TRAFFIC IMPACT STUDY

Proposed ANB Bank
Eby Creek Road & Market Street

Eagle, Colorado

January 17, 2025

20240027

Prepared by:

CivTrans ENGINEERING INC.
Arvada, Colorado
(303) 653-9200

This report has been prepared by the staff of CivTrans Engineering Inc. on behalf of ANB Bank, Alder Real Estate and Mauriello Planning Group, LLC under the direction of the undersigned professional engineer whose seal and signature appears hereon.

Digitally signed by Craig MacPhee
Reason: I am the author of this document
Date: 2025.01.17 14:12:52-07'00'

Craig A. MacPhee, PE, PTOE

TABLE OF CONTENTS

LIST OF EXHIBITS

LIST OF TABLES

TECHNICAL APPENDIX

EXECUTIVE SUMMARY

This Traffic Impact Study (TIS) document has been prepared to supplement the proposed development of a bank in Eagle, Colorado. The following is a summary of the traffic information and findings included in this report.

1. The proposed project is located at the southwest corner of Eby Creek Road & Market Street within the Town of Eagle, Colorado. A vicinity map is included as **Exhibit 1**.

2. ANB Bank is proposing to develop the vacant site into a 3,700 square foot bank with two drive-up service lanes. The site is proposed to be accessed from the west leg of the Eby Creek Road & Market Street roundabout. Completion and occupancy of the project is anticipated by the end of 2026. A current site plan is included as **Exhibit 2** and a recent aerial of the study area has been provided and is shown on **Exhibit 3**, herein.

3. The proposed site is anticipated to generate approximately 372 daily trips with 37 during the AM peak hour and 78 during the PM peak hour. A significant portion of these trips are anticipated to occur as pass-by trips, drawing from existing traffic that is already on the adjacent roadways.

4. The vacant fast-food restaurant to the south, although not a part of this project, was included as a developed property for long-range evaluation to confirm the adjacent roundabout intersection will operate within capacity. It is anticipated to generate 1,638 daily, 156 AM peak hour and 116 PM peak hour trips. Approximately half of the trips are anticipated to be pass-by trips from Eby Creek Road or diverted trips from I-70.

5. The study area was identified to include the following intersections.

    - Eby Creek Road & Market Street / Site Driveway
    - Eby Creek Road & Westbound I-70 Ramps
    - Eby Creek Road & Eastbound I-70 Ramps

    These intersections were analyzed for the weekday AM and PM peak hour.

6. The analysis horizons considered and evaluated in this report include:

    - Existing Condition (Year 2024)
    - Short-term Condition (Year 2027) without the project
    - Short-term Condition (Year 2027) with the project
    - Long-range Condition (Year 2045) without the project
    - Long-range Condition (Year 2045) with the project and fast-food restaurant

    Each of these analysis horizons included intersection capacity and queuing analysis.

7. The Town of Eagle and the Colorado Department of Transportation (CDOT) have established a minimum level of service D (LOS D) for acceptable operations at signalized intersections, roundabout intersections, and unsignalized (stop controlled) approaches. The analysis results indicate all the study area intersections are currently operating at acceptable LOS B or better and are not anticipated to degrade below acceptable levels in the future with or without the project.

   The northbound right turn movement from Eby Creek Road onto the eastbound I-70 on-ramp is heavy during the AM peak hour (828 vehicles per hour). If all of the vehicles utilize the bypass lane, significant delays and queuing can occur. Based on observations, a portion of these right turning vehicles utilize the left northbound lane and enter the roundabout before making the turn onto the on-ramp due to the heavy utilization of the bypass lane. The proportion of vehicles that utilize the bypass vs the left lane plays a large role on the operation of this approach. It is assumed that as traffic increases in the future, a balance between the two lanes will occur to not overburden the bypass lane. However, if growth continues for this movement, the approach is anticipated to near capacity in the long-range conditions and CDOT may need to expand the eastbound on-ramp capacity to accommodate higher volumes of traffic making this maneuver.

   The Rodel level of service report are included in the technical appendix. A delay and level of service summary for the study area intersections for all conditions (existing, short-term, long-range) is shown in Table 10 at the end of this document prior to the technical appendix.

8. Queuing was evaluated at the study area intersections for all conditions. There are no significant queuing issues currently at the study area intersections and none anticipated in the short-term. In the long-range conditions, the northbound approach queue on Eby Creek Road at the eastbound I-70 ramps intersection is anticipated to spill through the upstream Chambers Avenue roundabout intersection during the AM peak hour unless modifications are made to the on-ramp to increase capacity. Additionally, the westbound I-70 off-ramp approach to Eby Creek Road is anticipated to experience lengthy queues (500'+) during the PM peak hour, which would back up approximately 500' short of the I-70 travel lanes.

9. The proposed project is not anticipated to have a significant impact on the capacity (level of service) of the study area intersections or significantly increase estimated queues at the intersection approaches.

10. No auxiliary lane evaluation was conducted as the proposed development will access through a roundabout and no acceleration or deceleration lanes should be required as they are already incorporated into the roundabout design.

11. No sight distance evaluation was conducted as the proposed development will utilize an existing leg of the Eby Creek Road & Market Street roundabout intersection. Sight distance requirements for roundabouts differ from traditional

driveway approaches and the existing roundabout appears to have adequate sight distance for entering the roundabout.

Based on the analysis, findings and conclusions discussed in this report, the ANB Bank project and a potential redevelopment of the adjacent parcel are not anticipated to have a significant impact on the surrounding transportation system and no mitigation should be required.

INTRODUCTION

Project Overview

ANB Bank is proposing to construct a 3,700 square foot bank with two drive-through service lanes on a vacant site located at the southwest corner of Eby Creek Road & Market Street in Eagle, Colorado. The site will access the west leg of the roundabout intersection with a single lane in each direction. Off-street parking will be provided in a paved surface parking lot for employees and patrons of the bank. Completion of the project is anticipated by the end of 2026.

The project site is bordered by Eby Creek to the west, a vacant fast-food restaurant to the south, hotel and multi-family residential properties to the west and commercial properties to the east. The vacant fast-food restaurant to the south, although not a part of this project, was included as a developed property for long-range evaluation to confirm the adjacent roundabout intersection will operate within capacity. The bulk of the Town of Eagle lies to the south of the site with commercial uses between I-70 and the Eagle River and a mix of residential uses, city services, office, retail and recreational uses south of US 6.

The site is bound by Eby Creek Road to the north and east, Eby Creek to the west and I-70 to the south. Eby Creek Road functions as a north-south connector between the site, I-70 and US Highway 6. It provides one of two crossings for several miles of the Eagle River, the other being US 6. A grade-separated diamond interchange with roundabout ramp terminals is provided to I-70 via Eby Creek Road. A multi-use trail runs along the north side of I-70 near the site providing access to retail developments in the vicinity and access to a grade-separated crossing of I-70. The multi-use trail continues along Eby Creek Road south of I-70 to US 6, crossing Eagle River. Regional access to the area is accommodated primarily by Eby Creek Road, US Highway 6 and I-70.

Purpose of Report

The purpose of this study is to review, assess and identify potential traffic related impacts that the proposed project may have on the transportation network and recommend mitigation to minimize these impacts where necessary and possible. **Exhibit 1** shows the general vicinity of the project in the Town of Eagle. A current site plan is shown in **Exhibit 2** and a current aerial image of the study area is included as **Exhibit 3**.

The assumptions utilized in conducting the traffic analysis are based on criteria identified within section 2.3(5) of the Colorado Department of Transportation (CDOT) *State Highway Access Code*, coordination with the Town of Eagle and CDOT staff, and standard traffic engineering practices.

This report includes an evaluation and assessment of the study area for the existing conditions, short-term conditions and the long-range conditions. The short-term condition considers the transportation network shortly after completion of the proposed project. The long-range conditions considered the potential growth in traffic within the study area and

how the existing transportation system will handle those volumes with and without the proposed project approximately 20 years into the future (Year 2045). Weekday AM and PM peak hours of traffic operations were used as the basis of this study.

Resources

The key resources referenced in this TIS included the following:

1. The Colorado Department of Transportation's (CDOT) *State Highway Access Code (2002)*, which provides general requirements for traffic impact studies as well as auxiliary turn lane criteria.
2. The Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 11th Edition*, which compiles and quantifies empirical trip generation rates for specific land uses within the US, UK and Canada.

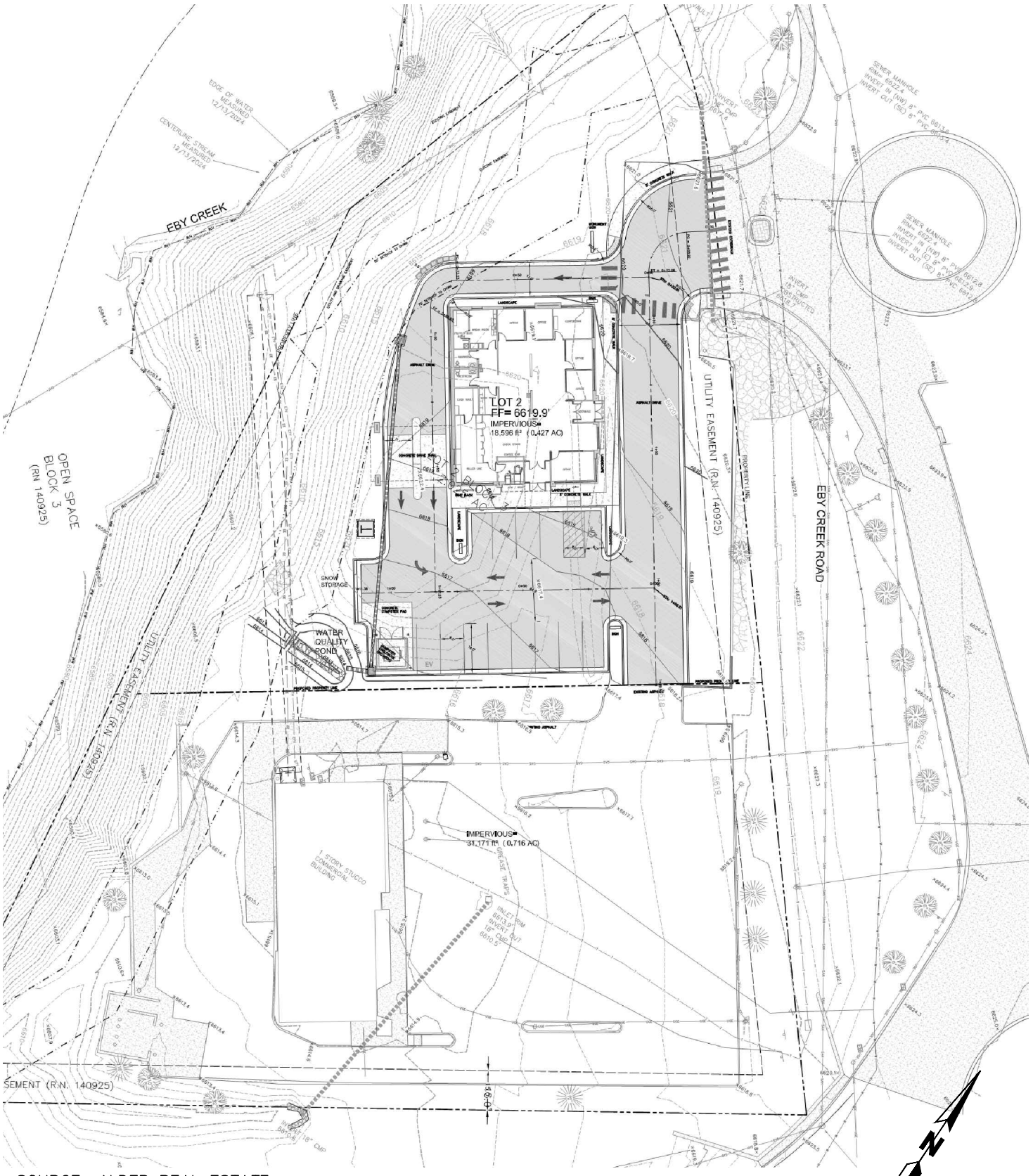
NOT TO SCALE

JANUARY 17, 2025

EXHIBIT 1

VICINITY MAP

Civtrans ENGINEERING INC.



SOURCE: ALDER REAL ESTATE

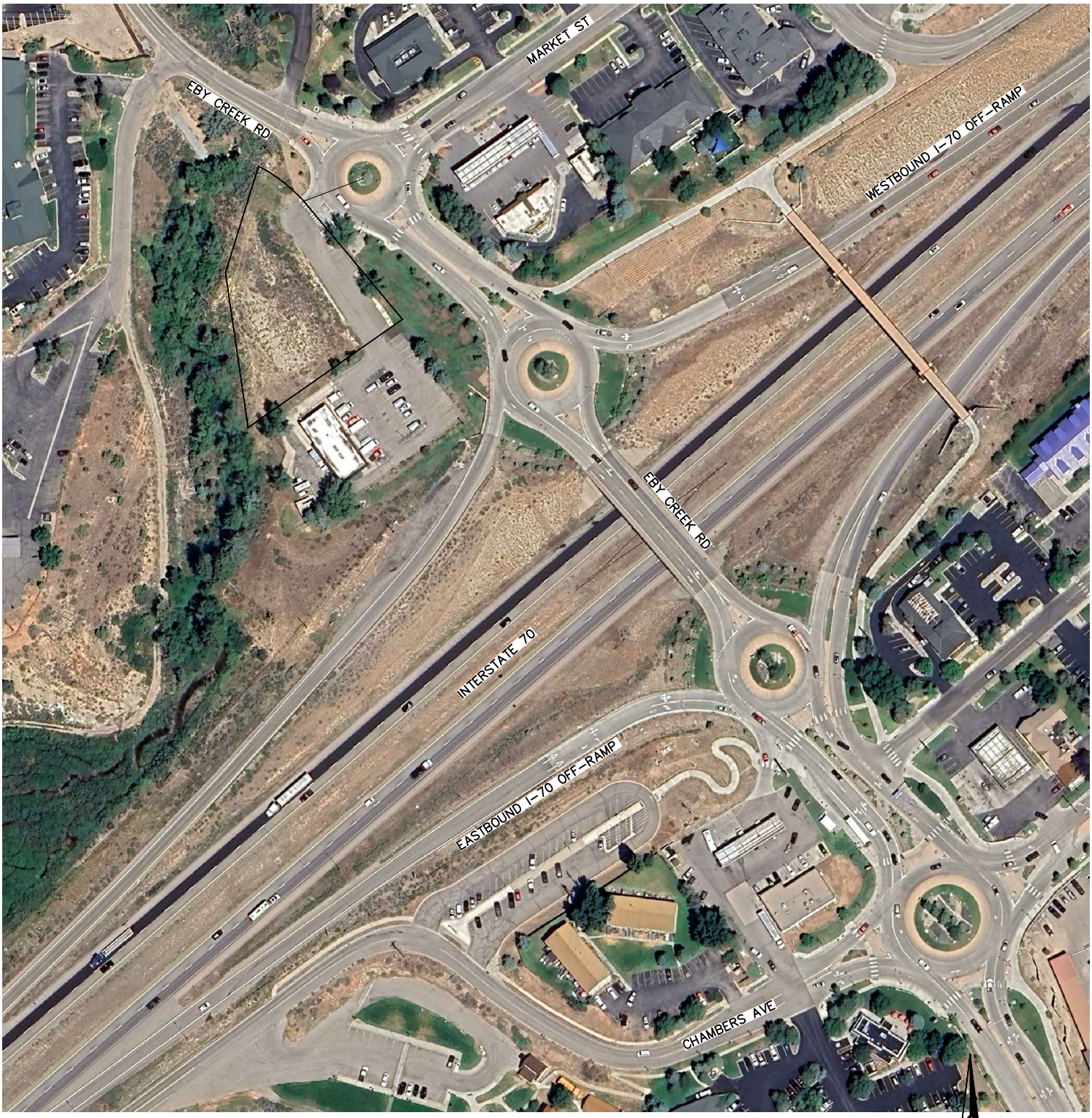
NOT TO SCALE

JANUARY 17, 2025

EXHIBIT 2

CURRENT SITE PLAN

Civ Trans ENGINEERING INC.



NOT TO SCALE
JANUARY 17, 2025

EXHIBIT 3

CURRENT AERIAL

Civtrans ENGINEERING INC.

ANALYSIS METHODOLOGY

The various analyses conducted and reported in this document include intersection capacity analysis and queuing analysis. Auxiliary lane and sight distance evaluations were not included in this study as no new accesses are proposed.

Capacity Analysis

The analyses described in this report were performed utilizing Rodel roundabout modeling software capacity methodology, which is based on various geometric variables (entry width, effective flare length, inscribed circle diameter, entry radius, entry angle and approach half width), approach flow (vehicles per hour) and circulating flow. The analyses and procedures conducted are based upon the worst-case conditions that occur during a typical weekday. Therefore, most of each weekday and the weekends will experience traffic conditions better than those described within this document, which represent the peak hours of operation only.

Level of Service (LOS) is an empirical premise developed by the transportation profession to quantify driver perception for such elements as travel time, number of stops, total amount of stopped delay, and impediments caused by other vehicles afforded to drivers who utilize the transportation network. This document has quantified level of service into a range from “A” which indicates little, if any, vehicle delay, to “F” which indicates significant vehicle delay and traffic congestion that may lead to system breakdown due to volumes that may far exceed capacity.

The level of service letter grades as defined by the Transportation Research Board and the associated amount of delay in seconds per vehicle, as well as a brief description of the operating condition, for both signalized and unsignalized intersections are included for reference in **Table 1** on the next page.

A threshold of level of service D was utilized as the minimum acceptable intersection operating condition, which is the industry standard for urbanized areas. Analysis results indicating operations worse than the minimum acceptable level were considered for mitigation measures. In the cases where existing conditions currently operate at or future background conditions are projected to operate at states poorer than the minimum acceptable level, the future with project conditions will be evaluated to maintain the current or projected operating conditions.

Table 1 – Intersection Analysis Criteria

Signalized Intersection Level of Service Criteria

Level of Service	Delay Range (seconds/vehicle)	Expected Delay at Intersection
A	≤ 10	Very low delay. Most vehicles do not stop.
B	> 10 and ≤ 20	Generally good progression of vehicles. Slight delays.
C	> 20 and ≤ 35	Fair progression. Increased number of stopped vehicles.
D	> 35 and ≤ 55	Noticeable congestion. Large portion of vehicles stopped.
E	> 55 and ≤ 80	Poor progression. High delays and frequent cycle failure.
F	> 80	Oversaturation. Forced flow. Extensive queuing.

Unsignalized Intersection Level of Service Criteria

Level of Service	Delay Range (seconds/vehicle)	Expected Delay to Minor Street Traffic
A	≤ 10	Little or no conflicting traffic for minor street approach.
B	> 10 and ≤ 15	Minor street approach begins to notice absence of available gaps.
C	> 15 and ≤ 25	Minor street approach begins experiencing delays for available gaps.
D	> 25 and ≤ 35	Minor street approach experiences queuing due to a reduction in available gaps.
E	> 35 and ≤ 50	Extensive minor street queuing due to insufficient gaps.
F	> 50	Insufficient gaps of suitable size to allow minor street traffic demand to cross safely through a major traffic stream.

Source: Highway Capacity Manual (Transportation Research Board, 2022).

Queuing Analysis

Queuing (95th percentile) lengths (feet) at the study area intersections are included in the Rodel reports within the technical appendix. The reported 95th percentile queues are number of vehicles, which are assumed to equate to 25' per vehicle. The reported queue length should be utilized when designing turn lanes.

Analysis Horizons

The following scenarios were analyzed as part of this study during both the AM and PM peak hours, with the corresponding volume and network configurations as indicated:

1. Existing Conditions

   Analysis of the existing conditions at the study area intersections was based on the traffic counts collected at the study area intersections in December 2024 and

the existing geometry and traffic control as observed in the field and through current aerial imagery.

2. Short-term without Project Conditions

   The short-term future year analysis includes the same roadway geometry as for the existing conditions. The forecast volumes were calculated by applying the anticipated ambient growth rate over the next three years.

3. Short-term with Project Conditions

   The short-term “build” condition takes the short-term no-project traffic volumes and adds the trips associated with the proposed project.

4. Long-range without Project Conditions

   The long-range future year analysis includes the same roadway geometry as for the short-term no-project conditions. The forecast volumes were calculated taking the traffic counts and applying the anticipated ambient growth rate over the next 20+ years.

5. Long-range with Project Conditions

   The long-range “build” analysis includes the same roadway geometry as for the short-term build conditions. The forecast volumes were calculated by adding the trips associated with the proposed project to the long-range no project volumes.

EXISTING CONDITIONS

Existing Conditions within the Study Area

The purpose of this section is to document the existing conditions within the study area for the proposed project.

Land Use

The site for the proposed project is currently vacant and zone Commercial General (CG), which is appropriate for the proposed use. The surrounding uses are primarily zoned for commercial and residential uses, including Commercial General to the east along Market Street, Residential High Density (R4) and Residential Multi-Family (R3) to the west, and Eagle County Agricultural Residential (AR) and Residential Suburban Low Density (RSL) to the north. Most of the Town of Eagle lies to the south of the site.

Existing Roadways

As shown on the site plan, the site fronts Eby Creek Road. Access is proposed directly to the Eby Creek Road & Market Street roundabout intersection. The following is a list of the surrounding streets, their functional classification, and general geometry.

Eby Creek Road is a north-south, major collector with a CDOT access control designation of R-A (regional highway). It extends from US Highway 6 to Castle Peak Road as a paved roadway, providing access for commercial uses and a connection to I-70, US 6 and areas north of I-70 within the Town of Eagle. It provides one of two bridged crossings of Eagle River and the only access to I-70 within the Town of Eagle. It has a posted speed limit of 35 mph north of Market Street, but no posted speed limit between Market Street and US Highway 6. The five roundabouts within less than ½ a mile along this segment of the roadway limit speed without regulatory signing.

Market Street is an east-west, commercial collector roadway that provides access for several retail uses in the vicinity of Eby Creek Road and I-70. Within ½ mile of Eby Creek Road, the roadway departs the Town and continues as Rule Road in unincorporated Eagle County. It does not have a posted speed limit through the study area.

Interstate 70 is an east-west interstate freeway traversing the entire United States from Maryland to Utah. Within Colorado, I-70 serves as an inter-city connection and mountain corridor. It connects the eastern plains of Colorado, the City of Denver and the mountain communities within Clear Creek, Summit, Eagle, Garfield and Mesa counties. In the study area, I-70 provides a connection between the site and the other communities in the Eagle-Vail valley, Denver-metro area as well as other communities to the west. I-70 is a 4-lane freeway within the study area and is posted at 75 mph. It provides a grade-separated diamond interchange with Eby Creek Road. The ramp intersections are roundabout controlled.

Study Area Intersections

The project study area intersections were identified through conversations with the Town of Eagle and CDOT staff. The study area includes the following intersections:

- Eby Creek Road & Market Street
- Eby Creek Road & Westbound I-70 Ramps
- Eby Creek Road & Eastbound I-70 Ramps

These intersections have been analyzed for level of service (LOS) for the weekday AM & PM peak hours and form the basis of this document.

Traffic Control and Descriptions

Eby Creek Road & Market Street is a single-lane roundabout intersection with the following lane configuration. Eby Creek Road is generally oriented northwest-southeast. Market Street forms the southwest-bound approach and the site access forms the northeast-bound approach. All four approaches have a single entry and exit lane at the roundabout. Pedestrian crossings are provided on all approaches except the north leg.

Eby Creek Road & Westbound I-70 Ramps is a multi-lane roundabout with half of the roundabout having one circulating lane and the other half having two circulating lanes. Eby Creek Road is generally oriented northwest-southeast. The lane configuration for each approach is as follows.

- Northeast-bound (I-70 On-ramp): no approach lanes; one exit lane
- Southwest-bound (I-70 Off-ramp): One left turn lane, one left-through-right lane; no exit lane
- Northwest-bound (Eby Creek): One left-through-right lane; two exit lanes
- Southeast-bound (Eby Creek): One through lane, one through-right lane; one exit lane

The roundabout has two circulation lanes on the north and west legs to accommodate dual left turns from the off-ramp and two through lanes for southbound Eby Creek. No pedestrian crossings are provided at the intersection as the multi-use lane deviates from Eby Creek Road just north of the intersection and pedestrians are prohibited from Eby Creek Road across the I-70 bridge.

Eby Creek Road & Eastbound I-70 Ramps is a multi-lane roundabout with ¾ of the roundabout having one circulating lane and the ¼ having two circulating lanes. Eby Creek Road is generally oriented northwest-southeast. The lane configuration for each approach is as follows.

- Northeast-bound (I-70 Off-ramp): one left-through-right lane, one right turn lane; no exit lane
- Southwest-bound (I-70 On-ramp): no approach lanes; two exit lanes, of which one is a bypass lane from northbound Eby Creek
- Northwest-bound (Eby Creek): One through-right lane, one right turn (bypass) lane; two exit lanes

- Southeast-bound (Eby Creek): One left-through lane, one through lane; one exit lane

The roundabout has two circulation lanes on the west legs to accommodate dual through lanes from southbound Eby Creek Road. A pedestrian crossing is provided on the south leg only as pedestrians are prohibited north of the intersection along Eby Creek Road across the I-70 bridge.

The existing geometry at each of the study area intersections is depicted in **Exhibit 4**, which follows, as well as the Rodel reports in the technical appendix.

Traffic Volumes and Peak Hours of Operation

Turning movement counts were collected by All Traffic Data Services at the study area intersections on Wednesday, December 11, 2024 from 7 AM to 9 AM and 4 PM to 6 PM. The raw count data is provided in the technical appendix. The existing traffic volumes used for intersection capacity analysis are shown in **Exhibit 5**.

Background Projects

Background projects are land development projects that have not yet been constructed but are anticipated to be completed in the near future. Therefore, their traffic would not have been included in the traffic counts collected, but should be included for future analyses. No background projects were identified for inclusion in this study.

