

# Lake Hill Development Traffic Impact Analysis



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**Submitted To:**

Summit County Housing  
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Frisco, CO 80443

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**TABLE OF CONTENTS**

<b>1.0</b>	<b>Introduction .....</b>	<b>4</b>
<b>2.0</b>	<b>Project Description .....</b>	<b>5</b>
<b>3.0</b>	<b>Study Considerations .....</b>	<b>5</b>
3.1	Data Collection .....	6
3.2	Level-of-Service Criteria .....	7
<b>4.0</b>	<b>Existing Conditions .....</b>	<b>9</b>
4.1	Roadways.....	9
4.2	Intersections .....	10
4.3	Pedestrian and Bicycle Access .....	11
4.4	Transit Access .....	11
4.5	Existing Intersection Capacity Analysis.....	11
<b>5.0</b>	<b>Future Background Traffic Conditions .....</b>	<b>12</b>
5.1	Annual Growth Factor and Future Volume Methodology .....	12
5.2	Signal Warrant Analysis .....	12
5.3	Year 2027 Background Intersection Capacity Analysis.....	13
5.4	Year 2042 Background Intersection Capacity Analysis.....	13
<b>6.0</b>	<b>Proposed Development Traffic .....</b>	<b>14</b>
6.1	Trip Generation .....	14
6.2	Trip Distribution and Assignment.....	16
6.3	Proposed Access .....	17
<b>7.0</b>	<b>Future Traffic Conditions with Site Development.....</b>	<b>17</b>
7.1	Year 2027 Background + Project Intersection Capacity Analysis .....	17
7.2	Year 2042 Background + Project Intersection Capacity Analysis .....	18
<b>8.0</b>	<b>Queue Analysis .....</b>	<b>19</b>
<b>9.0</b>	<b>Future Transit and Pedestrian/Bicyclist Amenities .....</b>	<b>20</b>
<b>10.0</b>	<b>Conclusions .....</b>	<b>22</b>



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**LIST OF TABLES**

Table 1 – Peak Hour Intersection Level-of-Service Summary .....	25-27
Table 2 – Peak Hour 95 <sup>th</sup> Percentile Queue Summary .....	28-29
Table 3 – Trip Generation Summary .....	30
Table 4 – Summary of Trip Generation .....	15
Table 5 – Distribution Calculations .....	16

**LIST OF FIGURES**

Figure 1 – Vicinity Map .....	31
Figure 2 – Conceptual Site Plan .....	32
Figure 3 – Year 2022 Existing Traffic Volumes .....	33
Figure 4 – Year 2027 Background Traffic Volumes .....	34
Figure 5 – Year 2042 Background Traffic Volumes .....	35
Figure 6 – Site Trip Distribution .....	36
Figure 7A – Site-Generated Traffic Volumes.....	37
Figure 7B – Site-Generated Traffic Volumes – Year 2042 Adjusted with Interchange .....	38
Figure 8 – Year 2027 Background + Project Traffic Volumes.....	39
Figure 9 – Year 2042 Background + Project Traffic Volumes.....	40

**APPENDIX**

Level of Service Definitions  
Existing Traffic Data  
Signal Warrant Worksheets  
Intersection Capacity Worksheets

## LAKE HILL DEVELOPMENT

### TRAFFIC IMPACT STUDY

#### 1.0 INTRODUCTION

The Fox Tuttle Transportation Group (Fox Tuttle) prepared this traffic impact study (Study) for the Lake Hill development (Project) in Frisco, CO. The project proposes to construct a new residential community with a mix of multi-family and single-family homes that will serve the local workforce of Summit County. The 44.8± acre site is currently vacant and located on Dillon Dam Road, northeast of the Lake Forest Condominiums. The property is within unincorporated Summit County. The land is bounded by I-70 to the west, Dillon Dam Road to the east, Lake Forest Condominiums to the south, and National Forest to the north as shown to the right. The original traffic impact study was completed by Michael Baker International in November 2015 (*Lake Hill Residential Development Traffic Study*). Fox Tuttle prepared an update to the original report to reflect changes associated with the existing roadway network, existing traffic volumes, and forecasted volumes. The update was submitted in 2019. This latest Study includes new traffic volumes (counted in July 2022) and a new Project site plan that proposes higher density than previously evaluated.



The purpose of this Study is to assist in identifying potential traffic impacts within the Study area as a result of this Project having an increase in density. The Study addresses existing, short-term (Year 2027), and long-term (Year 2042) mid-day and PM peak hour intersection conditions in the Study area with and without the Project generated traffic. The information contained in this Study is anticipated to be used by Summit County (County) in identifying any intersection or roadway deficiencies and potential improvements for both the short-term and long-term future conditions. This traffic study is consistent with Summit County requirements.

## 2.0 PROJECT DESCRIPTION

The Lake Hill Master Plan<sup>1</sup> was completed in July 2017 for the development of the new residential community. Lake Hill will be located within the Ten Mile Basin between I-70 and Dillon Dam Road, next to the existing Lake Forest Condominiums and across the street from the existing Heaton Campground. The purpose of Lake Hill is to provide housing for the local workforce within Summit County. Therefore, the BOCC is proposing to construct 875 multi-family units and 25 duplex homes for a total of 900 dwelling units. Since the Master Plan was completed for Lake Hill in 2017, the need for workforce housing in Summit County has increased dramatically per Summit County staff. In the 2019 Housing Needs Assessment, it was found that by 2023 the Ten Mile Basin will have a gap of 1,035 units under 120% AMI and Countywide there will be a gap of 3,066 units under 120% AMI. Since the Needs Assessment was completed, the Summit County staff has noticed the housing situation has gotten significantly worse, due to the COVID-19 pandemic with more people working remotely. Due to this and the shortage of developable land for workforce housing, the Board of County Commissioners decided to increase the proposed density on the Lake Hill parcel.

Access to the site is planned via two proposed driveways along Dillon Dam Road that are anticipated to be constructed as single-lane roundabouts. The accesses will lead to the internal roadway network to serve the Lake Hill community. A vicinity map is shown on **Figure 1**. The site and access plan is provided on **Figure 2**.

## 3.0 STUDY CONSIDERATIONS

The traffic analysis addressed the signalized and unsignalized intersection operations using the procedures and methodologies set forth by the Highway Capacity Manual (HCM)<sup>2</sup>. Study intersections

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<sup>1</sup> Master Plan was completed in partnership with Summit County, Town of Frisco, Summit Combined Housing Authority, Neighboring Community Stakeholders, and a consultant team.

<sup>2</sup> Highway Capacity Manual, Sixth Edition: A Guide for Multimodal Mobility Analysis, Transportation Research Board, National Research Council, 6<sup>th</sup> Edition (2016).



were evaluated using Synchro (version 11) software for signalized, stop-controlled and roundabout intersections.

### 3.1 Data Collection

Traffic counts were collected in July 2022 at five existing intersections for the weekday AM and PM peak hours. Intersection counts for US Highway 6 at Dillon Dam Road were gathered from the Dillon Medical Center Traffic Impact Study (FTH, November 2018) that were collected in September 2018 and grown to Year 2022. Average daily traffic (ADT) counts were collected for 24-hours on Dillon Dam Road south of N. Ten Mile Road, north of N. Ten Mile Road and south of the southmost security gate, as well as on N. Ten Mile Road east of Dillon Dam Road. Summit County staff provided count data for Dillon Dam Road that was collected in December 2018 that was utilized for comparison. Historic and projected traffic volumes for State Highway (SH) 9 and US Highway 6 were gathered from the Colorado Department of Transportation (CDOT) Transportation Data Management System (TDMS) to understand growth in the area.

Recently, CDOT completed a study that included the SH 9 interchange (Exit #203) along I-70 to provide the most appropriate design to accommodate the existing and future volumes on SH 9 through and near the interchange. As documented in CDOT's *Interstate 70 Exit 203 & Eastbound Auxiliary Lane Feasibility Study (June 2020)*, the intersection of SH 9 at Dillon Dam Road would have to be altered significantly to improve the capacity and operations at the interchange intersections. The CDOT Feasibility Study recommended that the intersection of SH 9 and Dillon Dam Road become right-in, right-out for Dillon Dam Road (east side of intersection) and  $\frac{3}{4}$  movement for Lusher Court (west side of the intersection). The left-turns to and from Dillon Dam Road and the left-turns from Lusher Court would be



restricted and redirected to a new frontage road underpass. CDOT’s conceptual design is shown in **Exhibit 1** to the right.

In addition to the count data and CDOT study, the following transportation studies were reviewed and incorporated into this analysis as appropriate:

**Exhibit 1. Recommended Interchange Design per the *Interstate 70 Exit 203 & Eastbound Auxiliary Lane Feasibility Study* (Figure 1-2)**

- Frisko Whole Foods Traffic Impact Study. Felsburg Holt & Ullevig. October 2012.
- Lake Hill Residential Development Traffic Study. Michael Baker International. November 10, 2015
- Frisko Kum & Go #948 (NWC Lusher & Summit) Traffic Impact Study. Kimley Horn. September 2016.
- Frisko Trail Master Plan. SE Group. March 2017.
- Colorado Highway 9 – Frisko Traffic Study (MP 94.36 to MP 96.25). Stolfus & Associates, Inc. August 2018.
- Dillon Medical Building Traffic Impact Study. Fox Tuttle Hernandez Transportation Group, LLC. November 7, 2018.
- Lake Hill Development Traffic Impact Study. Fox Tuttle Hernandez Transportation Group, LLC. June 21, 2021

The existing traffic volumes are illustrated on **Figure 3**. The existing intersection geometry and traffic control are also shown on this figure. Signal timing for the intersection of US Highway 6 at N. Dillon Dam Road was provided by CDOT and utilized within the analysis. Count data is provided in the **Appendix**.

### 3.2 Level-of-Service Criteria

To measure and describe the operational status of the study intersections, transportation engineers and planners commonly use a grading system referred to as “Level-of-Service” (LOS) that is defined by the *HCM*. LOS characterizes the operational conditions of an intersections traffic flow, ranging from LOS A (indicating very good, free flow operations) and LOS F (indicating congested and sometimes oversaturated conditions). These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with traveling through the intersections. The intersection LOS is represented as a

delay in seconds per vehicle for the intersection as a whole and for each turning movement. Criteria contained in the *HCM* was applied for these analyses in order to determine peak hour LOS. A more detailed discussion of LOS methodology is contained in the **Appendix** for reference. Typically, an acceptable level-of-service is LOS D or better in the peak hours.



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## 4.0 EXISTING CONDITIONS

### 4.1 Roadways

The study area boundaries are based on the amount of traffic to be generated by the project and potential impact to the existing roadway network. The existing study area street network consists of arterials and local streets. The primary public roadways that serve the project site are discussed in the following text. The existing study area roadway network is illustrated on **Figure 1**.

**US Highway 6** is an east-west principal arterial that connects Dillon to Keystone to the Loveland Ski Area. The highway provides access to I-70 on both sides of the Continental Divide/Eisenhower-Johnson Tunnels. US Highway 6 becomes Loveland Pass between Keystone and Loveland Ski Area, which is the alternative route to I-70 for trucks carrying hazardous materials to bypass the tunnels. West of Dillon Dam Road, US Highway 6 is classified by CDOT as a Non-Rural Arterial (NR-B) with three lanes per direction and services approximately 16,000 vehicles per day (vpd). East of N. Dillon Dam Road, the highway changes classification to Non-Rural Principal Highway (NR-A) with two lanes per direction and services approximately 12,000 vpd. The posted speed limit also changes on either side of Dillon Dam Road; west of the intersection the speed limit is 35 miles per hour (mph) and increases to 45 mph east of the intersection.

**State Highway 9 (Summit Boulevard)** is a north-south principal arterial that connects I-70 to Frisco, Breckenridge, and Park County. The highway continues east on I-70 where it heads north towards Kremmling from the interchange at Silverthorne (Exit #205). Summit Boulevard is a CDOT facility and is classified as NR-B (Non-Rural Arterial) with one lane per direction through the interchange and two lanes per direction south of the intersection with Dillon Dam Road/Lusher Court. The highway currently serves approximately 26,000 vpd just north of Dillon Dam Road and the posted speed limit is 35 mph. Within the study area, SH 9 is 82-feet wide with 12 to 13-foot travel lanes, two per direction; 18-foot median/center turn lane; and 12-foot auxiliary lanes.

**Dillon Dam Road** is a two-lane arterial within the study area that parallels I-70 and serves as a secondary connection between the towns of Frisco and Dillon. The roadway provides access to existing commercial businesses, lodging, multi-family complexes, and recreational areas. Over the dam, Dillon Dam Road is owned and secured by Denver Water with the authority to close the roadway due to threats against the dam and reservoir infrastructure. Adjacent to the Lake Hill property, the roadway width is 36-feet with 12 to 14-foot travel lanes (one per direction) and 6-

foot shoulders. Dillon Dam Road serves approximately 9,000 vpd north of N. Ten Mile Road and 8,500 vpd south of the dam. The roadway has a posted speed limit of 30 mph south of Beaver Lodge Road and increases to 45 mph north of Beaver Lodge Road. Dillon Dam Road is planned to provide direct access into the proposed Lake Hill community.

**N. Ten Mile Road** is a local two-lane roadway that serves commercial and residential properties along the southwest corner of Dillon Reservoir. N. Ten Mile Road parallels SH 9 and acts as a frontage road for the local businesses with multiple locations that lead to the highway. N. Ten Mile Road serves approximately 3,500 vpd east of Dillon Dam Road.

**La Bonte Street** is a local two-lane roadway that leads to the center of the Town of Dillon. The roadway serves local, visitor, and marina traffic. The intersection with Dillon Dam Road is a single-lane roundabout and just north of the Denver Water security house.

**Beaver Lodge Road, Prospect Point Drive, and Lake View Terrace** are two-lane local roadways that serve residential properties, both owned and rented.

## 4.2 Intersections

The study area was developed from discussions with Summit County and Town staff and includes six existing intersections as listed below with the current traffic control:

1. Dillon Dam Road at N. Ten Mile Road (side-street stop-controlled)
2. Dillon Dam Road at Beaver Lodge Road (side-street stop-controlled)
3. Dillon Dam Road at Prospect Point Drive (side-street stop-controlled)
4. Dillon Dam Road at Lake View Terrace (side-street stop-controlled)
5. Dillon Dam Road at La Bonte Street (roundabout)
6. US Highway 6 at Dillon Dam Road (signalized)
7. US Highway 9 at Dillon Dam Road/Lusher Court (signalized)

The existing lane configuration at each of the study intersections is illustrated on **Figure 3**.

### 4.3 Pedestrian and Bicycle Access

There are no sidewalks on the study area roadways; however, there is a paved multi-use recreational path that circulates Dillon Reservoir and parallels Dillon Dam Road near the project site. The Dillon Recreational Path provides walking and biking access into the Town of Frisco and Town of Dillon and links to other local and regional recreational facilities.

There are no on-street bike lanes on the study area roadways.

### 4.4 Transit Access

Currently, the Town of Frisco and Summit County is served by Summit Stage; however, there is currently no transit services along Dillon Dam Road. The Frisco Station is located on Lusher Court near the new Whole Foods development, and it provides park-and-ride services to utilize the Frisco-Breckenridge route, Frisco-Silverthorne route, and Copper Mountain route. Each of these routes link to other transfer stations and adjacent communities.

Denver Water has approved the use of Dillon Dam Road for transit service. Summit Stage is currently studying the existing routes to understand if there is potential to reroute and/or provide new routes that will travel on Dillon Dam Road. Refer to **Section 9.0** for future transit recommendations to serve Lake Hill.

### 4.5 Existing Intersection Capacity Analysis

The results of the LOS calculations for the intersections are summarized in **Table 1**. Average and 95<sup>th</sup> percentile<sup>3</sup> queues are summarized in **Table 2**. The intersection level-of-service worksheets are attached in the **Appendix**. **All of the study intersections operate overall at acceptable level-of-service, LOS C or better, with all side-street approaches at LOS E or better in both mid-day and PM peak hours.** The following movements operate at LOS E or F during mid-day or PM peak hours:

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<sup>3</sup> It should be noted that the 95<sup>th</sup> percentile queue length is a theoretical queue that is 1.65 standard deviations above the average queue length. In theory, the 95<sup>th</sup> percentile queue would be exceeded 5% of the time based on the average queue length, but it is also possible that a queue this long may not occur.



- **US Highway 6 and Dillon Dam Road:** The northbound left-turn operates at LOS E in the mid-day and PM peak hours. The northbound left-turn + through operates at LOS E during the mid-day hour. These side-street delays are a result of the signal needing to operate as split phasing for the northbound and southbound approaches. The left-turn storage is limited; therefore, both side-street approaches have added left-turn capacity by sharing the through lane with a second left-turn lane. A shared left+through lane requires split phasing for safety purposes.

**Recommendation:** No mitigation measures are recommended. It is common that side-street movements, especially left-turns, to operate below LOS D during peak hours, and shifting time to accommodate these movements would be at the expense of the heavy through traffic on US Highway 6.

## 5.0 FUTURE BACKGROUND TRAFFIC CONDITIONS

### 5.1 Annual Growth Factor and Future Volume Methodology

In order to forecast the future peak hour traffic volumes, background traffic growth assumptions were based on forecasted volumes provided by CDOT's SH 9 interchange study. The future volumes included traffic input from the Frisco Whole Foods Traffic Impact Study (October 2012) and previous Lake Hill Residential Development Traffic Study (November 2015).

Based on CDOT daily traffic volumes, it was calculated that SH 9 and US 6 will have an annual growth rate of less than 1%. For the purpose of this Study, a 1% annual growth rate was applied and is likely conservative. The Year 2027 background traffic is summarized on **Figure 4** and the 2042 background traffic is summarized on **Figure 5**.

### 5.2 Signal Warrant Analysis

A traffic signal warrant analysis was performed for the intersection of N. Ten Mile Road and Dillon Dam Road. The Manual on Uniform Traffic Control Devices (MUTCD) provides guidelines of when volumes and conditions of an intersection would warrant a signal to be considered for installation. The 4-hour and 8-hour warrants were evaluated using hourly traffic volumes collected in July 2022 and future volumes calculated with the growth rate. It was determined that the intersection of **N. Ten Mile Road and Dillon Dam Road will meet both the 4-hour and 8-hour signal warrants in Year 2027 background**. For

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comparison purposes, this Study assumes that a traffic signal will be installed at the intersection by Year 2027 as a result of background traffic volumes.

The signal warrants were also evaluated for Year 2042 with the Exit 203 interchange redesign that will change the traffic volumes through the intersection of N. Ten Mile Road and Dillon Dam Road. Hourly traffic was redirected to the appropriate route to and from State Highway 9 with the planned restricted movements and new Frontage Road underpass. It was determined that the intersection of **N. Ten Mile Road and Dillon Dam Road will continue to meet both the 4-hour and 8-hour signal warrants in Year 2042 background.**

### 5.3 Year 2027 Background Intersection Capacity Analysis

The Study area intersections were evaluated to determine baseline operations for the Year 2027 background scenario and to identify any capacity constraints associated with background traffic. The level-of-service criteria discussed previously was applied to the study area intersections to determine the impacts with the short-term background volumes.

The results of the LOS calculations for the intersections are summarized in **Table 1**. Average and 95<sup>th</sup> percentile queues are summarized in **Table 2**. The intersection level-of-service worksheets are attached in the **Appendix**.

**All of the study intersections operate overall at acceptable levels-of-service (LOS C or better) and perform similarly to the existing conditions.** The movements that operated at LOS E in the mid-day and PM peak hours at US Highway 6 and Dillon Dam Road in the existing condition were estimated to continue to operate at that the same LOS in Year 2026 background.

### 5.4 Year 2042 Background Intersection Capacity Analysis

The study area intersections were evaluated to determine baseline operations for the Year 2042 background scenario and to identify any capacity constraints associated with background traffic. The level-of-service criteria discussed previously was applied to the study area intersections to determine the impacts with the long-term background volumes. For this long-term scenario, it was assumed that CDOT's recommended redesign of the Exit 203 interchange would be implemented and operational. Part of the roadway project, the intersection of SH 9 and Dillon Dam Road/Lusher Court become side-street stop-control with restricted movements. It is planned that Dillon Dam Road be changed to right-in, right-out

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(east side of intersection) and Lusher Court be changed to  $\frac{3}{4}$  movement (west side of the intersection). The left-turns to and from Dillon Dam Road and the left-turns from Lusher Court would be restricted and redirected to a new frontage road underpass. For the purpose of this traffic study, the traffic forecasted for the intersection of SH 9 and Dillon Dam Road/Lusher Court was redirected to the future route to reach their destination.

