)	None	1220		98		1094	1157		1.0549
3	South Leg - Broomtail Ln (NB)	None	5		1230		5	609		0.0082
4	East Leg - MWR (WB)	None	1151		116		1118	2005		0.5741

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - Steamboat Blvd (SB)	None	5.57		5.57	0.88		A		A
2	West Leg - MWR (EB)	None	126.88		126.88	160.56		F		F
3	South Leg - Broomtail Ln (NB)	None	0.00		0.00	0.00		A		A
4	East Leg - MWR (WB)	None	4.36		4.36	4.52		A		A

2044 PM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - Steamboat Blvd (SB)	None	198		1145		270	1261		0.1573
2	West Leg - MWR (EB)	None	1376		110		1233	1151		1.1950
3	South Leg - Broomtail Ln (NB)	None	6		1256		6	599		0.0094
4	East Leg - MWR (WB)	None	1298		118		1144	2003		0.6478

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - Steamboat Blvd (SB)	None	5.90		5.90	0.88		A		A
2	West Leg - MWR (EB)	None	127.01		127.01	136.34		F		F
3	South Leg - Broomtail Ln (NB)	None	0.00		0.00	0.00		A		A
4	East Leg - MWR (WB)	None	4.81		4.81	4.52		A		A

Approach Flow Profile

2044 PM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - Steamboat Blvd (SB)	West Leg - MWR (EB)	South Leg - Broomtail Ln (NB)	East Leg - MWR (WB)
0.0 - 7.5	18.30	126.87	0.52	119.70
7.5 - 15.0	21.31	147.71	0.61	139.35
15.0 - 22.5	23.58	163.46	0.67	154.22
22.5 - 30.0	24.81	171.96	0.70	162.24
30.0 - 37.5	24.81	171.96	0.70	162.24
37.5 - 45.0	23.58	163.46	0.67	154.22
45.0 - 52.5	21.31	147.71	0.61	139.35
52.5 - 60.0	18.30	126.87	0.52	119.70
Peak 15 min	24.81	171.96	0.70	162.24
Peak 60 min	22.00	152.50	0.63	143.88

Exit Flow Profile

2044 PM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - Steamboat Blvd (SB)	West Leg - MWR (EB)	South Leg - Broomtail Ln (NB)	East Leg - MWR (WB)
0.0 - 7.5	26.95	113.70	0.52	123.38
7.5 - 15.0	31.11	132.29	0.60	141.36
15.0 - 22.5	32.86	146.25	0.67	142.54
22.5 - 30.0	33.81	154.06	0.70	142.96
30.0 - 37.5	33.82	154.15	0.70	142.97
37.5 - 45.0	32.90	146.63	0.67	142.56
45.0 - 52.5	31.22	132.77	0.61	141.79
52.5 - 60.0	28.95	114.13	0.52	140.75
0-60	252	1094	5	1118
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2024 Synthetic Flow Profile (veh)
Total with GTC Alternate Improvements	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
AM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - Steamboat Blvd (SB)	0	0	22.00	2	25.00	2	50.00	66.00	30.00
2	West Leg - MWR (EB)	90	0	11.00	1	15.20	1	50.00	66.00	30.00
3	South Leg - Broomtail Ln (NB)	180	0	10.00	1	14.00	1	25.00	66.00	30.00
4	East Leg - MWR (WB)	270	0	23.00	2	25.70	2	50.00	66.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - Steamboat Blvd (SB)	156.00	32.00	2	13.00	1	12.00	1
2	West Leg - MWR (EB)	130.00	32.00	2	25.00	2	23.00	2
3	South Leg - Broomtail Ln (NB)	130.00	32.00	2	13.50	1	10.00	1
4	East Leg - MWR (WB)	156.00	20.00	1	13.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - Steamboat Blvd (SB)	0	1.000	0	1.000	20.00	3286	0	12.00	1792	0
2	West Leg - MWR (EB)	0	1.000	0	1.000	20.00	1643	0	23.00	3435	0
3	South Leg - Broomtail Ln (NB)	0	1.000	0	1.000	20.00	1494	0	10.00	1494	0
4	East Leg - MWR (WB)	0	1.000	0	1.000	20.00	3435	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2024 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - Steamboat Blvd (SB)	0	102	1	47	0	5.0	1.00
2	West Leg - MWR (EB)	0	28	566	1	0	5.0	1.00
3	South Leg - Broomtail Ln (NB)	0	2	0	4	0	5.0	1.00
4	East Leg - MWR (WB)	0	2	403	73	0	5.0	1.00