Planned Transportation Improvements

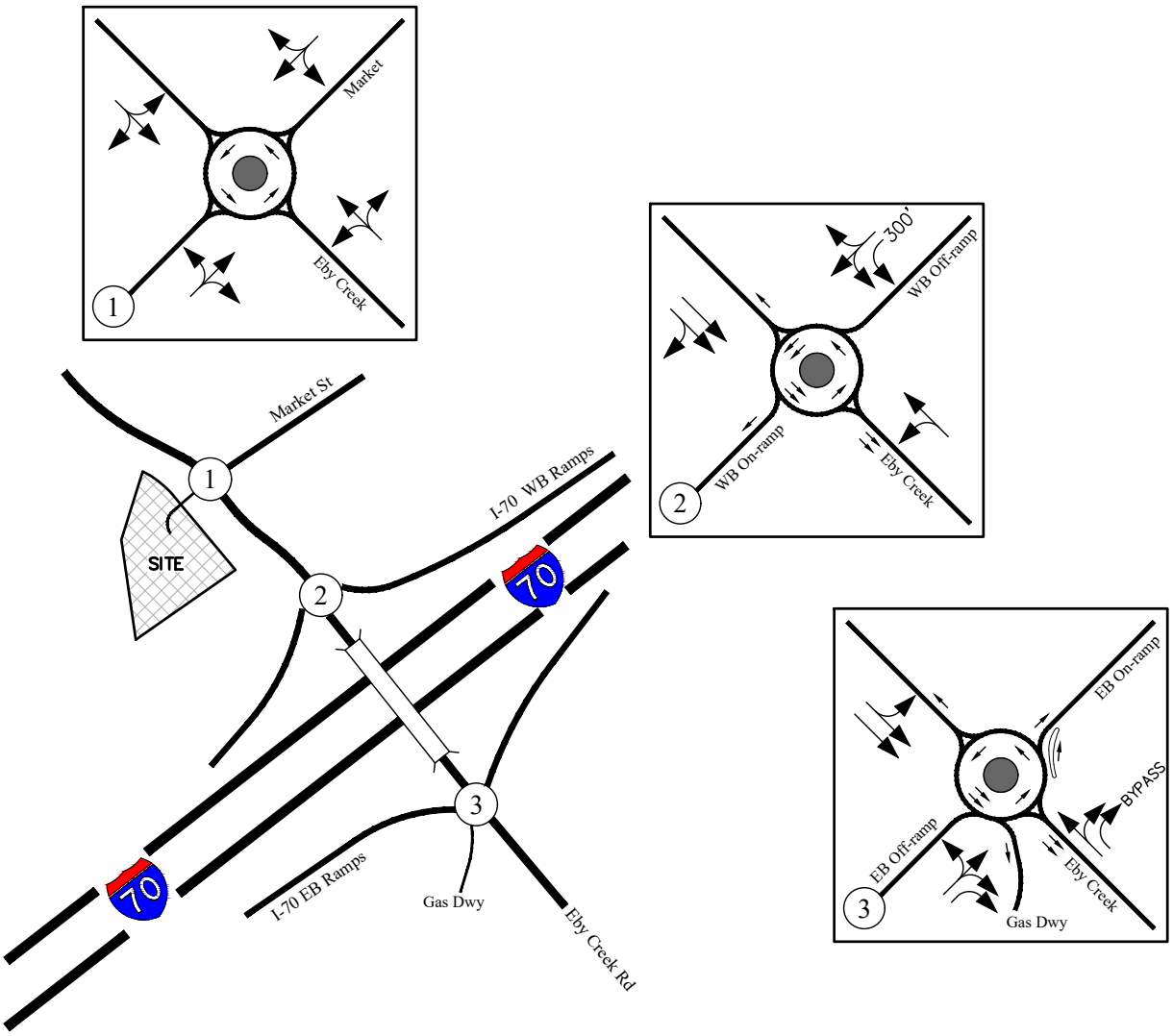
No planned transportation improvements were identified within the study area.

Ambient Traffic Growth

Eby Creek Road from Market Street to US Highway 6 is a CDOT facility and can be found within their *Online Transportation Information System (OTIS).* Within OTIS data, the roadway segment is shown to have a 20-year growth factor of 1.21, which correlates to an annual growth of 0.96%. Therefore, to account for future development and traffic growth through the study area, a 1.0% annual growth rate was applied to the 2024 traffic volumes for future condition analyses.

Peak Hour Factor

A peak hour factor (PHF) is used to convert the hourly traffic volume into a flow rate that represents the busiest 15 minutes of the peak hour. The intersection PHF derived from the traffic count was utilized for existing, short-term and long-range evaluations.



– Roundabout Intersection (with number of circulating lanes for each leg)

– Signalized Intersection

STOP – Stop–controlled Intersection

XXX' – Approximate storage length of turn lane without transition taper

N

NOT TO SCALE

JANUARY 17, 2025

EXHIBIT 4

EXISTING LANE GEOMETRY

Civtrans ENGINEERING INC.

EXISTING LEVEL OF SERVICE AND TRAFFIC ANALYSIS

Level of Service

The existing levels of service at the subject intersections were calculated using the methods from the *Rodel* (version 1.96) roundabout evaluation software. The existing levels of service (LOS) for the intersections within the study area are summarized on the following table. The existing traffic volumes used for this report are shown on Exhibit 5.

Table 2 -2024 Existing Intersections Levels of Service

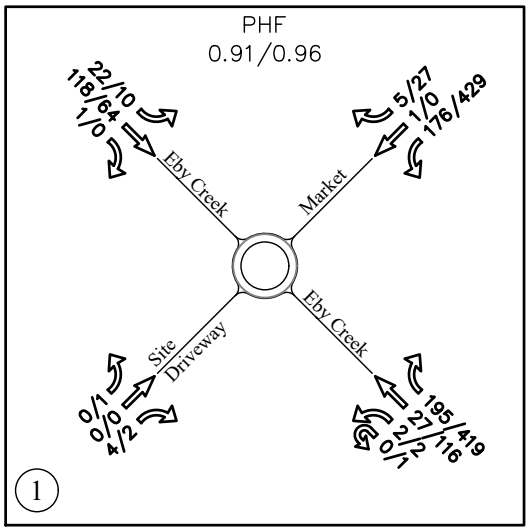
INTERSECTION (S)ignalized (U)nsignalized (R)oundabout		Approach Or Overall	AM Peak		PM Peak	
			Delay (sec)	LOS	Delay (sec)	LOS
Eby Creek Rd & Market St / Site Driveway	R	Ovr	6.7	A	11.1	B
Eby Creek Rd & Westbound I-70 Ramps	R	Ovr	5.2	A	11.0	B
Eby Creek Rd & Eastbound I-70 Ramps	R	Ovr	12.9	B	9.3	A

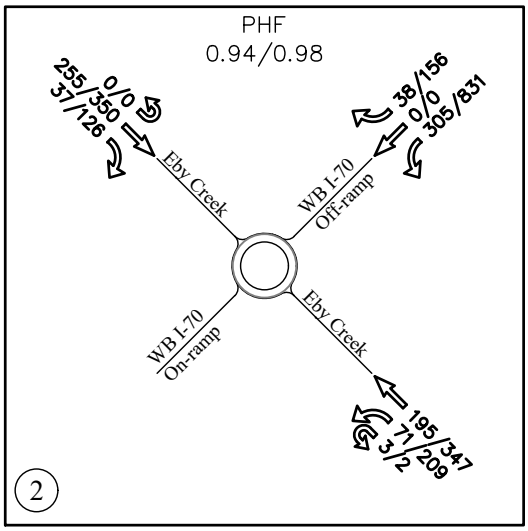
Level of service (LOS) D should be used as a guideline to maintain overall operations of signalized and roundabout intersections and unsignalized intersection approaches. Mitigation measures should be considered for overall signalized or roundabout intersections or unsignalized approaches reported to be operating at LOS E or F. As shown in the table above, all of the intersections are operating at acceptable levels of service. The Rodel level of service report are included in the technical appendix. A delay and level of service summary for the study area intersections for all conditions (existing, short-term, long-range) is shown in Table 10 at the end of this document prior to the technical appendix.

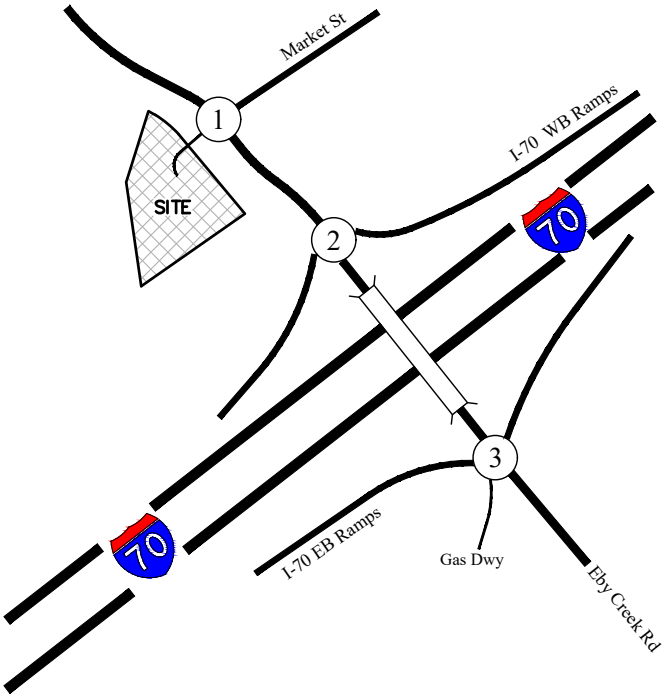
The northbound right turn movement from Eby Creek Road onto the eastbound I-70 on-ramp is heavy during the AM peak hour (828 vehicles per hour). If all of the vehicles utilize the bypass lane, significant delays and queuing can occur. It is assumed that a portion of these right turning vehicles utilize the left northbound lane and enter the roundabout before making the turn onto the on-ramp. The proportion of vehicles that utilize the bypass vs the left lane plays a large role on the operation of this approach. It is assumed that as traffic increases in the future, a balance between the two lanes will occur to not overburden the bypass lane.

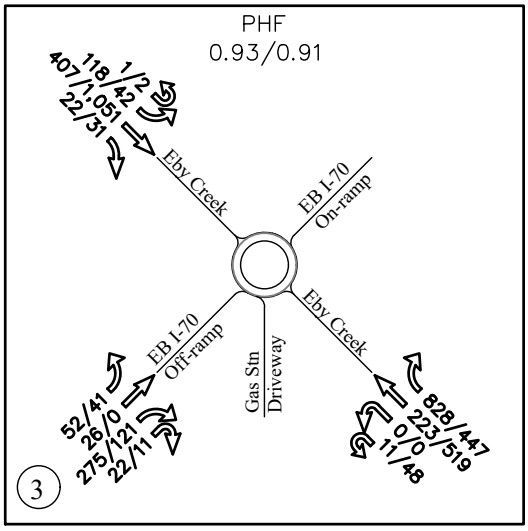
Queuing

The estimated 95th percentile queues for each intersection approach were calculated utilizing Rodel, which are reported in number of vehicles. Each vehicle is assumed to equate to 25’ of required queue storage. During the AM peak hour, the only significant queue occurs on the northbound approach of the eastbound I-70 ramps intersection with nearly 12 vehicles (~300’) of queuing estimated. During the PM peak hour, the westbound I-70 off-ramp is estimated to experience a queue of 5.7 vehicles (~150’).









12/34 – AM Peak Hour/PM Peak Hour
PHF – Peak Hour Factor

Source: Turning movement counts were collected by All Traffic Data Service on December 11, 2024, a Wednesday.

N

NOT TO SCALE
JANUARY 17, 2025

EXHIBIT 5

EXISTING (2024) TRAFFIC VOLUMES

Civ Trans ENGINEERING INC.

TRIP GENERATION AND DISTRIBUTION

Trip Generation

The *Trip Generation Manual, 11th Edition* published by the Institute of Transportation Engineers (ITE) is typically used to determine the number of trips generated by a proposed land use. The purpose of the Trip Generation Manual (TGM) is to compile and quantify empirical trip generation rates for specific land uses within the US, UK and Canada. The closest matching land use category within the Trip Generation Manual for the proposed use is 912 "Drive-in Bank."

The table below summarizes the trip generation estimate for the site based on this land use category.

Table 3 – Project Trip Generation

Land Use	ITE Code	Size	Units	Daily Trips	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Drive-in Bank	912	3.7	KSF*	372	21	16	37	39	39	78

*KSF = 1,000 square feet

As shown above, the bank is estimated to generate approximately 37 trips during the AM peak hour and 78 trips during the PM peak hour with 372 trips daily. A vehicle entering and exiting the site creates two trips.

To evaluate long-range conditions within the study area, the vacant fast-food restaurant to the south, although not a part of this project, was included as a developed property. It is not known what the property could redevelop into so a “highest and best use” was assumed, which could include strip retail, convenience store, coffee shop with drive-through, high-turnover (sit-down) restaurant or fast-food restaurant with a drive-through window. A convenience store or fast-food restaurant would generate the greatest number of trips. Since a structure already exists on the site that historically operated as a fast-food restaurant, this was used for estimating long-range trips to and from the overall site. Land use category 934, “Fast-Food Restaurant with a Drive-through Window,” from the TGM was utilized to estimate trips with a building size of 3,500 square feet. The resulting trip generation is shown in the following table.

Table 4 – Long-range Site Trip Generation

Land Use	ITE Code	Size	Units	Daily Trips	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Fast-food Restaurant	934	3.5	KSF*	1,638	80	76	156	60	56	116

*KSF = 1,000 square feet

Trip Types

Nearly all developments are made up of the following six trip types: new (destination) trips, pass-by trips, diverted trips, shared (internal) trips, multi-modal (non-vehicular) trips, and transit-oriented trips. In order to better understand the trip types available for land access and how they relate to this project, a description of each specific type follows.

New (Destination) Trips – These types of trips occur to access a specific land use such as a new retail development or a new residential subdivision. These types of trips will travel to and from the new site and a single other destination such as home or work. This is the only trip type that will result in a net increase in the total amount of traffic within the study area. The reason primarily is that these trips represent planned trips to a specific destination that never took trips to that part of the town prior to the development being constructed and occupied. This project will develop new trips.

Pass-by Trips – These trips represent vehicles which currently use adjacent roadways providing primary access to new land uses or projects. These trips, however, have an ultimate destination other than the project in question. They should be viewed as drop-in customers who stop in on their way home from work. A good example is a quick stop at the grocery store to pick up an ingredient for dinner on the way home from work or at a latte stand to grab a coffee on the way to work. This can make this trip pre-determined, but the stop is still on the way by. Another example would be on payday, where an individual generally drives by their bank every day without stopping, except on payday. On that day, this driver would drive into the bank, perform the prerequisite banking and then continue home. In this example, the trip started from work with a destination of home, however on the way, the driver stopped at the grocery store/latte stand and/or bank directly adjacent to their path. Pass-by trips are most always associated with commercial/retail types of developments. Therefore, pass-by trips are anticipated for this project. Per ITE, banks generally experience 30% of their AM peak hour trips and 60% of their PM peak hour trips as pass-by trips. Fast-food restaurants experience 50% of their AM peak hour trips and 55% of their PM peak hour trips as pass-by trips. Therefore, this reduction in overall trips will be applied to the trip generation estimates shown in tables 3 and 4 above.

Diverted (Linked) Trips - Diverted trips are like pass-by trips, but diverted trips occur from roadways that do not provide direct access to the site. Instead, one or more streets must be utilized to get to and from the site. For this project, diverted trips could occur from I-70, US Highway 6 or any other roadway that does not provide direct access to the site. Similar to pass-by trips, diverted trips are most always associated with commercial/retail type developments. While diverted trips are anticipated to occur for this development and the future development on the neighboring parcel, they would be very difficult to track or verify. They are likely to occur as commuters divert from their route of getting on/off I-70 at the Eby Creek Ramp terminals, but no reduction to account for diverted trips was applied to the trip generation estimates.

Shared Trips - Internal trips are the portion of trips generated by a mixed-use development that both begin and end within the development. When estimating trip generation for a development with several uses, each use will generate its own trips. If those trips occur between two of the onsite uses without using the external roadway system, it is considered a shared or internal trip. This trip type reduces the number of new trips generated on the public road system and is most commonly used for commercial or mix-use developments. Determining these trip types is more difficult to quantify and without specific guidance are usually determined by engineering judgment on a project by project basis. For this project, the bank will be the only use on the site until the neighboring parcel develops. Therefore, no shared (internal) trip reduction was applied to this project.

Multi-Modal Trips - These are non-vehicular trips to and from the site, mostly comprised of pedestrian and bicycle trips. Generally, they are local trips from the surrounding neighborhood or adjacent businesses. If a development is in an area with a high amount of bicycle and pedestrian activity, such as a downtown setting or college campus, a reduction of vehicular trips would be anticipated. The proposed project could experience a portion of its trips as bicycle and pedestrian trips, but the percentage is not anticipated to be significant.

Transit Trip - The Eagle-Vail Valley area is served by the Eagle Valley Transit Authority with public bus. The Valley Route connects Gypsum, Eagle, Edwards, Avon and Vail with bus service every 30 minutes and more frequently during commuting hours. The nearest stop to the site is the Chambers Park-n-Ride stop along Eby Creek Road just south of the eastbound I-70 ramps intersection. While bus transit is available near the site, the percentage of the overall trips accessing the bank site that will be transit is anticipated to be negligible. Therefore, no reduction in the overall trips was applied to account for transit.

Based on the various trip types depicted above and the nature of the proposed project, a trip reduction of 30% was applied to AM peak and 60% was applied to PM peak to account for pass-by trips for the bank and 50% AM and 55% PM for the fast-food restaurant. The breakdown of trip types is shown in the following table. Pass-by trips are anticipated to draw from the northbound right, northbound through, westbound left and southbound left movements at the Eby Creek Road & Market Street intersection.

Table 5 – Trip Types

Trip Type	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Total (Driveway) Trips (Bank)	21	16	37	39	39	78
Pass-by Trips (Bank)	5	5	10	23	23	46
New Trips (Bank)	16	11	27	16	16	32
Total Trips (Fast-Food)	80	76	156	60	56	116
Pass-by Trips (Fast-Food)	38	38	76	31	31	62
New Trips (Fast-Food)	42	38	80	29	25	54

Trip Distribution

As shown in the site plan, the site is proposed to be accessed directly from the Eby Creek Road & Market Street roundabout. The project is expected to draw locally and regionally from Eagle and other nearby communities. The fast-food restaurant would likely draw from existing traffic along I-70. Based on existing travel patterns, traffic observations, areas of population and the available transportation network, the trips associated with the project are anticipated to distribute as follows:

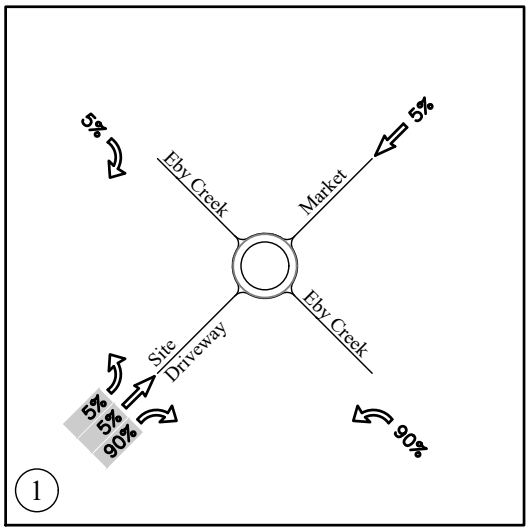
ANB Bank Trip Distribution

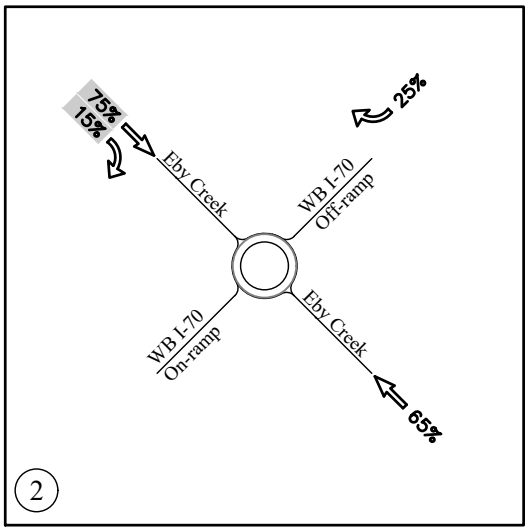
- Eby Creek Road north of the site – 5%
- Market Street east of the site – 5%
- I-70 east of the site – 25%
- I-70 west of the site – 15%
- Eby Creek Road south of I-70 – 50%

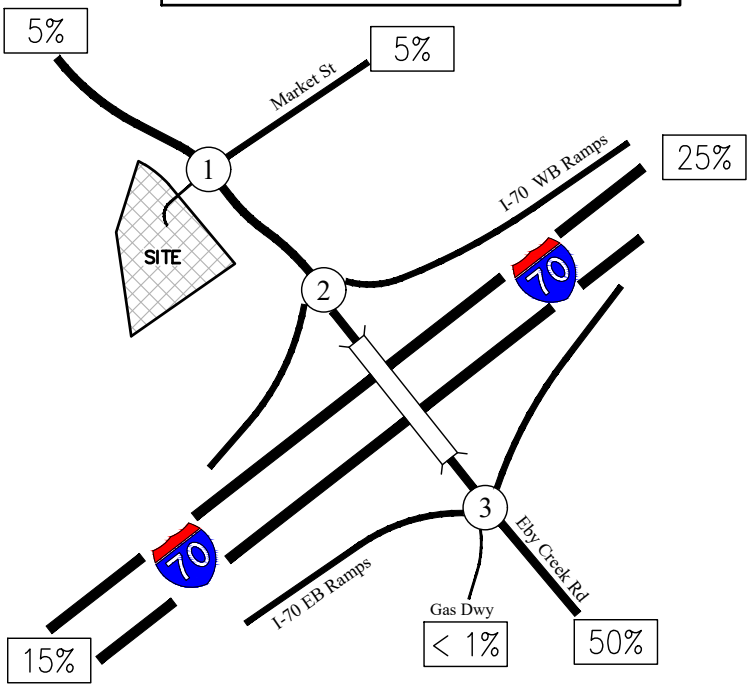
Future Fast-Food Restaurant Trip Distribution

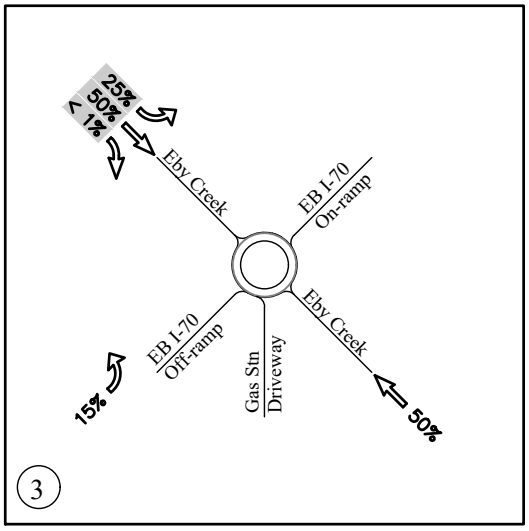
- Eby Creek Road north of the site – 5%
- Market Street east of the site – 5%
- I-70 east of the site – 10% in / 40% out (AM), 30% in / 20% out (PM)
- I-70 west of the site – 40% in / 10% out (AM), 20% in / 30% out (PM)
- Eby Creek Road south of I-70 – 40%

These trip distribution percentages are illustrated in **Exhibit 6**. The site-generated peak hour vehicular trips are illustrated in **Exhibit 7**, which includes pass-by trip estimates. Trip distribution and associated trips for the long-range development (fast-food) are shown in **Exhibits 8** and **9** respectively.









XX% – GENERAL TRIP DISTRIBUTION

XX% – PROJECT GENERATED INGRESS TRIPS (%)

YY% – PROJECT GENERATED EGRESS TRIPS (%)

N

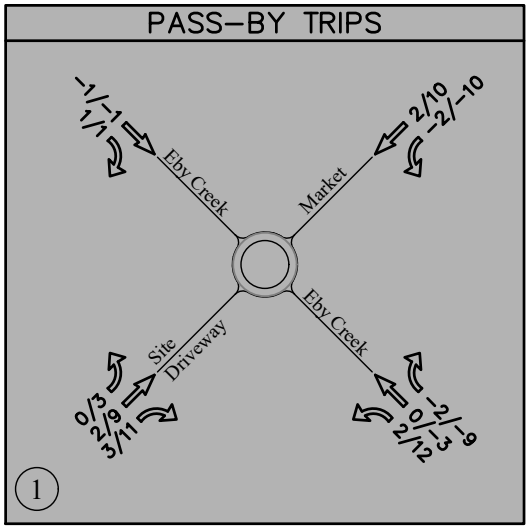
NOT TO SCALE

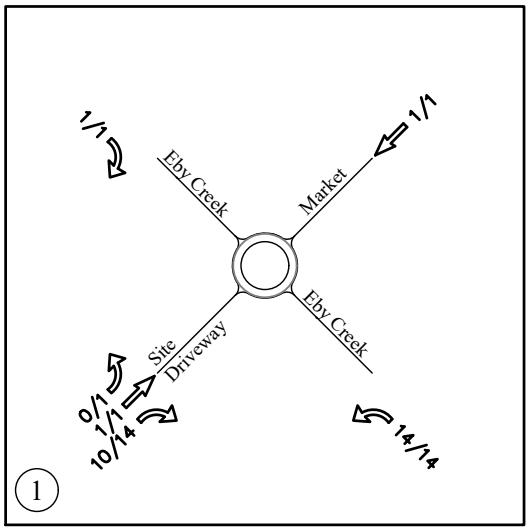
JANUARY 17, 2025

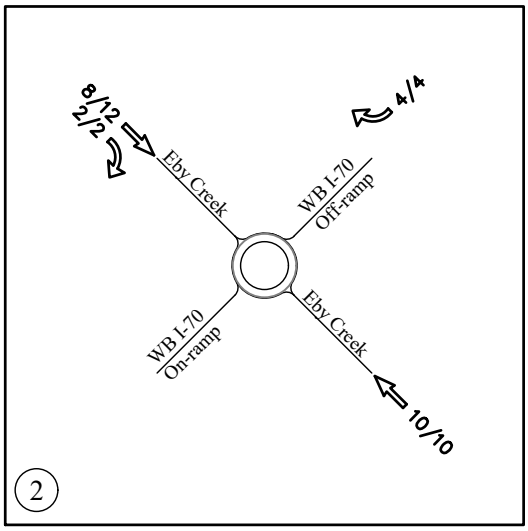
EXHIBIT 6

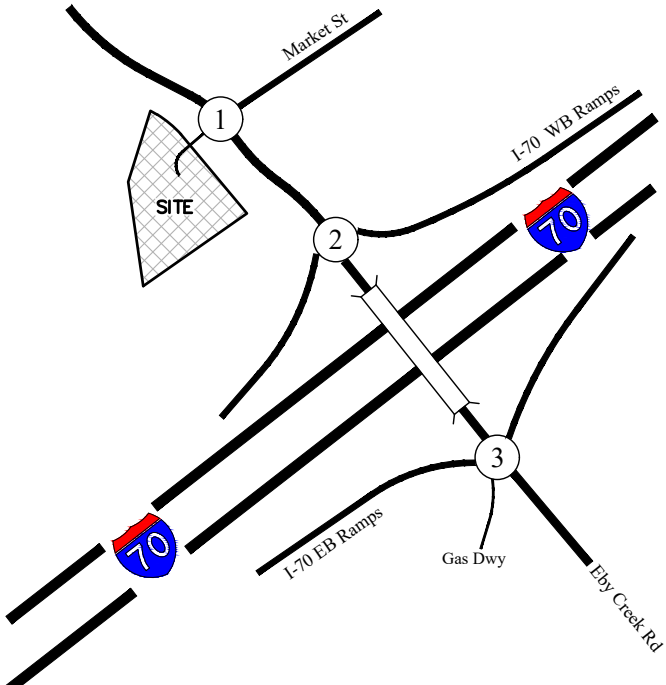
ANB BANK PROJECT TRIP DISTRIBUTION

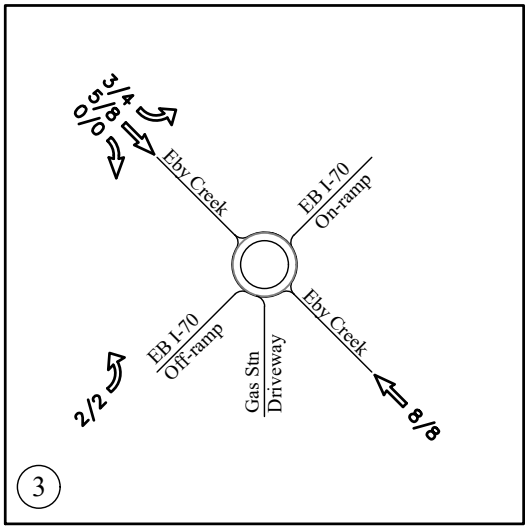
Civtrans ENGINEERING INC.