The results of the LOS calculations for the intersections are summarized in **Table 1**. Average and 95<sup>th</sup> percentile queues are summarized in **Table 2**. The intersection level-of-service worksheets are attached in the **Appendix**.

**All of the study intersections operate overall at acceptable levels-of-service and perform similarly to the existing conditions.** The movements that operated at LOS E at US Highway 6 and Dillon Dam Road in the existing and short-term conditions was estimated to continue to operate at the same LOS in the long-term background scenario.

## 6.0 PROPOSED DEVELOPMENT TRAFFIC

The Project is proposed to be constructed in one phase by Year 2027. **Figure 2** shows the conceptual site plan and accesses on Dillon Dam Road. For the purpose of this traffic study, it was assumed that all of the proposed workforce homes in Lake Hill will be completed and occupied by Year 2027. This approach provides the most conservative estimate for traffic impacts associated with the completion of Lake Hill.

### 6.1 Trip Generation

To establish the volume of new trips that will be added to the roadway network from the proposed Lake Hill community, trip generation rates were gathered from the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*<sup>4</sup>. A trip generation estimate was performed to determine the traffic increase based on land use types. The Project proposes to construct 25 duplex units (considered single-family attached) and 875 multi-family dwelling units.

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<sup>4</sup> Trip Generation 11<sup>th</sup> Edition, Institute of Transportation Engineers, 2021.



The trip rates contained in the ITE *Trip Generation Manual* for land uses #215 “Single-Family Attached Housing” and #221 “Multi-Family Housing (Mid-Rise)” were applied to the number of units to estimate the proposed traffic for Lake Hill. The manual does not have Midday trip rates, therefore the AM trip rates were utilized. It is anticipated that this methodology overestimates the generated trips that will be experienced midday since most residential trips, even in mountain communities, occur outside of the midday peak period. **Table 3** provides the trip generation estimates for the Project.

### Trip Types

The proposed Lake Hill development will create new trips, also known as ‘primary trips’, which is discussed in detail below:

Primary Trips. These trips are made specifically to travel to/from the residential community and are considered “new” trips. Primary trips would not have been made if the proposed project did not exist. Therefore, this is the only trip type that increases the total number of trips made on a regional basis.

Non-Auto Trips. These trips are completed by walking, biking, or using transit. Non-auto trips do not affect the exterior site access points, nor add any additional traffic volumes to the adjacent street network. Trip generation was performed based on the assumption that 10% of generated trips would be non-auto trips due to primarily future transit services, but also bicyclists and pedestrians. Refer to **Section 9.0** for anticipated transit service that will benefit residents of Lake Hill.

These assumptions are shown within the trip generation estimates in **Table 3**. The trips are summarized below in **Table 4**:

**Table 4: Summary of Trip Generation**

Period	Project Trips
Weekday Daily	3,737
Weekday Midday	302
Weekday PM	320

## 6.2 Trip Distribution and Assignment

The distribution percentages are based on regional land use destinations, existing travel patterns, and proximity to neighboring mountain communities. The existing intersection volumes at N. Ten Mile Road, Beaver Lodge Road, Prospect Point Drive, Lake View Terrace, and La Bonte Street were utilized to determine the percentage of trips that will travel north and south on Dillon Dam Road. The directional distributions for the existing side-streets are summarized in **Table 5**.

**Table 5: Distribution Calculations**

Intersection	Peak Period	Volume [Directional Percentage]			
		To North	To South	From North	From South
La Bonte Street	AM	103 [57%]	77 [43%]	125 [63%]	73 [37%]
	PM	66 [50%]	66 [40%]	332 [63%]	196 [37%]
Lake View Terrace	AM	4 [44%]	5 [56%]	4 [40%]	6 [60%]
	PM	5 [56%]	4 [44%]	6 [46%]	7 [54%]
Prospect Point Drive	AM	2 [15%]	11 [85%]	5 [29%]	12 [71%]
	PM	5 [36%]	9 [64%]	6 [35%]	11 [65%]
Beaver Lodge Road	AM	2 [40%]	3 [60%]	0 [0%]	8 [100%]
	PM	2 [22%]	7 [78%]	2 [25%]	6 [75%]
N. Ten Mile Road	AM	99 [52%]	91 [48%]	57 [34%]	111 [66%]
	PM	113 [57%]	86 [43%]	51 [34%]	97 [66%]
Average		43%	57%	37%	63%
Overall Average				40% (North)	60% (South)

It was assumed that 40% of the trips would travel north on Dillon Dam Road towards the Town of Dillon and 60% of the trips would travel south on Dillon Dam Road towards the Town of Frisco, this is slightly different than the previous trip distribution with 10% more traffic headed north.

The overall distribution within the Study area is as follows, as well as presented on **Figure 6**:

- 10% to/from SH 9 (north)
- 33% to/from SH 9 (south)
- 12% to/from Lusher Court (west)
- 5% to/from N. Ten Mile Road (south)
- 5% to/from La Bonte Street (north)
- 12% to/from US Highway 6 (east)
- 5% to/from Dillon Dam Road (north)
- 18% to/from US Highway 6 (west)

Using these distribution assumptions, the projected site traffic was assigned to the Study area roadway network for the weekday AM and PM peak hour periods. The site-generated volumes for Year 2027 are shown on **Figure 7A**. Since the intersection of SH 9 at Dillon Dam Road/Lusher Court is planned to be redesigned as part of the Exit 203 interchange project, trips were adjusted for Year 2042 at N. Ten Mile Road and at SH 9, which is shown on **Figure 7B**.

### 6.3 Proposed Access

The project proposes to have two accesses on Dillon Dam Road, both full-movement and single-lane roundabouts. The access locations are shown on **Figure 2**.

## 7.0 FUTURE TRAFFIC CONDITIONS WITH SITE DEVELOPMENT

This section discusses impacts associated with the development of the Lake Hill community in the short-term and long-term conditions.

### 7.1 Year 2027 Background + Project Intersection Capacity Analysis

The site-generated traffic volumes for were added to the Year 2027 background volumes to analyze potential site impacts in the short-term condition. The Year 2027 background + site-generated traffic volumes are illustrated on **Figure 8**. The level-of-service criteria discussed in prior sections was applied to the study area intersections to determine impacts with the addition of the site-build out traffic volumes in the short-term. The results of the LOS calculations for the intersections are summarized in **Table 1**. Average and 95<sup>th</sup> percentile queues are summarized in **Table 2**.



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**The project trips do not significantly impact the Study intersections for the short-term.** The Study intersections and movements will operate at LOS D or better, with the exception of the northbound left-turn and northbound left-turn + through at US 6 and Dillon Dam Road. These movements will operate at the same LOS as in the Year 2027 background scenario.

The proposed roundabout accesses are estimated to operate overall at LOS A with all approaches operating at LOS A in both peak hours.

## **7.2 Year 2042 Background + Project Intersection Capacity Analysis**

The site-generated traffic volumes for the Project were added to the Year 2042 background volumes to analyze potential site impacts in the long-term build-out condition. This scenario includes the implementation of the Exit 203 interchange improvements and restrictions at SH 9 and Dillon Dam Road/Lusher Court. The Year 2042 background + site-generated traffic volumes are illustrated on **Figure 9**. The level-of-service criteria discussed in prior sections was applied to the study area intersections to determine impacts with the addition of the site-build out traffic volumes in the long-term. The results of the LOS calculations for the intersections are summarized in **Table 1**. Average and 95<sup>th</sup> percentile queues are summarized in **Table 2**.

**The project trips do not significantly impact the Study intersections for the long-term.** The Study intersections and movements will operate at LOS D or better, with the exception of the northbound left-turn and northbound left-turn + through at US 6 and Dillon Dam Road, and the westbound right-turn at State Highway 9 and Dillon Dam Road/Lusher Court. These northbound movements at US 6 and Dillon Dam Road will operate at the same LOS as in the Year 2042 background scenario.

The westbound right-turn at State Highway 9 and Dillon Dam Road/Lusher Court was estimated to begin to operate at LOS E in the PM peak hour. The traffic model did not take into account the signals on State Highway 9 at the Exit 203 eastbound ramp and at Ten Mile Drive intersection which will provide additional gaps in traffic for the westbound right-turns to turn onto State Highway 9. The 95<sup>th</sup> percentile queue was calculated to extend 210 feet, which will not impact the upstream intersection of Dillon Dam Road and N. Ten Mile Drive. No mitigation measures are recommended since the delay is same as when a signal is installed at this intersection and the queue does not impact the upstream intersection.

The proposed roundabout accesses are estimated to operate overall at LOS B or better with all approaches operating at LOS B or better in both peak hours.

## 8.0 QUEUE ANALYSIS

A queuing analysis was performed to determine if the queues would be accommodated by the existing storage length and if any of the queues impact an upstream intersection/access. **Table 2** provides the existing storage lengths or distance to nearest intersection/access, and the 95<sup>th</sup> percentile<sup>5</sup> and average queues for the two peak hours within each evaluation scenario.

As shown in **Table 2**, the majority of the 95<sup>th</sup> percentile queues are shorter than the provided storage length or nearest upstream intersection/access, except those highlighted with **blue bold** font. The 95<sup>th</sup> percentile queues exceed the existing storage length during the existing and background conditions for the following movements:

- **US Highway 6 at N. Dillon Dam Road**
  - Westbound left-turn
  - Northbound left-turn
  - Northbound right-turn
  - Southbound left-turn
  - Southbound left-turn + through

Both side street movements at US Highway 6 have limited length to accommodate the turn lane storage needs. The northbound and southbound through lanes have become shared lanes with the left-turn to increase turning capacity. The signal timing is constrained by the progression needed on the highway and side street split phase operations. The westbound left-turn storage is restricted by the narrowing of the highway; it is possible that small adjustments in signal timing could improve the queuing of this movement. No mitigation measure is recommended, except to monitor queues for potential safety issues that would need to be addressed once identified.

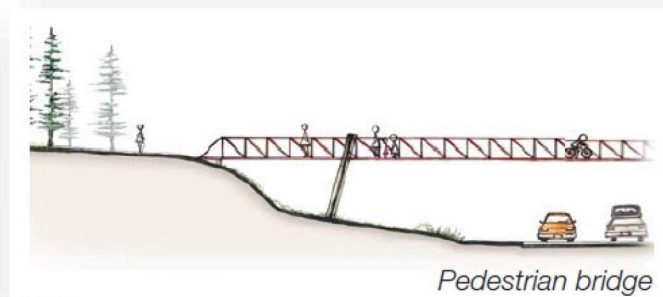
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<sup>5</sup> It should be noted that the 95<sup>th</sup> percentile queue length is a theoretical queue that is 1.65 standard deviations above the average queue length. In theory, the 95<sup>th</sup> percentile queue would be exceeded 5% of the time based on the average queue length, but it is also possible that a queue this long may not occur.

Project trips increase the northbound through + right-turn queue at Dillon Dam Road and N. Ten Mile Road beyond existing capacity (at this location, capacity is measured as the distance to the next access or intersection). It is recommended to consider adding an auxiliary right-turn lane, potentially when the intersection is signalized. At the other Study intersections, the Project trips only slightly increase queues at the study intersections.

## 9.0 FUTURE TRANSIT AND PEDESTRIAN/BICYCLIST AMENITIES

The Lake Hill Master Plan emphasizes the desire to have a transit-oriented, bicycle and pedestrian-friendly neighborhood to provide enhanced livability and connectivity within and surrounding the community. The Lake Hill property is across the street from the Dillon Reservoir Recreational Path and is also next to existing US Forest Service trails through the adjacent National Forest lands. The Lake Hill Master Plan anticipated including a pedestrian bridge over Dillon Dam Road from the Lake Hill community to the Dillon Recreational Path to provide a safe crossing route. The preliminary location of the pedestrian bridge has been identified just northeast of the south access roundabout to connect the proposed community center to the existing trail system. This location was determined to be within a quarter mile (approximately five-minute walk) from all the homes. The proposed roundabouts on Dillon Dam Road will also provide crosswalks for safe pedestrian crossing conditions for those that prefer to cross at-grade.



Source: Lake Hill Master Plan (July 2017)



Source: Lake Hill Master Plan (July 2017)



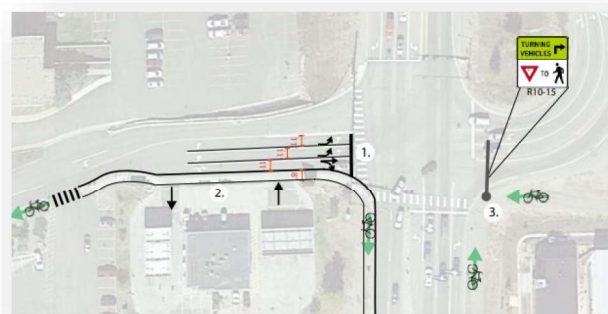
Within the Lake Hill neighborhood, it is proposed to provide a vast internal trail system linking the homes, community center, pedestrian bridge, and existing trails. Some of the trails will be paved pathways and others will be soft surface. Bike lanes will be considered on the internal roadways within the design process to provide safe connections for people biking.

The Frisco Trails Master Plan (March 2017) reviewed the existing trail system and made recommendations for future non-vehicular connectivity through and adjacent to the Town of Frisco. It was recommended that a trail connection be installed on the south side of Dillon Dam Road linking the existing Recreational Path to SH 9. The preliminary alignment shows the future trail connecting to the Recreational Path where it bends towards the reservoir and then crossing Dillon Dam Road and SH 9 to link to the Basecamp/Frisco Transit Center. The Frisco Trails Master Plan also proposed to install a paved path connecting Beaver Lodge Road to 9000 Divide and provide scenic walking trails along the waterfront. The Frisco Trails Master Plan recognizes the challenges of winter use on the Recreational Path related to plowing. Public comments indicated the desire for a maintained path during the winter for skiing, fat biking, and connection through Frisco.



Source: Frisco Trail Master Plan  
(March 2017)

The Frisco Trails Master Plan recommended that the intersection of Dillon Dam Road at SH 9 be reconstructed to accommodate an underpass in the long-term to provide a safe east-west connection for pedestrians and bicyclists between major activity centers of Frisco. The interim design included widening the sidewalk, limiting access, and providing a leading pedestrian interval at the signal. Residents of Lake Hill will benefit from each of the future trails and underpass by providing recreation and transportation opportunities directly outside their homes that connect into the Town of Frisco.



Source: Frisco Trail Master Plan (March 2017)

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The listed recommendations are supported by this traffic study and will provide Lake Hill residents the opportunity to walk or bike to and from their home. Consider plowing the Recreational Path from the Lake Hill community into town to encourage non-vehicular travel in the winter season.

The Lake Hill Master Plan determined that the best locations for the transit stops would be on the south side of the proposed roundabouts on Dillon Dam Road. Both locations would provide one bus stop per direction, for a total of four bus stops serving the Lake Hill community. Recently, Denver Water approved transit service across the dam which has led Summit Stage to review the existing transit routes and potential for rerouting to utilize Dillon Dam serve Lake Hill in the future. However, establishing a permanent transit route that will cross the dam and serve the Lake Hill community will be an ongoing challenge given that the Dillon Dam Road is closed regularly during the winter during snowstorms.

Ideally Summit Stage will one day provide transit access to the Lake Hill project and other residential developments along the Dillon Dam Road. However, this will require an adjustment to Summit Stage's typical operation of providing transit service that links communities rather than providing circulator or local access routes off the main connector roadways. One way that Lake Hill might be served is to provide a spur off of the "purple line" that connects between the Frisco Transfer Center and the Breckenridge Transfer Center. Another option might be a localized shuttle that links Lake Hill with the Frisco Transfer Center, and still another option may be some form of "Smart Transit" or demand responsive service as transit service technology evolves.

Given the uncertainty of future transit service to Lake Hill and other developments along the Dillon Dam Road, this Study has taken a somewhat conservative alternative mode trip reduction of 10% that reduces automobile traffic to account for transit, bicycle, and pedestrian access or other forms of human powered transportation. Given that much of the proposed housing at Lake Hill will be deed restricted or "affordable" housing, the developer may not be able to aggressively subsidize new transit service. That said, the Lake Hill project is a worthy target for providing enhanced transit access.

## 10.0 CONCLUSIONS

The Lake Hill proposes to construct local workforce housing with 875 multi-family units and 25 duplex homes for a total of 900 dwelling units. Access to the site is planned via two proposed driveways along Dillon Dam Road that are anticipated to be constructed as single-lane roundabouts. The accesses will lead to the internal roadway network to serve the Lake Hill community.



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The Project is estimated to generate 3,737 weekday daily trips with 302 trips occurring in the AM peak hour and 320 trips occurring in the PM peak hour. **It was determined that the existing roadway and intersection network can serve the site added traffic volumes in the short-term and long-term scenarios with the increase in density to 900 dwelling units.**

Based on this Study, the side-street stop-controlled intersection at **N. Ten Mile Road is anticipated to meet the 4-hour and 8-hour signal warrants by Year 2027 due to growth in background traffic volumes.** It is recommended that the intersection of Dillon Dam Road at N. Ten Mile Road be signalized at the time that actual traffic volumes meet signal warrant criteria. With the restricted movements at SH 9 and Dillon Dam Road/Lusher Court in the future, the rerouted volumes through the N. Ten Mile Road intersection continue to warrant a signal.

The Project accesses should be constructed with the following lane configuration:

- **Dillon Dam Road at North Access:** Construct as a single-lane roundabout.
- **Dillon Dam Road at South Access:** Construct as a single-lane roundabout.

The proposed site access and circulation will adequately serve the estimated vehicular trips and loading operations. The proposed internal trail system and pedestrian bridge over Dillon Dam Road will encourage residents to walk or bike to/from and through the Lake Hill community. The residents will be able to take advantage of the existing recreational path and hiking trails adjacent to the property. It is hoped that some form of transit will be provided on Dillon Dam Road and serve Lake Hill residents to connect to communities within Summit County. The County, the Town, the developer and Summit Stage will need to work together to identify potential transit service options and funding sources. The implementation of non-auto amenities will achieve the Master Plan objectives of providing a livable, connected, and healthy community.