2024 AM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - Steamboat Blvd (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - MWR (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - Broomtail Ln (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - MWR (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2024 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - Steamboat Blvd (SB)	None	150		407		101	1773		0.0846
2	West Leg - MWR (EB)	None	595		105		452	1154		0.5158
3	South Leg - Broomtail Ln (NB)	None	6		696		4	805		0.0075
4	East Leg - MWR (WB)	None	478		30		672	2090		0.2287

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - Steamboat Blvd (SB)	None	3.08		3.08	0.39		A		A
2	West Leg - MWR (EB)	None	7.13		7.13	3.77		A		A
3	South Leg - Broomtail Ln (NB)	None	0.00		0.00	0.00		A		A
4	East Leg - MWR (WB)	None	2.47		2.47	1.00		A		A

2024 AM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - Steamboat Blvd (SB)	None	169		459		114	1737		0.0974
2	West Leg - MWR (EB)	None	671		118		510	1148		0.5845
3	South Leg - Broomtail Ln (NB)	None	7		784		5	772		0.0088
4	East Leg - MWR (WB)	None	539		34		757	2086		0.2584

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - Steamboat Blvd (SB)	None	3.13		3.13	0.39		A		A
2	West Leg - MWR (EB)	None	7.70		7.70	3.77		A		A
3	South Leg - Broomtail Ln (NB)	None	0.00		0.00	0.00		A		A
4	East Leg - MWR (WB)	None	2.52		2.52	1.00		A		A

Approach Flow Profile

2024 AM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - Steamboat Blvd (SB)	West Leg - MWR (EB)	South Leg - Broomtail Ln (NB)	East Leg - MWR (WB)
0.0 - 7.5	15.60	61.88	0.62	49.71
7.5 - 15.0	18.16	72.04	0.73	57.87
15.0 - 22.5	20.10	79.72	0.80	64.05
22.5 - 30.0	21.14	83.87	0.85	67.37
30.0 - 37.5	21.14	83.87	0.85	67.37
37.5 - 45.0	20.10	79.72	0.80	64.05
45.0 - 52.5	18.16	72.04	0.73	57.87
52.5 - 60.0	15.60	61.88	0.62	49.71
Peak 15 min	21.14	83.87	0.85	67.37
Peak 60 min	18.75	74.38	0.75	59.75

Exit Flow Profile

2024 AM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - Steamboat Blvd (SB)	West Leg - MWR (EB)	South Leg - Broomtail Ln (NB)	East Leg - MWR (WB)
0.0 - 7.5	10.50	46.99	0.42	69.83
7.5 - 15.0	12.22	54.70	0.48	81.23
15.0 - 22.5	13.52	60.54	0.54	89.92
22.5 - 30.0	14.23	63.70	0.56	94.64
30.0 - 37.5	14.24	63.71	0.56	94.71
37.5 - 45.0	13.54	60.57	0.54	90.09
45.0 - 52.5	12.24	54.75	0.48	81.49
52.5 - 60.0	10.51	47.03	0.42	70.02
0-60	101	452	4	672
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2024 Synthetic Flow Profile (veh)
Total with GTC Alternate Improvements	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
PM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - Steamboat Blvd (SB)	0	0	22.00	2	25.00	2	50.00	66.00	30.00
2	West Leg - MWR (EB)	90	0	11.00	1	15.20	1	50.00	66.00	30.00
3	South Leg - Broomtail Ln (NB)	180	0	10.00	1	14.00	1	25.00	66.00	30.00
4	East Leg - MWR (WB)	270	0	23.00	2	25.70	2	50.00	66.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - Steamboat Blvd (SB)	156.00	32.00	2	13.00	1	12.00	1
2	West Leg - MWR (EB)	130.00	32.00	2	25.00	2	23.00	2
3	South Leg - Broomtail Ln (NB)	130.00	32.00	2	13.50	1	10.00	1
4	East Leg - MWR (WB)	156.00	20.00	1	13.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - Steamboat Blvd (SB)	0	1.000	0	1.000	20.00	3286	0	12.00	1792	0
2	West Leg - MWR (EB)	0	1.000	0	1.000	20.00	1643	0	23.00	3435	0
3	South Leg - Broomtail Ln (NB)	0	1.000	0	1.000	20.00	1494	0	10.00	1494	0
4	East Leg - MWR (WB)	0	1.000	0	1.000	20.00	3435	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2024 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - Steamboat Blvd (SB)	0	83	1	55	0	5.0	1.00
2	West Leg - MWR (EB)	1	83	735	0	0	5.0	1.00
3	South Leg - Broomtail Ln (NB)	0	0	0	4	0	5.0	1.00
4	East Leg - MWR (WB)	1	3	900	123	0	5.0	1.00