12/34 – AM Peak Hour/PM Peak Hour

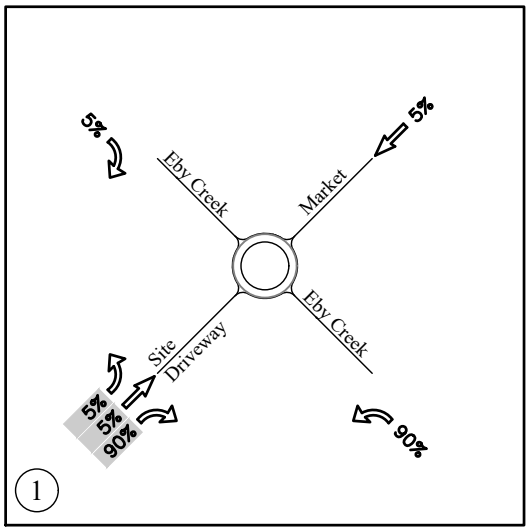
NOT TO SCALE

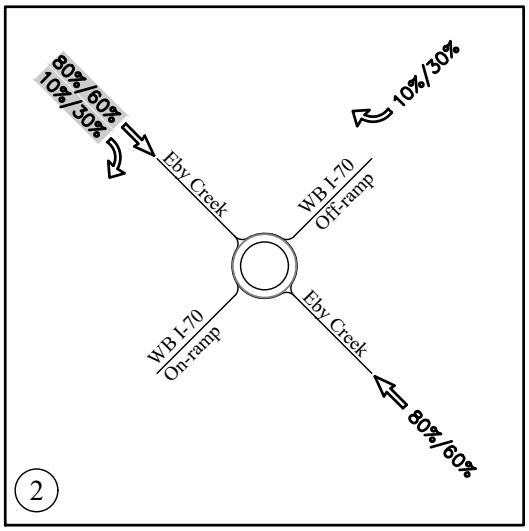
JANUARY 17, 2025

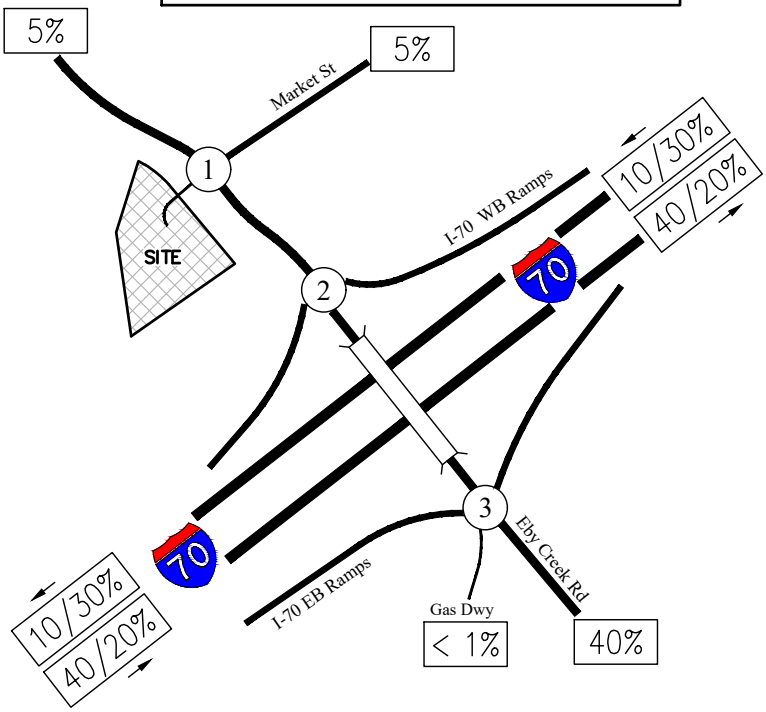
EXHIBIT 7

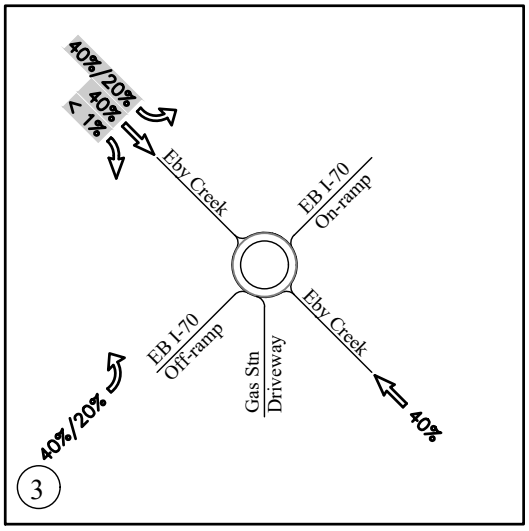
ANB Bank Site-generated New and Pass-by Trips

Civtrans ENGINEERING INC.









XX% – GENERAL TRIP DISTRIBUTION

XX% – PROJECT GENERATED INGRESS TRIPS (AM/PM)

YY% – PROJECT GENERATED EGRESS TRIPS (AM/PM)

N

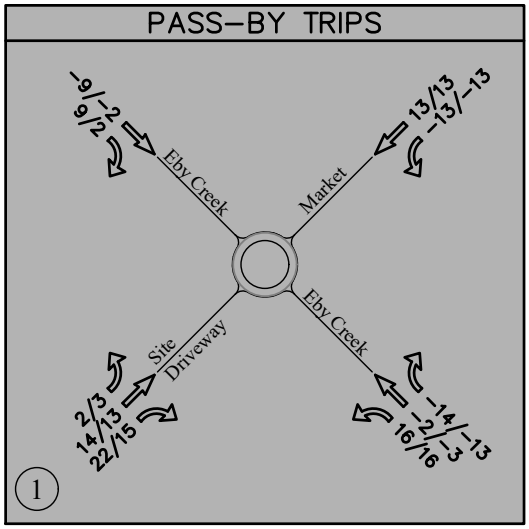
NOT TO SCALE

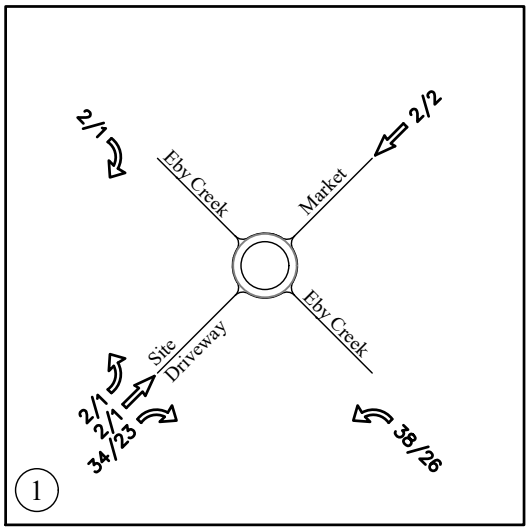
JANUARY 17, 2025

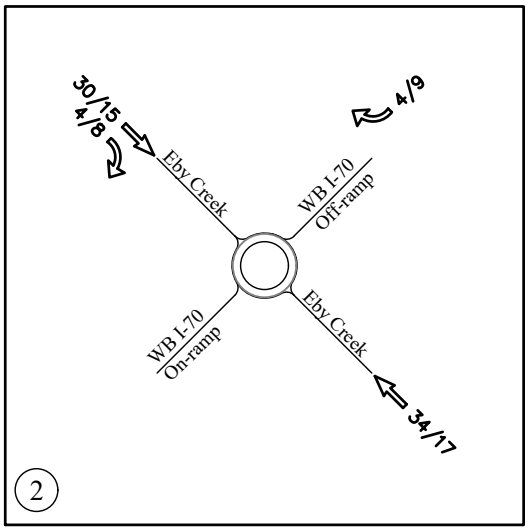
EXHIBIT 8

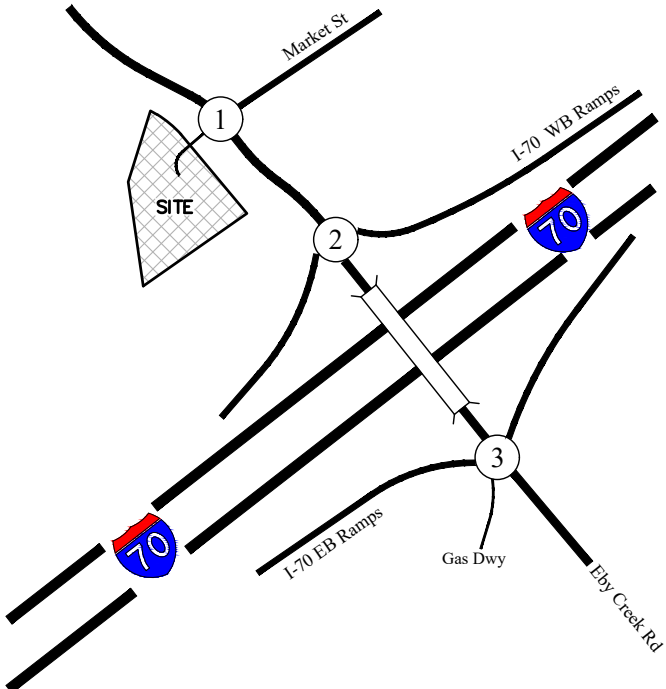
LONG-RANGE (FAST-FOOD) TRIP DISTRIBUTION

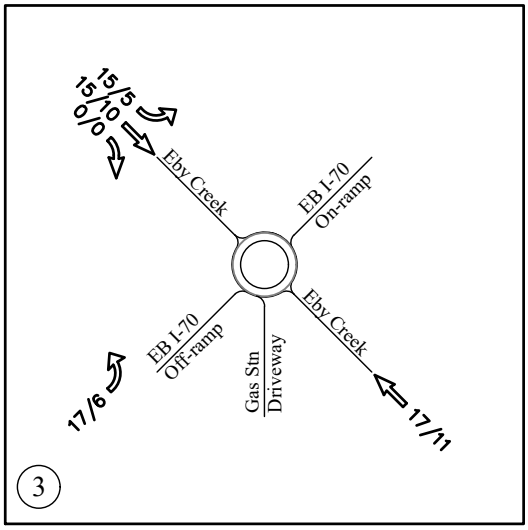
Civtrans ENGINEERING INC.











12/34 – AM Peak Hour/PM Peak Hour

NOT TO SCALE

JANUARY 17, 2025

EXHIBIT 9

FAST-FOOD SITE-GENERATED NEW AND PASS-BY TRIPS

CivTrans ENGINEERING INC.

FUTURE YEAR TRAFFIC IMPACT ANALYSIS

Level of service calculations for the short-term (Year 2027) and long-range (Year 2045) conditions assumed that the existing traffic volumes as shown on Exhibit 5 experience a background increase above the 2024 volumes at 1.0% per year. Two scenarios were examined for each of the future scenarios, one without the proposed project and one with the proposed project completed. A list of the future scenarios follows.

- Short-term Condition (Year 2027) without the Project
- Short-term Condition (Year 2027) with the Project
- Long-range Condition (Year 2045) without the Project
- Long-range Condition (Year 2045) with the Project and the Fast-food Restaurant

These scenarios will allow a specific comparison of impacts to the study area intersections and allow a determination to be made as to the extent of the project's impact and if any mitigation measures will be required.

Short-Term Condition (Year 2027) without the project

Level of Service

The intersections were analyzed for capacity, delay and level of service Rodel (version 1.96). The traffic volumes for this scenario include the existing (Year 2024) traffic volumes as shown on Exhibit 5 with three years of ambient growth applied. The total traffic volumes anticipated under this condition are shown on Exhibit 10. A summary of the results is shown in the following table

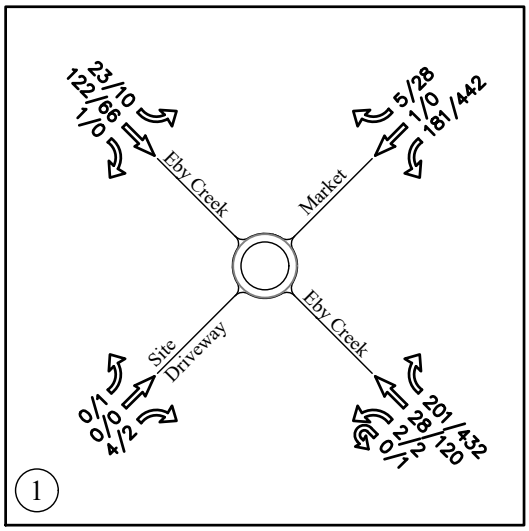
Table 6 -Year 2027 Levels of Service without Project

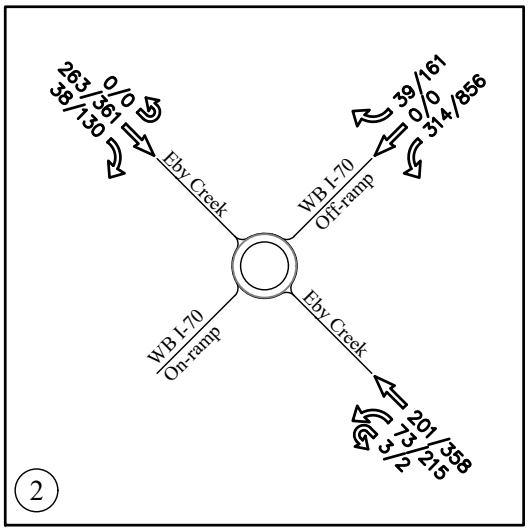
INTERSECTION (S)ignalized (U)nsignalized (R)oundabout		Approach Or Overall	AM Peak		PM Peak	
			Delay (sec)	LOS	Delay (sec)	LOS
Eby Creek Rd & Market St / Site Driveway	R	Ovr	6.8	A	11.4	B
Eby Creek Rd & Westbound I-70 Ramps	R	Ovr	5.3	A	11.6	B
Eby Creek Rd & Eastbound I-70 Ramps	R	Ovr	13.5	B	9.4	A

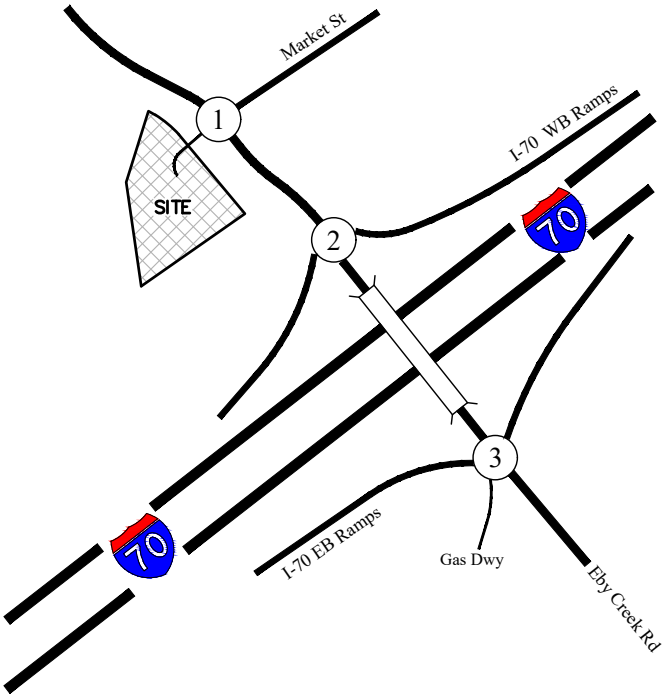
With the anticipated increase in traffic over the next three years, the intersections within the study area are anticipated to operate almost identical to the existing conditions.

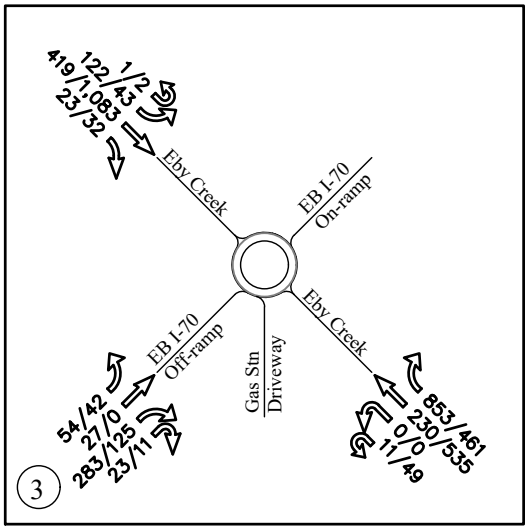
Queuing

The 95th percentile queue results for the short-term no-project condition were reviewed. No significant queues are anticipated at the study area intersections for this scenario beyond what is shown in the existing conditions.









12/34 – AM Peak Hour/PM Peak Hour

N

NOT TO SCALE

JANUARY 17, 2025

EXHIBIT 10

SHORT-TERM (2027) NO PROJECT TRAFFIC VOLUMES

CivTrans ENGINEERING INC.

Short-term Condition (Year 2027) with the Project

The traffic volumes included in this scenario include the short-term (year 2027) no-project traffic volumes as shown on Exhibit 10 plus the additional traffic from the proposed ANB Bank project, as shown on Exhibit 7. The total traffic volumes anticipated under this condition are shown on Exhibit 11. A summary of the Rodel results is shown in the following table.

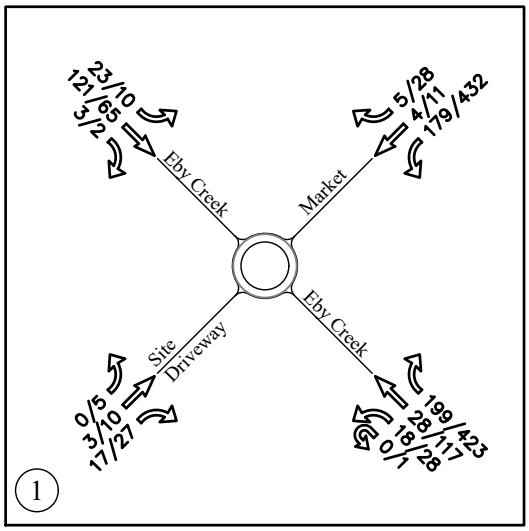
Table 7 -Year 2027 Levels of Service with Project

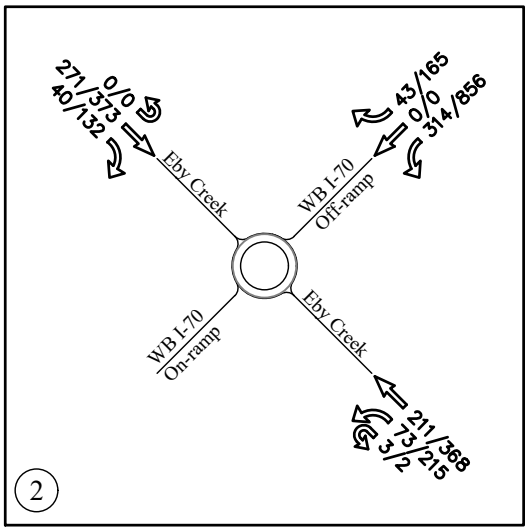
INTERSECTION (S)ignalized (U)nsignalized (R)oundabout		Approach Or Overall	AM Peak		PM Peak	
			Delay (sec)	LOS	Delay (sec)	LOS
Eby Creek Rd & Market St / Site Driveway	R	Ovr	6.9	A	11.7	B
Eby Creek Rd & Westbound I-70 Ramps	R	Ovr	5.4	A	11.9	B
Eby Creek Rd & Eastbound I-70 Ramps	R	Ovr	13.6	B	9.6	A

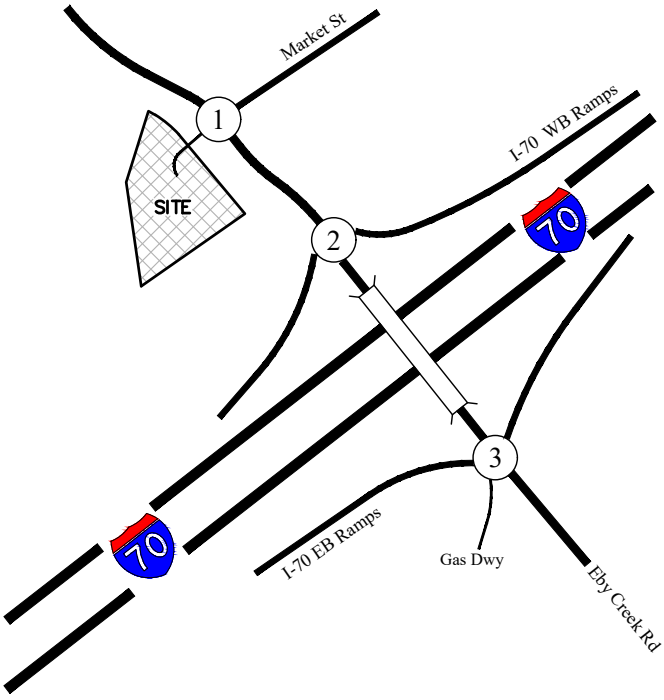
With the additional traffic generated by the proposed project, all of the study area intersections are anticipated to operate at acceptable levels of service with little change to the overall level of service shown in the existing conditions. The added driveway approach to the Eby Creek Road & Market Street intersection is shown to operate at LOS A. The level of service reports for the short-term with the project condition are provided in the technical appendix.

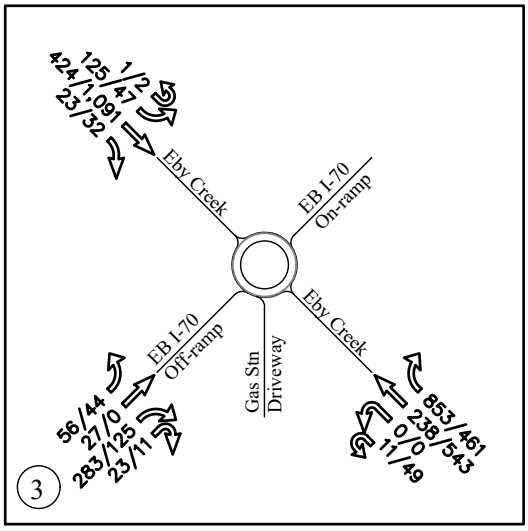
Queuing

The 95th percentile queue results for the short-term with project condition were reviewed. No significant queues are anticipated at the study area intersections for this scenario beyond what has already been identified in the existing conditions.









12/34 – AM Peak Hour/PM Peak Hour

N

NOT TO SCALE

JANUARY 17, 2025

EXHIBIT 11

SHORT-TERM (2027) WITH PROJECT TRAFFIC VOLUMES

CivTrans ENGINEERING INC.