*Note that the recommendations in this updated traffic study are the same as the previous traffic study for Lake Hill (Fox Tuttle, June 2021), regardless of the increase in dwelling units.*



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# ***Tables and Figures:***

*Table 1 – Peak Hour Intersection Level-of-Service Summary*

*Table 2 – Peak Hour Queue Summary*

*Table 3 – Trip Generation Summary*

*Table 4 – Summary of Trip Generation {IN REPORT}*

*Table 5 – Distribution Calculations {IN REPORT}*

*Figure 1 – Vicinity Map*

*Figure 2 – Conceptual Site Plan*

*Figure 3 – Year 2022 Existing Traffic Volumes*

*Figure 4 – Year 2027 Background Traffic Volumes*

*Figure 5 – Year 2042 Background Traffic Volumes*

*Figure 6 – Site Trip Distribution*

*Figure 7A – Site-Generated Traffic Volumes*

*Figure 7B – Site-Generated Traffic Volumes – Year 2042 Adjusted with Interchange*

*Figure 8 – Year 2027 Background + Project Traffic Volumes*

*Figure 9 – Year 2042 Background + Project Traffic Volumes*

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Table 1 - Peak Hour Intersection Level of Service Summary

Intersection and Lanes Groups	Existing (Year 2022)			Year 2027 Background			Year 2027 Bkgrd + Project			Year 2042 Background			Year 2042 Bkgrd + Project						
	Mid-Day Delay	LOS	PM Peak Delay	LOS	Mid-Day Delay	LOS	PM Peak Delay	LOS	Mid-Day Delay	LOS	PM Peak Delay	LOS	Mid-Day Delay	LOS	PM Peak Delay	LOS			
Signalized Control																			
Dillon Dam Road at N. Ten Mile Road	Analyzed as Stop-Controlled			9	A	10	B	9	A	11	B	12	B	12	B	13	B		
				28	C	26	C	28	C	25	C	21	C	21	C	20	C		
				30	C	30	C	30	C	30	C	29	C	30	C	29	C		
				5	A	7	A	5	A	9	A	8	A	6	A	9	A		
				4	A	5	A	5	A	6	A	9	A	7	A	6	A		
Dillon Dam Road at US Highway 6	32	C	34	C	32	C	35	C	34	C	36	D	34	C	39	D	41	D	
	14	B	18	B	15	B	19	B	16	B	21	C	17	B	25	C	28	C	
	20	C	27	C	21	C	29	C	24	C	32	C	26	C	38	D	44	D	
	19	B	24	C	19	B	25	C	21	C	27	C	23	C	31	C	34	C	
	14	B	18	B	14	B	19	B	16	B	19	B	17	B	23	C	26	C	
	21	C	27	C	22	C	28	C	24	C	29	C	26	C	36	D	37	D	
	19	B	25	C	20	B	26	C	21	C	27	C	23	C	31	C	32	C	
	61	E	55	E	62	E	55	E	60	E	55	E	60	E	54	D	54	D	
	61	E	55	D	61	E	54	D	59	E	54	D	60	E	54	D	53	D	
	49	D	46	D	49	D	45	D	47	D	45	D	47	D	45	D	44	D	
	54	D	52	D	55	D	53	D	55	D	52	D	55	D	54	D	52	D	
	54	D	52	D	54	D	52	D	54	D	53	D	54	D	53	D	54	D	
	48	D	39	D	48	D	39	D	48	D	39	D	47	D	37	D	37	D	
	Dillon Dam Road/Lusher Court at State Highway 9	26	C	29	C	27	C	30	C	29	C	32	C	Analyzed as Stop-Controlled			Analyzed as Stop-Controlled		
	Eastbound Left	52	D	50	D	52	D	51	D	52	D	51	D						
Eastbound Through+Right	37	D	34	C	37	D	34	C	38	D	35	C							
Westbound Left	53	D	53	D	53	D	53	D	54	D	54	D							
Westbound Through+Right	37	D	36	D	37	D	36	D	37	D	35	D							
Northbound Left	14	B	16	B	15	B	17	B	16	B	18	B							
Northbound Through	18	B	24	C	19	B	25	C	21	C	27	C							
Northbound Right	19	B	26	C	20	B	27	C	22	C	35	C							
Southbound Left	14	B	18	B	14	B	19	B	16	B	21	C							
Southbound Through	19	B	21	C	19	B	22	C	21	C	24	C							
Southbound Right	18	B	21	C	18	B	22	C	20	B	24	C							

Table 1 - Peak Hour Intersection Level of Service Summary

Intersection and Lanes Groups	Existing (Year 2022)			Year 2027 Background			Year 2027 Bkgrd + Project			Year 2042 Background			Year 2042 Bkgrd + Project		
	Mid-Day Delay	LOS	PM Peak Delay	Mid-Day Delay	LOS	PM Peak Delay	Mid-Day Delay	LOS	PM Peak Delay	Mid-Day Delay	LOS	PM Peak Delay	Mid-Day Delay	LOS	PM Peak Delay
Stop-Controlled															
Dillon Dam Road at N. Ten Mile Road	4	A	4	A	A		Analyzed as Signalized			Analyzed as Signalized			Analyzed as Signalized		
	21	C	26	D											
	11	B	14	B											
	0	A	0	A											
Dillon Dam Road at Beaver Lodge Road	8	A	9	A											
	0	A	0	A			0	A	0	A	0	A	0	A	0
	14	B	17	C			17	C	24	C	15	C	18	C	27
	0	A	0	A			0	A	0	A	0	A	0	A	0
Dillon Dam Road at Prospect Point Drive	0	A	9	A			0	A	10	A	9	A	9	A	10
	0	A	0	A			0	A	0	A	0	A	0	A	0
	15	B	16	C			19	C	22	C	17	C	21	C	26
	0	A	0	A			0	A	0	A	0	A	0	A	0
Dillon Dam Road at Lake View Terrace	8	A	9	A			8	A	10	A	8	A	9	A	10
	0	A	0	A			0	A	0	A	0	A	0	A	0
	13	B	15	B			16	C	20	C	15	B	17	C	21
	8	A	8	A			8	A	8	A	8	A	9	A	8
Dillon Dam Road/Lusher Court at State Highway 9	0	A	0	A			0	A	0	A	0	A	0	A	0
	Analyzed as Signalized			Analyzed as Signalized			Analyzed as Signalized			Analyzed as Signalized			Analyzed as Signalized		
Eastbound Right															
Westbound Right															
Northbound Left															
Northbound Through															
Northbound Right															
Southbound Through															
Southbound Right															



Table 1 - Peak Hour Intersection Level of Service Summary

Intersection and Lanes Groups	Existing (Year 2022)			Year 2027 Background			Year 2027 Bkgrd + Project			Year 2042 Background			Year 2042 Bkgrd + Project							
	Mid-Day Delay	PM Peak Delay	LOS	Mid-Day Delay	PM Peak Delay	LOS	Mid-Day Delay	PM Peak Delay	LOS	Mid-Day Delay	PM Peak Delay	LOS	Mid-Day Delay	PM Peak Delay	LOS					
Roundabout																				
Dillon Dam Road at La Bonte Street	6	A	10	A	7	A	13	B	7	A	16	C	7	A	20	C	8	A	22	C
Westbound Left+Right	6	A	5	A	7	A	6	A	7	A	7	A	7	A	7	A	8	A	8	A
Northbound Through+Right	7	A	13	B	7	A	19	C	8	A	23	C	8	A	33	D	10	A	35	D
Southbound Left+Through	6	A	8	A	6	A	8	A	6	A	9	A	7	A	10	A	7	A	11	B
Dillon Dam Road at South Access	Analyzed with Project Scenarios			Analyzed with Project Scenarios			Analyzed with Project Scenarios			6	A	8	A	Analyzed with Project Scenarios			7	A	10	B
Eastbound Left+Right									6	A	5	A					6	A	5	A
Northbound Left+Through									6	A	10	A					7	A	12	B
Southbound Through+Right									6	A	6	A					7	A	6	A
Dillon Dam Road at North Access	Analyzed with Project Scenarios			Analyzed with Project Scenarios			Analyzed with Project Scenarios			6	A	8	A	Analyzed with Project Scenarios			7	A	9	A
Eastbound Left+Right									6	A	5	A					6	A	5	A
Northbound Left+Through									7	A	9	A					7	A	12	B
Southbound Through+Right									6	A	6	A					6	A	6	A

Note: Delay represented in average seconds per vehicle.

Table 2 - Peak Hour 95th Percentile Queue Summary

Intersection and Lanes Groups		Existing Storage	Existing (Year 2022)		Year 2027 Background		Year 2027 Background + Project		Year 2042 Background		Year 2042 Background + Project		
			Mid-Day	PM Peak	Mid-Day	PM Peak	Mid-Day	PM Peak	Mid-Day	PM Peak	Mid-Day	PM Peak	
Signalized Control													
Dillon Dam Road at N. Ten Mile Road			100'	Analyzed as Stop-Control	68'	66'	68'	66'	25'	29'	25'	29'	
Westbound Left		150'	34'		35'	35'	36'	35'	48'	49'	48'	50'	
Westbound Right		-	120'		241'	136'	320'	74'	156'	83'	189'		
Northbound Through+Right		-	117'		101'	178'	138'	144'	188'	108'	207'		
Southbound Left+Through													
Dillon Dam Road at US Highway 6			500'	98'	115'	103'	122'	108'	124'	147'	130'	150'	
Eastbound Left		-	247'	285'	264'	300'	276'	300'	325'	376'	325'	376'	
Eastbound Through		500'	60'	63'	62'	64'	66'	69'	70'	69'	71'	73'	
Eastbound Right		150'	102'	132'	108'	141'	120'	162'	129'	180'	142'	275'	
Westbound Left		-	264'	292'	283'	308'	295'	308'	372'	391'	380'	391'	
Westbound Through		420'	62'	82'	64'	84'	67'	84'	73'	91'	73'	91'	
Westbound Right		110'	210'	186'	220'	194'	245'	207'	244'	215'	267'	229'	
Northbound Left		-	216'	189'	223'	195'	249'	211'	252'	221'	277'	233'	
Northbound Left+Through		70'	63'	70'	69'	79'	92'	97'	85'	111'	110'	126'	
Northbound Right		120'	152'	255'	160'	270'	163'	273'	183'	316'	186'	316'	
Southbound Left		-	158'	266'	164'	280'	167'	287'	186'	326'	188'	338'	
Southbound Left+Through													
Southbound Right		110'	50'	45'	52'	47'	52'	47'	54'	49'	54'	49'	
Dillon Dam Road/Lusher Court at State Highway 9			145'	105'	128'	109'	134'	109'	134'	Analyzed as Stop-Control			
Eastbound Left		-	111'	160'	116'	168'	122'	188'					
Eastbound Through+Right		205'	120'	98'	134'	103'	170'	121'					
Westbound Left		-	127'	113'	102'	117'	176'	141'					
Westbound Through+Right		165'	48'	41'	51'	43'	57'	46'					
Northbound Left		-	197'	305'	211'	328'	232'	344'					
Northbound Through		200'	48'	58'	49'	59'	56'	66'					
Northbound Right		115'	46'	52'	49'	55'	58'	69'					
Southbound Left		-	206'	229'	222'	246'	242'	259'					
Southbound Through													
Southbound Right		240'	44'	51'	45'	52'	49'	55'					
Stop-Controlled													
Dillon Dam Road at N. Ten Mile Road			100'	30'	40'	Analyzed as Signalized		Analyzed as Signalized		Analyzed as Signalized		Analyzed as Signalized	
Westbound Left		150'	15'	25'									
Westbound Right		-	0'	0'									
Northbound Through+Right													
Southbound Left+Through													

Table 2 - Peak Hour 95th Percentile Queue Summary

Intersection and Lanes Groups		Existing Storage	Existing (Year 2022)		Year 2027 Background		Year 2027 Background + Project		Year 2042 Background		Year 2042 Background + Project		
			Mid-Day	PM Peak	Mid-Day	PM Peak	Mid-Day	PM Peak	Mid-Day	PM Peak	Mid-Day	PM Peak	
Dillon Dam Road at Beaver Lodge Road													
	Westbound Left+Right	-	3'	5'	3'	5'	3'	5'	3'	5'	3'	8'	
	Northbound Through+Right	-	0'	0'	0'	0'	0'	0'	0'	0'	0'	0'	
	Southbound Left+Through	-	0'	0'	0'	0'	0'	0'	0'	0'	0'	0'	
Dillon Dam Road at Prospect Point Drive													
	Westbound Left+Right	-	3'	3'	5'	5'	5'	5'	5'	5'	8'	8'	
	Northbound Through+Right	-	0'	0'	0'	0'	0'	0'	0'	0'	0'	0'	
	Southbound Left+Through	-	0'	0'	0'	0'	0'	0'	0'	0'	0'	0'	
Dillon Dam Road at Lake View Terrace													
	Eastbound Left+Right	-	3'	3'	3'	3'	5'	3'	3'	3'	3'	3'	
	Northbound Left+Through	-	0'	0'	0'	0'	0'	0'	0'	0'	0'	0'	
	Southbound Through+Right	-	0'	0'	0'	0'	0'	0'	0'	0'	0'	0'	
Dillon Dam Road/Lusher Court at State Highway 9													
	Eastbound Right	-	Analyzed as Signalized	Analyzed as Signalized	Analyzed as Signalized	Analyzed as Signalized	Analyzed as Signalized	Analyzed as Signalized	118'	73'	188'	93'	
	Westbound Right	-							98'	195'	110'	210'	
	Northbound Left	165'							18'	13'	18'	13'	
	Northbound Through	-							0'	0'	0'	0'	
	Northbound Right	200'							0'	0'	0'	0'	
	Southbound Through	-							0'	0'	0'	0'	
	Southbound Right	240'							0'	0'	0'	0'	
Roundabout													
Dillon Dam Road at La Bonte Street													
	Westbound Left+Right	-	25'	25'	25'	25'	25'	25'	25'	25'	25'	25'	
	Northbound Through+Right	-	50'	125'	50'	200'	75'	250'	50'	325'	75'	425'	
	Southbound Left+Through	-	25'	50'	50'	75'	50'	75'	50'	100'	50'	125'	
Dillon Dam Road at South Access													
	Eastbound Left+Right	-	Future Intersection	Future Intersection	Future Intersection	Future Intersection	Future Intersection	Future Intersection	Future Intersection	25'	0'	0'	
	Northbound Left+Through	-								50'	100'	50'	150'
	Southbound Through+Right	-								50'	25'	50'	50'
Dillon Dam Road at North Access													
	Eastbound Left+Right	-	Future Intersection	Future Intersection	Future Intersection	Future Intersection	Future Intersection	Future Intersection	Future Intersection	25'	0'	0'	
	Northbound Left+Through	-								50'	100'	50'	150'
	Southbound Through+Right	-								25'	25'	50'	50'

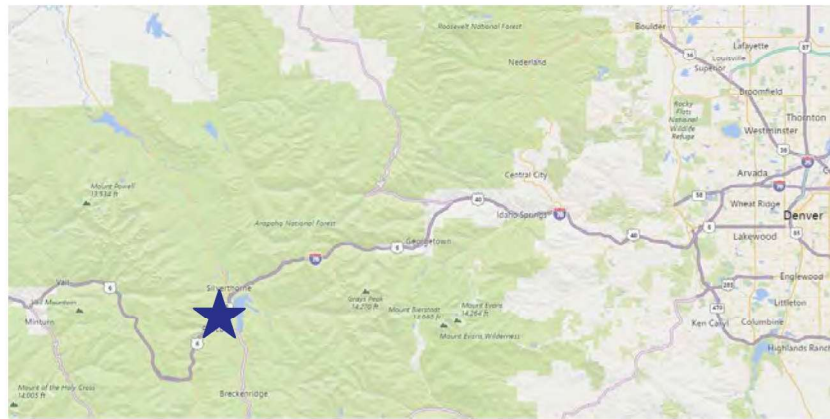




Table 3 - Trip Generation Summary

Land Use	Size	Unit	Non-Auto Factor	Average Daily Trips			AM Peak Hour Trips			PM Peak Hour Trips					
				Rate	Total	In	Out	Rate	Total	In	Out	Rate	Total	In	Out
Weekday															
ITE 215 - Single-Family Attached Housing	25	Dwelling Units	0.90	7.20	162	81	81	0.48	11	3	8	0.57	13	7	6
ITE 221 - Multi-Family Housing (Mid-Rise)	875	Dwelling Units	0.90	4.54	3,575	1,788	1,787	0.37	291	67	224	0.39	307	187	120
Total Weekday New Trips:					3,737	1,869	1,868	AM >	302	70	232	PM >	320	194	126

Source : ITE Trip Generation 10th Edition, 2017.



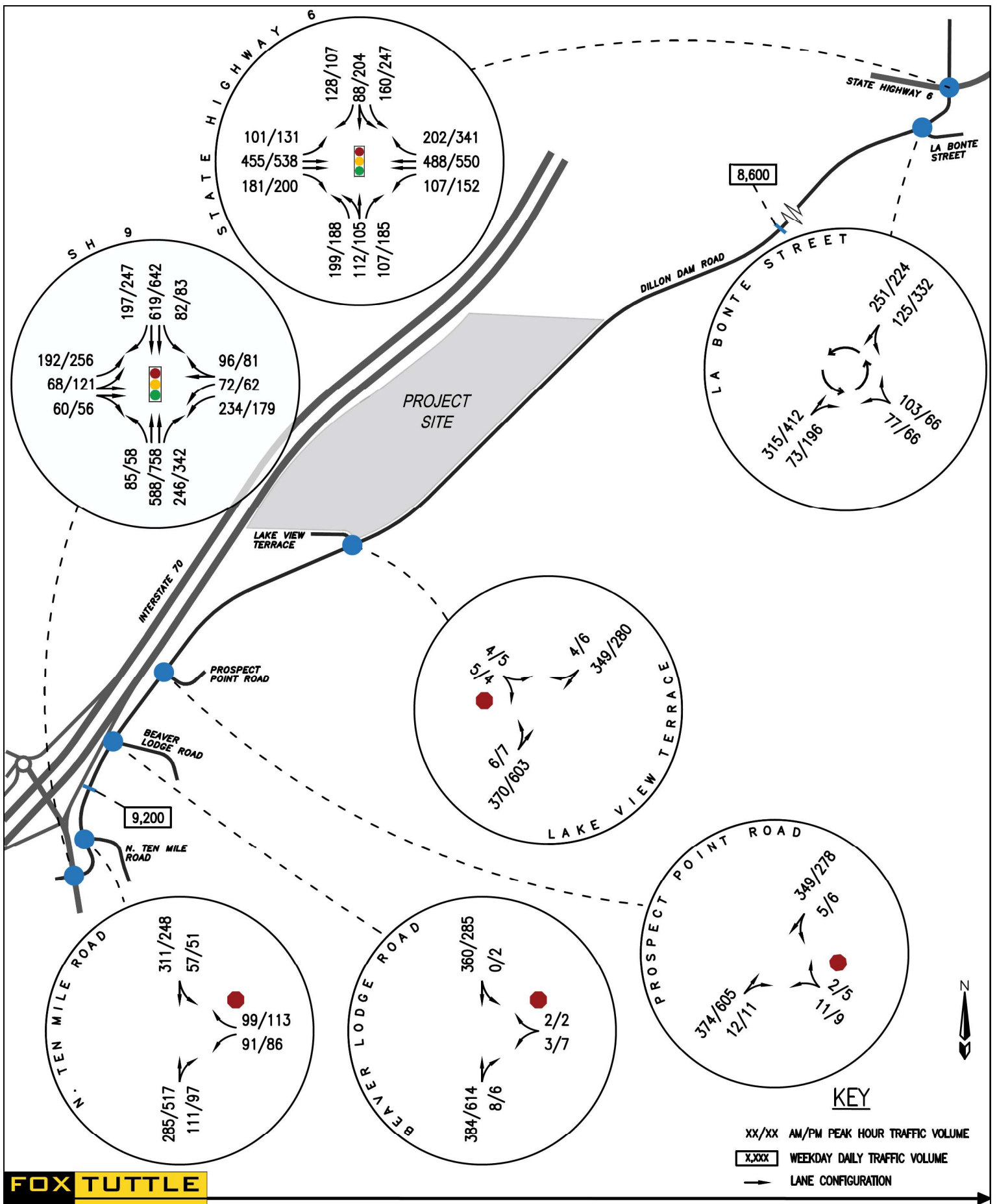


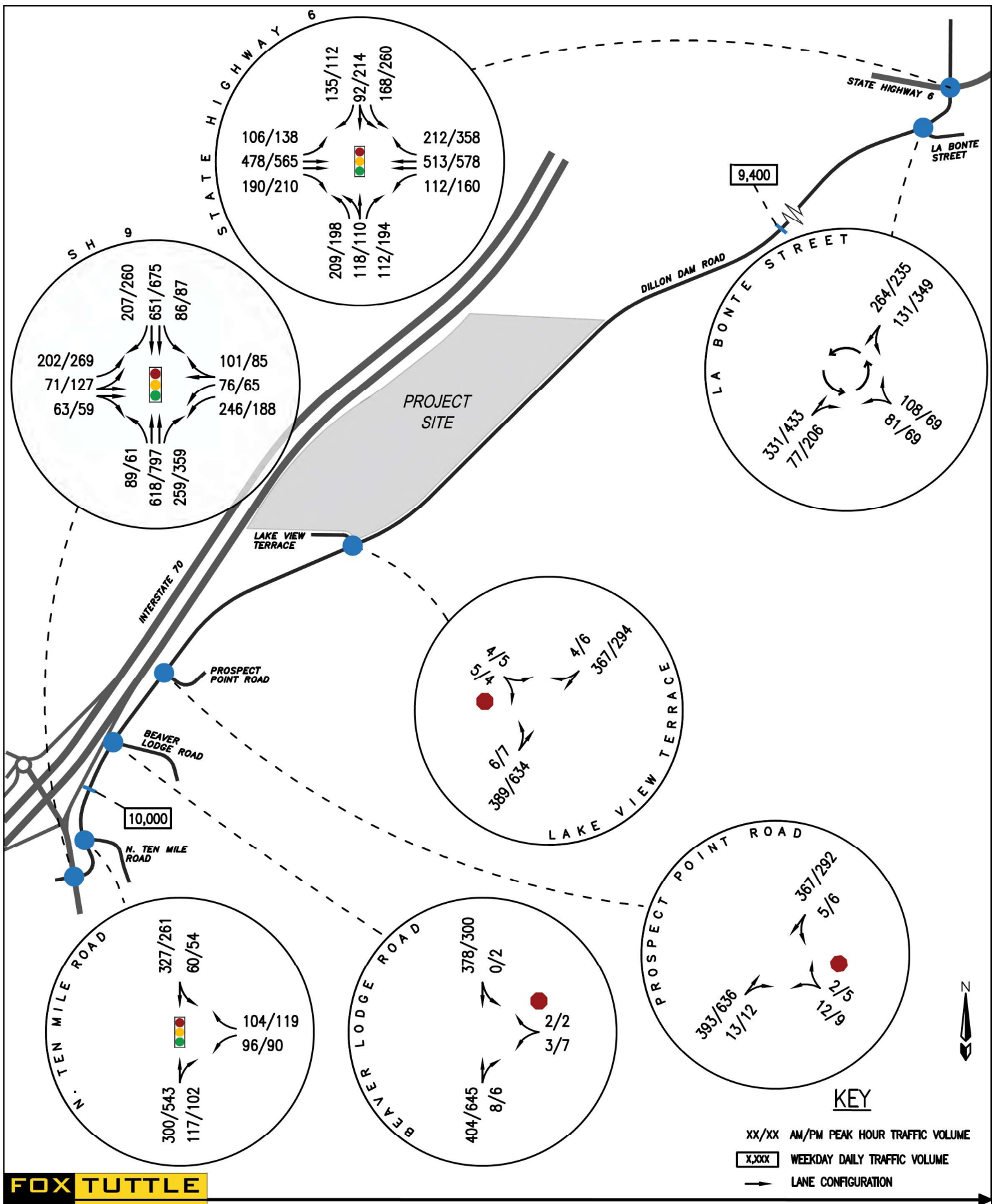
**Proposed Access 2 (North)**  
**Full Movement**  
**Roundabout**