2024 PM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - Steamboat Blvd (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - MWR (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - Broomtail Ln (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - MWR (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2024 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - Steamboat Blvd (SB)	None	139		905		206	1428		0.0974
2	West Leg - MWR (EB)	None	819		88		956	1161		0.7055
3	South Leg - Broomtail Ln (NB)	None	4		903		4	729		0.0055
4	East Leg - MWR (WB)	None	1027		84		823	2037		0.5042

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - Steamboat Blvd (SB)	None	4.42		4.42	0.54		A		A
2	West Leg - MWR (EB)	None	11.38		11.38	8.71		B		B
3	South Leg - Broomtail Ln (NB)	None	0.00		0.00	0.00		A		A
4	East Leg - MWR (WB)	None	3.72		3.72	3.41		A		A

2024 PM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - Steamboat Blvd (SB)	None	157		1020		232	1348		0.1163
2	West Leg - MWR (EB)	None	924		99		1078	1156		0.7989
3	South Leg - Broomtail Ln (NB)	None	5		1017		5	687		0.0066
4	East Leg - MWR (WB)	None	1158		95		927	2026		0.5715

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - Steamboat Blvd (SB)	None	4.62		4.62	0.54		A		A
2	West Leg - MWR (EB)	None	13.19		13.19	8.71		B		B
3	South Leg - Broomtail Ln (NB)	None	0.00		0.00	0.00		A		A
4	East Leg - MWR (WB)	None	4.04		4.04	3.41		A		A

Approach Flow Profile

2024 PM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - Steamboat Blvd (SB)	West Leg - MWR (EB)	South Leg - Broomtail Ln (NB)	East Leg - MWR (WB)
0.0 - 7.5	14.45	85.17	0.42	106.80
7.5 - 15.0	16.83	99.16	0.48	124.34
15.0 - 22.5	18.62	109.73	0.54	137.60
22.5 - 30.0	19.59	115.44	0.56	144.76
30.0 - 37.5	19.59	115.44	0.56	144.76
37.5 - 45.0	18.62	109.73	0.54	137.60
45.0 - 52.5	16.83	99.16	0.48	124.34
52.5 - 60.0	14.45	85.17	0.42	106.80
Peak 15 min	19.59	115.44	0.56	144.76
Peak 60 min	17.37	102.38	0.50	128.38

Exit Flow Profile

2024 PM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - Steamboat Blvd (SB)	West Leg - MWR (EB)	South Leg - Broomtail Ln (NB)	East Leg - MWR (WB)
0.0 - 7.5	21.40	99.37	0.42	85.47
7.5 - 15.0	24.89	115.63	0.48	99.33
15.0 - 22.5	27.55	127.99	0.54	109.92
22.5 - 30.0	29.00	134.68	0.56	115.72
30.0 - 37.5	29.03	134.74	0.56	115.94
37.5 - 45.0	27.62	128.14	0.54	110.41
45.0 - 52.5	25.00	115.85	0.48	100.08
52.5 - 60.0	21.48	99.53	0.42	85.96
0-60	206	956	4	823
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2044 Synthetic Flow Profile (veh)
Total with GTC Alternate Improvements	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
AM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - Steamboat Blvd (SB)	0	0	22.00	2	25.00	2	50.00	66.00	30.00
2	West Leg - MWR (EB)	90	0	11.00	1	15.20	1	50.00	66.00	30.00
3	South Leg - Broomtail Ln (NB)	180	0	10.00	1	14.00	1	25.00	66.00	30.00
4	East Leg - MWR (WB)	270	0	23.00	2	25.70	2	50.00	66.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - Steamboat Blvd (SB)	156.00	32.00	2	13.00	1	12.00	1
2	West Leg - MWR (EB)	130.00	32.00	2	25.00	2	23.00	2
3	South Leg - Broomtail Ln (NB)	130.00	32.00	2	13.50	1	10.00	1
4	East Leg - MWR (WB)	156.00	20.00	1	13.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - Steamboat Blvd (SB)	0	1.000	0	1.000	20.00	3286	0	12.00	1792	0
2	West Leg - MWR (EB)	0	1.000	0	1.000	20.00	1643	0	23.00	3435	0
3	South Leg - Broomtail Ln (NB)	0	1.000	0	1.000	20.00	1494	0	10.00	1494	0
4	East Leg - MWR (WB)	0	1.000	0	1.000	20.00	3435	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2044 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - Steamboat Blvd (SB)	0	114	2	71	0	5.0	1.00
2	West Leg - MWR (EB)	0	41	840	2	0	5.0	1.00
3	South Leg - Broomtail Ln (NB)	0	3	0	5	0	5.0	1.00
4	East Leg - MWR (WB)	0	2	457	81	0	5.0	1.00