Long-Range Condition (Year 2045) without the Project

This section focuses on the long-range scenario of the year 2045. This scenario assumes that the bank project and adjacent site have not been constructed and the site remains undeveloped. This analysis will show how the future traffic volumes will be handled by the existing facilities and what new elements may be needed for the traffic system to continue functioning at an acceptable level of service. The traffic volumes for this condition include the existing traffic, as shown on Exhibit 5 with an ambient background growth applied over the next twenty-one years. Please see Exhibit 12 for the traffic volumes used for this scenario. A summary of the level of service results are shown in the following table

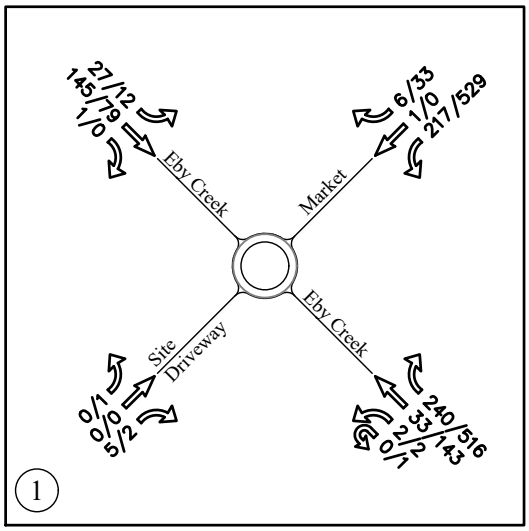
Table 8 -Year 2045 Levels of Service without Project

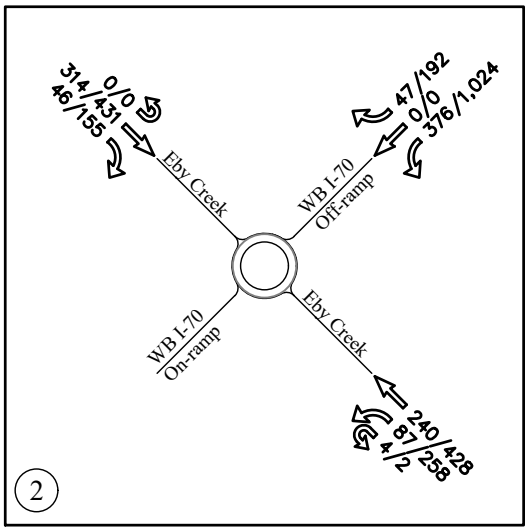
INTERSECTION (S)ignalized (U)nsignalized (R)oundabout		Approach Or Overall	AM Peak		PM Peak	
			Delay (sec)	LOS	Delay (sec)	LOS
Eby Creek Rd & Market St / Site Driveway	R	Ovr	7.4	A	14.4	B
Eby Creek Rd & Westbound I-70 Ramps	R	Ovr	5.8	A	21.3	C
Eby Creek Rd & Eastbound I-70 Ramps	R	Ovr	17.7	C	12.6	B

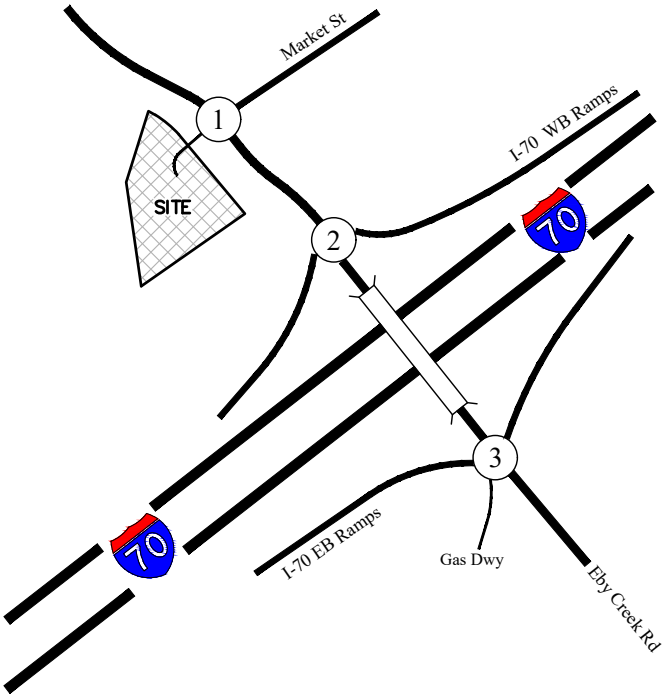
For the long-range condition without the proposed project, the study area intersections are generally anticipated to operate at acceptable levels of service and within capacity. The westbound I-70 off-ramp is shown to fall to LOS D for this scenario and the northbound right turn from Eby Creek Road onto eastbound I-70 is shown to be approaching capacity. If future growth exceeds the assumed 1% utilized in this study, CDOT may need to expand the eastbound on-ramp capacity to accommodate higher volumes of traffic making this maneuver. The level of service reports for the long-range no project conditions are provided in the technical appendix.

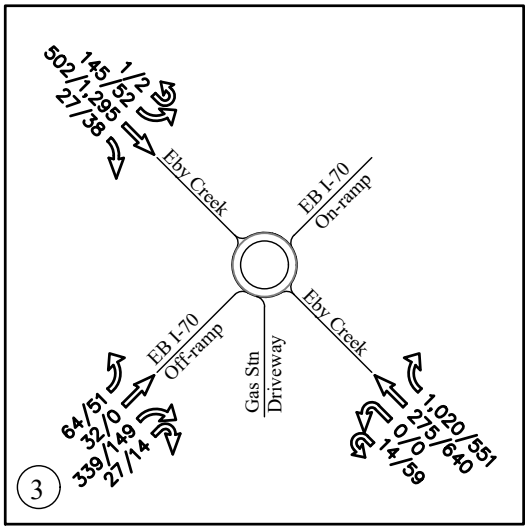
Queuing

For the long-range condition, 95th percentile queue estimates are anticipated to be lengthy on a couple of approaches for the study area intersections. Specifically, the northbound approach on Eby Creek Road at the eastbound I-70 ramps is estimated to exceed 17 vehicles in the bypass lane (~425') during the AM peak hour, which would extend through the upstream Chambers Avenue roundabout intersection. Queues on the westbound I-70 off-ramp are estimated to exceed 21 vehicles (~525') during the PM peak, which would be approximately 500' from the I-70 travel lanes.









12/34 – AM Peak Hour/PM Peak Hour

N

NOT TO SCALE

JANUARY 17, 2025

EXHIBIT 12

LONG-RANGE (2045) NO PROJECT TRAFFIC VOLUMES

CivTrans ENGINEERING INC.

Long-Range Conditions (Year 2045) with the Project

The traffic volumes included in this scenario include the long-range (Year 2045) traffic volumes as shown on Exhibit 11, and the additional traffic from the proposed ANB Bank project and the adjacent parcel (assumed to be a fast-food restaurant), as shown on Exhibits 7 and 9. The total traffic volumes anticipated under this condition are shown on Exhibit 13. A summary of the results is shown in the following table.

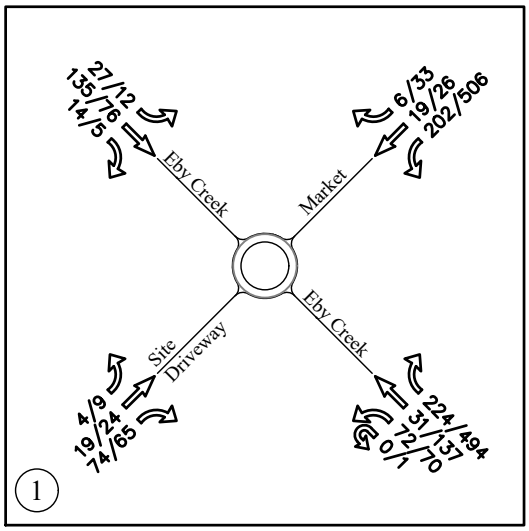
Table 9 - Year 2045 Levels of Service with the Project

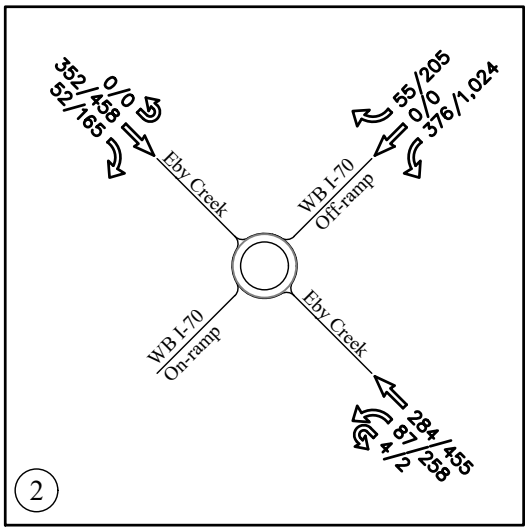
INTERSECTION (S)ignalized (U)nsignalized (R)oundabout		Approach Or Overall	AM Peak		PM Peak	
			Delay (sec)	LOS	Delay (sec)	LOS
Eby Creek Rd & Market St / Site Driveway	R	Ovr	8.0	A	16.1	C
Eby Creek Rd & Westbound I-70 Ramps	R	Ovr	6.2	A	25.2	D
Eby Creek Rd & Eastbound I-70 Ramps	R	Ovr	19.2	C	13.3	B

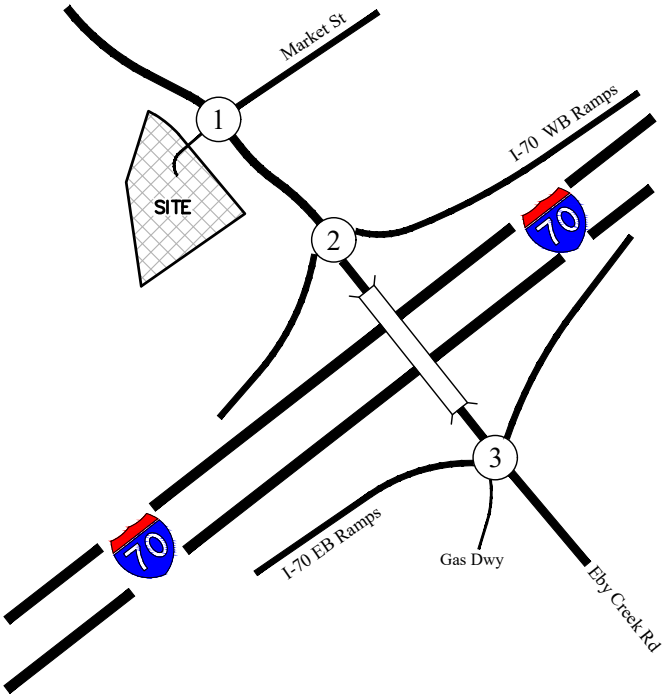
The long-range condition with the proposed project and a fast-food restaurant on the neighboring parcel results in similar operations at the study area intersection as the no-project condition, but the Eby Creek & Market and Eby Creek & Westbound I-70 Ramps roundabouts are anticipated to degrade in level of service during the PM peak hour to LOS C and LOS D respectively. No improvements are anticipated to be required to accommodate the ANB Bank and neighboring development projects for the long-range condition. The level of service reports for the long-range with the project condition (Year 2045) are provided in the technical appendix.

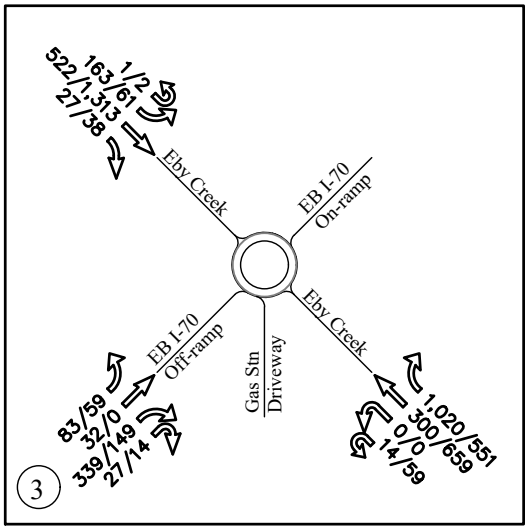
Queuing

With the project in the long-range condition, the 95th percentile queue on the site driveway approach of the Eby Creek Road & Market Street roundabout is estimated to be less than one vehicle and no on-site significant on-site queuing is anticipated. At the remaining study area intersections, 95th percentile queues are comparable to the no-project conditions and the site-generated traffic is not anticipated to have a significant impact on queue.









12/34 – AM Peak Hour/PM Peak Hour

N

NOT TO SCALE

JANUARY 17, 2025

EXHIBIT 13

LONG-RANGE (2045) WITH PROJECT TRAFFIC VOLUMES

Civtrans ENGINEERING INC.

CONCLUSIONS & RECOMMENDATIONS

Based on the analysis, findings and conclusions discussed in this report, the ANB Bank project and a potential redevelopment of the adjacent parcel are not anticipated to have a significant impact on the surrounding transportation system and no mitigation should be required.

The analysis results indicate that all of the intersections within the study are currently operating at acceptable levels of service and will continue to operate at acceptable levels with the project and in the long-range conditions.

The northbound right turn movement from Eby Creek Road onto the eastbound I-70 on-ramp is heavy during the AM peak hour (828 vehicles per hour). If all of the vehicles utilize the bypass lane, significant delays and queuing can occur. It is assumed that a portion of these right turning vehicles utilize the left northbound lane and enter the roundabout before making the turn onto the on-ramp. The proportion of vehicles that utilize the bypass vs the left lane plays a large role on the operation of this approach. It is assumed that as traffic increases in the future, a balance between the two lanes will occur to not overburden the bypass lane. If growth continues for this movement, the approach is anticipated to near capacity in the long-range conditions and CDOT may need to expand the eastbound on-ramp capacity to accommodate higher volumes of traffic making this maneuver.

Queuing was evaluated at the study area intersections for all conditions. There are no significant queuing issues currently at the study area intersections. In the long-range conditions, the northbound approach queue on Eby Creek Road at the eastbound I-70 ramps intersection is anticipated to spill through the upstream Chambers Avenue roundabout intersection during the AM peak hour unless modifications are made to the on-ramp to increase capacity. Additionally, the westbound I-70 off-ramp approach to Eby Creek Road is anticipated to experience lengthy queues (500’+) during the PM peak hour, which would back up approximately 500’ short of the I-70 travel lanes.

ANB Bank - Traffic Impact Study - January 17, 2025

Table 10 - Delay and Level of Service Summary (All Conditions)

Intersection and Movments	S, R or U	Existing				Short-term (2027) No Project				Short-term (2027) Build				Long-range (2045) No Project				Long-range (2045) Build			
		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Eby Creek Rd &	R	Base Condition				Unchanged				with site driveway				Unchanged				with site driveway			
Market Street		**6.7**	**A**	**11.1**	**B**	**6.8**	**A**	**11.4**	**B**	**6.9**	**A**	**11.7**	**B**	**7.4**	**A**	**14.4**	**B**	**8.0**	**A**	**16.1**	**C**
Eastbound		0.1	A	0.1	A	0.1	A	0.1	A	5.4	A	6.8	A	0.1	A	0.1	A	7.3	A	9.0	A
Westbound		6.0	A	10.0	A	6.1	A	10.3	B	6.1	A	10.6	B	6.5	A	12.4	B	6.9	A	13.5	B
Northbound		7.2	A	12.6	B	7.3	A	13.0	B	7.5	A	13.6	B	7.9	A	16.9	C	8.7	A	20.2	C
Southbound		7.0	A	7.1	A	7.2	A	7.2	A	7.3	A	7.4	A	7.8	A	8.2	A	8.3	A	8.8	A
Eby Creek Rd &	R	Base Condition				Unchanged				Unchanged				Unchanged				Unchanged			
I-70 Westbound Ramps		**5.2**	**A**	**11.0**	**B**	**5.3**	**A**	**11.6**	**B**	**5.4**	**A**	**11.9**	**B**	**5.8**	**A**	**21.3**	**C**	**6.2**	**A**	**25.2**	**D**
Westbound		4.5	A	12.1	B	4.6	A	13.0	B	4.7	A	13.4	B	5.2	A	29.7	D	5.4	A	37.2	E
Northbound		7.1	A	11.3	B	7.2	A	11.7	B	7.3	A	11.9	B	7.8	A	14.6	B	8.4	A	15.5	C
Southbound		4.1	A	8.3	A	4.2	A	8.7	A	4.3	A	8.8	A	4.8	A	12.1	B	5.0	A	12.8	B
Eby Creek Rd &	R	Base Condition				Unchanged				Unchanged				Unchanged				Unchanged			
I-70 Eastbound Ramps		**12.9**	**B**	**9.3**	**A**	**13.5**	**B**	**9.4**	**A**	**13.6**	**B**	**9.6**	**A**	**17.7**	**C**	**12.6**	**B**	**19.2**	**C**	**13.3**	**B**
Eastbound		5.4	A	5.8	A	5.5	A	6.0	A	5.6	A	6.2	A	6.3	A	7.9	A	6.7	A	8.5	A
Northbound		10.4	B	12.2	B	11.0	B	12.8	B	11.2	B	13.0	B	20.9	C	19.5	C	25.1	D	21.5	C
- bypass		26.9	D	11.2	B	28.6	D	11.5	B	28.8	D	11.5	B	37.2	E	13.1	B	38.9	E	13.2	B
Southbound		5.0	A	7.2	A	5.1	A	7.4	A	5.1	A	7.5	A	5.5	A	9.1	A	5.7	A	9.4	A

Traffic Impact Study
ANB Bank - Eagle

TECHNICAL APPENDIX
January 17, 2025

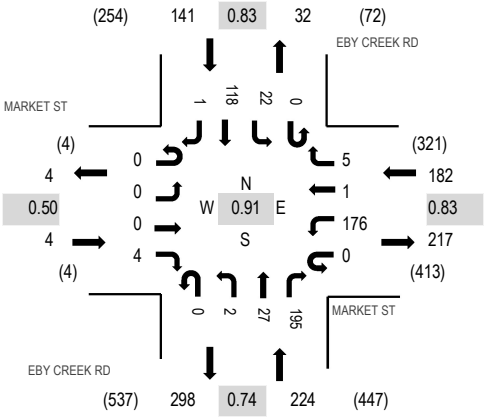
CivTrans ENGINEERING INC.

RAW TRAFFIC COUNTS

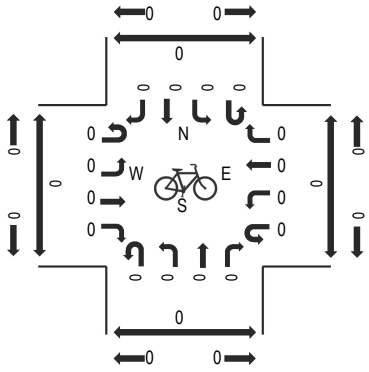
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 EBY CREEK RD & MARKET ST AM
Date: Wednesday, December 11, 2024
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

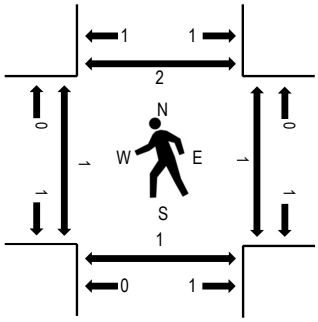
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

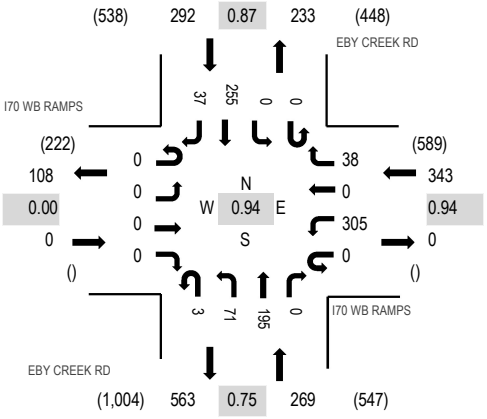
Traffic Counts - Motorized Vehicles

Interval Start Time	MARKET ST Eastbound				MARKET ST Westbound				EBY CREEK RD Northbound				EBY CREEK RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	0	0	14	0	1	0	0	2	20	0	2	29	0	68	483	0	0	0	2
7:15 AM	0	0	0	1	0	36	0	1	0	1	3	40	0	6	33	1	122	551	0	0	0	0
7:30 AM	0	0	0	1	0	43	0	1	0	0	3	62	0	4	27	0	141	544	1	1	1	1
7:45 AM	0	0	0	0	0	54	1	2	0	0	6	45	0	8	36	0	152	547	0	0	0	1
8:00 AM	0	0	0	2	0	43	0	1	0	1	15	48	0	4	22	0	136	543	0	0	0	0
8:15 AM	0	0	0	0	0	42	0	0	0	0	8	42	0	2	21	0	115		0	0	0	0
8:30 AM	0	0	0	0	0	43	0	3	0	0	9	53	0	1	35	0	144		0	0	0	0
8:45 AM	0	0	0	0	0	36	0	0	0	0	17	72	0	4	19	0	148		0	0	0	1
Count Total	0	0	0	4	0	311	1	9	0	2	63	382	0	31	222	1	1,026		1	1	1	5
Peak Hour	0	0	0	4	0	176	1	5	0	2	27	195	0	22	118	1	551		1	1	1	2

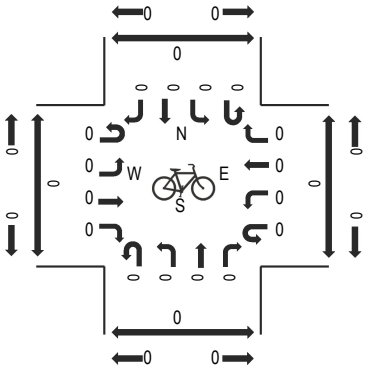
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 EBY CREEK RD & I70 WB RAMPS AM
Date: Wednesday, December 11, 2024
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

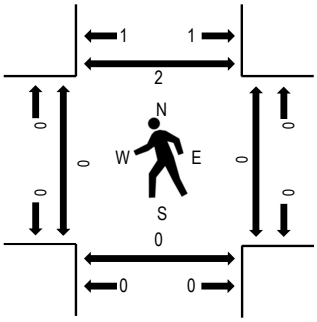
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

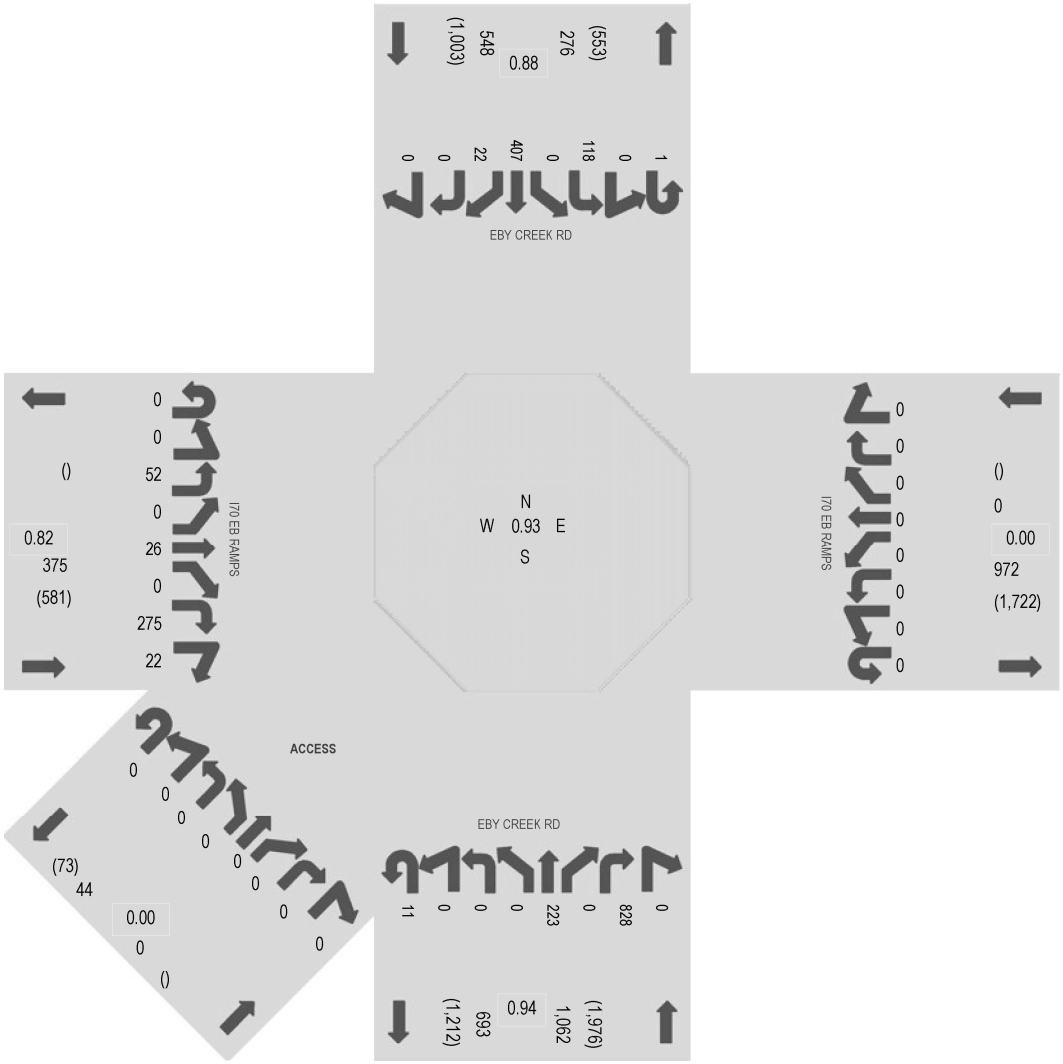
Traffic Counts - Motorized Vehicles

Interval Start Time	I70 WB RAMPS Eastbound				I70 WB RAMPS Westbound				EBY CREEK RD Northbound				EBY CREEK RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	0	0	35	0	1	1	21	21	0	0	0	39	5	123	786	0	0	0	0
7:15 AM	0	0	0	0	0	56	0	3	1	25	41	0	0	0	61	7	194	890	0	0	0	0
7:30 AM	0	0	0	0	0	71	0	9	2	18	56	0	0	0	57	16	229	904	0	0	0	0
7:45 AM	0	0	0	0	0	81	0	8	0	20	45	0	0	0	79	7	240	896	0	0	0	0
8:00 AM	0	0	0	0	0	78	0	13	0	16	49	0	0	0	65	6	227	888	0	0	0	2
8:15 AM	0	0	0	0	0	75	0	8	1	17	45	0	0	0	54	8	208		0	0	0	0
8:30 AM	0	0	0	0	0	66	0	10	0	20	49	0	0	0	66	10	221		0	0	0	0
8:45 AM	0	0	0	0	0	62	0	13	1	21	77	0	0	0	53	5	232		0	0	0	0
Count Total	0	0	0	0	0	524	0	65	6	158	383	0	0	0	474	64	1,674		0	0	0	2
Peak Hour	0	0	0	0	0	305	0	38	3	71	195	0	0	0	255	37	904		0	0	0	2