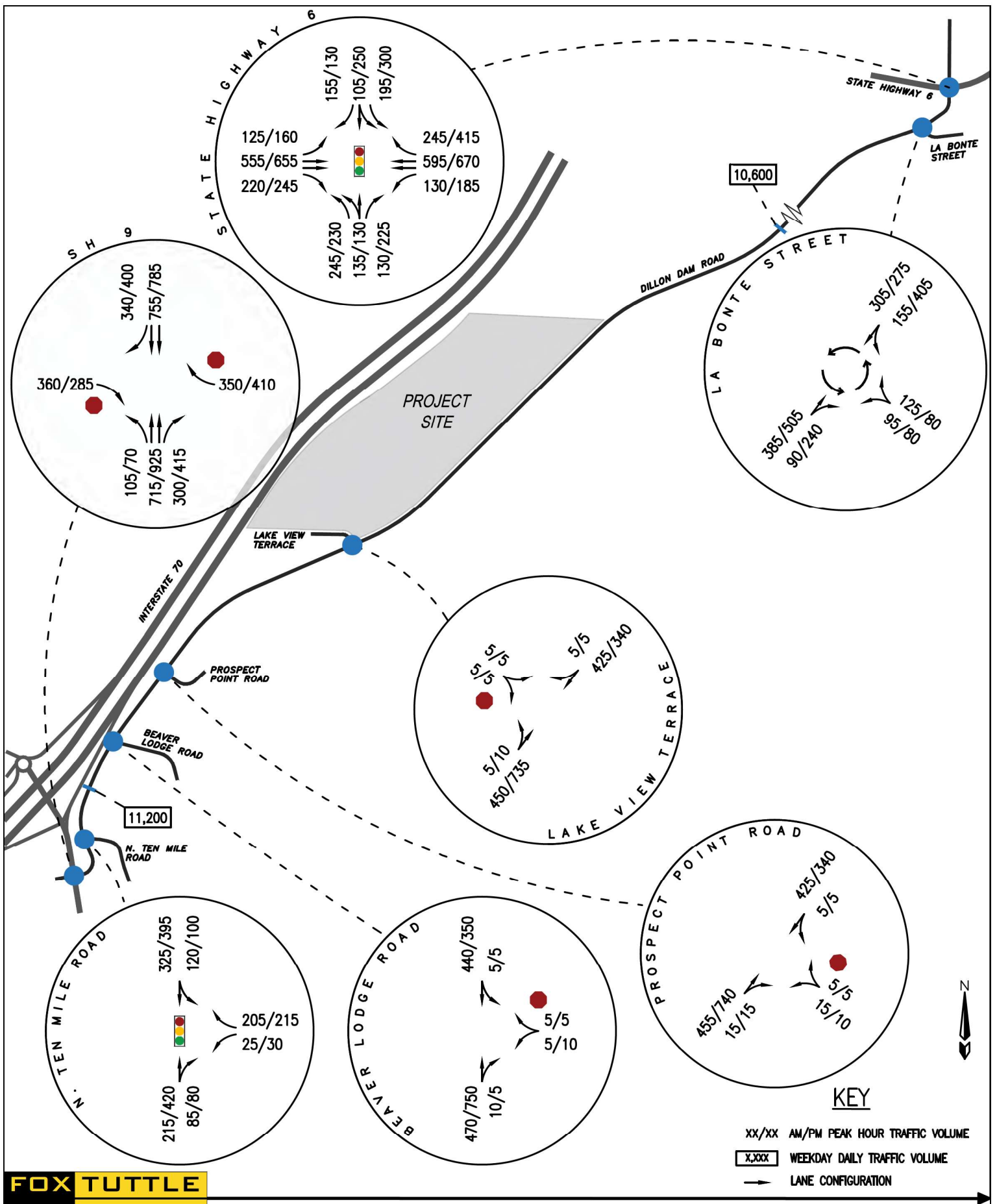


**Proposed Access 1 (South)**  
**Full Movement**  
**Roundabout**

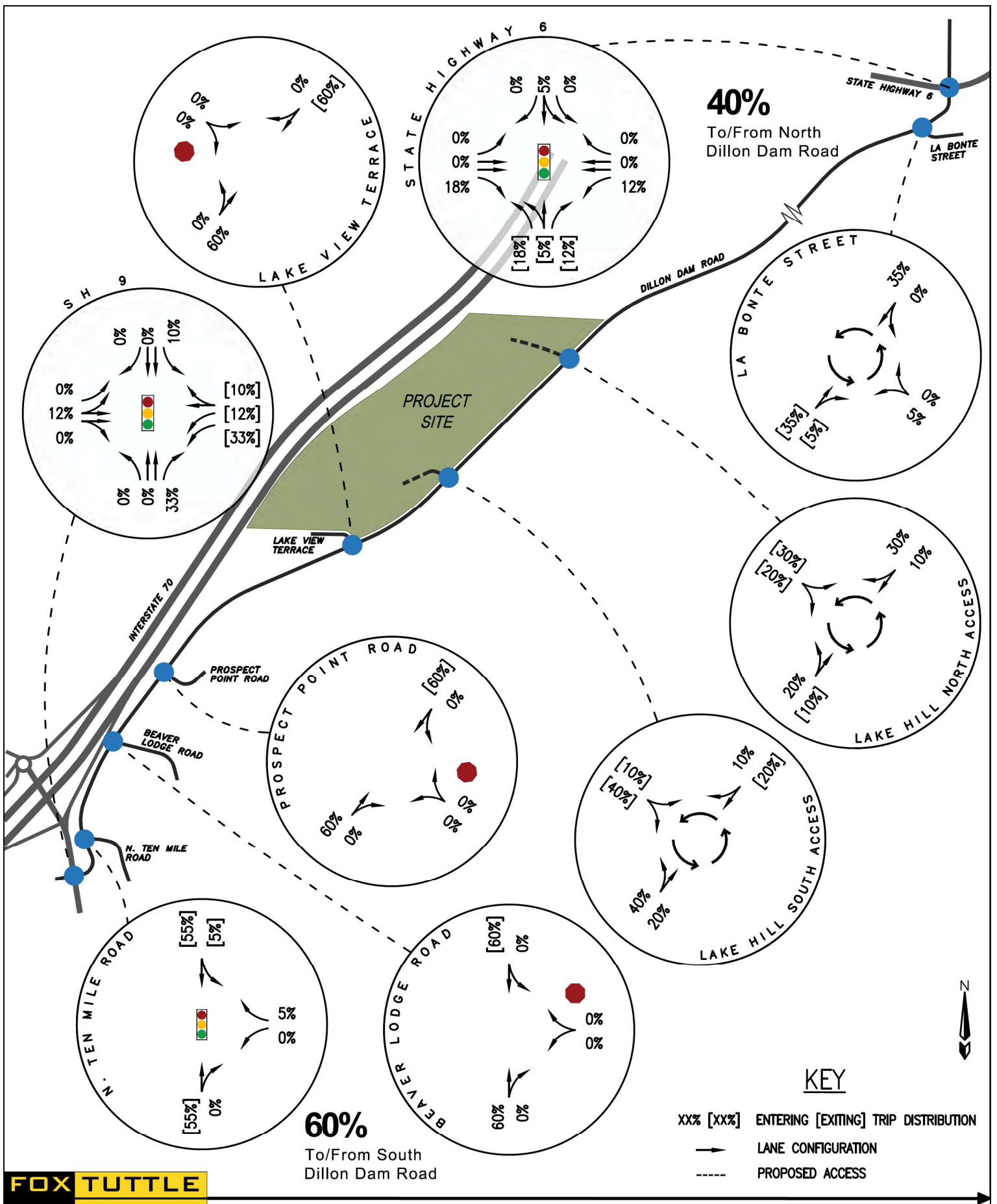


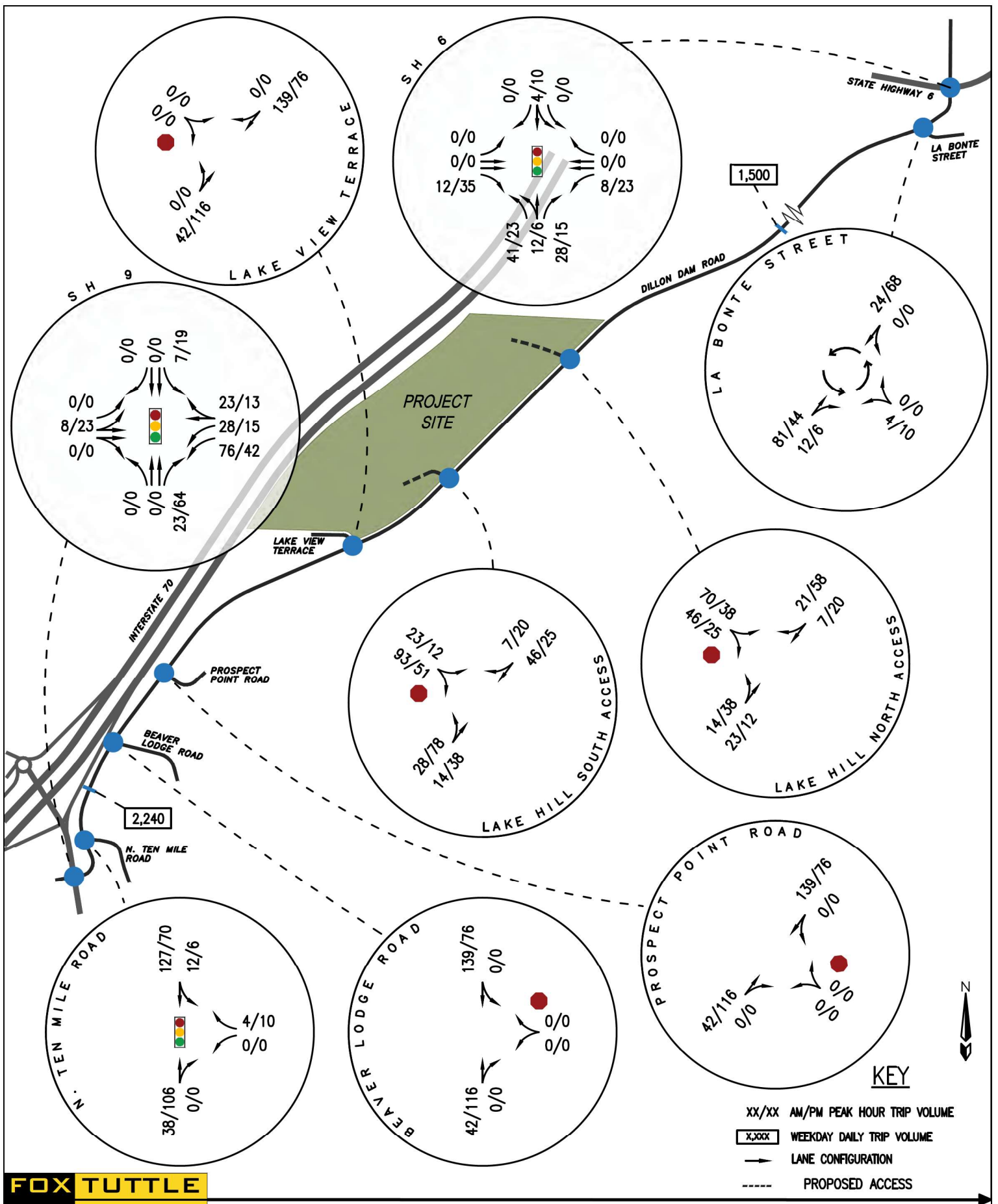




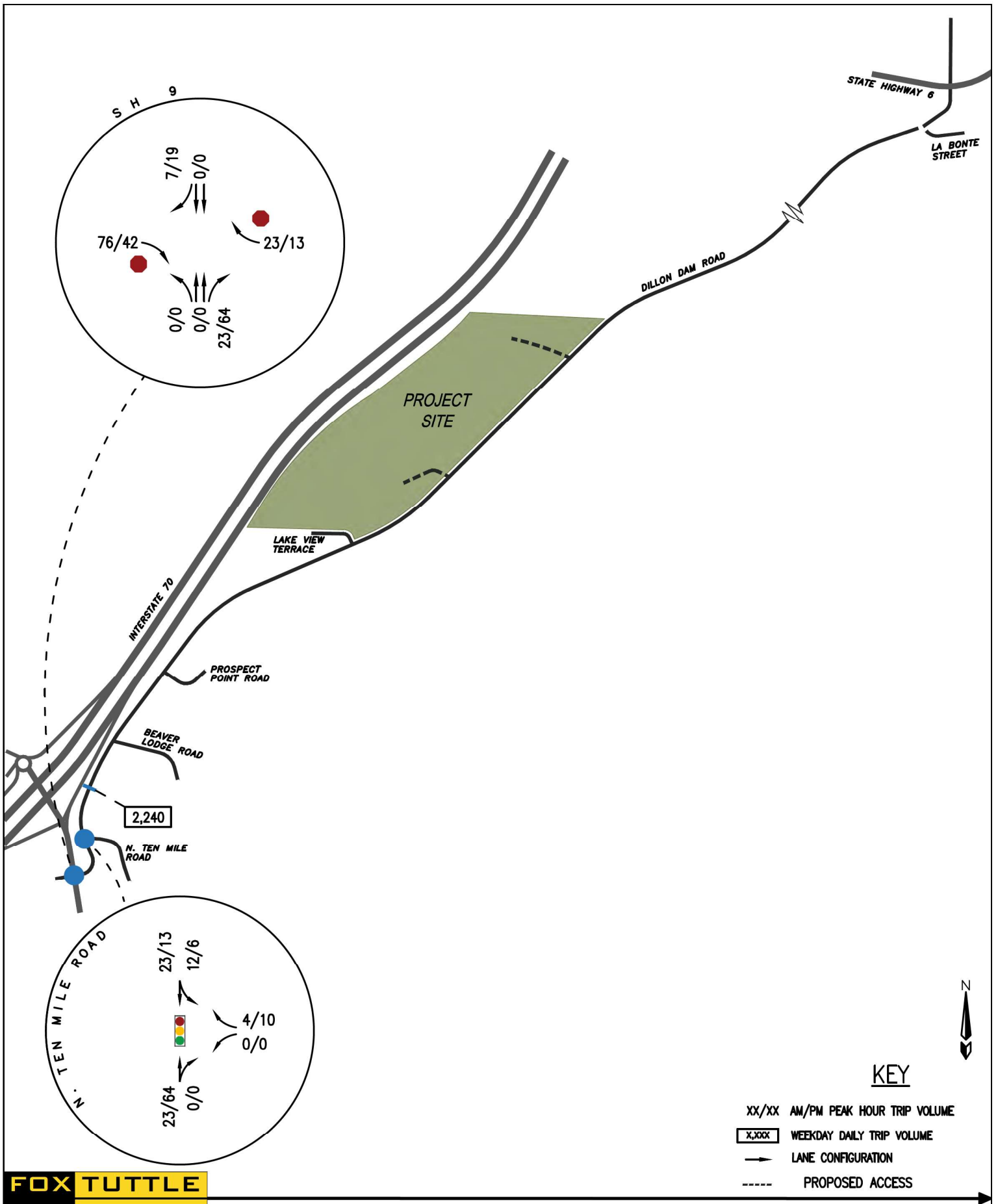




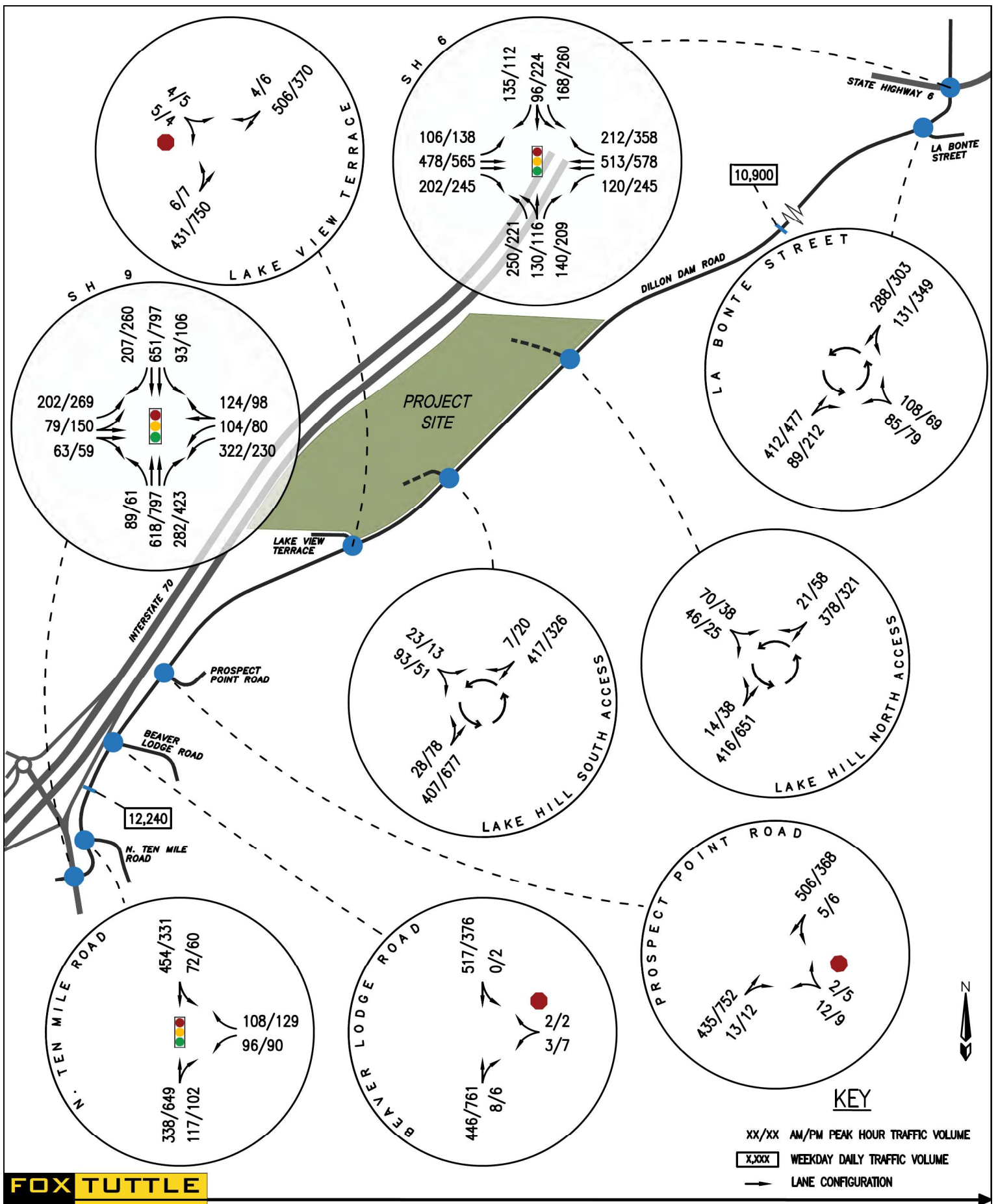


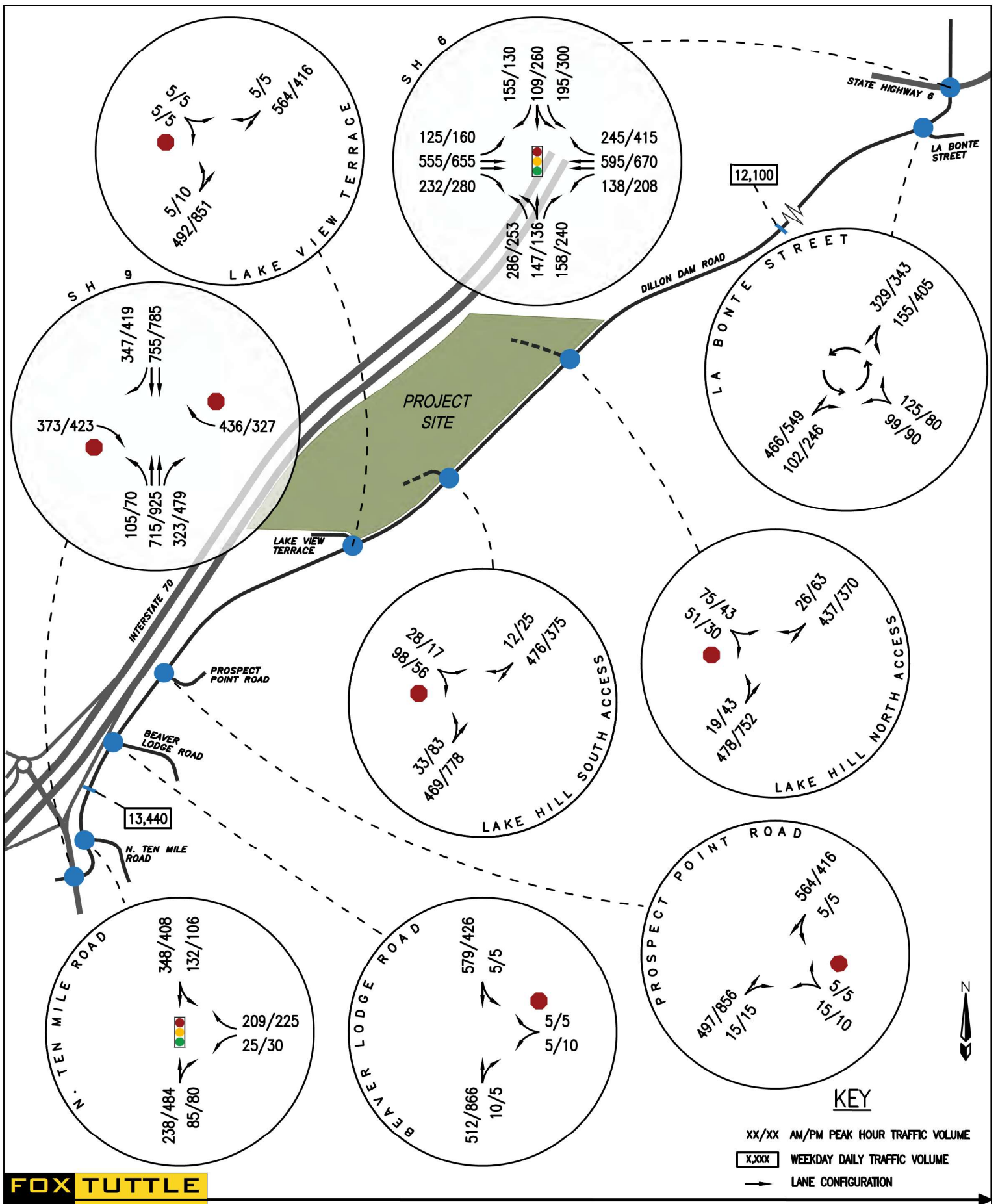


# LAKE HILL DEVELOPMENT TRAFFIC IMPACT STUDY SITE-GENERATED TRAFFIC VOLUMES









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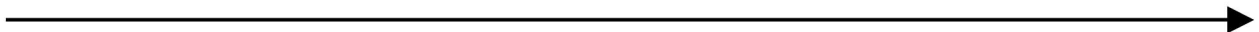
# ***Appendix:***

*Level-of-Service Definitions*

*Existing Traffic Data*

*Signal Warrant Worksheets*

*Intersection Capacity Worksheets*





## ***Level-of-Service Definitions***

## LEVEL OF SERVICE DEFINITIONS

In rating roadway and intersection operating conditions with existing or future traffic volumes, “Levels of Service” (LOS) A through F are used, with LOS A indicating very good operation and LOS F indicating poor operation. Levels of service at signalized and unsignalized intersections are closely associated with vehicle delays experienced in seconds per vehicle. More complete level of service definitions and delay data for signal and stop sign controlled intersections are contained in the following table for reference.

Level of Service Rating	Delay in seconds per vehicle (a)		Definition
	Signalized	Unsignalized	
A	0.0 to 10.0	0.0 to 10.0	Low vehicular traffic volumes; primarily free flow operations. Density is low and vehicles can freely maneuver within the traffic stream. Drivers are able to maintain their desired speeds with little or no delay.
B	10.1 to 20.0	10.1 to 15.0	Stable vehicular traffic volume flow with potential for some restriction of operating speeds due to traffic conditions. Vehicle maneuvering is only slightly restricted. The stopped delays are not bothersome and drivers are not subject to appreciable tension.
C	20.1 to 35.0	15.1 to 25.0	Stable traffic operations, however the ability for vehicles to maneuver is more restricted by the increase in traffic volumes. Relatively satisfactory operating speeds prevail, but adverse signal coordination or longer vehicle queues cause delays along the corridor.
D	35.1 to 55.0	25.1 to 35.0	Approaching unstable vehicular traffic flow where small increases in volume could cause substantial delays. Most drivers are restricted in ability to maneuver and selection of travel speeds due to congestion. Driver comfort and convenience are low, but tolerable.
E	55.1 to 80.0	35.1 to 50.0	Traffic operations characterized by significant approach delays and average travel speeds of one-half to one-third the free flow speed. Vehicular flow is unstable and there is potential for stoppages of brief duration. High signal density, extensive vehicle queuing, or corridor signal progression/timing are the typical causes of vehicle delays at signalized corridors.
F	> 80.0	> 50.0	Forced vehicular traffic flow and operations with high approach delays at critical intersections. Vehicle speeds are reduced substantially, and stoppages may occur for short or long periods of time because of downstream congestion.

(a) Delay ranges based on Highway Capacity Manual (6<sup>th</sup> Edition, 2016) criteria.



## ***Existing Traffic Data***

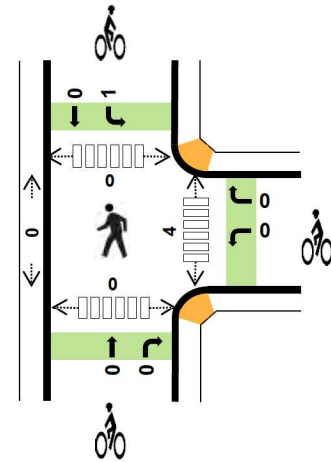
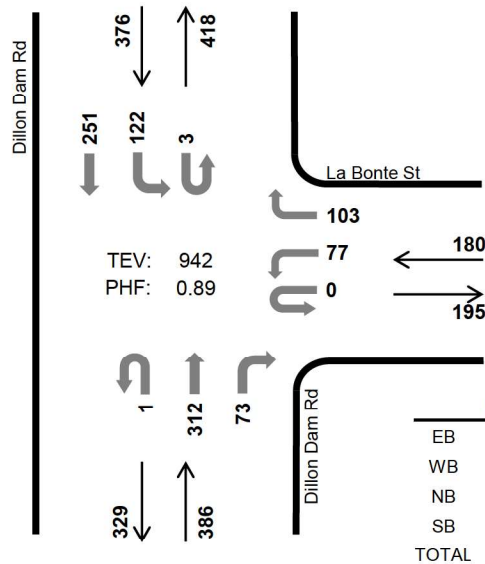




# Dillon Dam Rd La Bonte St



## Peak Hour



## Two-and-a-Half-Hour Count Summaries

Interval Start		n/a				La Bonte St				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
12:00 PM		0	0	0	0	0	13	0	24	0	0	82	7	1	33	62	0	222	0
12:15 PM		0	0	0	0	0	18	0	23	0	0	85	23	1	24	61	0	235	0
12:30 PM		0	0	0	0	0	21	0	24	0	0	60	22	1	28	65	0	221	0
12:45 PM		0	0	0	0	0	25	0	32	1	0	85	21	0	37	63	0	264	942
Peak Hour	All	0	0	0	0	0	77	0	103	1	0	312	73	3	122	251	0	942	0
	HV	0	0	0	0	0	0	0	1	0	0	0	1	0	3	0	0	5	0
	HV%	-	-	-	-	-	0%	-	1%	0%	-	0%	1%	0%	2%	0%	-	1%	0

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:00 PM	0	0	0	2	2	0	0	0	0	0	2	0	0	0	2
12:15 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
12:30 PM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	1	1	0	0	0	0	0	2	0	0	0	2
Peak Hour	0	1	1	3	5	0	0	0	1	1	4	0	0	0	4

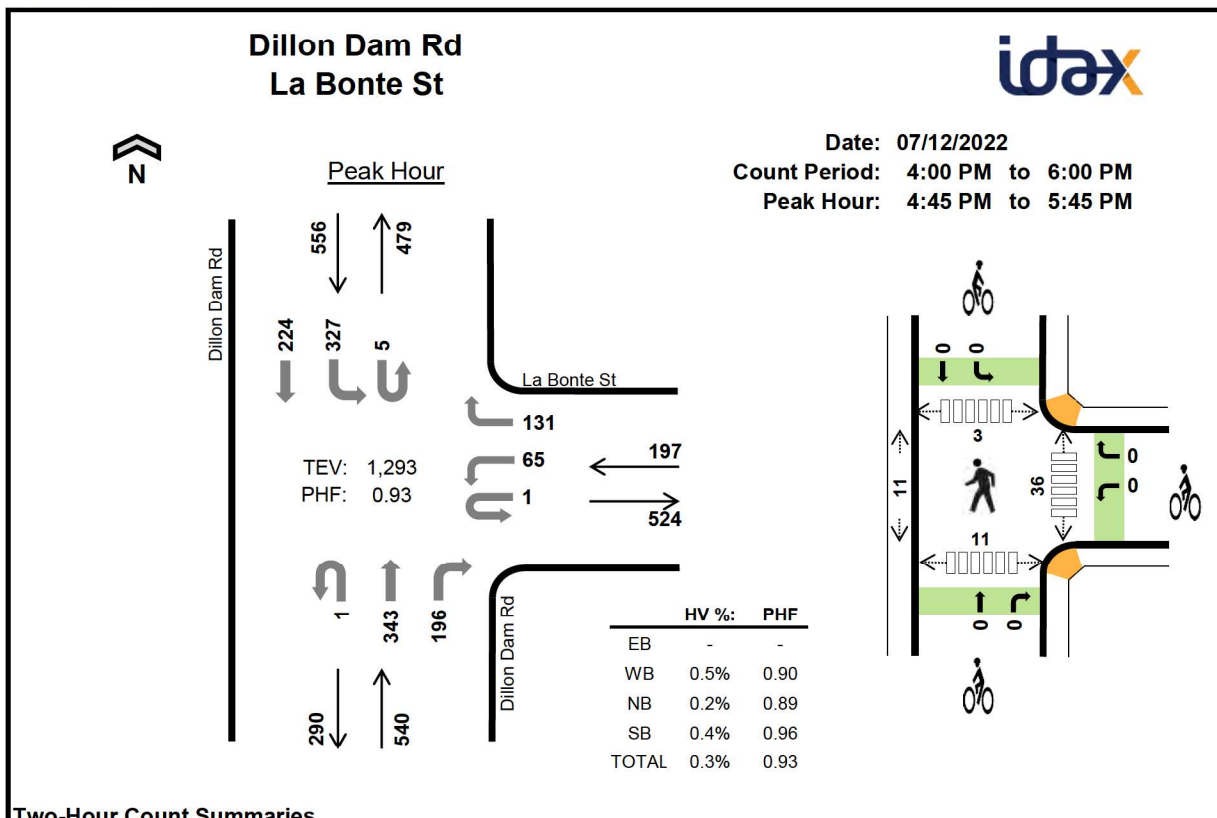
Two-and-a-Half-Hour Count Summaries																			