2044 AM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - Steamboat Blvd (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - MWR (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - Broomtail Ln (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - MWR (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2044 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - Steamboat Blvd (SB)	None	187		462		122	1735		0.1078
2	West Leg - MWR (EB)	None	883		118		531	1148		0.7691
3	South Leg - Broomtail Ln (NB)	None	8		995		6	695		0.0115
4	East Leg - MWR (WB)	None	540		44		959	2076		0.2601

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - Steamboat Blvd (SB)	None	3.59		3.59	0.58		A		A
2	West Leg - MWR (EB)	None	14.56		14.56	12.35		B		B
3	South Leg - Broomtail Ln (NB)	None	4.07		4.07	0.04		A		A
4	East Leg - MWR (WB)	None	2.58		2.58	1.19		A		A

2044 AM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - Steamboat Blvd (SB)	None	211		521		137	1694		0.1245
2	West Leg - MWR (EB)	None	996		133		599	1142		0.8722
3	South Leg - Broomtail Ln (NB)	None	9		1119		7	650		0.0139
4	East Leg - MWR (WB)	None	609		49		1079	2071		0.2941

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - Steamboat Blvd (SB)	None	3.66		3.66	0.58		A		A
2	West Leg - MWR (EB)	None	17.51		17.51	12.35		C		C
3	South Leg - Broomtail Ln (NB)	None	5.19		5.19	0.04		A		A
4	East Leg - MWR (WB)	None	2.64		2.64	1.19		A		A

Approach Flow Profile

2044 AM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - Steamboat Blvd (SB)	West Leg - MWR (EB)	South Leg - Broomtail Ln (NB)	East Leg - MWR (WB)
0.0 - 7.5	19.45	91.83	0.83	56.16
7.5 - 15.0	22.64	106.90	0.97	65.38
15.0 - 22.5	25.06	118.31	1.07	72.35
22.5 - 30.0	26.36	124.46	1.13	76.11
30.0 - 37.5	26.36	124.46	1.13	76.11
37.5 - 45.0	25.06	118.31	1.07	72.35
45.0 - 52.5	22.64	106.90	0.97	65.38
52.5 - 60.0	19.45	91.83	0.83	56.16
Peak 15 min	26.36	124.46	1.13	76.11
Peak 60 min	23.37	110.38	1.00	67.50

Exit Flow Profile

2044 AM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - Steamboat Blvd (SB)	West Leg - MWR (EB)	South Leg - Broomtail Ln (NB)	East Leg - MWR (WB)
0.0 - 7.5	12.68	55.20	0.62	99.56
7.5 - 15.0	14.74	64.25	0.73	115.65
15.0 - 22.5	16.31	71.12	0.80	127.90
22.5 - 30.0	17.17	74.83	0.84	134.65
30.0 - 37.5	17.19	74.84	0.85	135.03
37.5 - 45.0	16.36	71.16	0.80	128.71
45.0 - 52.5	14.81	64.32	0.73	116.93
52.5 - 60.0	12.72	55.26	0.63	100.33
0-60	122	531	6	959
%Trucks	5.00	5.00	5.00	5.00

Scheme Summary

Control Data

Control Data and Model Parameters

Steamboat Resort Comprehensive	2044 Synthetic Flow Profile (veh)
Total with GTC Alternate Improvements	7.5 min Time Slice
Rodel-Win1	Queuing Delays (sec)
Right Hand Drive	Daylight conditions
PM Peak Hour	Peak 60/15 min Results
Full Geometry	Output flows: Vehicles
English Units (ft)	50% Confidence Level

Available Data

Entry Capacity Calibrated	No
Entry Capacity Modified	No
Crosswalks	No
Flows Factored	No
Approach/Exit Road Capacity Calibrated	No
Accidents	No
Accident Costs	No
Bypass Model	No
Bypass Calibration	No
Global Results	Yes