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

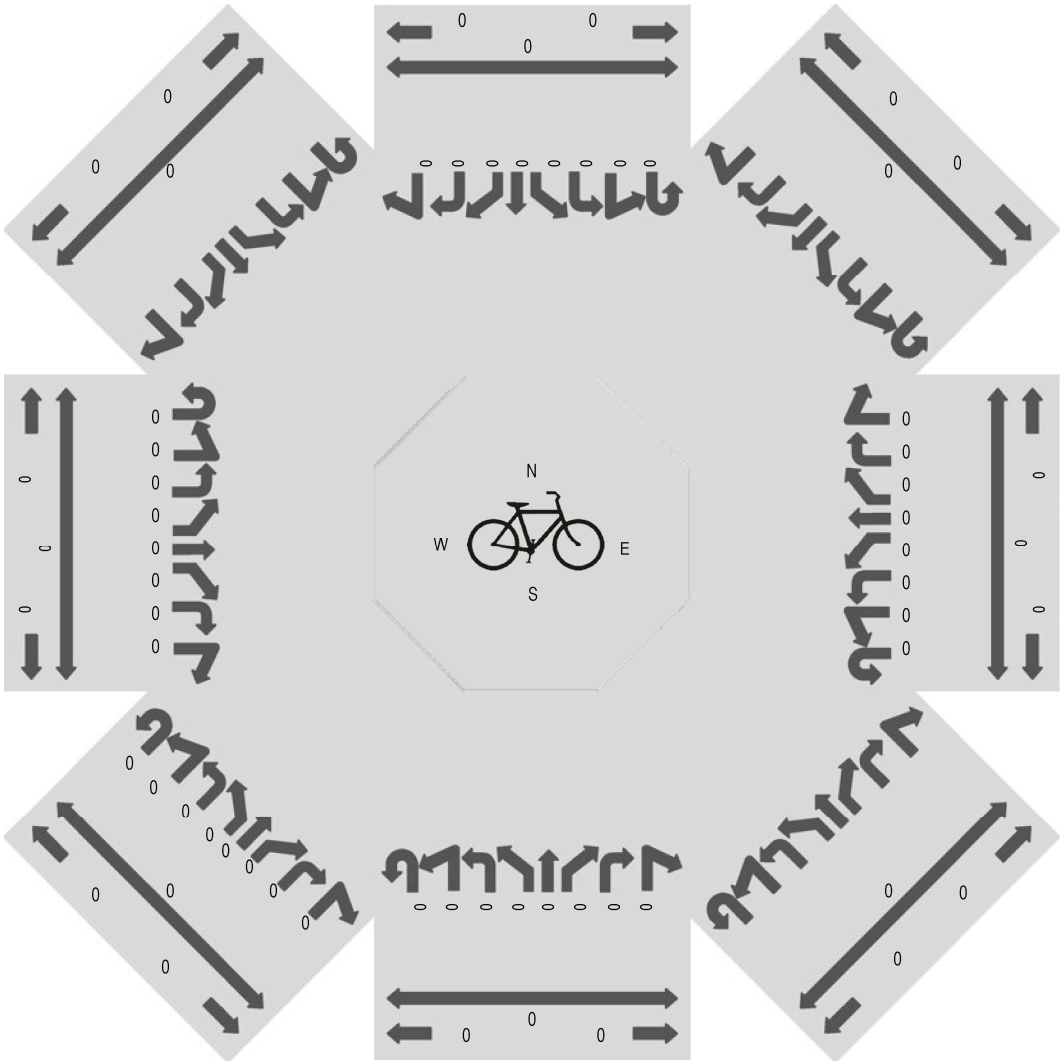
Location: 3 EBY CREEK RD & I70 EB RAMPS AM
Date: Wednesday, December 11, 2024
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles

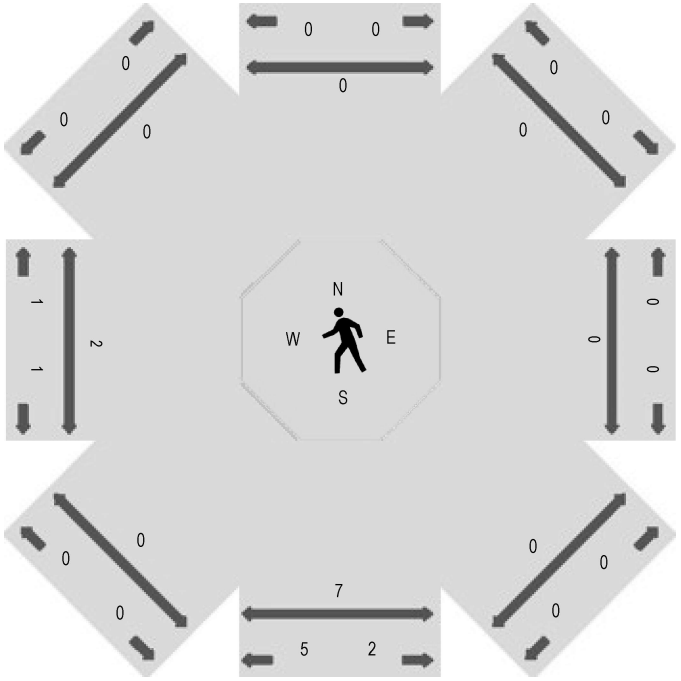


Note: Total study counts contained in parentheses.

Peak Hour - Bicycles



Peak Hour - Pedestrians



Traffic Counts - Motorized Vehicles

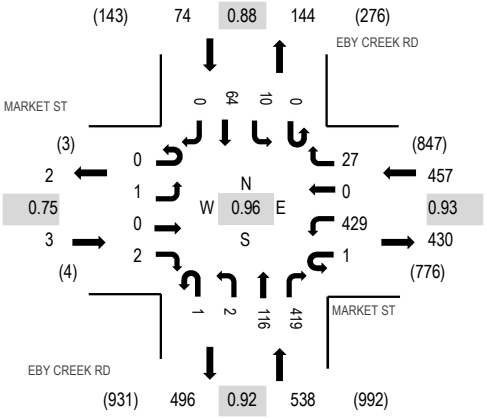
Interval Start Time	Westbound								Northwestbound								Northbound								Northeastbound							
	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR
7:00 AM	0	0	0	0	0	0	0	0									1	0	0	0	38	0	130	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0									5	0	0	0	63	0	211	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0									2	0	0	0	53	0	228	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0									3	0	0	0	50	0	199	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0									1	0	0	0	57	0	190	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0									1	0	0	0	49	0	182	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0									2	0	0	0	60	0	182	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0									2	0	0	0	91	0	176	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0									17	0	0	0	461	0	1,498	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0									11	0	0	0	223	0	828	0	0	0	0	0	0	0	0	0

Interval Start Time	Eastbound								Southeastbound								Southbound								Southwestbound								Total	Rolling Hour
	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR		
7:00 AM	0	0	6	0	5	0	40	1									0	0	19	0	54	3	0	0									297	1,809
7:15 AM	0	0	6	0	13	0	45	4									1	0	27	0	79	6	0	0									460	1,985
7:30 AM	0	0	21	0	9	0	77	8									0	0	36	0	95	2	0	0									531	1,938
7:45 AM	0	0	13	0	2	0	88	4									0	0	34	0	119	9	0	0									521	1,834
8:00 AM	0	0	12	0	2	0	65	6									0	0	21	0	114	5	0	0									473	1,751
8:15 AM	0	0	10	0	0	0	38	1									0	0	20	0	105	7	0	0									413	
8:30 AM	0	0	9	0	0	0	35	6									0	0	20	0	111	2	0	0									427	
8:45 AM	0	0	14	0	0	0	36	5									0	0	16	0	94	4	0	0									438	
Count Total	0	0	91	0	31	0	424	35									1	0	193	0	771	38	0	0									3,560	
Peak Hour	0	0	52	0	26	0	275	22									1	0	118	0	407	22	0	0									1,985	

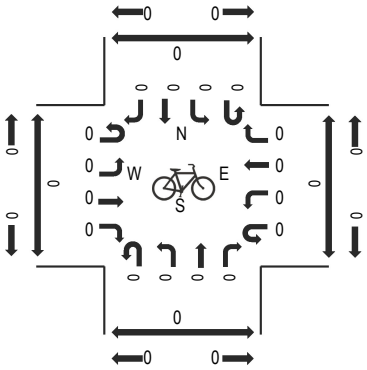
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 EBY CREEK RD & MARKET ST PM
Date: Wednesday, December 11, 2024
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 04:15 PM - 04:30 PM

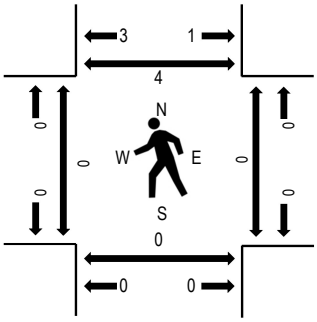
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

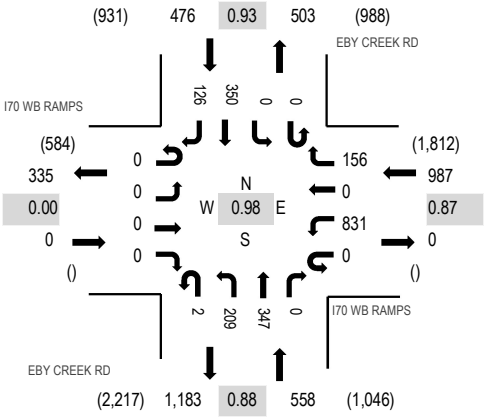
Traffic Counts - Motorized Vehicles

Interval Start Time	MARKET ST Eastbound				MARKET ST Westbound				EBY CREEK RD Northbound				EBY CREEK RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	0	1	94	0	8	2	0	27	90	0	2	13	0	237	1,045	0	0	0	0
4:15 PM	0	1	0	0	0	110	0	5	0	0	31	115	0	1	15	0	278	1,072	0	0	0	3
4:30 PM	0	0	0	0	0	93	0	10	0	0	28	107	0	3	14	0	255	1,033	0	0	0	0
4:45 PM	0	0	0	1	1	111	0	4	0	1	24	111	0	2	20	0	275	1,007	0	0	0	0
5:00 PM	0	0	0	1	0	115	0	8	1	1	33	86	0	4	15	0	264	941	0	0	0	1
5:15 PM	0	0	0	0	0	88	0	4	2	0	30	92	0	0	23	0	239		0	0	0	0
5:30 PM	0	0	0	0	0	87	0	9	2	0	24	95	0	1	11	0	229		0	0	0	1
5:45 PM	0	0	0	1	0	95	1	3	0	0	27	63	0	2	17	0	209		0	0	0	0
Count Total	0	1	0	3	2	793	1	51	7	2	224	759	0	15	128	0	1,986		0	0	0	5
Peak Hour	0	1	0	2	1	429	0	27	1	2	116	419	0	10	64	0	1,072		0	0	0	4

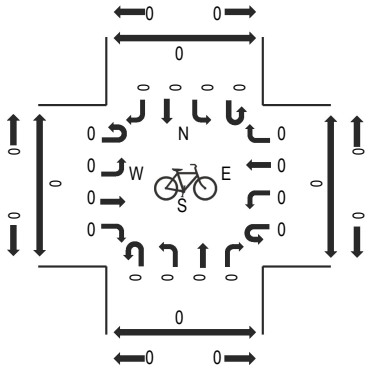
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 EBY CREEK RD & I70 WB RAMPS PM
Date: Wednesday, December 11, 2024
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

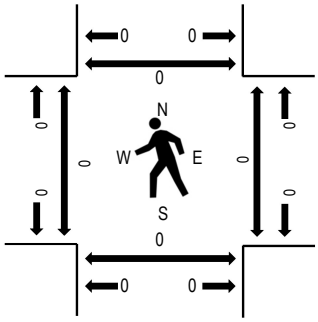
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

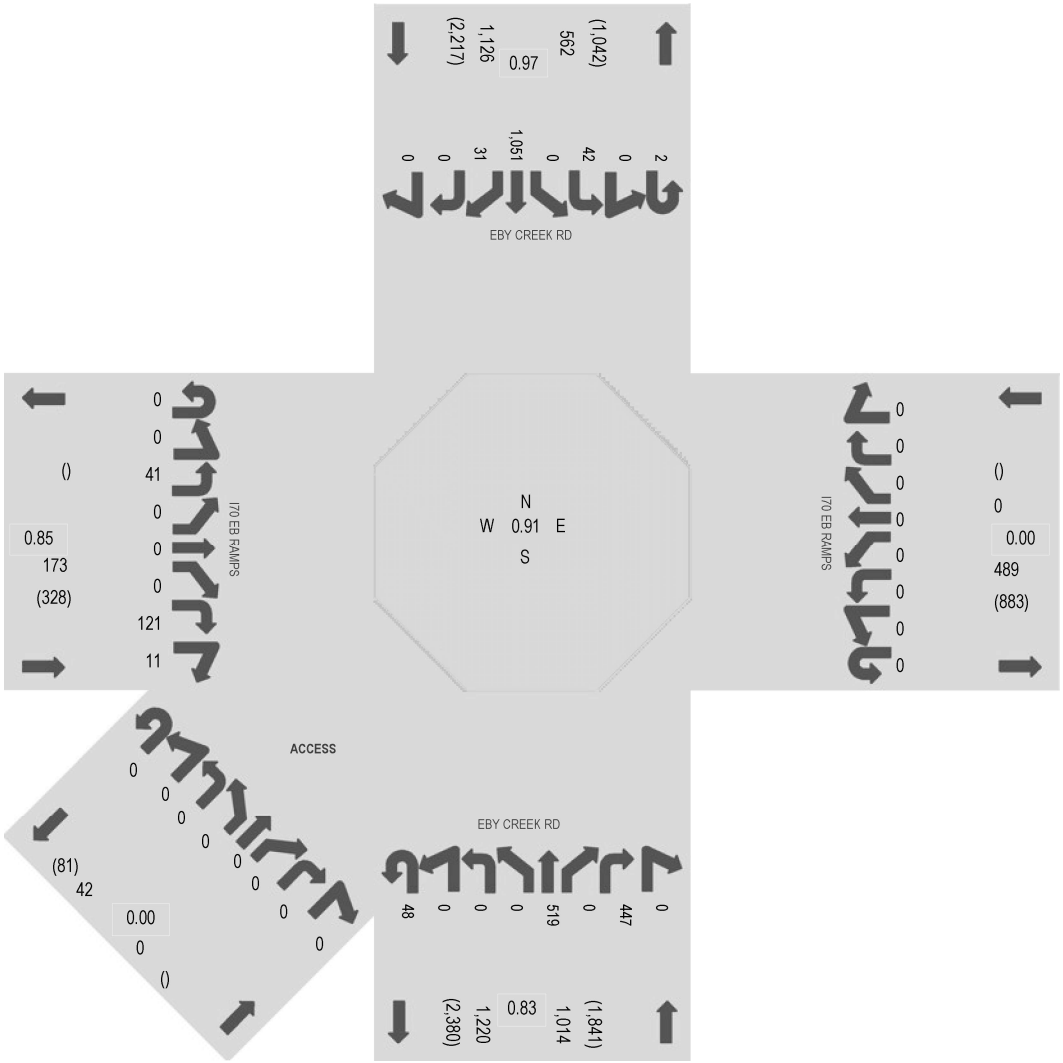
Traffic Counts - Motorized Vehicles

Interval Start Time	I70 WB RAMPS Eastbound				I70 WB RAMPS Westbound				EBY CREEK RD Northbound				EBY CREEK RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	0	0	154	0	31	1	44	84	0	0	0	88	20	422	1,854	0	0	0	0
4:15 PM	0	0	0	0	0	177	0	42	0	41	105	0	0	0	93	30	488	1,949	0	0	0	0
4:30 PM	0	0	0	0	0	164	0	43	1	37	92	0	0	0	88	22	447	1,957	0	0	0	0
4:45 PM	0	0	0	0	0	196	0	39	0	35	96	0	0	0	100	31	497	2,021	0	0	0	0
5:00 PM	0	0	0	0	0	192	0	30	1	69	92	0	0	0	94	39	517	1,935	0	0	0	0
5:15 PM	0	0	0	0	0	204	0	42	0	53	84	0	0	0	85	28	496		0	0	0	0
5:30 PM	0	0	0	0	0	239	0	45	1	52	75	0	0	0	71	28	511		0	0	0	0
5:45 PM	0	0	0	0	0	179	0	35	0	30	53	0	0	0	89	25	411		0	0	0	0
Count Total	0	0	0	0	0	1,505	0	307	4	361	681	0	0	0	708	223	3,789		0	0	0	0
Peak Hour	0	0	0	0	0	831	0	156	2	209	347	0	0	0	350	126	2,021		0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

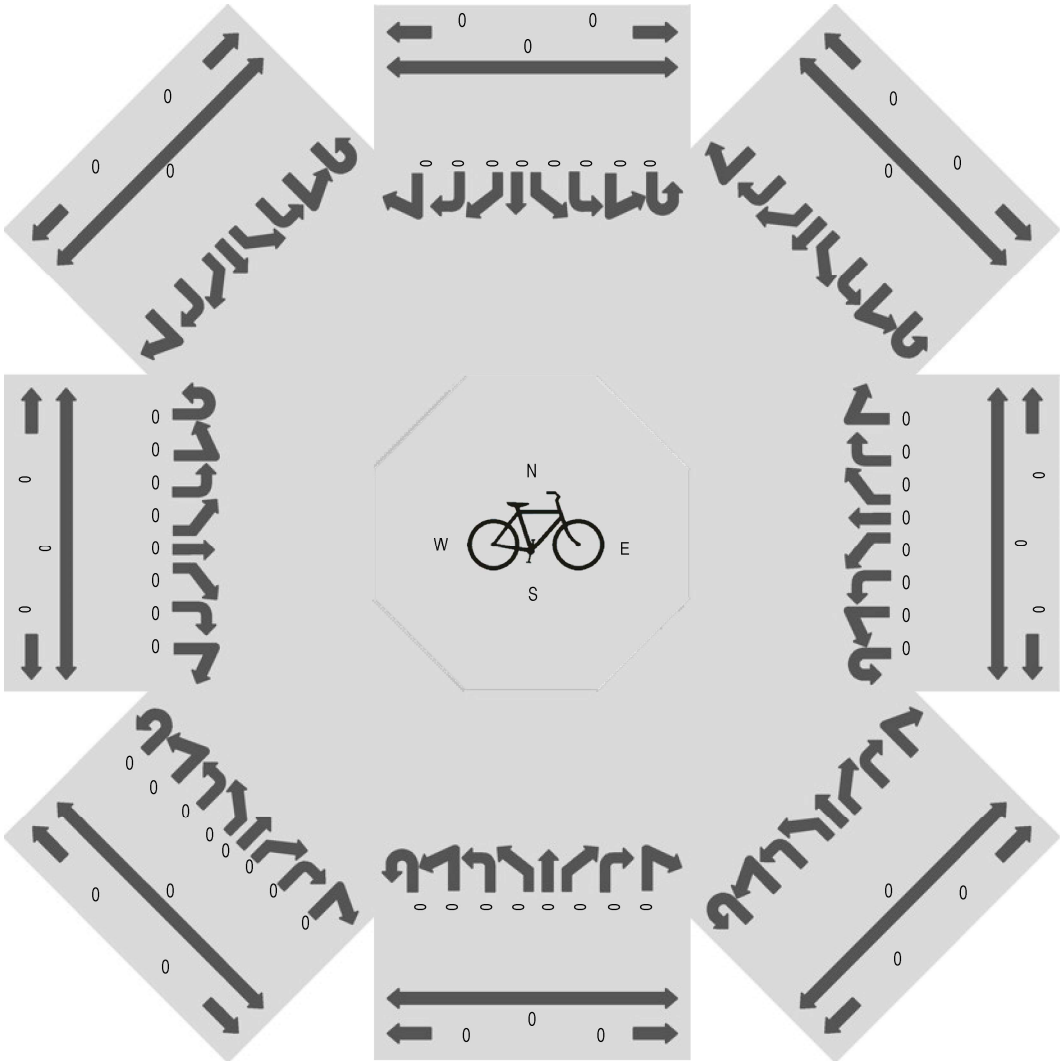
Location: 3 EBY CREEK RD & I70 EB RAMPS PM
Date: Wednesday, December 11, 2024
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles

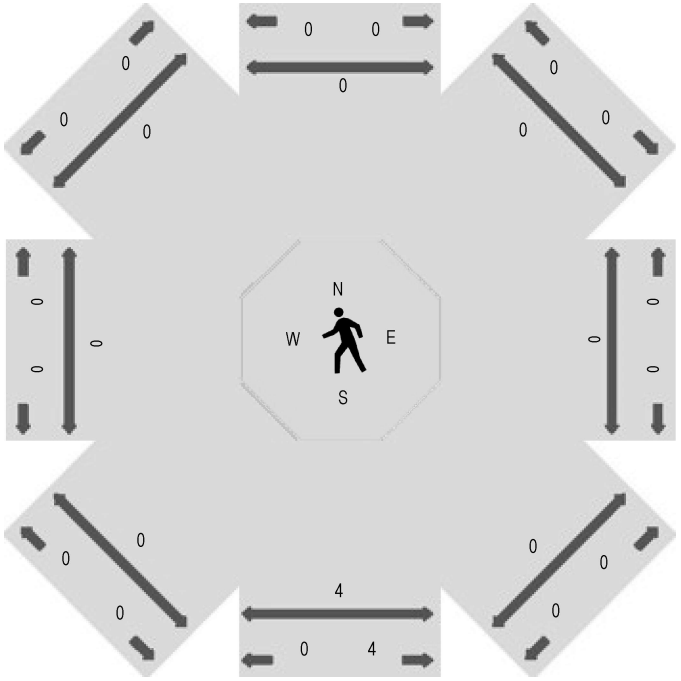


Note: Total study counts contained in parentheses.

Peak Hour - Bicycles



Peak Hour - Pedestrians



Traffic Counts - Motorized Vehicles

Interval Start Time	Westbound								Northwestbound								Northbound								Northeastbound							
	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR
4:00 PM	0	0	0	0	0	0	0	0									11	0	0	0	117	0	103	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0									3	0	0	0	130	0	105	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0									11	0	0	0	121	0	110	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0									4	0	0	0	121	0	118	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0									25	0	0	0	156	0	129	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0									8	0	0	0	121	0	90	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0									3	0	0	0	119	0	77	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0									3	0	0	0	76	0	80	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0									68	0	0	0	961	0	812	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0									48	0	0	0	519	0	447	0	0	0	0	0	0	0	0	0

Interval Start Time	Eastbound								Southeastbound								Southbound								Southwestbound								Total	Rolling Hour
	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR	U	HL	L	BL	T	BR	R	HR		
4:00 PM	0	0	7	0	0	0	36	2									1	0	7	0	227	4	0	0									515	2,184
4:15 PM	0	0	16	0	0	0	31	3									0	0	14	0	253	6	0	0									561	2,301
4:30 PM	0	0	11	0	0	0	26	2									1	0	12	0	233	7	0	0									534	2,313
4:45 PM	0	0	7	0	0	0	26	2									0	0	9	0	283	4	0	0									574	2,311
5:00 PM	0	0	14	0	0	0	31	3									0	0	12	0	253	9	0	0									632	2,202
5:15 PM	0	0	9	0	0	0	38	4									1	0	9	0	282	11	0	0									573	
5:30 PM	0	0	6	0	0	0	22	4									1	0	5	0	285	10	0	0									532	
5:45 PM	0	0	6	0	0	0	19	3									1	0	3	0	267	7	0	0									465	
Count Total	0	0	76	0	0	0	229	23									5	0	71	0	2,083	58	0	0									4,386	
Peak Hour	0	0	41	0	0	0	121	11									2	0	42	0	1,051	31	0	0									2,313	

TRIP GENERATION CALCULATIONS

Trip Generation for Proposed ANB Bank

The current project is proposing to construct a 3,700 SF bank with two drive through lanes. The ATM will be a walk-up, not served by the drive-up lane. A bank with drive-up service lanes falls under land use category (LUC) 912 "Drive-in Bank" within the *Trip Generation Manual 11th Edition*, published by the Institute of Transportation Engineers. Therefore, LUC 912 was used.

The neighboring parcel is currently a vacant 3,500± SF fast-food restaurant with a drive-through window. Although not a part of this project, trip generation for this parcel was estimated to evaluate the adjacent intersection for the long-range with the driveway leg at full build out. A "highest and best use" was assumed for the adjacent property, which could include strip retail, convenience store, fast-food restaurant with drive-through, coffee shop with drive-through or a high-turnover (sit-down) restaurant. A convenience store and fast-food restaurant with drive-through would generate the most trips for the southern portion of the site. Therefore, land use category 934 "Fast-food Restaurant with Drive-Through Window" was used for estimating trips.

According to the *Trip Generation Handbook*, a fitted curve equation for estimating trips should be used if an equation is provided and the number of studies exceeds 20. If the number of studies is less than 20, then R^2 should be equal to or greater than 0.75 and the standard deviation equal or less than 0.55. The rate or equation is highlighted below, which indicates which was used.

Banks and fast-food restaurants experience a significant portion of their trips as pass-by trips, 30% AM and 60-65% PM for banks and 50% AM and 55% for fast-food restaurants, so the new added trip to the overall transportation system is less than the overall rates from the TGM would indicate.

Trip Generation

Per Trip Generation Manual, the following land use categories were applied.