Interval Start		n/a				La Bonte St				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
	12:00 PM	0	0	0	0	0	13	0	24	0	0	82	7	1	33	62	0		
	12:15 PM	0	0	0	0	0	18	0	23	0	0	85	23	1	24	61	0		
	12:30 PM	0	0	0	0	0	21	0	24	0	0	60	22	1	28	65	0		
	12:45 PM	0	0	0	0	0	25	0	32	1	0	85	21	0	37	63	0		
	1:00 PM	0	0	0	0	0	15	0	21	0	0	56	20	1	24	55	0		
	1:15 PM	0	0	0	0	0	13	0	26	0	0	73	27	2	32	64	0		
	1:30 PM	0	0	0	0	0	12	0	26	1	0	75	14	0	38	64	0		
	1:45 PM	0	0	0	0	0	12	0	29	0	0	45	22	1	35	52	0		
	2:00 PM	0	0	0	0	0	13	0	27	0	0	65	14	0	34	67	0		
	2:15 PM	0	0	0	0	0	12	0	34	0	0	52	24	1	42	61	0		
Count Total		0	0	0	0	0	154	0	266	2	0	678	194	8	327	614	0		
Peak Hour	All	0	0	0	0	0	77	0	103	1	0	312	73	3	122	251	0		
	HV	0	0	0	0	0	0	0	1	0	0	0	1	0	3	0	0		
	HV%	-	-	-	-	-	0%	-	1%	0%	-	0%	1%	0%	2%	0%	-		
Note: Two-and-a-half-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
	12:00 PM	0	0	0	2	2	0	0	0	0	0	2	0	0	0	0	2		
	12:15 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0		
	12:30 PM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0		
	12:45 PM	0	0	0	1	1	0	0	0	0	0	2	0	0	0	0	2		
	1:00 PM	0	1	2	0	3	0	1	0	0	1	0	0	0	0	0	0		
	1:15 PM	0	0	0	2	2	0	1	0	0	1	0	0	0	0	0	0		
	1:30 PM	0	1	1	1	3	0	0	0	0	0	0	0	0	0	0	0		
	1:45 PM	0	0	0	1	1	0	0	0	1	1	0	4	0	0	0	4		
	2:00 PM	0	0	0	1	1	0	0	0	0	0	2	0	0	0	0	2		
	2:15 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	4		
Count Total		0	3	4	8	15	0	2	0	2	4	8	6	0	0	0	14		
Peak Hr		0	1	1	3	5	0	0	0	1	1	4	0	0	0	0	4		

Two-and-a-Half-Hour Count Summaries - Heavy Vehicles																		
Interval Start	n/a				La Bonte St				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	2	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	5
1:00 PM	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	0	3	6
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	8
1:30 PM	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	3	9
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	9
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	7
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Count Total	0	0	0	0	0	0	0	3	0	0	3	1	1	6	1	0	15	0
Peak Hour	0	0	0	0	0	0	0	1	0	0	0	1	0	3	0	0	5	0

Two-and-a-Half-Hour Count Summaries - Bikes																		
Interval Start	n/a				La Bonte St				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	LT	TH	RT		LT	TH	RT		LT	TH	RT		LT	TH	RT			
12:00 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
12:15 PM	0	0	0		0	0	0		0	0	0		1	0	0		1	0
12:30 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
12:45 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	1
1:00 PM	0	0	0		0	0	1		0	0	0		0	0	0		1	2
1:15 PM	0	0	0		0	0	1		0	0	0		0	0	0		1	2
1:30 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	2
1:45 PM	0	0	0		0	0	0		0	0	0		1	0	0		1	3
2:00 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	2
2:15 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	1
Count Total	0	0	0		0	0	2		0	0	0		2	0	0		4	0
Peak Hour	0	0	0		0	0	0		0	0	0		1	0	0		1	0

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



**Two-Hour Count Summaries**

Interval Start		n/a				La Bonte St				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	0	0	0	17	0	39	0	0	86	33	2	71	65	0	313	0
4:15 PM		0	0	0	0	0	21	0	29	0	0	66	35	0	69	68	0	288	0
4:30 PM		0	0	0	0	0	6	0	27	1	0	91	37	1	68	56	0	287	0
4:45 PM		0	0	0	0	0	15	0	36	0	0	92	46	1	91	50	0	331	1,219
5:00 PM		0	0	0	0	0	18	0	37	0	0	69	43	0	75	54	0	296	1,202
5:15 PM		0	0	0	0	1	17	0	33	1	0	93	57	1	78	66	0	347	1,261
5:30 PM		0	0	0	0	0	15	0	25	0	0	89	50	3	83	54	0	319	1,293
5:45 PM		0	0	0	0	0	8	0	27	0	0	78	43	1	80	57	0	294	1,256
Count Total		0	0	0	0	1	117	0	253	2	0	664	344	9	615	470	0	2,475	0
Peak Hour	All	0	0	0	0	1	65	0	131	1	0	343	196	5	327	224	0	1,293	0
	HV	0	0	0	0	0	0	0	1	0	0	1	0	0	2	0	0	4	0
	HV%	-	-	-	-	0%	0%	-	1%	0%	-	0%	0%	0%	1%	0%	-	0%	0

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

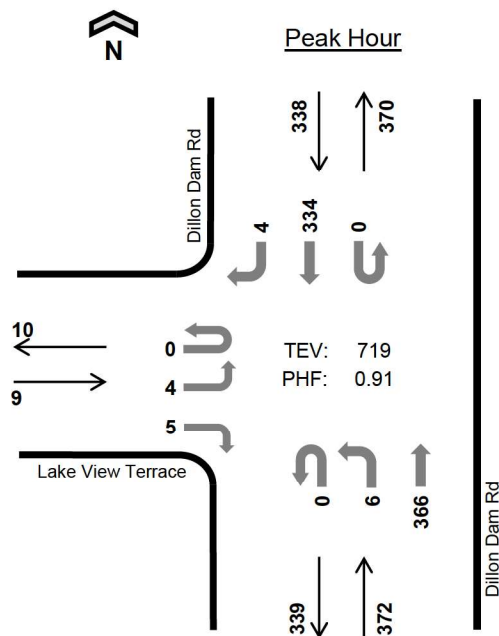
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	0	2	2	0	1	0	0	1	0	0	0	0	0
4:15 PM	0	1	0	0	1	0	0	0	0	0	4	0	0	0	4
4:30 PM	0	0	1	0	1	0	0	0	0	0	4	2	0	0	6
4:45 PM	0	0	1	0	1	0	0	0	0	0	4	0	0	0	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	2	8	0	8	18
5:15 PM	0	0	0	2	2	0	0	0	0	0	10	2	3	2	17
5:30 PM	0	1	0	0	1	0	0	0	0	0	20	1	0	1	22
5:45 PM	0	1	0	0	1	0	0	0	0	0	5	0	0	0	5
Count Total	0	3	2	4	9	0	1	0	0	1	49	13	3	11	76
Peak Hr	0	1	1	2	4	0	0	0	0	0	36	11	3	11	61