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	North Leg - Steamboat Blvd (SB)	0	0	22.00	2	25.00	2	50.00	66.00	30.00
2	West Leg - MWR (EB)	90	0	11.00	1	15.20	1	50.00	66.00	30.00
3	South Leg - Broomtail Ln (NB)	180	0	10.00	1	14.00	1	25.00	66.00	30.00
4	East Leg - MWR (WB)	270	0	23.00	2	25.70	2	50.00	66.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	North Leg - Steamboat Blvd (SB)	156.00	32.00	2	13.00	1	12.00	1
2	West Leg - MWR (EB)	130.00	32.00	2	25.00	2	23.00	2
3	South Leg - Broomtail Ln (NB)	130.00	32.00	2	13.50	1	10.00	1
4	East Leg - MWR (WB)	156.00	20.00	1	13.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	North Leg - Steamboat Blvd (SB)	0	1.000	0	1.000	20.00	3286	0	12.00	1792	0
2	West Leg - MWR (EB)	0	1.000	0	1.000	20.00	1643	0	23.00	3435	0
3	South Leg - Broomtail Ln (NB)	0	1.000	0	1.000	20.00	1494	0	10.00	1494	0
4	East Leg - MWR (WB)	0	1.000	0	1.000	20.00	3435	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2044 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	North Leg - Steamboat Blvd (SB)	0	92	2	82	0	5.0	1.00
2	West Leg - MWR (EB)	2	123	1095	0	0	5.0	1.00
3	South Leg - Broomtail Ln (NB)	0	0	0	5	0	5.0	1.00
4	East Leg - MWR (WB)	1	3	1010	137	0	5.0	1.00

2044 PM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	North Leg - Steamboat Blvd (SB)	0.750	1.125	0.750	0	30	60
2	West Leg - MWR (EB)	0.750	1.125	0.750	0	30	60
3	South Leg - Broomtail Ln (NB)	0.750	1.125	0.750	0	30	60
4	East Leg - MWR (WB)	0.750	1.125	0.750	0	30	60

Operational Results

2044 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - Steamboat Blvd (SB)	None	176		1016		252	1351		0.1303
2	West Leg - MWR (EB)	None	1220		98		1094	1157		1.0549
3	South Leg - Broomtail Ln (NB)	None	5		1230		5	609		0.0082
4	East Leg - MWR (WB)	None	1151		116		1118	2005		0.5741

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - Steamboat Blvd (SB)	None	5.57		5.57	0.88		A		A
2	West Leg - MWR (EB)	None	126.88		126.88	160.56		F		F
3	South Leg - Broomtail Ln (NB)	None	0.00		0.00	0.00		A		A
4	East Leg - MWR (WB)	None	4.36		4.36	4.52		A		A

2044 PM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)				Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass	Entry	Bypass	Entry	Bypass
1	North Leg - Steamboat Blvd (SB)	None	198		1145		270	1261		0.1573
2	West Leg - MWR (EB)	None	1376		110		1233	1151		1.1950
3	South Leg - Broomtail Ln (NB)	None	6		1256		6	599		0.0094
4	East Leg - MWR (WB)	None	1298		118		1144	2003		0.6478

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	North Leg - Steamboat Blvd (SB)	None	5.90		5.90	0.88		A		A
2	West Leg - MWR (EB)	None	127.01		127.01	136.34		F		F
3	South Leg - Broomtail Ln (NB)	None	0.00		0.00	0.00		A		A
4	East Leg - MWR (WB)	None	4.81		4.81	4.52		A		A

Approach Flow Profile

2044 PM Peak - Approach Flows (Veh / Hour)

Time Slice	North Leg - Steamboat Blvd (SB)	West Leg - MWR (EB)	South Leg - Broomtail Ln (NB)	East Leg - MWR (WB)
0.0 - 7.5	18.30	126.87	0.52	119.70
7.5 - 15.0	21.31	147.71	0.61	139.35
15.0 - 22.5	23.58	163.46	0.67	154.22
22.5 - 30.0	24.81	171.96	0.70	162.24
30.0 - 37.5	24.81	171.96	0.70	162.24
37.5 - 45.0	23.58	163.46	0.67	154.22
45.0 - 52.5	21.31	147.71	0.61	139.35
52.5 - 60.0	18.30	126.87	0.52	119.70
Peak 15 min	24.81	171.96	0.70	162.24
Peak 60 min	22.00	152.50	0.63	143.88

Exit Flow Profile

2044 PM Peak - Exit Flows (Veh / Hour)

Time Slice	North Leg - Steamboat Blvd (SB)	West Leg - MWR (EB)	South Leg - Broomtail Ln (NB)	East Leg - MWR (WB)
0.0 - 7.5	26.95	113.70	0.52	123.38
7.5 - 15.0	31.11	132.29	0.60	141.36
15.0 - 22.5	32.86	146.25	0.67	142.54
22.5 - 30.0	33.81	154.06	0.70	142.96
30.0 - 37.5	33.82	154.15	0.70	142.97
37.5 - 45.0	32.90	146.63	0.67	142.56
45.0 - 52.5	31.22	132.77	0.61	141.79
52.5 - 60.0	28.95	114.13	0.52	140.75
0-60	252	1094	5	1118
%Trucks	5.00	5.00	5.00	5.00