LUC 912 - Drive-in Bank

Weekday		Equation	Rate	% in	%out	# Studies	Std Dev	R^2
AM Peak:	n/a		9.95	58%	42%	44	6	n/a
PM Peak:	n/a		21.01	50%	50%	114	15.13	n/a
ADT:	n/a		100.35	50%	50%	19	68.62	n/a

			Total	In	Out
For X=	3.70	**AM Peak=**	**37**	**21**	**16**
		PM Peak=	**78**	**39**	**39**
		ADT=	**372**		

Pass-by Trips	30%	AM	10	5	5
	60%	PM	46	23	23

New Trips	AM	27	16	11
	PM	32	16	16

LUC 934 - Fast-Food Restaurant with Drive-through Window

Weekday		Equation	Rate	% in	%out	# Studies	Std Dev	R^2
AM Peak:	n/a		44.61	51%	49%	96	27.14	n/a
PM Peak:	n/a		33.03	52%	48%	190	17.59	n/a
ADT:	n/a		467.48	50%	50%	71	238.62	n/a

			Total	In	Out
For X=	3.50	**AM Peak=**	**156**	**80**	**76**
		PM Peak=	**116**	**60**	**56**
		ADT=	**1638**		

Pass-by Trips	50%	AM	76	38	38
	55%	PM	62	31	31

New Trips		AM	80	42	38
		PM	54	29	25

EXISTING (2024) CONDITIONS
LEVEL OF SERVICE AND QUEUING CALCULATIONS

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	Eby Creek Rd NB	49	0	15.00	1	18.00	1	48.00	53.00	42.00
2	Market St	126	0	13.50	1	17.00	1	90.00	64.00	20.00
3	Eby Creek Rd SB	240	0	12.70	1	18.60	1	63.00	51.00	46.00
4	Site Driveway	305	0	16.00	1	16.00	1	0.00	66.00	56.00

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	Eby Creek Rd NB	121.00	22.00	1	21.00	1	19.60	1
2	Market St	119.00	20.00	1	17.00	1	15.00	1
3	Eby Creek Rd SB	121.00	22.00	1	18.00	1	14.50	1
4	Site Driveway	119.00	22.00	1	19.00	1	19.00	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	Eby Creek Rd NB	0	1.000	0	1.000	20.00	2240	0	19.60	2927	0
2	Market St	0	1.000	0	1.000	20.00	2016	0	15.00	2240	0
3	Eby Creek Rd SB	0	1.000	0	1.000	20.00	1897	0	14.50	2166	0
4	Site Driveway	0	1.000	0	1.000	20.00	2390	0	19.00	2838	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	Peak Hour Factor
1	Eby Creek Rd NB	0	2	27	195	0	2.0	1.00	0.910
2	Market St	0	176	1	5	0	2.0	1.00	0.910
3	Eby Creek Rd SB	0	22	118	1	0	2.0	1.00	0.910
4	Site Driveway	0	0	0	4	0	2.0	1.00	0.910

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	Eby Creek Rd NB	None	224		22		298	925		0.2421	
2	Market St	None	182		29		217	1058		0.1720	
3	Eby Creek Rd SB	None	141		179		32	837		0.1684	
4	Site Driveway	None	4		316		4	751		0.0053	

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	Eby Creek Rd NB	None	7.19		7.19	0.93		A		A
2	Market St	None	5.98		5.98	0.64		A		A
3	Eby Creek Rd SB	None	7.04		7.04	0.63		A		A
4	Site Driveway	None	0.05		0.05	0.00		A		A

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	Eby Creek Rd NB	41	0	12.80	1	19.00	1	46.00	125.00	33.00
2	I-70 WB Off-Ramp	117	0	24.00	2	24.80	2	45.00	113.00	15.00
3	Eby Creek Rd SB	230	0	22.90	2	26.30	2	47.00	66.00	15.00
4	I-70 WB On-ramp	319	0	15.00	1	15.00	1	50.00	60.00	40.00

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	Eby Creek Rd NB	134.00	20.00	1	26.00	2	23.00	2
2	I-70 WB Off-Ramp	138.00	22.00	1	15.00	1	15.00	1
3	Eby Creek Rd SB	134.00	33.00	2	20.70	1	16.00	1
4	I-70 WB On-ramp	138.00	33.00	2	16.90	1	17.60	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	Eby Creek Rd NB	0	1.000	0	1.000	20.00	1912	0	23.00	3435	0
2	I-70 WB Off-Ramp	0	1.000	0	1.000	20.00	3584	0	15.00	2240	0
3	Eby Creek Rd SB	0	1.000	0	1.000	20.00	3420	0	16.00	2390	0
4	I-70 WB On-ramp	0	1.000	0	1.000	20.00	2240	0	17.60	2629	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	Peak Hour Factor
1	Eby Creek Rd NB	3	71	195	0	0	2.0	1.00	0.940
2	I-70 WB Off-Ramp	0	305	0	38	0	2.0	1.00	0.940
3	Eby Creek Rd SB	0	0	255	37	0	2.0	1.00	0.940
4	I-70 WB On-ramp	0	0	0	0	0	2.0	1.00	0.940

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	Eby Creek Rd NB	None	269		0		563	1037		0.2595	
2	I-70 WB Off-Ramp	None	343		269		0	1814		0.1891	
3	Eby Creek Rd SB	None	292		379		233	1849		0.1579	
4	I-70 WB On-ramp	None	0		0		108	0		0.0000	

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	Eby Creek Rd NB	None	7.14		7.14	1.04		A		A
2	I-70 WB Off-Ramp	None	4.53		4.53	0.73		A		A
3	Eby Creek Rd SB	None	4.13		4.13	0.60		A		A
4	I-70 WB On-ramp	None	0.00		0.00	0.00		A		A

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	Eby Creek Rd NB	46	0	13.90	1	19.80	1	77.00	120.00	21.00
2	EB 1-70 On-ramp	144	0	12.00	1	12.00	1	90.00	60.00	30.00
3	Eby Creek Rd SB	221	0	24.00	2	27.80	2	36.00	118.00	32.00
4	EB I-70 Off-ramp	303	0	24.00	2	26.00	2	40.00	190.00	26.00
5	Gas Station Dwy	348	0	12.00	1	12.00	1	90.00	60.00	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	Eby Creek Rd NB	132.00	22.00	1	28.00	2	26.00	2
2	EB 1-70 On-ramp	136.00	22.00	1	16.60	1	15.80	1
3	Eby Creek Rd SB	132.00	20.00	1	17.10	1	12.40	1
4	EB I-70 Off-ramp	136.00	33.00	2	13.00	1	12.00	1
5	Gas Station Dwy	146.00	34.00	2	22.00	1	19.30	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	Eby Creek Rd NB	0	1.000	0	1.000	23.90	3570	0	26.00	3883	0
2	EB 1-70 On-ramp	0	1.000	0	1.000	24.00	1792	0	15.80	2360	0
3	Eby Creek Rd SB	0	1.000	0	1.000	24.00	3584	0	12.40	1852	0
4	EB I-70 Off-ramp	0	1.000	0	1.000	24.00	3584	0	12.00	1792	0
5	Gas Station Dwy	0	1.000	0	1.000	24.00	1792	0	19.30	2882	0

Bypass Geometry

Bypass Approach Geometry (ft)

Leg	Leg Names	Bypass Type	Bypass Flows	V	nv	Vb	nvb	Vt	nvt
1	Eby Creek Rd NB	Merge	600	13.9	1	10	1	23.9	2

Bypass Entry and Exit Geometry (ft)

Leg	Leg Names	Entry Geometry						Leg	Leg Names	Exit Lanes	
		Eb	neb	Lb	Lt	Rb	Phib			nex	Nmx
1	Eby Creek Rd NB	13.9	1	0	349	155.000 1686	30	2	EB 1-70 On-ramp	1	2

Bypass Entry Capacity Modifiers and Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Calibration	
		Capacity + or -	Cross Walk Factor	Intercept + or -	Slope Factor
1	Eby Creek Rd NB	0	1.000	0	1.000

Traffic Flow Data (veh/hr)

2024 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows						Flow Modifiers		
		U-Turn	Exit-4	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	11	0	1	223	228	600	2.0	1.00	0.930
2	EB 1-70 On-ramp	0	0	0	0	0	0	2.0	1.00	0.930
3	Eby Creek Rd SB	1	118	407	22	0	0	2.0	1.00	0.930
4	EB I-70 Off-ramp	0	52	26	275	22	0	2.0	1.00	0.930
5	Gas Station Dwy	0	0	0	0	0	0	2.0	1.00	0.930

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	Eby Creek Rd NB	Merge	463	600	197	372	693	983	758	0.4712	0.7917
2	EB 1-70 On-ramp	None	0		0		971	0		0.0000	
3	Eby Creek Rd SB	None	548		12		276	2159		0.2539	
4	EB I-70 Off-ramp	None	375		559		1	1699		0.2207	
5	Gas Station Dwy	None	0		0		44	0		0.0000	

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	Eby Creek Rd NB	Merge	10.39	26.87	19.69	2.73	11.97	B	D	C
2	EB 1-70 On-ramp	None	0.00		0.00	0.00		A		A
3	Eby Creek Rd SB	None	5.00		5.00	1.21		A		A
4	EB I-70 Off-ramp	None	5.41		5.41	1.02		A		A
5	Gas Station Dwy	None	0.00		0.00	0.00		A		A

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	Eby Creek Rd NB	49	0	15.00	1	18.00	1	48.00	53.00	42.00
2	Market St	126	0	13.50	1	17.00	1	90.00	64.00	20.00
3	Eby Creek Rd SB	240	0	12.70	1	18.60	1	63.00	51.00	46.00
4	Site Driveway	305	0	16.00	1	16.00	1	0.00	66.00	56.00

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	Eby Creek Rd NB	121.00	22.00	1	21.00	1	19.60	1
2	Market St	119.00	20.00	1	17.00	1	15.00	1
3	Eby Creek Rd SB	121.00	22.00	1	18.00	1	14.50	1
4	Site Driveway	119.00	22.00	1	19.00	1	19.00	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	Eby Creek Rd NB	0	1.000	0	1.000	20.00	2240	0	19.60	2927	0
2	Market St	0	1.000	0	1.000	20.00	2016	0	15.00	2240	0
3	Eby Creek Rd SB	0	1.000	0	1.000	20.00	1897	0	14.50	2166	0
4	Site Driveway	0	1.000	0	1.000	20.00	2390	0	19.00	2838	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	Peak Hour Factor
1	Eby Creek Rd NB	1	2	116	419	0	2.0	1.00	0.960
2	Market St	1	429	0	27	0	2.0	1.00	0.960
3	Eby Creek Rd SB	0	10	64	0	0	2.0	1.00	0.960
4	Site Driveway	0	1	0	2	0	2.0	1.00	0.960

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	Eby Creek Rd NB	None	538		12		496	930		0.5783	
2	Market St	None	457		120		430	1003		0.4558	
3	Eby Creek Rd SB	None	74		433		144	700		0.1058	
4	Site Driveway	None	3		505		2	651		0.0046	

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	Eby Creek Rd NB	None	12.56		12.56	3.62		B		B
2	Market St	None	10.00		10.00	2.39		A		A
3	Eby Creek Rd SB	None	7.05		7.05	0.35		A		A
4	Site Driveway	None	0.05		0.05	0.00		A		A

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	Eby Creek Rd NB	41	0	12.80	1	19.00	1	46.00	125.00	33.00
2	I-70 WB Off-Ramp	117	0	24.00	2	24.80	2	45.00	113.00	15.00
3	Eby Creek Rd SB	230	0	22.90	2	26.30	2	47.00	66.00	15.00
4	I-70 WB On-ramp	319	0	15.00	1	15.00	1	50.00	60.00	40.00

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	Eby Creek Rd NB	134.00	20.00	1	26.00	2	23.00	2
2	I-70 WB Off-Ramp	138.00	22.00	1	15.00	1	15.00	1
3	Eby Creek Rd SB	134.00	33.00	2	20.70	1	16.00	1
4	I-70 WB On-ramp	138.00	33.00	2	16.90	1	17.60	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	Eby Creek Rd NB	0	1.000	0	1.000	20.00	1912	0	23.00	3435	0
2	I-70 WB Off-Ramp	0	1.000	0	1.000	20.00	3584	0	15.00	2240	0
3	Eby Creek Rd SB	0	1.000	0	1.000	20.00	3420	0	16.00	2390	0
4	I-70 WB On-ramp	0	1.000	0	1.000	20.00	2240	0	17.60	2629	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	Peak Hour Factor
1	Eby Creek Rd NB	2	209	347	0	0	2.0	1.00	0.980
2	I-70 WB Off-Ramp	0	831	0	156	0	2.0	1.00	0.980
3	Eby Creek Rd SB	0	0	350	126	0	2.0	1.00	0.980
4	I-70 WB On-ramp	0	0	0	0	0	2.0	1.00	0.980

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	Eby Creek Rd NB	None	558		0		1183	1037		0.5383	
2	I-70 WB Off-Ramp	None	987		558		0	1494		0.6608	
3	Eby Creek Rd SB	None	476		1042		503	1321		0.3605	
4	I-70 WB On-ramp	None	0		0		335	0		0.0000	

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	Eby Creek Rd NB	None	11.31		11.31	3.15		B		B
2	I-70 WB Off-Ramp	None	12.08		12.08	5.74		B		B
3	Eby Creek Rd SB	None	8.34		8.34	2.01		A		A
4	I-70 WB On-ramp	None	0.00		0.00	0.00		A		A

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	Eby Creek Rd NB	46	0	13.90	1	19.80	1	77.00	120.00	21.00
2	EB 1-70 On-ramp	144	0	12.00	1	12.00	1	90.00	60.00	30.00
3	Eby Creek Rd SB	221	0	24.00	2	27.80	2	36.00	118.00	32.00
4	EB I-70 Off-ramp	303	0	24.00	2	26.00	2	40.00	190.00	26.00
5	Gas Station Dwy	348	0	12.00	1	12.00	1	90.00	60.00	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	Eby Creek Rd NB	132.00	22.00	1	28.00	2	26.00	2
2	EB 1-70 On-ramp	136.00	22.00	1	16.60	1	15.80	1
3	Eby Creek Rd SB	132.00	20.00	1	17.10	1	12.40	1
4	EB I-70 Off-ramp	136.00	33.00	2	13.00	1	12.00	1
5	Gas Station Dwy	146.00	34.00	2	22.00	1	19.30	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	Eby Creek Rd NB	0	1.000	0	1.000	23.90	3570	0	26.00	3883	0
2	EB 1-70 On-ramp	0	1.000	0	1.000	24.00	1792	0	15.80	2360	0
3	Eby Creek Rd SB	0	1.000	0	1.000	24.00	3584	0	12.40	1852	0
4	EB I-70 Off-ramp	0	1.000	0	1.000	24.00	3584	0	12.00	1792	0
5	Gas Station Dwy	0	1.000	0	1.000	24.00	1792	0	19.30	2882	0

Bypass Geometry

Bypass Approach Geometry (ft)

Leg	Leg Names	Bypass Type	Bypass Flows	V	nv	Vb	nvb	Vt	nvt
1	Eby Creek Rd NB	Merge	400	13.9	1	10	1	23.9	2

Bypass Entry and Exit Geometry (ft)

Leg	Leg Names	Entry Geometry						Leg	Leg Names	Exit Lanes	
		Eb	neb	Lb	Lt	Rb	Phib			nex	Nmx
1	Eby Creek Rd NB	13.9	1	0	349	155.000 1637	30	2	EB 1-70 On-ramp	1	2

Bypass Entry Capacity Modifiers and Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Calibration	
		Capacity + or -	Cross Walk Factor	Intercept + or -	Slope Factor
1	Eby Creek Rd NB	0	1.000	0	1.000

Traffic Flow Data (veh/hr)

2024 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows						Flow Modifiers		
		U-Turn	Exit-4	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	48	0	1	519	47	400	2.0	1.00	0.910
2	EB 1-70 On-ramp	0	0	0	0	0	0	2.0	1.00	0.910
3	Eby Creek Rd SB	2	42	1051	31	0	0	2.0	1.00	0.910
4	EB I-70 Off-ramp	0	41	0	121	11	0	2.0	1.00	0.910
5	Gas Station Dwy	0	0	0	0	0	0	2.0	1.00	0.910

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	Eby Creek Rd NB	Merge	615	400	85	89	1220	1051	850	0.5852	0.4707
2	EB 1-70 On-ramp	None	0		0		489	0		0.0000	
3	Eby Creek Rd SB	None	1126		49		562	2118		0.5316	
4	EB I-70 Off-ramp	None	173		1174		1	1212		0.1428	
5	Gas Station Dwy	None	0		0		42	0		0.0000	

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	Eby Creek Rd NB	Merge	12.22	11.24	11.83	4.54	2.71	B	B	B
2	EB 1-70 On-ramp	None	0.00		0.00	0.00		A		A
3	Eby Creek Rd SB	None	7.19		7.19	3.53		A		A
4	EB I-70 Off-ramp	None	5.84		5.84	0.69		A		A
5	Gas Station Dwy	None	0.00		0.00	0.00		A		A

SHORT-TERM (2027) CONDITIONS
WITHOUT PROJECT
LEVEL OF SERVICE AND QUEUING
CALCULATIONS

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	Eby Creek Rd NB	49	0	15.00	1	18.00	1	48.00	53.00	42.00
2	Market St	126	0	13.50	1	17.00	1	90.00	64.00	20.00
3	Eby Creek Rd SB	240	0	12.70	1	18.60	1	63.00	51.00	46.00
4	Site Driveway	305	0	16.00	1	16.00	1	0.00	66.00	56.00

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	Eby Creek Rd NB	121.00	22.00	1	21.00	1	19.60	1
2	Market St	119.00	20.00	1	17.00	1	15.00	1
3	Eby Creek Rd SB	121.00	22.00	1	18.00	1	14.50	1
4	Site Driveway	119.00	22.00	1	19.00	1	19.00	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	Eby Creek Rd NB	0	1.000	0	1.000	20.00	2240	0	19.60	2927	0
2	Market St	0	1.000	0	1.000	20.00	2016	0	15.00	2240	0
3	Eby Creek Rd SB	0	1.000	0	1.000	20.00	1897	0	14.50	2166	0
4	Site Driveway	0	1.000	0	1.000	20.00	2390	0	19.00	2838	0

Traffic Flow Data (veh/hr)

2027 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	0	2	28	201	0	2.0	1.00	0.910
2	Market St	0	181	1	5	0	2.0	1.00	0.910
3	Eby Creek Rd SB	0	23	122	1	0	2.0	1.00	0.910
4	Site Driveway	0	0	0	4	0	2.0	1.00	0.910

Operational Results

2027 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	Eby Creek Rd NB	None	231		23		307	925		0.2499	
2	Market St	None	187		30		224	1057		0.1769	
3	Eby Creek Rd SB	None	146		184		33	835		0.1749	
4	Site Driveway	None	4		326		4	746		0.0054	

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	Eby Creek Rd NB	None	7.28		7.28	0.97		A		A
2	Market St	None	6.05		6.05	0.66		A		A
3	Eby Creek Rd SB	None	7.16		7.16	0.66		A		A
4	Site Driveway	None	0.05		0.05	0.00		A		A

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	Eby Creek Rd NB	41	0	12.80	1	19.00	1	46.00	125.00	33.00
2	I-70 WB Off-Ramp	117	0	24.00	2	24.80	2	45.00	113.00	15.00
3	Eby Creek Rd SB	230	0	22.90	2	26.30	2	47.00	66.00	15.00
4	I-70 WB On-ramp	319	0	15.00	1	15.00	1	50.00	60.00	40.00

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	Eby Creek Rd NB	134.00	20.00	1	26.00	2	23.00	2
2	I-70 WB Off-Ramp	138.00	22.00	1	15.00	1	15.00	1
3	Eby Creek Rd SB	134.00	33.00	2	20.70	1	16.00	1
4	I-70 WB On-ramp	138.00	33.00	2	16.90	1	17.60	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	Eby Creek Rd NB	0	1.000	0	1.000	20.00	1912	0	23.00	3435	0
2	I-70 WB Off-Ramp	0	1.000	0	1.000	20.00	3584	0	15.00	2240	0
3	Eby Creek Rd SB	0	1.000	0	1.000	20.00	3420	0	16.00	2390	0
4	I-70 WB On-ramp	0	1.000	0	1.000	20.00	2240	0	17.60	2629	0

Traffic Flow Data (veh/hr)

2027 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	3	73	201	0	0	2.0	1.00	0.940
2	I-70 WB Off-Ramp	0	314	0	39	0	2.0	1.00	0.940
3	Eby Creek Rd SB	0	0	263	38	0	2.0	1.00	0.940
4	I-70 WB On-ramp	0	0	0	0	0	2.0	1.00	0.940

Operational Results

2027 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	Eby Creek Rd NB	None	277		0		580	1037		0.2672	
2	I-70 WB Off-Ramp	None	353		277		0	1805		0.1956	
3	Eby Creek Rd SB	None	301		390		240	1841		0.1635	
4	I-70 WB On-ramp	None	0		0		111	0		0.0000	

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	Eby Creek Rd NB	None	7.22		7.22	1.08		A		A
2	I-70 WB Off-Ramp	None	4.62		4.62	0.76		A		A
3	Eby Creek Rd SB	None	4.21		4.21	0.62		A		A
4	I-70 WB On-ramp	None	0.00		0.00	0.00		A		A

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	Eby Creek Rd NB	46	0	13.90	1	19.80	1	77.00	120.00	21.00
2	EB 1-70 On-ramp	144	0	12.00	1	12.00	1	90.00	60.00	30.00
3	Eby Creek Rd SB	221	0	24.00	2	27.80	2	36.00	118.00	32.00
4	EB I-70 Off-ramp	303	0	24.00	2	26.00	2	40.00	190.00	26.00
5	Gas Station Dwy	348	0	12.00	1	12.00	1	90.00	60.00	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	Eby Creek Rd NB	132.00	22.00	1	28.00	2	26.00	2
2	EB 1-70 On-ramp	136.00	22.00	1	16.60	1	15.80	1
3	Eby Creek Rd SB	132.00	20.00	1	17.10	1	12.40	1
4	EB I-70 Off-ramp	136.00	33.00	2	13.00	1	12.00	1
5	Gas Station Dwy	146.00	34.00	2	22.00	1	19.30	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	Eby Creek Rd NB	0	1.000	0	1.000	23.90	3570	0	26.00	3883	0
2	EB 1-70 On-ramp	0	1.000	0	1.000	24.00	1792	0	15.80	2360	0
3	Eby Creek Rd SB	0	1.000	0	1.000	24.00	3584	0	12.40	1852	0
4	EB I-70 Off-ramp	0	1.000	0	1.000	24.00	3584	0	12.00	1792	0
5	Gas Station Dwy	0	1.000	0	1.000	24.00	1792	0	19.30	2882	0

Bypass Geometry

Bypass Approach Geometry (ft)

Leg	Leg Names	Bypass Type	Bypass Flows	V	nv	Vb	nvb	Vt	nvt
1	Eby Creek Rd NB	Merge	603	13.9	1	10	1	23.9	2

Bypass Entry and Exit Geometry (ft)

Leg	Leg Names	Entry Geometry						Leg	Leg Names	Exit Lanes	
		Eb	neb	Lb	Lt	Rb	Phib			nex	Nmx
1	Eby Creek Rd NB	13.9	1	0	349	155.000 2133	30	2	EB 1-70 On-ramp	1	2

Bypass Entry Capacity Modifiers and Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Calibration	
		Capacity + or -	Cross Walk Factor	Intercept + or -	Slope Factor
1	Eby Creek Rd NB	0	1.000	0	1.000

Traffic Flow Data (veh/hr)

2027 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows						Flow Modifiers		
		U-Turn	Exit-4	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	11	0	1	230	250	603	2.0	1.00	0.930
2	EB 1-70 On-ramp	0	0	0	0	0	0	2.0	1.00	0.930
3	Eby Creek Rd SB	1	122	419	23	0	0	2.0	1.00	0.930
4	EB I-70 Off-ramp	0	54	27	283	23	0	2.0	1.00	0.930
5	Gas Station Dwy	0	0	0	0	0	0	2.0	1.00	0.930

Operational Results

2027 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	Eby Creek Rd NB	Merge	492	603	204	399	713	978	749	0.5029	0.8050
2	EB 1-70 On-ramp	None	0		0		1000	0		0.0000	
3	Eby Creek Rd SB	None	565		12		285	2159		0.2617	
4	EB I-70 Off-ramp	None	387		576		1	1685		0.2296	
5	Gas Station Dwy	None	0		0		46	0		0.0000	

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	Eby Creek Rd NB	Merge	11.01	28.59	20.69	3.10	13.06	B	D	C
2	EB 1-70 On-ramp	None	0.00		0.00	0.00		A		A
3	Eby Creek Rd SB	None	5.07		5.07	1.27		A		A
4	EB I-70 Off-ramp	None	5.52		5.52	1.08		A		A
5	Gas Station Dwy	None	0.00		0.00	0.00		A		A

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	Eby Creek Rd NB	49	0	15.00	1	18.00	1	48.00	53.00	42.00
2	Market St	126	0	13.50	1	17.00	1	90.00	64.00	20.00
3	Eby Creek Rd SB	240	0	12.70	1	18.60	1	63.00	51.00	46.00
4	Site Driveway	305	0	16.00	1	16.00	1	0.00	66.00	56.00

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	Eby Creek Rd NB	121.00	22.00	1	21.00	1	19.60	1
2	Market St	119.00	20.00	1	17.00	1	15.00	1
3	Eby Creek Rd SB	121.00	22.00	1	18.00	1	14.50	1
4	Site Driveway	119.00	22.00	1	19.00	1	19.00	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	Eby Creek Rd NB	0	1.000	0	1.000	20.00	2240	0	19.60	2927	0
2	Market St	0	1.000	0	1.000	20.00	2016	0	15.00	2240	0
3	Eby Creek Rd SB	0	1.000	0	1.000	20.00	1897	0	14.50	2166	0
4	Site Driveway	0	1.000	0	1.000	20.00	2390	0	19.00	2838	0

Traffic Flow Data (veh/hr)

2027 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	1	2	120	432	0	2.0	1.00	0.960
2	Market St	1	442	0	28	0	2.0	1.00	0.960
3	Eby Creek Rd SB	0	10	66	0	0	2.0	1.00	0.960
4	Site Driveway	0	1	0	2	0	2.0	1.00	0.960

Operational Results

2027 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	Eby Creek Rd NB	None	555		12		511	930		0.5965	
2	Market St	None	471		124		443	1000		0.4709	
3	Eby Creek Rd SB	None	76		446		149	693		0.1097	
4	Site Driveway	None	3		520		2	643		0.0047	

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	Eby Creek Rd NB	None	13.02		13.02	3.90		B		B
2	Market St	None	10.27		10.27	2.54		B		B
3	Eby Creek Rd SB	None	7.18		7.18	0.36		A		A
4	Site Driveway	None	0.05		0.05	0.00		A		A

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	Eby Creek Rd NB	41	0	12.80	1	19.00	1	46.00	125.00	33.00
2	I-70 WB Off-Ramp	117	0	24.00	2	24.80	2	45.00	113.00	15.00
3	Eby Creek Rd SB	230	0	22.90	2	26.30	2	47.00	66.00	15.00
4	I-70 WB On-ramp	319	0	15.00	1	15.00	1	50.00	60.00	40.00

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	Eby Creek Rd NB	134.00	20.00	1	26.00	2	23.00	2
2	I-70 WB Off-Ramp	138.00	22.00	1	15.00	1	15.00	1
3	Eby Creek Rd SB	134.00	33.00	2	20.70	1	16.00	1
4	I-70 WB On-ramp	138.00	33.00	2	16.90	1	17.60	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	Eby Creek Rd NB	0	1.000	0	1.000	20.00	1912	0	23.00	3435	0
2	I-70 WB Off-Ramp	0	1.000	0	1.000	20.00	3584	0	15.00	2240	0
3	Eby Creek Rd SB	0	1.000	0	1.000	20.00	3420	0	16.00	2390	0
4	I-70 WB On-ramp	0	1.000	0	1.000	20.00	2240	0	17.60	2629	0