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	n/a				La Bonte St				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0
4:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	5
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	4
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	4
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	4
Count Total	0	0	0	0	0	0	0	3	0	0	2	0	0	4	0	0	9	0
Peak Hour	0	0	0	0	0	0	0	1	0	0	1	0	0	2	0	0	4	0

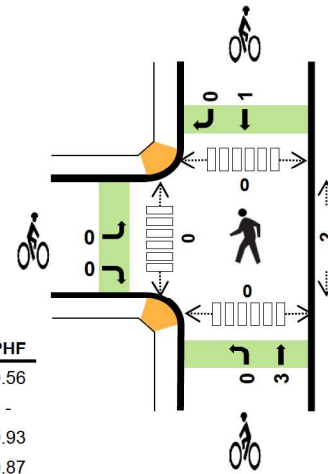
Two-Hour Count Summaries - Bikes																		
Interval Start	n/a			La Bonte St			Dillon Dam Rd			Dillon Dam Rd			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
4:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	0				
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1				
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Count Total	0	0	0	0	0	1	0	0	0	0	0	0	1	0				
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0				

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

# Dillon Dam Rd Lake View Terrace



Date: 07/12/2022  
Count Period: 12:00 PM to 2:30 PM  
Peak Hour: 12:15 PM to 1:15 PM



	HV %:	PHF
EB	11.1%	0.56
WB	-	-
NB	1.3%	0.93
SB	0.6%	0.87
TOTAL	1.1%	0.91

## Two-and-a-Half-Hour Count Summaries

Interval Start		Lake View Terrace				n/a				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
12:15 PM		0	0	0	2	0	0	0	0	0	2	89	0	0	0	86	0	179	0
12:30 PM		0	2	0	1	0	0	0	0	0	1	86	0	0	0	86	1	177	0
12:45 PM		0	0	0	0	0	0	0	0	0	1	99	0	0	0	96	1	197	0
1:00 PM		0	2	0	2	0	0	0	0	0	2	92	0	0	0	66	2	166	719
Peak Hour	All	0	4	0	5	0	0	0	0	0	6	366	0	0	0	334	4	719	0
	HV	0	0	0	1	0	0	0	0	0	1	4	0	0	0	2	0	8	0
	HV%	-	0%	-	20%	-	-	-	-	-	17%	1%	-	-	-	1%	0%	1%	0

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:15 PM	0	0	1	0	1	0	0	1	1	2	1	0	0	0	1
12:30 PM	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1
12:45 PM	0	0	1	1	2	0	0	1	0	1	0	0	0	0	0
1:00 PM	1	0	3	1	5	0	0	0	0	0	0	0	0	0	0
Peak Hour	1	0	5	2	8	0	0	3	1	4	2	0	0	0	2



Two-and-a-Half-Hour Count Summaries																			
Interval Start		Lake View Terrace				n/a				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
12:00 PM		0	1	0	1	0	0	0	0	0	0	91	0	0	0	69	2	164	0
12:15 PM		0	0	0	2	0	0	0	0	0	2	89	0	0	0	86	0	179	0
12:30 PM		0	2	0	1	0	0	0	0	0	1	86	0	0	0	86	1	177	0
12:45 PM		0	0	0	0	0	0	0	0	0	1	99	0	0	0	96	1	197	717
1:00 PM		0	2	0	2	0	0	0	0	0	2	92	0	0	0	66	2	166	719
1:15 PM		0	0	0	1	0	0	0	0	0	0	94	0	0	0	74	5	174	714
1:30 PM		0	0	0	0	0	0	0	0	0	1	90	0	0	0	78	2	171	708
1:45 PM		0	0	0	1	0	0	0	0	0	2	60	0	0	0	54	0	117	628
2:00 PM		0	0	0	0	0	0	0	0	0	1	81	0	0	0	81	0	163	625
2:15 PM		0	1	0	3	0	0	0	0	0	1	89	0	0	0	68	2	164	615
Count Total		0	6	0	11	0	0	0	0	0	11	871	0	0	0	758	15	1,672	0
Peak Hour	All	0	4	0	5	0	0	0	0	0	6	366	0	0	0	334	4	719	0
	HV	0	0	0	1	0	0	0	0	0	1	4	0	0	0	2	0	8	0
	HV%	-	0%	-	20%	-	-	-	-	-	17%	1%	-	-	-	1%	0%	1%	0
Note: Two-and-a-half-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
12:00 PM		0	0	0	0	0	0	0	12	0	12	1	0	0	0	0	1		
12:15 PM		0	0	1	0	1	0	0	1	1	2	1	0	0	0	0	1		
12:30 PM		0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	1		
12:45 PM		0	0	1	1	2	0	0	1	0	1	0	0	0	0	0	0		
1:00 PM		1	0	3	1	5	0	0	0	0	0	0	0	0	0	0	0		
1:15 PM		0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0		
1:30 PM		0	0	0	1	1	1	0	3	1	5	0	0	0	0	0	0		
1:45 PM		0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0		
2:00 PM		0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0		
2:15 PM		0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0		
Count Total		1	0	5	4	10	1	0	24	3	28	3	0	0	0	0	3		
Peak Hr		1	0	5	2	8	0	0	3	1	4	2	0	0	0	0	2		

**Two-and-a-Half-Hour Count Summaries - Heavy Vehicles**

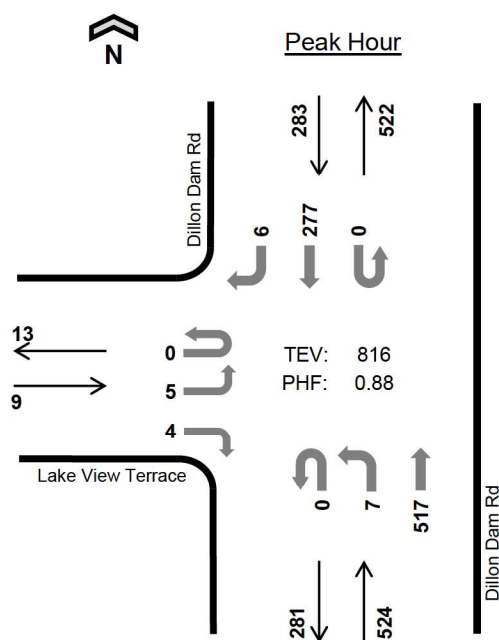
Interval Start	Lake View Terrace				n/a				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	3	
1:00 PM	0	0	0	1	0	0	0	0	0	0	1	2	0	0	0	1	0	8	
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	8	
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	
Count Total	0	0	0	1	0	0	0	0	0	0	1	4	0	0	0	4	0	10	0
Peak Hour	0	0	0	1	0	0	0	0	0	0	1	4	0	0	0	2	0	8	0

**Two-and-a-Half-Hour Count Summaries - Bikes**

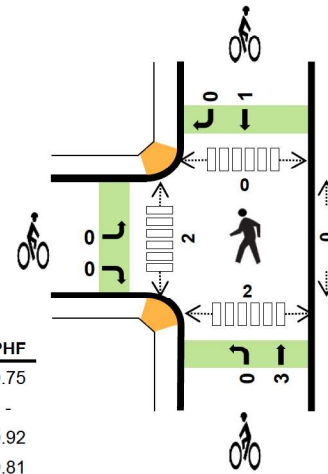
Interval Start	Lake View Terrace			n/a			Dillon Dam Rd			Dillon Dam Rd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
12:00 PM	0	0	0	0	0	0	0	12	0	0	0	0	12	0
12:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0
12:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
12:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	16
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
1:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	4
1:30 PM	0	0	1	0	0	0	0	3	0	0	1	0	5	8
1:45 PM	0	0	0	0	0	0	1	1	0	0	0	0	2	9
2:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	11
2:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	10
Count Total	0	0	1	0	0	0	1	23	0	0	3	0	28	0
Peak Hour	0	0	0	0	0	0	0	3	0	0	1	0	4	0

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

## Dillon Dam Rd Lake View Terrace



Date: 07/12/2022  
Count Period: 4:00 PM to 6:00 PM  
Peak Hour: 4:45 PM to 5:45 PM



	HV %:	PHF
EB	0.0%	0.75
WB	-	-
NB	0.4%	0.92
SB	0.7%	0.81
TOTAL	0.5%	0.88

### Two-Hour Count Summaries

Interval Start		Lake View Terrace				n/a				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	0	2	0	0	0	0	0	3	122	0	0	0	74	1	202	0
4:15 PM		0	0	0	3	0	0	0	0	0	0	113	0	0	0	81	0	197	0
4:30 PM		0	1	0	0	0	0	0	0	0	3	132	0	0	0	59	1	196	0
4:45 PM		0	1	0	0	0	0	0	0	0	1	125	0	0	0	64	3	194	789
5:00 PM		0	2	0	1	0	0	0	0	0	1	123	0	0	0	54	1	182	769
5:15 PM		0	1	0	1	0	0	0	0	0	3	140	0	0	0	86	1	232	804
5:30 PM		0	1	0	2	0	0	0	0	0	2	129	0	0	0	73	1	208	816
5:45 PM		0	0	0	3	0	0	0	0	0	3	115	0	0	0	73	0	194	816
Count Total		0	6	0	12	0	0	0	0	0	16	999	0	0	0	564	8	1,605	0
Peak Hour	All	0	5	0	4	0	0	0	0	0	7	517	0	0	0	277	6	816	0
	HV	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4	0
	HV%	-	0%	-	0%	-	-	-	-	-	0%	0%	-	-	-	1%	0%	0%	0

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	3	0	3	0	0	1	0	1	0	0	0	0	0
4:45 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
5:00 PM	0	0	1	0	1	0	0	0	1	1	0	2	0	2	4
5:15 PM	0	0	0	2	2	0	0	1	0	1	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
Count Total	0	0	5	2	7	0	0	5	1	6	0	2	1	2	5
Peak Hr	0	0	2	2	4	0	0	3	1	4	0	2	0	2	4



Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Lake View Terrace				n/a				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	5
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	7
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Count Total	0	0	0	0	0	0	0	0	0	0	5	0	0	0	2	0	7	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4	0

Two-Hour Count Summaries - Bikes																		
Interval Start	Lake View Terrace			n/a			Dillon Dam Rd			Dillon Dam Rd			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0				
4:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	2				
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	3				
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	4				
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	4				
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	4				
Count Total	0	0	0	0	0	0	0	5	0	0	1	0	6	0				
Peak Hour	0	0	0	0	0	0	0	3	0	0	1	0	4	0				

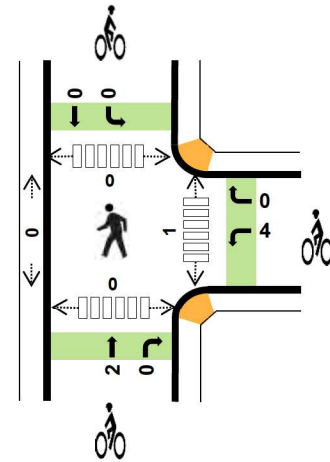
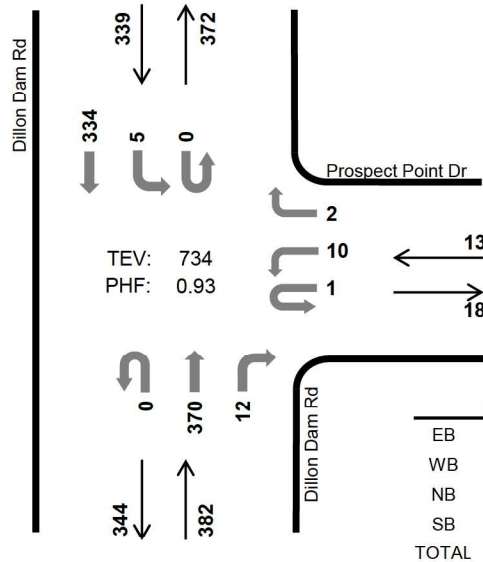
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

# Dillon Dam Rd Prospect Point Dr



Peak Hour

Date: 07/12/2022  
Count Period: 12:00 PM to 2:30 PM  
Peak Hour: 12:00 PM to 1:00 PM



	HV %:	PHF
EB	-	-
WB	0.0%	0.81
NB	0.8%	0.91
SB	0.0%	0.93
TOTAL	0.4%	0.93

## Two-and-a-Half-Hour Count Summaries

Interval Start		n/a				Prospect Point Dr				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
12:00 PM		0	0	0	0	0	2	0	1	0	0	88	3	0	1	74	0	169	0
12:15 PM		0	0	0	0	0	4	0	0	0	0	95	4	0	1	86	0	190	0
12:30 PM		0	0	0	0	1	3	0	0	0	0	86	1	0	0	86	0	177	0
12:45 PM		0	0	0	0	0	1	0	1	0	0	101	4	0	3	88	0	198	734
Peak Hour	All	0	0	0	0	1	10	0	2	0	0	370	12	0	5	334	0	734	0
	HV	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0
	HV%	-	-	-	-	0%	0%	-	0%	-	-	1%	0%	-	0%	0%	-	0%	0

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:00 PM	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0
12:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
12:45 PM	0	0	2	0	2	0	0	0	0	0	1	0	0	0	1
Peak Hour	0	0	3	0	3	0	4	2	0	6	1	0	0	0	1

Two-and-a-Half-Hour Count Summaries																			
Interval Start		n/a				Prospect Point Dr				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
	12:00 PM	0	0	0	0	0	2	0	1	0	0	88	3	0	1	74	0		
	12:15 PM	0	0	0	0	0	4	0	0	0	0	95	4	0	1	86	0		
	12:30 PM	0	0	0	0	1	3	0	0	0	0	86	1	0	0	86	0		
	12:45 PM	0	0	0	0	0	1	0	1	0	0	101	4	0	3	88	0		
	1:00 PM	0	0	0	0	0	1	0	1	0	0	88	2	0	1	69	0		
	1:15 PM	0	0	0	0	0	0	0	2	0	0	94	1	0	1	79	0		
	1:30 PM	0	0	0	0	0	3	0	0	0	0	89	5	0	0	73	0		
	1:45 PM	0	0	0	0	0	0	0	2	0	0	68	1	0	0	57	0		
	2:00 PM	0	0	0	0	0	6	0	0	0	0	84	2	0	0	88	0		
	2:15 PM	0	0	0	0	0	4	0	0	0	0	88	3	0	0	71	0		
Count Total		0	0	0	0	1	24	0	7	0	0	881	26	0	7	771	0		
Peak Hour	All	0	0	0	0	1	10	0	2	0	0	370	12	0	5	334	0		
	HV	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0		
	HV%	-	-	-	-	0%	0%	-	0%	-	-	1%	0%	-	0%	0%	-		
Note: Two-and-a-half-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
	12:00 PM	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	0		
	12:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0		
	12:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0		
	12:45 PM	0	0	2	0	2	0	0	0	0	0	1	0	0	0	0	1		
	1:00 PM	0	0	3	1	4	0	0	1	0	1	0	0	0	0	0	0		
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:30 PM	0	0	0	1	1	0	0	7	4	11	0	0	0	0	0	0		
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:00 PM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0		
	2:15 PM	0	0	1	1	2	0	0	0	1	1	0	0	0	0	0	0		
Count Total		0	0	7	3	10	0	4	12	5	21	1	0	0	0	0	1		
Peak Hr		0	0	3	0	3	0	4	2	0	6	1	0	0	0	0	1		



Two-and-a-Half-Hour Count Summaries - Heavy Vehicles																		
Interval Start	n/a				Prospect Point Dr				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	3
1:00 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	4	7
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	7
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	3
Count Total	0	0	0	0	0	0	0	0	0	0	7	0	0	0	3	0	10	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0

Two-and-a-Half-Hour Count Summaries - Bikes																		
Interval Start	n/a				Prospect Point Dr				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	LT	TH	RT		LT	TH	RT		LT	TH	RT		LT	TH	RT			
12:00 PM	0	0	0		4	0	0		0	1	0		0	0	0		5	0
12:15 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
12:30 PM	0	0	0		0	0	0		0	1	0		0	0	0		1	0
12:45 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	6
1:00 PM	0	0	0		0	0	0		0	1	0		0	0	0		1	2
1:15 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	2
1:30 PM	0	0	0		0	0	0		0	7	0		0	4	0		11	12
1:45 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	12
2:00 PM	0	0	0		0	0	0		0	2	0		0	0	0		2	13
2:15 PM	0	0	0		0	0	0		0	0	0		0	1	0		1	14
Count Total	0	0	0		4	0	0		0	12	0		0	5	0		21	0
Peak Hour	0	0	0		4	0	0		0	2	0		0	0	0		6	0

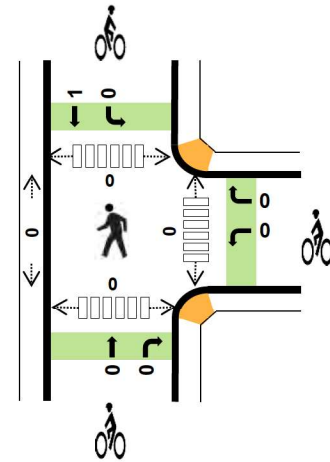
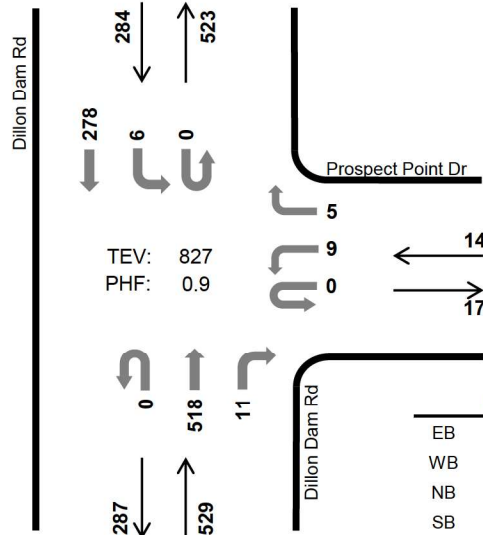
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

# Dillon Dam Rd Prospect Point Dr



Peak Hour

Date: 07/12/2022  
Count Period: 4:00 PM to 6:00 PM  
Peak Hour: 4:45 PM to 5:45 PM



	HV %:	PHF
EB	-	-
WB	0.0%	0.88
NB	0.6%	0.92
SB	1.1%	0.84
TOTAL	0.7%	0.90

## Two-Hour Count Summaries

Interval Start		n/a				Prospect Point Dr				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	0	0	0	1	0	0	1	0	124	2	0	1	75	0	204	0
4:15 PM		0	0	0	0	0	2	0	1	0	0	113	2	0	0	83	0	201	0
4:30 PM		0	0	0	0	0	1	0	0	0	0	138	2	0	1	59	0	201	0
4:45 PM		0	0	0	0	0	2	0	2	0	0	125	5	0	0	62	0	196	802
5:00 PM		0	0	0	0	0	2	0	1	0	0	125	4	0	1	57	0	190	788
5:15 PM		0	0	0	0	0	2	0	1	0	0	142	1	0	3	82	0	231	818
5:30 PM		0	0	0	0	0	3	0	1	0	0	126	1	0	2	77	0	210	827
5:45 PM		0	0	0	0	0	3	0	0	0	0	117	5	0	2	66	0	193	824
Count Total		0	0	0	0	0	16	0	6	1	0	1,010	22	0	10	561	0	1,626	0
Peak Hour	All	0	0	0	0	0	9	0	5	0	0	518	11	0	6	278	0	827	0
	HV	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	6	0
	HV%	-	-	-	-	-	0%	-	0%	-	-	1%	0%	-	0%	1%	-	1%	0

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
4:30 PM	0	0	3	0	3	0	0	1	0	1	0	0	0	0	0
4:45 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	1	1	2	0	0	0	1	1	0	0	0	0	0
5:15 PM	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	1	0	1	0	0	0	1	1	0	0	0	0	0
Count Total	0	0	7	3	10	0	1	1	2	4	0	0	0	0	0
Peak Hr	0	0	3	3	6	0	0	0	1	1	0	0	0	0	0

**Two-Hour Count Summaries - Heavy Vehicles**

Interval Start	n/a				Prospect Point Dr				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	6
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	3	9
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	6
Count Total	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	3	10	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	6	0

**Two-Hour Count Summaries - Bikes**

Interval Start	n/a			Prospect Point Dr			Dillon Dam Rd			Dillon Dam Rd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	3
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Count Total	0	0	0	0	0	1	0	1	0	0	2	0	4	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	1	0	1	0