Traffic Flow Data (veh/hr)

2027 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	2	215	358	0	0	2.0	1.00	0.980
2	I-70 WB Off-Ramp	0	856	0	161	0	2.0	1.00	0.980
3	Eby Creek Rd SB	0	0	361	130	0	2.0	1.00	0.980
4	I-70 WB On-ramp	0	0	0	0	0	2.0	1.00	0.980

Operational Results

2027 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	Eby Creek Rd NB	None	575		0		1219	1037		0.5546	
2	I-70 WB Off-Ramp	None	1017		575		0	1475		0.6896	
3	Eby Creek Rd SB	None	491		1073		519	1296		0.3789	
4	I-70 WB On-ramp	None	0		0		345	0		0.0000	

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	Eby Creek Rd NB	None	11.65		11.65	3.36		B		B
2	I-70 WB Off-Ramp	None	13.00		13.00	6.49		B		B
3	Eby Creek Rd SB	None	8.69		8.69	2.17		A		A
4	I-70 WB On-ramp	None	0.00		0.00	0.00		A		A

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	Eby Creek Rd NB	46	0	13.90	1	19.80	1	77.00	120.00	21.00
2	EB 1-70 On-ramp	144	0	12.00	1	12.00	1	90.00	60.00	30.00
3	Eby Creek Rd SB	221	0	24.00	2	27.80	2	36.00	118.00	32.00
4	EB I-70 Off-ramp	303	0	24.00	2	26.00	2	40.00	190.00	26.00
5	Gas Station Dwy	348	0	12.00	1	12.00	1	90.00	60.00	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	Eby Creek Rd NB	132.00	22.00	1	28.00	2	26.00	2
2	EB 1-70 On-ramp	136.00	22.00	1	16.60	1	15.80	1
3	Eby Creek Rd SB	132.00	20.00	1	17.10	1	12.40	1
4	EB I-70 Off-ramp	136.00	33.00	2	13.00	1	12.00	1
5	Gas Station Dwy	146.00	34.00	2	22.00	1	19.30	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	Eby Creek Rd NB	0	1.000	0	1.000	23.90	3570	0	26.00	3883	0
2	EB 1-70 On-ramp	0	1.000	0	1.000	24.00	1792	0	15.80	2360	0
3	Eby Creek Rd SB	0	1.000	0	1.000	24.00	3584	0	12.40	1852	0
4	EB I-70 Off-ramp	0	1.000	0	1.000	24.00	3584	0	12.00	1792	0
5	Gas Station Dwy	0	1.000	0	1.000	24.00	1792	0	19.30	2882	0

Bypass Geometry

Bypass Approach Geometry (ft)

Leg	Leg Names	Bypass Type	Bypass Flows	V	nv	Vb	nvb	Vt	nvt
1	Eby Creek Rd NB	Merge	410	13.9	1	10	1	23.9	2

Bypass Entry and Exit Geometry (ft)

Leg	Leg Names	Entry Geometry						Leg	Leg Names	Exit Lanes	
		Eb	neb	Lb	Lt	Rb	Phib			nex	Nmx
1	Eby Creek Rd NB	13.9	1	0	349	155.000 1786	30	2	EB 1-70 On-ramp	1	2

Bypass Entry Capacity Modifiers and Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Calibration	
		Capacity + or -	Cross Walk Factor	Intercept + or -	Slope Factor
1	Eby Creek Rd NB	0	1.000	0	1.000

Traffic Flow Data (veh/hr)

2027 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows						Flow Modifiers		
		U-Turn	Exit-4	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	49	0	1	535	51	410	2.0	1.00	0.910
2	EB 1-70 On-ramp	0	0	0	0	0	0	2.0	1.00	0.910
3	Eby Creek Rd SB	2	43	1083	32	0	0	2.0	1.00	0.910
4	EB I-70 Off-ramp	0	42	0	125	11	0	2.0	1.00	0.910
5	Gas Station Dwy	0	0	0	0	0	0	2.0	1.00	0.910

Operational Results

2027 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	Eby Creek Rd NB	Merge	636	410	87	94	1257	1050	848	0.6059	0.4834
2	EB 1-70 On-ramp	None	0		0		504	0		0.0000	
3	Eby Creek Rd SB	None	1160		50		579	2117		0.5479	
4	EB I-70 Off-ramp	None	178		1209		1	1184		0.1503	
5	Gas Station Dwy	None	0		0		43	0		0.0000	

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	Eby Creek Rd NB	Merge	12.75	11.51	12.26	4.96	2.86	B	B	B
2	EB 1-70 On-ramp	None	0.00		0.00	0.00		A		A
3	Eby Creek Rd SB	None	7.40		7.40	3.78		A		A
4	EB I-70 Off-ramp	None	6.04		6.04	0.73		A		A
5	Gas Station Dwy	None	0.00		0.00	0.00		A		A

SHORT-TERM (2027) CONDITIONS
WITH PROJECT
LEVEL OF SERVICE AND QUEUING
CALCULATIONS

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	Eby Creek Rd NB	49	0	15.00	1	18.00	1	48.00	53.00	42.00
2	Market St	126	0	13.50	1	17.00	1	90.00	64.00	20.00
3	Eby Creek Rd SB	240	0	12.70	1	18.60	1	63.00	51.00	46.00
4	Site Driveway	305	0	16.00	1	16.00	1	0.00	66.00	56.00

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	Eby Creek Rd NB	121.00	22.00	1	21.00	1	19.60	1
2	Market St	119.00	20.00	1	17.00	1	15.00	1
3	Eby Creek Rd SB	121.00	22.00	1	18.00	1	14.50	1
4	Site Driveway	119.00	22.00	1	19.00	1	19.00	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	Eby Creek Rd NB	0	1.000	0	1.000	20.00	2240	0	19.60	2927	0
2	Market St	0	1.000	0	1.000	20.00	2016	0	15.00	2240	0
3	Eby Creek Rd SB	0	1.000	0	1.000	20.00	1897	0	14.50	2166	0
4	Site Driveway	0	1.000	0	1.000	20.00	2390	0	19.00	2838	0

Traffic Flow Data (veh/hr)

2027 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	0	18	28	199	0	2.0	1.00	0.910
2	Market St	0	179	4	5	0	2.0	1.00	0.910
3	Eby Creek Rd SB	0	23	121	3	0	2.0	1.00	0.910
4	Site Driveway	0	0	3	17	0	2.0	1.00	0.910

Operational Results

2027 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	Eby Creek Rd NB	None	245		26		317	923		0.2654	
2	Market St	None	188		46		225	1048		0.1795	
3	Eby Creek Rd SB	None	147		201		33	826		0.1781	
4	Site Driveway	None	20		323		25	748		0.0267	

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	Eby Creek Rd NB	None	7.47		7.47	1.05		A		A
2	Market St	None	6.13		6.13	0.68		A		A
3	Eby Creek Rd SB	None	7.27		7.27	0.68		A		A
4	Site Driveway	None	5.42		5.42	0.09		A		A

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	Eby Creek Rd NB	41	0	12.80	1	19.00	1	46.00	125.00	33.00
2	I-70 WB Off-Ramp	117	0	24.00	2	24.80	2	45.00	113.00	15.00
3	Eby Creek Rd SB	230	0	22.90	2	26.30	2	47.00	66.00	15.00
4	I-70 WB On-ramp	319	0	15.00	1	15.00	1	50.00	60.00	40.00

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	Eby Creek Rd NB	134.00	20.00	1	26.00	2	23.00	2
2	I-70 WB Off-Ramp	138.00	22.00	1	15.00	1	15.00	1
3	Eby Creek Rd SB	134.00	33.00	2	20.70	1	16.00	1
4	I-70 WB On-ramp	138.00	33.00	2	16.90	1	17.60	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	Eby Creek Rd NB	0	1.000	0	1.000	20.00	1912	0	23.00	3435	0
2	I-70 WB Off-Ramp	0	1.000	0	1.000	20.00	3584	0	15.00	2240	0
3	Eby Creek Rd SB	0	1.000	0	1.000	20.00	3420	0	16.00	2390	0
4	I-70 WB On-ramp	0	1.000	0	1.000	20.00	2240	0	17.60	2629	0

Traffic Flow Data (veh/hr)

2027 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	3	73	211	0	0	2.0	1.00	0.940
2	I-70 WB Off-Ramp	0	314	0	43	0	2.0	1.00	0.940
3	Eby Creek Rd SB	0	0	271	40	0	2.0	1.00	0.940
4	I-70 WB On-ramp	0	0	0	0	0	2.0	1.00	0.940

Operational Results

2027 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	Eby Creek Rd NB	None	287		0		588	1037		0.2768	
2	I-70 WB Off-Ramp	None	357		287		0	1794		0.1990	
3	Eby Creek Rd SB	None	311		390		254	1841		0.1690	
4	I-70 WB On-ramp	None	0		0		113	0		0.0000	

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	Eby Creek Rd NB	None	7.33		7.33	1.13		A		A
2	I-70 WB Off-Ramp	None	4.71		4.71	0.79		A		A
3	Eby Creek Rd SB	None	4.29		4.29	0.65		A		A
4	I-70 WB On-ramp	None	0.00		0.00	0.00		A		A

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	Eby Creek Rd NB	46	0	13.90	1	19.80	1	77.00	120.00	21.00
2	EB 1-70 On-ramp	144	0	12.00	1	12.00	1	90.00	60.00	30.00
3	Eby Creek Rd SB	221	0	24.00	2	27.80	2	36.00	118.00	32.00
4	EB I-70 Off-ramp	303	0	24.00	2	26.00	2	40.00	190.00	26.00
5	Gas Station Dwy	348	0	12.00	1	12.00	1	90.00	60.00	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	Eby Creek Rd NB	132.00	22.00	1	28.00	2	26.00	2
2	EB 1-70 On-ramp	136.00	22.00	1	16.60	1	15.80	1
3	Eby Creek Rd SB	132.00	20.00	1	17.10	1	12.40	1
4	EB I-70 Off-ramp	136.00	33.00	2	13.00	1	12.00	1
5	Gas Station Dwy	146.00	34.00	2	22.00	1	19.30	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	Eby Creek Rd NB	0	1.000	0	1.000	23.90	3570	0	26.00	3883	0
2	EB 1-70 On-ramp	0	1.000	0	1.000	24.00	1792	0	15.80	2360	0
3	Eby Creek Rd SB	0	1.000	0	1.000	24.00	3584	0	12.40	1852	0
4	EB I-70 Off-ramp	0	1.000	0	1.000	24.00	3584	0	12.00	1792	0
5	Gas Station Dwy	0	1.000	0	1.000	24.00	1792	0	19.30	2882	0

Bypass Geometry

Bypass Approach Geometry (ft)

Leg	Leg Names	Bypass Type	Bypass Flows	V	nv	Vb	nvb	Vt	nvt
1	Eby Creek Rd NB	Merge	410	13.9	1	10	1	23.9	2

Bypass Entry and Exit Geometry (ft)

Leg	Leg Names	Entry Geometry						Leg	Leg Names	Exit Lanes	
		Eb	neb	Lb	Lt	Rb	Phib			nex	Nmx
1	Eby Creek Rd NB	13.9	1	0	349	155.000 2728	30	2	EB 1-70 On-ramp	1	2

Bypass Entry Capacity Modifiers and Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Calibration	
		Capacity + or -	Cross Walk Factor	Intercept + or -	Slope Factor
1	Eby Creek Rd NB	0	1.000	0	1.000

Traffic Flow Data (veh/hr)

2027 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows						Flow Modifiers		
		U-Turn	Exit-4	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	49	0	1	543	51	410	2.0	1.00	0.910
2	EB 1-70 On-ramp	0	0	0	0	0	0	2.0	1.00	0.910
3	Eby Creek Rd SB	2	47	1091	32	0	0	2.0	1.00	0.910
4	EB I-70 Off-ramp	0	44	0	125	11	0	2.0	1.00	0.910
5	Gas Station Dwy	0	0	0	0	0	0	2.0	1.00	0.910

Operational Results

2027 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	Eby Creek Rd NB	Merge	644	410	93	98	1265	1046	847	0.6157	0.4841
2	EB 1-70 On-ramp	None	0		0		508	0		0.0000	
3	Eby Creek Rd SB	None	1172		50		589	2117		0.5536	
4	EB I-70 Off-ramp	None	180		1221		1	1175		0.1532	
5	Gas Station Dwy	None	0		0		43	0		0.0000	

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	Eby Creek Rd NB	Merge	13.04	11.54	12.46	5.18	2.87	B	B	B
2	EB 1-70 On-ramp	None	0.00		0.00	0.00		A		A
3	Eby Creek Rd SB	None	7.48		7.48	3.88		A		A
4	EB I-70 Off-ramp	None	6.17		6.17	0.76		A		A
5	Gas Station Dwy	None	0.00		0.00	0.00		A		A

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	Eby Creek Rd NB	49	0	15.00	1	18.00	1	48.00	53.00	42.00
2	Market St	126	0	13.50	1	17.00	1	90.00	64.00	20.00
3	Eby Creek Rd SB	240	0	12.70	1	18.60	1	63.00	51.00	46.00
4	Site Driveway	305	0	16.00	1	16.00	1	0.00	66.00	56.00

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	Eby Creek Rd NB	121.00	22.00	1	21.00	1	19.60	1
2	Market St	119.00	20.00	1	17.00	1	15.00	1
3	Eby Creek Rd SB	121.00	22.00	1	18.00	1	14.50	1
4	Site Driveway	119.00	22.00	1	19.00	1	19.00	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	Eby Creek Rd NB	0	1.000	0	1.000	20.00	2240	0	19.60	2927	0
2	Market St	0	1.000	0	1.000	20.00	2016	0	15.00	2240	0
3	Eby Creek Rd SB	0	1.000	0	1.000	20.00	1897	0	14.50	2166	0
4	Site Driveway	0	1.000	0	1.000	20.00	2390	0	19.00	2838	0

Traffic Flow Data (veh/hr)

2027 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	1	28	117	423	0	2.0	1.00	0.960
2	Market St	1	432	11	28	0	2.0	1.00	0.960
3	Eby Creek Rd SB	0	10	65	2	0	2.0	1.00	0.960
4	Site Driveway	0	5	10	27	0	2.0	1.00	0.960

Operational Results

2027 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	Eby Creek Rd NB	None	569		26		525	923		0.6165	
2	Market St	None	472		151		444	984		0.4797	
3	Eby Creek Rd SB	None	77		473		150	678		0.1136	
4	Site Driveway	None	42		509		41	648		0.0648	

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	Eby Creek Rd NB	None	13.63		13.63	4.22		B		B
2	Market St	None	10.55		10.55	2.63		B		B
3	Eby Creek Rd SB	None	7.37		7.37	0.38		A		A
4	Site Driveway	None	6.84		6.84	0.20		A		A

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	Eby Creek Rd NB	41	0	12.80	1	19.00	1	46.00	125.00	33.00
2	I-70 WB Off-Ramp	117	0	24.00	2	24.80	2	45.00	113.00	15.00
3	Eby Creek Rd SB	230	0	22.90	2	26.30	2	47.00	66.00	15.00
4	I-70 WB On-ramp	319	0	15.00	1	15.00	1	50.00	60.00	40.00

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	Eby Creek Rd NB	134.00	20.00	1	26.00	2	23.00	2
2	I-70 WB Off-Ramp	138.00	22.00	1	15.00	1	15.00	1
3	Eby Creek Rd SB	134.00	33.00	2	20.70	1	16.00	1
4	I-70 WB On-ramp	138.00	33.00	2	16.90	1	17.60	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	Eby Creek Rd NB	0	1.000	0	1.000	20.00	1912	0	23.00	3435	0
2	I-70 WB Off-Ramp	0	1.000	0	1.000	20.00	3584	0	15.00	2240	0
3	Eby Creek Rd SB	0	1.000	0	1.000	20.00	3420	0	16.00	2390	0
4	I-70 WB On-ramp	0	1.000	0	1.000	20.00	2240	0	17.60	2629	0

Traffic Flow Data (veh/hr)

2027 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	2	215	368	0	0	2.0	1.00	0.980
2	I-70 WB Off-Ramp	0	856	0	165	0	2.0	1.00	0.980
3	Eby Creek Rd SB	0	0	373	132	0	2.0	1.00	0.980
4	I-70 WB On-ramp	0	0	0	0	0	2.0	1.00	0.980

Operational Results

2027 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	Eby Creek Rd NB	None	585		0		1231	1037		0.5643	
2	I-70 WB Off-Ramp	None	1021		585		0	1464		0.6975	
3	Eby Creek Rd SB	None	505		1073		533	1296		0.3897	
4	I-70 WB On-ramp	None	0		0		347	0		0.0000	

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	Eby Creek Rd NB	None	11.87		11.87	3.48		B		B
2	I-70 WB Off-Ramp	None	13.35		13.35	6.74		B		B
3	Eby Creek Rd SB	None	8.82		8.82	2.25		A		A
4	I-70 WB On-ramp	None	0.00		0.00	0.00		A		A

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	Eby Creek Rd NB	46	0	13.90	1	19.80	1	77.00	120.00	21.00
2	EB 1-70 On-ramp	144	0	12.00	1	12.00	1	90.00	60.00	30.00
3	Eby Creek Rd SB	221	0	24.00	2	27.80	2	36.00	118.00	32.00
4	EB I-70 Off-ramp	303	0	24.00	2	26.00	2	40.00	190.00	26.00
5	Gas Station Dwy	348	0	12.00	1	12.00	1	90.00	60.00	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	Eby Creek Rd NB	132.00	22.00	1	28.00	2	26.00	2
2	EB 1-70 On-ramp	136.00	22.00	1	16.60	1	15.80	1
3	Eby Creek Rd SB	132.00	20.00	1	17.10	1	12.40	1
4	EB I-70 Off-ramp	136.00	33.00	2	13.00	1	12.00	1
5	Gas Station Dwy	146.00	34.00	2	22.00	1	19.30	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	Eby Creek Rd NB	0	1.000	0	1.000	23.90	3570	0	26.00	3883	0
2	EB 1-70 On-ramp	0	1.000	0	1.000	24.00	1792	0	15.80	2360	0
3	Eby Creek Rd SB	0	1.000	0	1.000	24.00	3584	0	12.40	1852	0
4	EB I-70 Off-ramp	0	1.000	0	1.000	24.00	3584	0	12.00	1792	0
5	Gas Station Dwy	0	1.000	0	1.000	24.00	1792	0	19.30	2882	0

Bypass Geometry

Bypass Approach Geometry (ft)

Leg	Leg Names	Bypass Type	Bypass Flows	V	nv	Vb	nvb	Vt	nvt
1	Eby Creek Rd NB	Merge	410	13.9	1	10	1	23.9	2

Bypass Entry and Exit Geometry (ft)

Leg	Leg Names	Entry Geometry						Leg	Leg Names	Exit Lanes	
		Eb	neb	Lb	Lt	Rb	Phib			nex	Nmx
1	Eby Creek Rd NB	13.9	1	0	349	155.000 2331	30	2	EB 1-70 On-ramp	1	2

Bypass Entry Capacity Modifiers and Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Calibration	
		Capacity + or -	Cross Walk Factor	Intercept + or -	Slope Factor
1	Eby Creek Rd NB	0	1.000	0	1.000

Traffic Flow Data (veh/hr)

2027 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows						Flow Modifiers		
		U-Turn	Exit-4	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	49	0	1	543	51	410	2.0	1.00	0.910
2	EB 1-70 On-ramp	0	0	0	0	0	0	2.0	1.00	0.910
3	Eby Creek Rd SB	2	47	1091	32	0	0	2.0	1.00	0.910
4	EB I-70 Off-ramp	0	44	0	125	11	0	2.0	1.00	0.910
5	Gas Station Dwy	0	0	0	0	0	0	2.0	1.00	0.910

Operational Results

2027 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	Eby Creek Rd NB	Merge	644	410	93	98	1265	1046	847	0.6157	0.4841
2	EB 1-70 On-ramp	None	0		0		508	0		0.0000	
3	Eby Creek Rd SB	None	1172		50		589	2117		0.5536	
4	EB I-70 Off-ramp	None	180		1221		1	1175		0.1532	
5	Gas Station Dwy	None	0		0		43	0		0.0000	

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	Eby Creek Rd NB	Merge	13.04	11.54	12.46	5.18	2.87	B	B	B
2	EB 1-70 On-ramp	None	0.00		0.00	0.00		A		A
3	Eby Creek Rd SB	None	7.48		7.48	3.88		A		A
4	EB I-70 Off-ramp	None	6.17		6.17	0.76		A		A
5	Gas Station Dwy	None	0.00		0.00	0.00		A		A

LONG-RANGE (2045) CONDITIONS WITHOUT PROJECT LEVEL OF SERVICE AND QUEUING CALCULATIONS

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	Eby Creek Rd NB	49	0	15.00	1	18.00	1	48.00	53.00	42.00
2	Market St	126	0	13.50	1	17.00	1	90.00	64.00	20.00
3	Eby Creek Rd SB	240	0	12.70	1	18.60	1	63.00	51.00	46.00
4	Site Driveway	305	0	16.00	1	16.00	1	0.00	66.00	56.00

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	Eby Creek Rd NB	121.00	22.00	1	21.00	1	19.60	1
2	Market St	119.00	20.00	1	17.00	1	15.00	1
3	Eby Creek Rd SB	121.00	22.00	1	18.00	1	14.50	1
4	Site Driveway	119.00	22.00	1	19.00	1	19.00	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	Eby Creek Rd NB	0	1.000	0	1.000	20.00	2240	0	19.60	2927	0
2	Market St	0	1.000	0	1.000	20.00	2016	0	15.00	2240	0
3	Eby Creek Rd SB	0	1.000	0	1.000	20.00	1897	0	14.50	2166	0
4	Site Driveway	0	1.000	0	1.000	20.00	2390	0	19.00	2838	0

Traffic Flow Data (veh/hr)

2045 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	0	2	33	240	0	2.0	1.00	0.910
2	Market St	0	217	1	6	0	2.0	1.00	0.910
3	Eby Creek Rd SB	0	27	145	1	0	2.0	1.00	0.910
4	Site Driveway	0	0	0	5	0	2.0	1.00	0.910

Operational Results

2045 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	Eby Creek Rd NB	None	275		27		367	922		0.2981	
2	Market St	None	224		35		267	1054		0.2125	
3	Eby Creek Rd SB	None	173		220		39	815		0.2122	
4	Site Driveway	None	5		389		4	712		0.0070	

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	Eby Creek Rd NB	None	7.87		7.87	1.24		A		A
2	Market St	None	6.54		6.54	0.83		A		A
3	Eby Creek Rd SB	None	7.85		7.85	0.84		A		A
4	Site Driveway	None	0.07		0.07	0.00		A		A

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	Eby Creek Rd NB	41	0	12.80	1	19.00	1	46.00	125.00	33.00
2	I-70 WB Off-Ramp	117	0	24.00	2	24.80	2	45.00	113.00	15.00
3	Eby Creek Rd SB	230	0	22.90	2	26.30	2	47.00	66.00	15.00
4	I-70 WB On-ramp	319	0	15.00	1	15.00	1	50.00	60.00	40.00

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	Eby Creek Rd NB	134.00	20.00	1	26.00	2	23.00	2
2	I-70 WB Off-Ramp	138.00	22.00	1	15.00	1	15.00	1
3	Eby Creek Rd SB	134.00	33.00	2	20.70	1	16.00	1
4	I-70 WB On-ramp	138.00	33.00	2	16.90	1	17.60	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	Eby Creek Rd NB	0	1.000	0	1.000	20.00	1912	0	23.00	3435	0
2	I-70 WB Off-Ramp	0	1.000	0	1.000	20.00	3584	0	15.00	2240	0
3	Eby Creek Rd SB	0	1.000	0	1.000	20.00	3420	0	16.00	2390	0
4	I-70 WB On-ramp	0	1.000	0	1.000	20.00	2240	0	17.60	2629	0

Traffic Flow Data (veh/hr)

2045 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	4	87	240	0	0	2.0	1.00	0.940
2	I-70 WB Off-Ramp	0	376	0	47	0	2.0	1.00	0.940
3	Eby Creek Rd SB	0	0	314	46	0	2.0	1.00	0.940
4	I-70 WB On-ramp	0	0	0	0	0	2.0	1.00	0.940

Operational Results

2045 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	Eby Creek Rd NB	None	331		0		694	1037		0.3193	
2	I-70 WB Off-Ramp	None	423		331		0	1745		0.2424	
3	Eby Creek Rd SB	None	360		467		287	1779		0.2023	
4	I-70 WB On-ramp	None	0		0		133	0		0.0000	

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	Eby Creek Rd NB	None	7.84		7.84	1.39		A		A
2	I-70 WB Off-Ramp	None	5.15		5.15	1.01		A		A
3	Eby Creek Rd SB	None	4.80		4.80	0.82		A		A
4	I-70 WB On-ramp	None	0.00		0.00	0.00		A		A

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	Eby Creek Rd NB	46	0	13.90	1	19.80	1	77.00	120.00	21.00
2	EB 1-70 On-ramp	144	0	12.00	1	12.00	1	90.00	60.00	30.00
3	Eby Creek Rd SB	221	0	24.00	2	27.80	2	36.00	118.00	32.00
4	EB I-70 Off-ramp	303	0	24.00	2	26.00	2	40.00	190.00	26.00
5	Gas Station Dwy	348	0	12.00	1	12.00	1	90.00	60.00	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	Eby Creek Rd NB	132.00	22.00	1	28.00	2	26.00	2
2	EB 1-70 On-ramp	136.00	22.00	1	16.60	1	15.80	1
3	Eby Creek Rd SB	132.00	20.00	1	17.10	1	12.40	1
4	EB I-70 Off-ramp	136.00	33.00	2	13.00	1	12.00	1
5	Gas Station Dwy	146.00	34.00	2	22.00	1	19.30	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	Eby Creek Rd NB	0	1.000	0	1.000	23.90	3570	0	26.00	3883	0
2	EB 1-70 On-ramp	0	1.000	0	1.000	24.00	1792	0	15.80	2360	0
3	Eby Creek Rd SB	0	1.000	0	1.000	24.00	3584	0	12.40	1852	0
4	EB I-70 Off-ramp	0	1.000	0	1.000	24.00	3584	0	12.00	1792	0
5	Gas Station Dwy	0	1.000	0	1.000	24.00	1792	0	19.30	2882	0