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

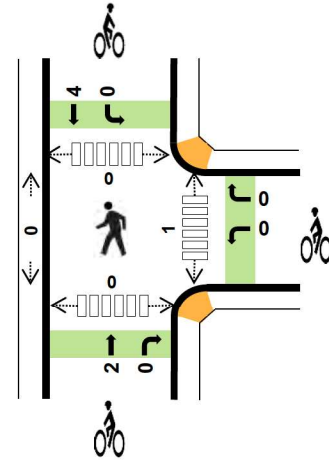
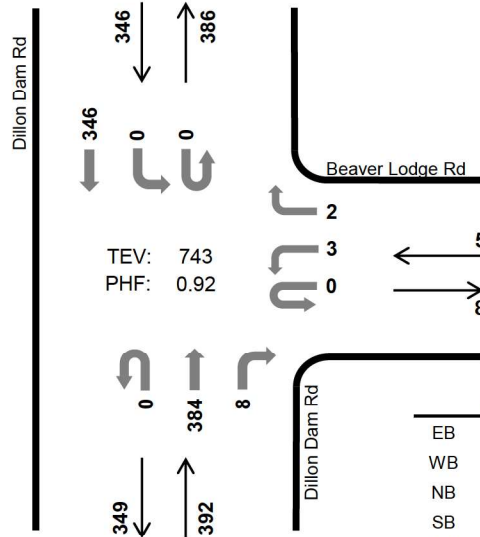


# Dillon Dam Rd Beaver Lodge Rd



Peak Hour

Date: 07/12/2022  
Count Period: 12:00 PM to 2:30 PM  
Peak Hour: 12:00 PM to 1:00 PM



	HV %:	PHF
EB	-	-
WB	0.0%	0.42
NB	0.8%	0.88
SB	0.0%	0.95
TOTAL	0.4%	0.92

## Two-and-a-Half-Hour Count Summaries

Interval Start		n/a				Beaver Lodge Rd				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
12:00 PM		0	0	0	0	0	1	0	0	0	0	91	2	0	0	78	0	172	0
12:15 PM		0	0	0	0	0	2	0	1	0	0	98	1	0	0	88	0	190	0
12:30 PM		0	0	0	0	0	0	0	1	0	0	86	2	0	0	91	0	180	0
12:45 PM		0	0	0	0	0	0	0	0	0	0	109	3	0	0	89	0	201	743
Peak Hour	All	0	0	0	0	0	3	0	2	0	0	384	8	0	0	346	0	743	0
	HV	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0
	HV%	-	-	-	-	-	0%	-	0%	-	-	1%	0%	-	-	0%	-	0%	0

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:00 PM	0	0	0	0	0	0	0	1	4	5	0	0	0	0	0
12:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
12:45 PM	0	0	2	0	2	0	0	0	0	0	1	0	0	0	1
Peak Hour	0	0	3	0	3	0	0	2	4	6	1	0	0	0	1

Two-and-a-Half-Hour Count Summaries																			
Interval Start		n/a				Beaver Lodge Rd				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
	12:00 PM	0	0	0	0	0	1	0	0	0	0	91	2	0	0	78	0		
	12:15 PM	0	0	0	0	0	2	0	1	0	0	98	1	0	0	88	0		
	12:30 PM	0	0	0	0	0	0	0	1	0	0	86	2	0	0	91	0		
	12:45 PM	0	0	0	0	0	0	0	0	0	0	109	3	0	0	89	0		
	1:00 PM	0	0	0	0	0	2	0	1	0	0	85	0	0	0	74	0		
	1:15 PM	0	0	0	0	0	2	0	0	0	0	100	3	0	1	77	0		
	1:30 PM	0	0	0	0	0	1	0	2	0	0	89	0	0	0	77	0		
	1:45 PM	0	0	0	0	0	2	0	0	0	0	70	2	0	0	58	0		
	2:00 PM	0	0	0	0	0	1	0	2	0	0	80	1	0	0	92	0		
	2:15 PM	0	0	0	0	0	4	0	1	0	0	90	2	0	1	73	0		
Count Total		0	0	0	0	0	15	0	8	0	0	898	16	0	2	797	0		
Peak Hour	All	0	0	0	0	0	3	0	2	0	0	384	8	0	0	346	0		
	HV	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0		
	HV%	-	-	-	-	-	0%	-	0%	-	-	1%	0%	-	-	0%	-		
Note: Two-and-a-half-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
	12:00 PM	0	0	0	0	0	0	0	1	4	5	0	0	0	0	0	0		
	12:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0		
	12:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0		
	12:45 PM	0	0	2	0	2	0	0	0	0	0	1	0	0	0	0	1		
	1:00 PM	0	0	2	1	3	0	0	1	0	1	0	0	0	0	0	0		
	1:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0		
	1:30 PM	0	0	1	1	2	0	0	7	4	11	0	0	0	0	0	0		
	1:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1		
	2:00 PM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0		
	2:15 PM	0	1	1	1	3	0	0	0	1	1	0	0	0	0	0	0		
Count Total		0	1	8	3	12	0	0	12	9	21	2	0	0	0	0	2		
Peak Hr		0	0	3	0	3	0	0	2	4	6	1	0	0	0	0	1		

Two-and-a-Half-Hour Count Summaries - Heavy Vehicles																		
Interval Start	n/a				Beaver Lodge Rd				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	3
1:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	6
1:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	6
1:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	8
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
2:15 PM	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	3	5
Count Total	0	0	0	0	0	1	0	0	0	0	8	0	0	0	3	0	12	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0

Two-and-a-Half-Hour Count Summaries - Bikes																		
Interval Start	n/a				Beaver Lodge Rd				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	LT	TH	RT		LT	TH	RT		LT	TH	RT		LT	TH	RT			
12:00 PM	0	0	0		0	0	0		0	1	0		0	4	0		5	0
12:15 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
12:30 PM	0	0	0		0	0	0		0	1	0		0	0	0		1	0
12:45 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	6
1:00 PM	0	0	0		0	0	0		0	1	0		0	0	0		1	2
1:15 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	2
1:30 PM	0	0	0		0	0	0		0	7	0		0	4	0		11	12
1:45 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	12
2:00 PM	0	0	0		0	0	0		0	2	0		0	0	0		2	13
2:15 PM	0	0	0		0	0	0		0	0	0		0	1	0		1	14
Count Total	0	0	0		0	0	0		0	12	0		0	9	0		21	0
Peak Hour	0	0	0		0	0	0		0	2	0		0	4	0		6	0

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

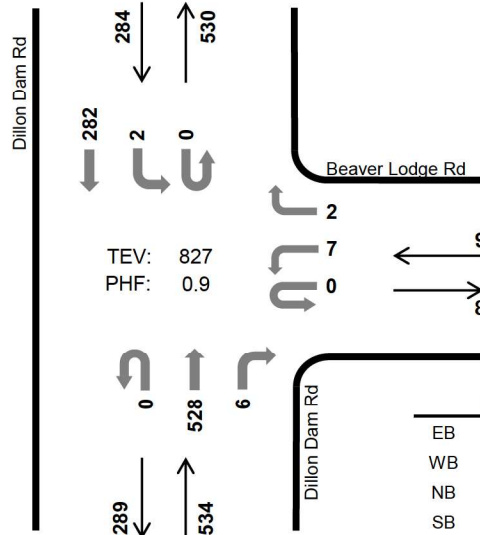


# Dillon Dam Rd Beaver Lodge Rd



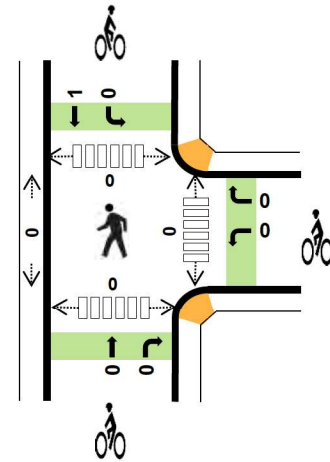
Peak Hour

Date: 07/12/2022  
Count Period: 4:00 PM to 6:00 PM  
Peak Hour: 4:45 PM to 5:45 PM



TEV: 827  
PHF: 0.9

	HV %:	PHF
EB	-	-
WB	0.0%	0.56
NB	0.9%	0.92
SB	1.1%	0.85
TOTAL	1.0%	0.90



## Two-Hour Count Summaries

Interval Start		n/a				Beaver Lodge Rd				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	0	0	0	1	0	1	0	0	122	1	0	0	77	0	202	0
4:15 PM		0	0	0	0	0	2	0	0	0	0	117	0	0	1	85	0	205	0
4:30 PM		0	0	0	0	0	0	0	1	0	0	140	4	0	1	57	0	203	0
4:45 PM		0	0	0	0	0	1	0	0	0	0	126	1	0	0	63	0	191	801
5:00 PM		0	0	0	0	0	2	0	0	0	0	131	2	0	1	59	0	195	794
5:15 PM		0	0	0	0	0	1	0	1	0	0	144	1	0	1	83	0	231	820
5:30 PM		0	0	0	0	0	3	0	1	0	0	127	2	0	0	77	0	210	827
5:45 PM		0	0	0	0	0	1	0	0	0	0	120	0	0	0	70	0	191	827
Count Total		0	0	0	0	0	11	0	4	0	0	1,027	11	0	4	571	0	1,628	0
Peak Hour	All	0	0	0	0	0	7	0	2	0	0	528	6	0	2	282	0	827	0
	HV	0	0	0	0	0	0	0	0	0	0	5	0	0	0	3	0	8	0
	HV%	-	-	-	-	-	0%	-	0%	-	-	1%	0%	-	0%	1%	-	1%	0

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	3	0	3	0	0	1	0	1	0	0	0	0	0
4:45 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	2	1	3	0	0	0	1	1	0	0	0	0	0
5:15 PM	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	1	0	1	0	0	0	1	1	0	0	0	0	0
Count Total	0	0	9	3	12	0	0	1	2	3	0	0	0	0	0
Peak Hr	0	0	5	3	8	0	0	0	1	1	0	0	0	0	0

**Two-Hour Count Summaries - Heavy Vehicles**

Interval Start	n/a				Beaver Lodge Rd				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	7
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	10
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	8
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	8
Count Total	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	3	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	3	0	0

**Two-Hour Count Summaries - Bikes**

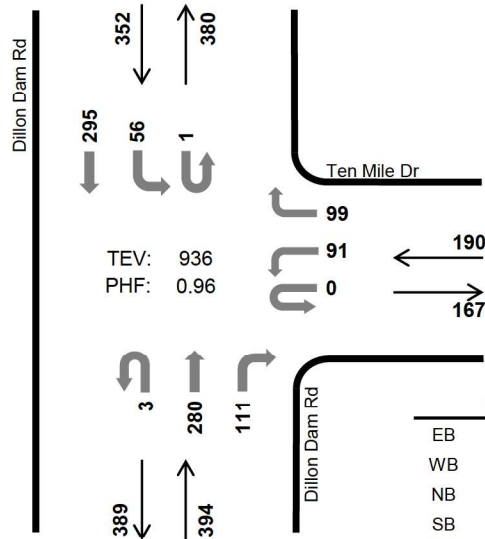
Interval Start	n/a			Beaver Lodge Rd			Dillon Dam Rd			Dillon Dam Rd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Count Total	0	0	0	0	0	0	0	1	0	0	2	0	3	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	1	0	1	0

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

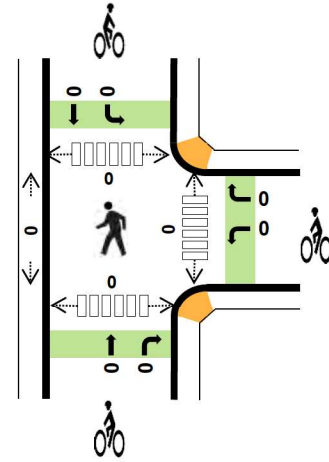
## Dillon Dam Rd Ten Mile Dr



### Peak Hour



Date: 07/12/2022  
Count Period: 12:00 PM to 2:30 PM  
Peak Hour: 12:15 PM to 1:15 PM



	HV %:	PHF
EB	-	-
WB	4.2%	0.95
NB	2.3%	0.91
SB	1.1%	0.96
TOTAL	2.2%	0.96

### Two-and-a-Half-Hour Count Summaries

Interval Start		n/a				Ten Mile Dr				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
12:15 PM		0	0	0	0	0	19	0	24	0	0	77	31	1	16	75	0	243	0
12:30 PM		0	0	0	0	0	27	0	23	3	0	62	28	0	12	80	0	235	0
12:45 PM		0	0	0	0	0	17	0	33	0	0	74	25	0	14	68	0	231	0
1:00 PM		0	0	0	0	0	28	0	19	0	0	67	27	0	14	72	0	227	936
Peak Hour	All	0	0	0	0	0	91	0	99	3	0	280	111	1	56	295	0	936	0
	HV	0	0	0	0	0	8	0	0	2	0	4	3	0	1	3	0	21	0
	HV%	-	-	-	-	-	9%	-	0%	67%	-	1%	3%	0%	2%	1%	-	2%	0

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:15 PM	0	3	2	1	6	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	1	3	0	4	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	2	3	3	8	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	8	9	4	21	0	0	0	0	0	0	0	0	0	0

Two-and-a-Half-Hour Count Summaries																				
Interval Start		n/a				Ten Mile Dr				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour	
		Eastbound				Westbound				Northbound				Southbound						
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
	12:00 PM	0	0	0	0	0	0	17	0	15	0	0	81	19	0	21	60	0	213	0
	12:15 PM	0	0	0	0	0	0	19	0	24	0	0	77	31	1	16	75	0	243	0
	12:30 PM	0	0	0	0	0	0	27	0	23	3	0	62	28	0	12	80	0	235	0
	12:45 PM	0	0	0	0	0	0	17	0	33	0	0	74	25	0	14	68	0	231	922
	1:00 PM	0	0	0	0	0	0	28	0	19	0	0	67	27	0	14	72	0	227	936
	1:15 PM	0	0	0	0	0	0	18	0	23	0	0	77	19	0	16	62	0	215	908
	1:30 PM	0	0	0	0	0	0	19	0	29	0	0	58	27	0	12	67	0	212	885
	1:45 PM	0	0	0	0	0	0	24	0	20	0	0	52	35	0	8	54	0	193	847
	2:00 PM	0	0	0	0	0	0	11	0	13	0	0	65	9	0	21	70	0	189	809
	2:15 PM	0	0	0	0	0	0	22	0	28	1	0	67	22	0	14	67	0	221	815
Count Total		0	0	0	0	0	0	202	0	227	4	0	680	242	1	148	675	0	2,179	0
Peak Hour	All	0	0	0	0	0	0	91	0	99	3	0	280	111	1	56	295	0	936	0
	HV	0	0	0	0	0	0	8	0	0	2	0	4	3	0	1	3	0	21	0
	HV%	-	-	-	-	-	-	9%	-	0%	67%	-	1%	3%	0%	2%	1%	-	2%	0
Note: Two-and-a-half-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																				
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)								
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total				
	12:00 PM	0	1	0	1	2	0	1	0	4	5	0	0	0	0	0	0	0		
	12:15 PM	0	3	2	1	6	0	0	0	0	0	0	0	0	0	0	0	0		
	12:30 PM	0	1	3	0	4	0	0	0	0	0	0	0	0	0	0	0	0		
	12:45 PM	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0		
	1:00 PM	0	2	3	3	8	0	0	0	0	0	0	0	0	0	0	0	0		
	1:15 PM	0	1	1	1	3	0	0	4	0	4	0	0	0	0	0	0	0		
	1:30 PM	0	0	3	2	5	0	0	1	4	5	0	0	0	0	0	0	0		
	1:45 PM	0	0	1	0	1	0	0	2	0	2	1	0	0	0	0	1	1		
	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:15 PM	0	1	1	2	4	0	0	0	1	1	1	0	0	0	0	1	1		
Count Total		0	11	15	10	36	0	1	7	9	17	2	0	0	0	0	2	2		
Peak Hr		0	8	9	4	21	0	0	0	0	0	0	0	0	0	0	0	0		



Two-and-a-Half-Hour Count Summaries - Heavy Vehicles																			
Interval Start	n/a				Ten Mile Dr				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
12:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	2	0
12:15 PM	0	0	0	0	0	3	0	0	0	0	0	1	1	0	0	1	0	6	0
12:30 PM	0	0	0	0	0	1	0	0	0	2	0	0	1	0	0	0	0	4	0
12:45 PM	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	3	15
1:00 PM	0	0	0	0	0	2	0	0	0	0	0	2	1	0	1	2	0	8	21
1:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	3	18
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	2	0	5	19
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	17
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
2:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	1	0	4	10
Count Total	0	0	0	0	0	11	0	0	0	2	0	4	9	0	3	7	0	36	0
Peak Hour	0	0	0	0	0	8	0	0	0	2	0	4	3	0	1	3	0	21	0

Two-and-a-Half-Hour Count Summaries - Bikes																		
Interval Start	n/a				Ten Mile Dr				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	LT	TH	RT		LT	TH	RT		LT	TH	RT		LT	TH	RT			
12:00 PM	0	0	0		0	0	1		0	0	0		0	4	0		5	0
12:15 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
12:30 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
12:45 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	5
1:00 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
1:15 PM	0	0	0		0	0	0		0	4	0		0	0	0		4	4
1:30 PM	0	0	0		0	0	0		0	1	0		1	3	0		5	9
1:45 PM	0	0	0		0	0	0		0	2	0		0	0	0		2	11
2:00 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	11
2:15 PM	0	0	0		0	0	0		0	0	0		0	1	0		1	8
Count Total	0	0	0		0	0	1		0	7	0		1	8	0		17	0
Peak Hour	0	0	0		0	0	0		0	0	0		0	0	0		0	0

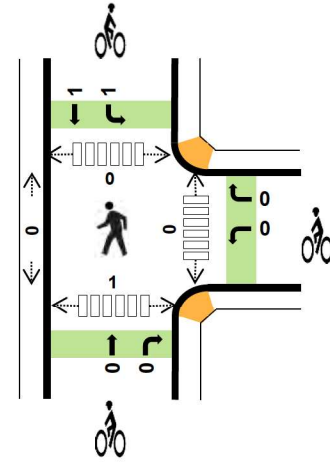
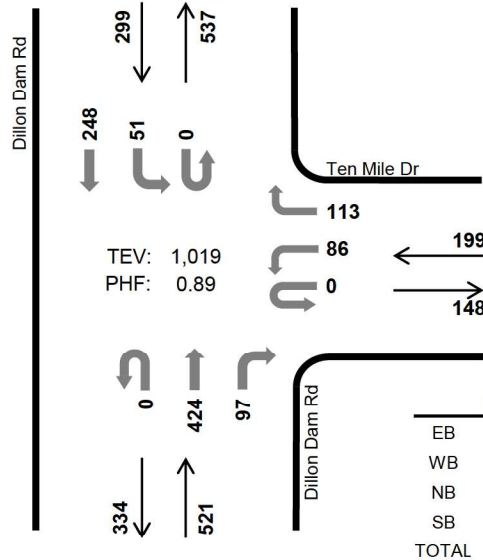
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

## Dillon Dam Rd Ten Mile Dr



Peak Hour

Date: 07/12/2022  
Count Period: 4:00 PM to 6:00 PM  
Peak Hour: 5:00 PM to 6:00 PM



	HV %:	PHF
EB	-	-
WB	1.0%	0.87
NB	0.8%	0.89
SB	1.0%	0.88
TOTAL	0.9%	0.89

### Two-Hour Count Summaries

Interval Start		n/a				Ten Mile Dr				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	0	0	0	19	0	21	0	0	100	29	0	12	63	0	244	0
4:15 PM		0	0	0	0	0	16	0	27	0	0	94	19	0	15	72	0	243	0
4:30 PM		0	0	0	0	0	15	0	24	0	0	118	28	0	10	48	0	243	0
4:45 PM		0	0	0	0	0	14	0	17	0	0	108	20	0	5	59	0	223	953
5:00 PM		0	0	0	0	0	30	0	27	0	0	110	21	0	12	53	0	253	962
5:15 PM		0	0	0	0	0	21	0	33	0	0	119	28	0	11	74	0	286	1,005
5:30 PM		0	0	0	0	0	18	0	38	0	0	86	27	0	15	66	0	250	1,012
5:45 PM		0	0	0	0	0	17	0	15	0	0	109	21	0	13	55	0	230	1,019
Count Total		0	0	0	0	0	150	0	202	0	0	844	193	0	93	490	0	1,972	0
Peak Hour	All	0	0	0	0	0	86	0	113	0	0	424	97	0	51	248	0	1,019	0
	HV	0	0	0	0	0	2	0	0	0	0	2	2	0	0	3	0	9	0
	HV%	-	-	-	-	-	2%	-	0%	-	-	0%	2%	-	0%	1%	-	1%	0