Bypass Geometry

Bypass Approach Geometry (ft)

Leg	Leg Names	Bypass Type	Bypass Flows	V	nv	Vb	nvb	Vt	nvt
1	Eby Creek Rd NB	Merge	570	13.9	1	10	1	23.9	2

Bypass Entry and Exit Geometry (ft)

Leg	Leg Names	Entry Geometry						Leg	Leg Names	Exit Lanes	
		Eb	neb	Lb	Lt	Rb	Phib			nex	Nmx
1	Eby Creek Rd NB	13.9	1	0	349	155.000 2926	30	2	EB 1-70 On-ramp	1	2

Bypass Entry Capacity Modifiers and Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Calibration	
		Capacity + or -	Cross Walk Factor	Intercept + or -	Slope Factor
1	Eby Creek Rd NB	0	1.000	0	1.000

Traffic Flow Data (veh/hr)

2045 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows						Flow Modifiers		
		U-Turn	Exit-4	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	14	0	1	275	450	570	2.0	1.00	0.930
2	EB 1-70 On-ramp	0	0	0	0	0	0	2.0	1.00	0.930
3	Eby Creek Rd SB	1	145	502	27	0	0	2.0	1.00	0.930
4	EB I-70 Off-ramp	0	64	32	339	27	0	2.0	1.00	0.930
5	Gas Station Dwy	0	0	0	0	0	0	2.0	1.00	0.930

Operational Results

2045 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	Eby Creek Rd NB	Merge	740	570	242	627	855	955	675	0.7748	0.8443
2	EB 1-70 On-ramp	None	0		0		1194	0		0.0000	
3	Eby Creek Rd SB	None	675		15		340	2155		0.3132	
4	EB I-70 Off-ramp	None	462		689		1	1596		0.2895	
5	Gas Station Dwy	None	0		0		54	0		0.0000	

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	Eby Creek Rd NB	Merge	20.87	37.24	27.99	10.71	17.54	C	E	D
2	EB 1-70 On-ramp	None	0.00		0.00	0.00		A		A
3	Eby Creek Rd SB	None	5.53		5.53	1.63		A		A
4	EB I-70 Off-ramp	None	6.28		6.28	1.49		A		A
5	Gas Station Dwy	None	0.00		0.00	0.00		A		A

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	Eby Creek Rd NB	49	0	15.00	1	18.00	1	48.00	53.00	42.00
2	Market St	126	0	13.50	1	17.00	1	90.00	64.00	20.00
3	Eby Creek Rd SB	240	0	12.70	1	18.60	1	63.00	51.00	46.00
4	Site Driveway	305	0	16.00	1	16.00	1	0.00	66.00	56.00

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	Eby Creek Rd NB	121.00	22.00	1	21.00	1	19.60	1
2	Market St	119.00	20.00	1	17.00	1	15.00	1
3	Eby Creek Rd SB	121.00	22.00	1	18.00	1	14.50	1
4	Site Driveway	119.00	22.00	1	19.00	1	19.00	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	Eby Creek Rd NB	0	1.000	0	1.000	20.00	2240	0	19.60	2927	0
2	Market St	0	1.000	0	1.000	20.00	2016	0	15.00	2240	0
3	Eby Creek Rd SB	0	1.000	0	1.000	20.00	1897	0	14.50	2166	0
4	Site Driveway	0	1.000	0	1.000	20.00	2390	0	19.00	2838	0

Traffic Flow Data (veh/hr)

2045 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	1	2	143	516	0	2.0	1.00	0.960
2	Market St	1	529	0	33	0	2.0	1.00	0.960
3	Eby Creek Rd SB	0	12	79	0	0	2.0	1.00	0.960
4	Site Driveway	0	1	0	2	0	2.0	1.00	0.960

Operational Results

2045 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	Eby Creek Rd NB	None	662		14		611	929		0.7123	
2	Market St	None	563		147		529	986		0.5708	
3	Eby Creek Rd SB	None	91		533		177	645		0.1410	
4	Site Driveway	None	3		622		2	588		0.0051	

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	Eby Creek Rd NB	None	16.91		16.91	6.35		C		C
2	Market St	None	12.40		12.40	3.76		B		B
3	Eby Creek Rd SB	None	8.16		8.16	0.48		A		A
4	Site Driveway	None	0.05		0.05	0.00		A		A

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	Eby Creek Rd NB	41	0	12.80	1	19.00	1	46.00	125.00	33.00
2	I-70 WB Off-Ramp	117	0	24.00	2	24.80	2	45.00	113.00	15.00
3	Eby Creek Rd SB	230	0	22.90	2	26.30	2	47.00	66.00	15.00
4	I-70 WB On-ramp	319	0	15.00	1	15.00	1	50.00	60.00	40.00

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	Eby Creek Rd NB	134.00	20.00	1	26.00	2	23.00	2
2	I-70 WB Off-Ramp	138.00	22.00	1	15.00	1	15.00	1
3	Eby Creek Rd SB	134.00	33.00	2	20.70	1	16.00	1
4	I-70 WB On-ramp	138.00	33.00	2	16.90	1	17.60	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	Eby Creek Rd NB	0	1.000	0	1.000	20.00	1912	0	23.00	3435	0
2	I-70 WB Off-Ramp	0	1.000	0	1.000	20.00	3584	0	15.00	2240	0
3	Eby Creek Rd SB	0	1.000	0	1.000	20.00	3420	0	16.00	2390	0
4	I-70 WB On-ramp	0	1.000	0	1.000	20.00	2240	0	17.60	2629	0

Traffic Flow Data (veh/hr)

2045 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	2	258	428	0	0	2.0	1.00	0.980
2	I-70 WB Off-Ramp	0	1024	0	192	0	2.0	1.00	0.980
3	Eby Creek Rd SB	0	0	431	155	0	2.0	1.00	0.980
4	I-70 WB On-ramp	0	0	0	0	0	2.0	1.00	0.980

Operational Results

2045 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	Eby Creek Rd NB	None	688		0		1454	1037		0.6636	
2	I-70 WB Off-Ramp	None	1216		688		0	1350		0.9008	
3	Eby Creek Rd SB	None	586		1281		619	1129		0.5189	
4	I-70 WB On-ramp	None	0		0		413	0		0.0000	

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	Eby Creek Rd NB	None	14.55		14.55	5.15		B		B
2	I-70 WB Off-Ramp	None	29.66		29.66	21.05		D		D
3	Eby Creek Rd SB	None	12.07		12.07	3.78		B		B
4	I-70 WB On-ramp	None	0.00		0.00	0.00		A		A

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	Eby Creek Rd NB	46	0	13.90	1	19.80	1	77.00	120.00	21.00
2	EB 1-70 On-ramp	144	0	12.00	1	12.00	1	90.00	60.00	30.00
3	Eby Creek Rd SB	221	0	24.00	2	27.80	2	36.00	118.00	32.00
4	EB I-70 Off-ramp	303	0	24.00	2	26.00	2	40.00	190.00	26.00
5	Gas Station Dwy	348	0	12.00	1	12.00	1	90.00	60.00	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	Eby Creek Rd NB	132.00	22.00	1	28.00	2	26.00	2
2	EB 1-70 On-ramp	136.00	22.00	1	16.60	1	15.80	1
3	Eby Creek Rd SB	132.00	20.00	1	17.10	1	12.40	1
4	EB I-70 Off-ramp	136.00	33.00	2	13.00	1	12.00	1
5	Gas Station Dwy	146.00	34.00	2	22.00	1	19.30	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	Eby Creek Rd NB	0	1.000	0	1.000	23.90	3570	0	26.00	3883	0
2	EB 1-70 On-ramp	0	1.000	0	1.000	24.00	1792	0	15.80	2360	0
3	Eby Creek Rd SB	0	1.000	0	1.000	24.00	3584	0	12.40	1852	0
4	EB I-70 Off-ramp	0	1.000	0	1.000	24.00	3584	0	12.00	1792	0
5	Gas Station Dwy	0	1.000	0	1.000	24.00	1792	0	19.30	2882	0

Bypass Geometry

Bypass Approach Geometry (ft)

Leg	Leg Names	Bypass Type	Bypass Flows	V	nv	Vb	nvb	Vt	nvt
1	Eby Creek Rd NB	Merge	451	13.9	1	10	1	23.9	2

Bypass Entry and Exit Geometry (ft)

Leg	Leg Names	Entry Geometry						Leg	Leg Names	Exit Lanes	
		Eb	neb	Lb	Lt	Rb	Phib			nex	Nmx
1	Eby Creek Rd NB	13.9	1	0	349	155.000 253	30	2	EB 1-70 On-ramp	1	2

Bypass Entry Capacity Modifiers and Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Calibration	
		Capacity + or -	Cross Walk Factor	Intercept + or -	Slope Factor
1	Eby Creek Rd NB	0	1.000	0	1.000

Traffic Flow Data (veh/hr)

2045 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows						Flow Modifiers		
		U-Turn	Exit-4	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	59	0	1	640	100	451	2.0	1.00	0.910
2	EB 1-70 On-ramp	0	0	0	0	0	0	2.0	1.00	0.910
3	Eby Creek Rd SB	2	52	1295	38	0	0	2.0	1.00	0.910
4	EB I-70 Off-ramp	0	51	0	149	14	0	2.0	1.00	0.910
5	Gas Station Dwy	0	0	0	0	0	0	2.0	1.00	0.910

Operational Results

2045 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	Eby Creek Rd NB	Merge	800	451	105	152	1503	1039	829	0.7702	0.5438
2	EB 1-70 On-ramp	None	0		0		603	0		0.0000	
3	Eby Creek Rd SB	None	1387		60		693	2106		0.6585	
4	EB I-70 Off-ramp	None	214		1446		1	997		0.2147	
5	Gas Station Dwy	None	0		0		52	0		0.0000	

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	Eby Creek Rd NB	Merge	19.45	13.09	17.16	11.27	3.71	C	B	C
2	EB 1-70 On-ramp	None	0.00		0.00	0.00		A		A
3	Eby Creek Rd SB	None	9.12		9.12	6.18		A		A
4	EB I-70 Off-ramp	None	7.93		7.93	1.20		A		A
5	Gas Station Dwy	None	0.00		0.00	0.00		A		A

LONG-RANGE (2045) CONDITIONS
WITH PROJECT
LEVEL OF SERVICE AND QUEUING
CALCULATIONS

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	Eby Creek Rd NB	49	0	15.00	1	18.00	1	48.00	53.00	42.00
2	Market St	126	0	13.50	1	17.00	1	90.00	64.00	20.00
3	Eby Creek Rd SB	240	0	12.70	1	18.60	1	63.00	51.00	46.00
4	Site Driveway	305	0	16.00	1	16.00	1	0.00	66.00	56.00

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	Eby Creek Rd NB	121.00	22.00	1	21.00	1	19.60	1
2	Market St	119.00	20.00	1	17.00	1	15.00	1
3	Eby Creek Rd SB	121.00	22.00	1	18.00	1	14.50	1
4	Site Driveway	119.00	22.00	1	19.00	1	19.00	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	Eby Creek Rd NB	0	1.000	0	1.000	20.00	2240	0	19.60	2927	0
2	Market St	0	1.000	0	1.000	20.00	2016	0	15.00	2240	0
3	Eby Creek Rd SB	0	1.000	0	1.000	20.00	1897	0	14.50	2166	0
4	Site Driveway	0	1.000	0	1.000	20.00	2390	0	19.00	2838	0

Traffic Flow Data (veh/hr)

2045 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	0	72	31	224	0	2.0	1.00	0.910
2	Market St	0	202	19	6	0	2.0	1.00	0.910
3	Eby Creek Rd SB	0	27	135	14	0	2.0	1.00	0.910
4	Site Driveway	0	4	19	74	0	2.0	1.00	0.910

Operational Results

2045 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	Eby Creek Rd NB	None	327		50		411	910		0.3592	
2	Market St	None	227		107		270	1011		0.2246	
3	Eby Creek Rd SB	None	176		293		41	776		0.2269	
4	Site Driveway	None	97		364		105	726		0.1336	

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	Eby Creek Rd NB	None	8.74		8.74	1.65		A		A
2	Market St	None	6.86		6.86	0.90		A		A
3	Eby Creek Rd SB	None	8.33		8.33	0.93		A		A
4	Site Driveway	None	7.27		7.27	0.49		A		A

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	Eby Creek Rd NB	41	0	12.80	1	19.00	1	46.00	125.00	33.00
2	I-70 WB Off-Ramp	117	0	24.00	2	24.80	2	45.00	113.00	15.00
3	Eby Creek Rd SB	230	0	22.90	2	26.30	2	47.00	66.00	15.00
4	I-70 WB On-ramp	319	0	15.00	1	15.00	1	50.00	60.00	40.00

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	Eby Creek Rd NB	134.00	20.00	1	26.00	2	23.00	2
2	I-70 WB Off-Ramp	138.00	22.00	1	15.00	1	15.00	1
3	Eby Creek Rd SB	134.00	33.00	2	20.70	1	16.00	1
4	I-70 WB On-ramp	138.00	33.00	2	16.90	1	17.60	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	Eby Creek Rd NB	0	1.000	0	1.000	20.00	1912	0	23.00	3435	0
2	I-70 WB Off-Ramp	0	1.000	0	1.000	20.00	3584	0	15.00	2240	0
3	Eby Creek Rd SB	0	1.000	0	1.000	20.00	3420	0	16.00	2390	0
4	I-70 WB On-ramp	0	1.000	0	1.000	20.00	2240	0	17.60	2629	0

Traffic Flow Data (veh/hr)

2045 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	4	87	284	0	0	2.0	1.00	0.940
2	I-70 WB Off-Ramp	0	376	0	55	0	2.0	1.00	0.940
3	Eby Creek Rd SB	0	0	352	52	0	2.0	1.00	0.940
4	I-70 WB On-ramp	0	0	0	0	0	2.0	1.00	0.940

Operational Results

2045 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	Eby Creek Rd NB	None	375		0		732	1037		0.3617	
2	I-70 WB Off-Ramp	None	431		375		0	1696		0.2541	
3	Eby Creek Rd SB	None	404		467		339	1779		0.2271	
4	I-70 WB On-ramp	None	0		0		139	0		0.0000	

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	Eby Creek Rd NB	None	8.38		8.38	1.67		A		A
2	I-70 WB Off-Ramp	None	5.39		5.39	1.10		A		A
3	Eby Creek Rd SB	None	5.02		5.02	0.95		A		A
4	I-70 WB On-ramp	None	0.00		0.00	0.00		A		A

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	Eby Creek Rd NB	46	0	13.90	1	19.80	1	77.00	120.00	21.00
2	EB 1-70 On-ramp	144	0	12.00	1	12.00	1	90.00	60.00	30.00
3	Eby Creek Rd SB	221	0	24.00	2	27.80	2	36.00	118.00	32.00
4	EB I-70 Off-ramp	303	0	24.00	2	26.00	2	40.00	190.00	26.00
5	Gas Station Dwy	348	0	12.00	1	12.00	1	90.00	60.00	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	Eby Creek Rd NB	132.00	22.00	1	28.00	2	26.00	2
2	EB 1-70 On-ramp	136.00	22.00	1	16.60	1	15.80	1
3	Eby Creek Rd SB	132.00	20.00	1	17.10	1	12.40	1
4	EB I-70 Off-ramp	136.00	33.00	2	13.00	1	12.00	1
5	Gas Station Dwy	146.00	34.00	2	22.00	1	19.30	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	Eby Creek Rd NB	0	1.000	0	1.000	23.90	3570	0	26.00	3883	0
2	EB 1-70 On-ramp	0	1.000	0	1.000	24.00	1792	0	15.80	2360	0
3	Eby Creek Rd SB	0	1.000	0	1.000	24.00	3584	0	12.40	1852	0
4	EB I-70 Off-ramp	0	1.000	0	1.000	24.00	3584	0	12.00	1792	0
5	Gas Station Dwy	0	1.000	0	1.000	24.00	1792	0	19.30	2882	0

Bypass Geometry

Bypass Approach Geometry (ft)

Leg	Leg Names	Bypass Type	Bypass Flows	V	nv	Vb	nvb	Vt	nvt
1	Eby Creek Rd NB	Merge	570	13.9	1	10	1	23.9	2

Bypass Entry and Exit Geometry (ft)

Leg	Leg Names	Entry Geometry						Leg	Leg Names	Exit Lanes	
		Eb	neb	Lb	Lt	Rb	Phib			nex	Nmx
1	Eby Creek Rd NB	13.9	1	0	349	155.000 4414	30	2	EB 1-70 On-ramp	1	2

Bypass Entry Capacity Modifiers and Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Calibration	
		Capacity + or -	Cross Walk Factor	Intercept + or -	Slope Factor
1	Eby Creek Rd NB	0	1.000	0	1.000

Traffic Flow Data (veh/hr)

2045 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows						Flow Modifiers		
		U-Turn	Exit-4	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	14	0	1	300	450	570	2.0	1.00	0.930
2	EB 1-70 On-ramp	0	0	0	0	0	0	2.0	1.00	0.930
3	Eby Creek Rd SB	1	163	522	27	0	0	2.0	1.00	0.930
4	EB I-70 Off-ramp	0	83	32	339	27	0	2.0	1.00	0.930
5	Gas Station Dwy	0	0	0	0	0	0	2.0	1.00	0.930

Operational Results

2045 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	Eby Creek Rd NB	Merge	765	570	279	644	875	933	669	0.8203	0.8516
2	EB 1-70 On-ramp	None	0		0		1212	0		0.0000	
3	Eby Creek Rd SB	None	713		15		384	2155		0.3308	
4	EB I-70 Off-ramp	None	481		727		1	1566		0.3072	
5	Gas Station Dwy	None	0		0		54	0		0.0000	

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	Eby Creek Rd NB	Merge	25.06	38.93	30.98	14.22	18.49	D	E	D
2	EB 1-70 On-ramp	None	0.00		0.00	0.00		A		A
3	Eby Creek Rd SB	None	5.74		5.74	1.80		A		A
4	EB I-70 Off-ramp	None	6.71		6.71	1.69		A		A
5	Gas Station Dwy	None	0.00		0.00	0.00		A		A

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	Eby Creek Rd NB	49	0	15.00	1	18.00	1	48.00	53.00	42.00
2	Market St	126	0	13.50	1	17.00	1	90.00	64.00	20.00
3	Eby Creek Rd SB	240	0	12.70	1	18.60	1	63.00	51.00	46.00
4	Site Driveway	305	0	16.00	1	16.00	1	0.00	66.00	56.00

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	Eby Creek Rd NB	121.00	22.00	1	21.00	1	19.60	1
2	Market St	119.00	20.00	1	17.00	1	15.00	1
3	Eby Creek Rd SB	121.00	22.00	1	18.00	1	14.50	1
4	Site Driveway	119.00	22.00	1	19.00	1	19.00	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	Eby Creek Rd NB	0	1.000	0	1.000	20.00	2240	0	19.60	2927	0
2	Market St	0	1.000	0	1.000	20.00	2016	0	15.00	2240	0
3	Eby Creek Rd SB	0	1.000	0	1.000	20.00	1897	0	14.50	2166	0
4	Site Driveway	0	1.000	0	1.000	20.00	2390	0	19.00	2838	0

Traffic Flow Data (veh/hr)

2045 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	1	70	137	494	0	2.0	1.00	0.960
2	Market St	1	506	26	33	0	2.0	1.00	0.960
3	Eby Creek Rd SB	0	12	76	5	0	2.0	1.00	0.960
4	Site Driveway	0	9	24	65	0	2.0	1.00	0.960

Operational Results

2045 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	Eby Creek Rd NB	None	702		46		648	912		0.7694	
2	Market St	None	566		217		531	944		0.5995	
3	Eby Creek Rd SB	None	93		604		179	607		0.1532	
4	Site Driveway	None	98		596		101	602		0.1628	

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	Eby Creek Rd NB	None	20.16		20.16	8.35		C		C
2	Market St	None	13.53		13.53	4.23		B		B
3	Eby Creek Rd SB	None	8.81		8.81	0.53		A		A
4	Site Driveway	None	9.04		9.04	0.57		A		A

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	Eby Creek Rd NB	41	0	12.80	1	19.00	1	46.00	125.00	33.00
2	I-70 WB Off-Ramp	117	0	24.00	2	24.80	2	45.00	113.00	15.00
3	Eby Creek Rd SB	230	0	22.90	2	26.30	2	47.00	66.00	15.00
4	I-70 WB On-ramp	319	0	15.00	1	15.00	1	50.00	60.00	40.00

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	Eby Creek Rd NB	134.00	20.00	1	26.00	2	23.00	2
2	I-70 WB Off-Ramp	138.00	22.00	1	15.00	1	15.00	1
3	Eby Creek Rd SB	134.00	33.00	2	20.70	1	16.00	1
4	I-70 WB On-ramp	138.00	33.00	2	16.90	1	17.60	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	Eby Creek Rd NB	0	1.000	0	1.000	20.00	1912	0	23.00	3435	0
2	I-70 WB Off-Ramp	0	1.000	0	1.000	20.00	3584	0	15.00	2240	0
3	Eby Creek Rd SB	0	1.000	0	1.000	20.00	3420	0	16.00	2390	0
4	I-70 WB On-ramp	0	1.000	0	1.000	20.00	2240	0	17.60	2629	0

Traffic Flow Data (veh/hr)

2045 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	2	258	455	0	0	2.0	1.00	0.980
2	I-70 WB Off-Ramp	0	1024	0	205	0	2.0	1.00	0.980
3	Eby Creek Rd SB	0	0	458	165	0	2.0	1.00	0.980
4	I-70 WB On-ramp	0	0	0	0	0	2.0	1.00	0.980

Operational Results

2045 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	Eby Creek Rd NB	None	715		0		1479	1037		0.6897	
2	I-70 WB Off-Ramp	None	1229		715		0	1320		0.9310	
3	Eby Creek Rd SB	None	623		1279		659	1131		0.5508	
4	I-70 WB On-ramp	None	0		0		423	0		0.0000	

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	Eby Creek Rd NB	None	15.47		15.47	5.74		C		C
2	I-70 WB Off-Ramp	None	37.20		37.20	27.46		E		E
3	Eby Creek Rd SB	None	12.77		12.77	4.24		B		B
4	I-70 WB On-ramp	None	0.00		0.00	0.00		A		A

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	Eby Creek Rd NB	46	0	13.90	1	19.80	1	77.00	120.00	21.00
2	EB 1-70 On-ramp	144	0	12.00	1	12.00	1	90.00	60.00	30.00
3	Eby Creek Rd SB	221	0	24.00	2	27.80	2	36.00	118.00	32.00
4	EB I-70 Off-ramp	303	0	24.00	2	26.00	2	40.00	190.00	26.00
5	Gas Station Dwy	348	0	12.00	1	12.00	1	90.00	60.00	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	Eby Creek Rd NB	132.00	22.00	1	28.00	2	26.00	2
2	EB 1-70 On-ramp	136.00	22.00	1	16.60	1	15.80	1
3	Eby Creek Rd SB	132.00	20.00	1	17.10	1	12.40	1
4	EB I-70 Off-ramp	136.00	33.00	2	13.00	1	12.00	1
5	Gas Station Dwy	146.00	34.00	2	22.00	1	19.30	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	Eby Creek Rd NB	0	1.000	0	1.000	23.90	3570	0	26.00	3883	0
2	EB 1-70 On-ramp	0	1.000	0	1.000	24.00	1792	0	15.80	2360	0
3	Eby Creek Rd SB	0	1.000	0	1.000	24.00	3584	0	12.40	1852	0
4	EB I-70 Off-ramp	0	1.000	0	1.000	24.00	3584	0	12.00	1792	0
5	Gas Station Dwy	0	1.000	0	1.000	24.00	1792	0	19.30	2882	0

Bypass Geometry

Bypass Approach Geometry (ft)

Leg	Leg Names	Bypass Type	Bypass Flows	V	nv	Vb	nvb	Vt	nvt
1	Eby Creek Rd NB	Merge	451	13.9	1	10	1	23.9	2

Bypass Entry and Exit Geometry (ft)

Leg	Leg Names	Entry Geometry						Leg	Leg Names	Exit Lanes	
		Eb	neb	Lb	Lt	Rb	Phib			nex	Nmx
1	Eby Creek Rd NB	13.9	1	0	349	155.000 4067	30	2	EB 1-70 On-ramp	1	2

Bypass Entry Capacity Modifiers and Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Calibration	
		Capacity + or -	Cross Walk Factor	Intercept + or -	Slope Factor
1	Eby Creek Rd NB	0	1.000	0	1.000

Traffic Flow Data (veh/hr)

2045 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows						Flow Modifiers		
		U-Turn	Exit-4	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Eby Creek Rd NB	59	0	1	659	100	451	2.0	1.00	0.910
2	EB 1-70 On-ramp	0	0	0	0	0	0	2.0	1.00	0.910
3	Eby Creek Rd SB	2	61	1313	38	0	0	2.0	1.00	0.910
4	EB I-70 Off-ramp	0	59	0	149	14	0	2.0	1.00	0.910
5	Gas Station Dwy	0	0	0	0	0	0	2.0	1.00	0.910

Operational Results

2045 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	Eby Creek Rd NB	Merge	819	451	122	161	1521	1028	826	0.7964	0.5457
2	EB 1-70 On-ramp	None	0		0		612	0		0.0000	
3	Eby Creek Rd SB	None	1414		60		719	2106		0.6713	
4	EB I-70 Off-ramp	None	222		1473		1	975		0.2276	
5	Gas Station Dwy	None	0		0		52	0		0.0000	

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	Eby Creek Rd NB	Merge	21.45	13.17	18.51	13.30	3.74	C	B	C
2	EB 1-70 On-ramp	None	0.00		0.00	0.00		A		A
3	Eby Creek Rd SB	None	9.40		9.40	6.61		A		A
4	EB I-70 Off-ramp	None	8.46		8.46	1.35		A		A
5	Gas Station Dwy	None	0.00		0.00	0.00		A		A