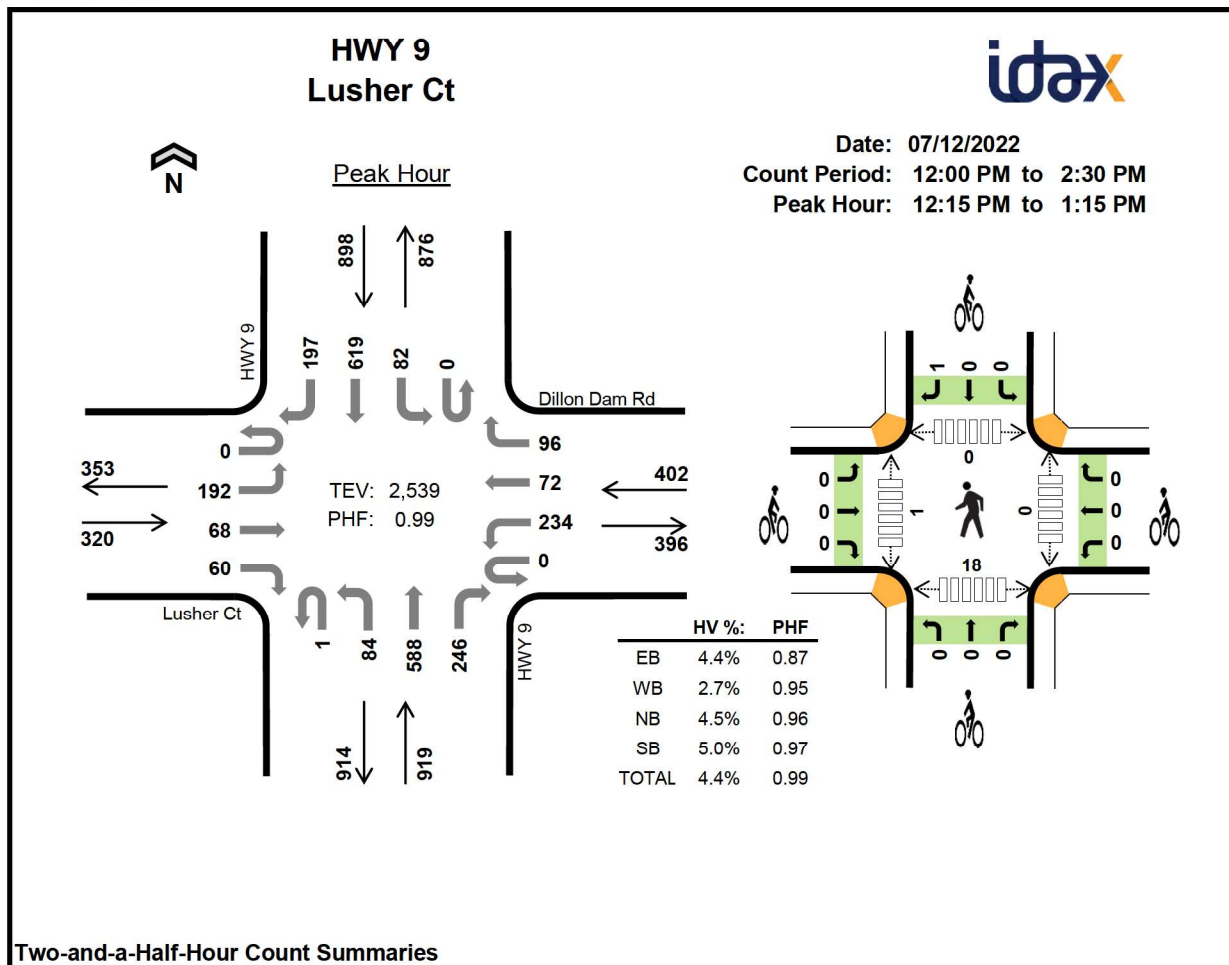
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	2	2	0	4	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	3	2	0	5	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	5	1	6	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	1	1	3	0	0	0	1	1	0	0	0	0	0
5:15 PM	0	1	1	2	4	0	0	0	0	0	0	0	0	1	1
5:30 PM	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
Count Total	0	7	14	4	25	0	0	0	2	2	0	0	0	1	1
Peak Hr	0	2	4	3	9	0	0	0	2	2	0	0	0	1	1

Two-Hour Count Summaries - Heavy Vehicles																			
Interval Start	n/a				Ten Mile Dr				Dillon Dam Rd				Dillon Dam Rd				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	0	0	0	0	2	0	0	0	0	0	1	1	0	0	0	0	4	0
4:15 PM	0	0	0	0	0	3	0	0	0	0	0	0	2	0	0	0	0	5	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	3	2	0	0	1	0	6	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	16
5:00 PM	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	3	15
5:15 PM	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2	0	4	14
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	10
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Count Total	0	0	0	0	0	7	0	0	0	0	0	7	7	0	0	4	0	25	0
Peak Hour	0	0	0	0	0	2	0	0	0	0	0	2	2	0	0	3	0	9	0

Two-Hour Count Summaries - Bikes																	
Interval Start	n/a			Ten Mile Dr			Dillon Dam Rd			Dillon Dam Rd			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0

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



### Two-and-a-Half-Hour Count Summaries

Interval Start		Lusher Ct				Dillon Dam Rd				HWY 9				HWY 9				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
12:15 PM		0	41	20	10	0	60	15	27	0	27	141	71	0	21	147	49	629	0
12:30 PM		0	47	13	17	0	60	19	27	0	17	151	65	0	13	163	43	635	0
12:45 PM		0	46	18	16	0	51	24	15	1	14	162	57	0	23	157	52	636	0
1:00 PM		0	58	17	17	0	63	14	27	0	26	134	53	0	25	152	53	639	2,539
Peak Hour	All	0	192	68	60	0	234	72	96	1	84	588	246	0	82	619	197	2,539	0
	HV	0	11	2	1	0	0	1	10	0	1	36	4	0	3	33	9	111	0
	HV%	-	6%	3%	2%	-	0%	1%	10%	0%	1%	6%	2%	-	4%	5%	5%	4%	0

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:15 PM	2	4	10	9	25	0	0	0	0	0	0	0	0	5	5
12:30 PM	4	2	16	11	33	0	0	0	0	0	0	0	0	1	1
12:45 PM	2	2	6	13	23	0	0	0	1	1	0	1	0	9	10
1:00 PM	6	3	9	12	30	0	0	0	0	0	0	0	0	3	3
Peak Hour	14	11	41	45	111	0	0	0	1	1	0	1	0	18	19



Two-and-a-Half-Hour Count Summaries																			
Interval Start		Lusher Ct				Dillon Dam Rd				HWY 9				HWY 9				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
12:00 PM		0	53	19	21	0	39	9	17	0	9	163	61	0	19	159	55	624	0
12:15 PM		0	41	20	10	0	60	15	27	0	27	141	71	0	21	147	49	629	0
12:30 PM		0	47	13	17	0	60	19	27	0	17	151	65	0	13	163	43	635	0
12:45 PM		0	46	18	16	0	51	24	15	1	14	162	57	0	23	157	52	636	2,524
1:00 PM		0	58	17	17	0	63	14	27	0	26	134	53	0	25	152	53	639	2,539
1:15 PM		0	65	27	19	0	53	10	18	0	19	163	54	0	14	131	44	617	2,527
1:30 PM		0	50	16	19	0	49	13	21	0	15	169	46	0	20	167	48	633	2,525
1:45 PM		0	39	21	13	0	46	14	12	0	19	151	42	0	27	150	57	591	2,480
2:00 PM		0	57	18	20	0	60	11	12	0	14	155	46	0	9	152	40	594	2,435
2:15 PM		0	58	21	18	0	57	16	20	0	11	161	50	0	20	143	54	629	2,447
Count Total		0	514	190	170	0	538	145	196	1	171	1,550	545	0	191	1,521	495	6,227	0
Peak Hour	All	0	192	68	60	0	234	72	96	1	84	588	246	0	82	619	197	2,539	0
	HV	0	11	2	1	0	0	1	10	0	1	36	4	0	3	33	9	111	0
	HV%	-	6%	3%	2%	-	0%	1%	10%	0%	1%	6%	2%	-	4%	5%	5%	4%	0
Note: Two-and-a-half-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.																			
Interval Start		Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)							
		EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total			
12:00 PM		4	1	7	12	24	0	4	0	0	4	0	0	0	2	2			
12:15 PM		2	4	10	9	25	0	0	0	0	0	0	0	0	5	5			
12:30 PM		4	2	16	11	33	0	0	0	0	0	0	0	0	1	1			
12:45 PM		2	2	6	13	23	0	0	0	1	1	0	1	0	9	10			
1:00 PM		6	3	9	12	30	0	0	0	0	0	0	0	0	3	3			
1:15 PM		4	3	14	13	34	4	0	0	0	4	0	0	0	2	2			
1:30 PM		3	3	12	11	29	1	3	0	0	4	0	0	0	1	1			
1:45 PM		1	0	9	11	21	2	0	0	0	2	0	0	0	7	7			
2:00 PM		6	0	8	11	25	0	0	0	0	0	0	0	0	5	5			
2:15 PM		3	3	12	10	28	0	1	0	0	1	0	0	0	10	10			
Count Total		35	21	103	113	272	7	8	0	1	16	0	1	0	45	46			
Peak Hour		14	11	41	45	111	0	0	0	1	1	0	1	0	18	19			

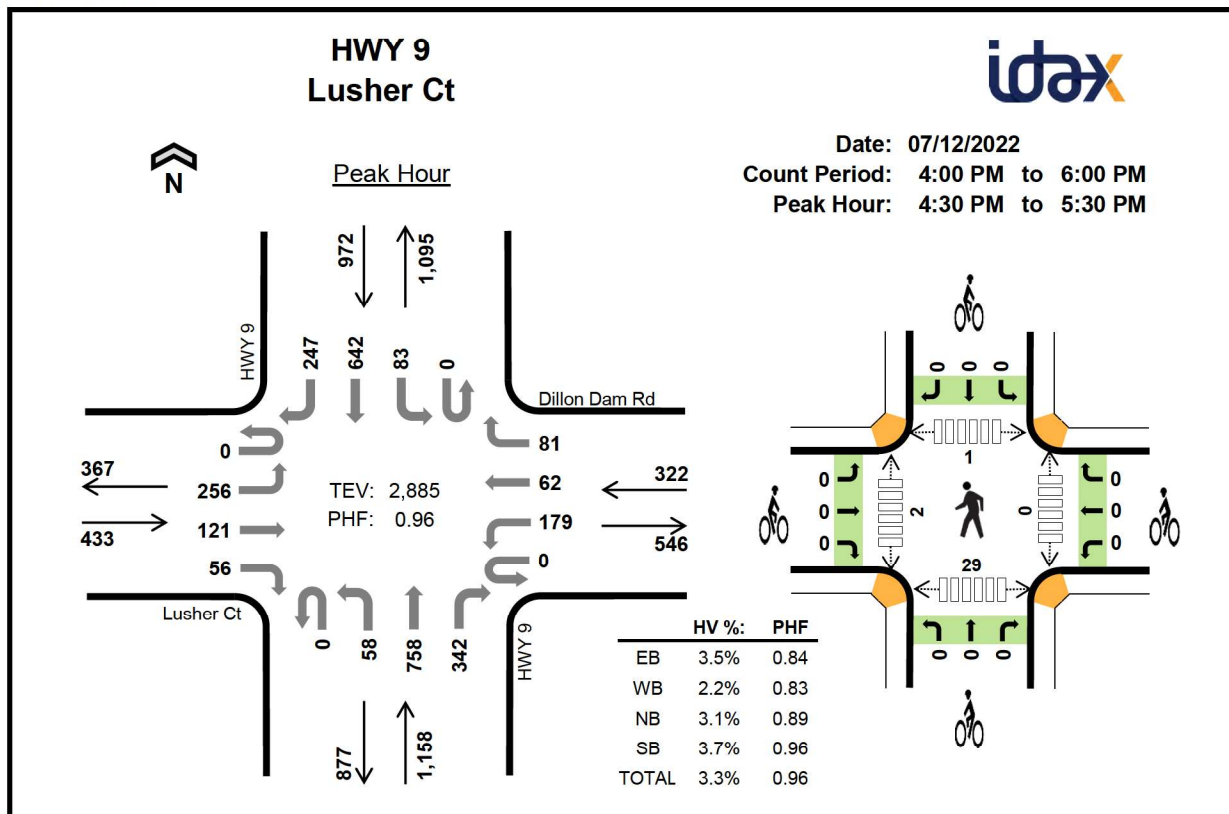
**Two-and-a-Half-Hour Count Summaries - Heavy Vehicles**

Interval Start	Lusher Ct				Dillon Dam Rd				HWY 9				HWY 9				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
12:00 PM	0	3	1	0	0	0	0	1	0	0	7	0	0	0	11	1	24	0
12:15 PM	0	1	1	0	0	0	1	3	0	0	7	3	0	0	8	1	25	0
12:30 PM	0	2	1	1	0	0	0	2	0	0	16	0	0	0	7	4	33	0
12:45 PM	0	2	0	0	0	0	0	2	0	0	5	1	0	0	10	3	23	105
1:00 PM	0	6	0	0	0	0	0	3	0	1	8	0	0	3	8	1	30	111
1:15 PM	0	2	0	2	0	0	1	2	0	0	14	0	0	0	12	1	34	120
1:30 PM	0	2	1	0	0	1	0	2	0	0	11	1	0	2	9	0	29	116
1:45 PM	0	1	0	0	0	0	0	0	0	0	9	0	0	1	5	5	21	114
2:00 PM	0	5	0	1	0	0	0	0	0	0	8	0	0	0	9	2	25	109
2:15 PM	0	2	0	1	0	0	1	2	0	0	11	1	0	1	7	2	28	103
Count Total	0	26	4	5	0	1	3	17	0	1	96	6	0	7	86	20	272	0
Peak Hour	0	11	2	1	0	0	1	10	0	1	36	4	0	3	33	9	111	0

**Two-and-a-Half-Hour Count Summaries - Bikes**

Interval Start	Lusher Ct			Dillon Dam Rd			HWY 9			HWY 9			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
12:00 PM	0	0	0	0	4	0	0	0	0	0	0	0	4	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	5
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:15 PM	0	4	0	0	0	0	0	0	0	0	0	0	4	5
1:30 PM	0	1	0	0	3	0	0	0	0	0	0	0	4	9
1:45 PM	0	2	0	0	0	0	0	0	0	0	0	0	2	10
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	10
2:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	7
Count Total	0	7	0	0	8	0	0	0	0	0	0	1	16	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	1	1	0

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

**Two-Hour Count Summaries**

Interval Start		Lusher Ct				Dillon Dam Rd				HWY 9				HWY 9				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	70	23	15	0	48	14	19	0	21	167	76	0	30	138	58	679	0
4:15 PM		0	45	18	19	0	53	16	18	1	20	176	83	0	18	134	61	662	0
4:30 PM		0	76	38	15	0	33	17	17	0	14	169	83	0	19	150	77	708	0
4:45 PM		0	56	22	17	0	43	15	14	0	14	187	88	0	18	153	66	693	2,742
5:00 PM		0	73	31	16	0	42	16	28	0	16	181	80	0	22	180	51	736	2,799
5:15 PM		0	51	30	8	0	61	14	22	0	14	221	91	0	24	159	53	748	2,885
5:30 PM		0	72	23	13	0	50	17	14	0	17	187	76	0	16	127	44	656	2,833
5:45 PM		0	76	23	10	0	46	15	10	1	14	159	82	0	24	131	40	631	2,771
Count Total		0	519	208	113	0	376	124	142	2	130	1,447	659	0	171	1,172	450	5,513	0
Peak Hour	All	0	256	121	56	0	179	62	81	0	58	758	342	0	83	642	247	2,885	0
	HV	0	12	2	1	0	0	1	6	0	0	31	5	0	2	26	8	94	0
	HV%	-	5%	2%	2%	-	0%	2%	7%	-	0%	4%	1%	-	2%	4%	3%	3%	0

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	8	1	11	6	26	0	0	0	0	0	0	0	0	4	4
4:15 PM	3	2	9	10	24	0	0	0	0	0	0	0	0	7	7
4:30 PM	8	2	14	13	37	0	0	0	0	0	0	0	0	8	8
4:45 PM	1	0	5	9	15	0	0	0	0	0	0	0	0	8	8
5:00 PM	4	2	8	7	21	0	0	0	0	0	0	2	0	3	5
5:15 PM	2	3	9	7	21	0	0	0	0	0	0	0	1	10	11
5:30 PM	3	0	10	3	16	0	0	0	0	0	0	0	0	7	7
5:45 PM	3	0	8	4	15	0	1	0	0	1	0	0	0	1	1
Count Total	32	10	74	59	175	0	1	0	0	1	0	2	1	48	51
Peak Hour	15	7	36	36	94	0	0	0	0	0	0	2	1	29	32

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Lusher Ct				Dillon Dam Rd				HWY 9				HWY 9				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	5	0	3	0	0	0	1	0	1	10	0	0	2	3	1	26	0
4:15 PM	0	2	0	1	0	0	1	1	0	1	8	0	0	2	6	2	24	0
4:30 PM	0	6	2	0	0	0	0	2	0	0	11	3	0	0	10	3	37	0
4:45 PM	0	1	0	0	0	0	0	0	0	0	4	1	0	0	8	1	15	102
5:00 PM	0	4	0	0	0	0	0	2	0	0	7	1	0	0	4	3	21	97
5:15 PM	0	1	0	1	0	0	1	2	0	0	9	0	0	2	4	1	21	94
5:30 PM	0	1	2	0	0	0	0	0	0	1	9	0	0	0	2	1	16	73
5:45 PM	0	3	0	0	0	0	0	0	0	1	7	0	0	0	4	0	15	73
Count Total	0	23	4	5	0	0	2	8	0	4	65	5	0	6	41	12	175	0
Peak Hour	0	12	2	1	0	0	1	6	0	0	31	5	0	2	26	8	94	0

Two-Hour Count Summaries - Bikes																	
Interval Start	Lusher Ct			Dillon Dam Rd			HWY 9			HWY 9			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	1			
Count Total	0	0	0	0	1	0	0	0	0	0	0	0	1	0			
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0			

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



## Vehicle Classification Report Summary

**Location:** DILLON DAM RD MIDWAY S/O SOUTH SECURITY GATE  
**Count Direction:** Northbound / Southbound  
**Date Range:** 7/12/2022 to 7/12/2022  
**Site Code:** 01

		FHWA Vehicle Classification												Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total															
Northbound		38	3,524	769	0	145	1	0	2	0	0	0	0	0	4,479
Percent		0.8%	78.7%	17.2%	0.0%	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound		46	2,715	902	0	445	2	0	1	0	0	0	0	0	4,111
Percent		1.1%	66.0%	21.9%	0.0%	10.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total		84	6,239	1,671	0	590	3	0	3	0	0	0	0	0	8,590
Percent		1.0%	72.6%	19.5%	0.0%	6.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

## Vehicle Speed Report Summary

**Location:** DILLON DAM RD MIDWAY S/O SOUTH SECURITY GATE  
**Count Direction:** Northbound / Southbound  
**Date Range:** 7/12/2022 to 7/12/2022  
**Site Code:** 01

		Speed Range (mph)																Total	
		0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
		Study Total																	
<b>Northbound</b>	1	0	0	2	74	692	2,170	1,351	175	10	0	3	0	0	0	0	1	0	4,479
<b>Percent</b>	0.0%	0.0%	0.0%	0.0%	1.7%	15.4%	48.4%	30.2%	3.9%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
<b>Southbound</b>	0	2	7	10	28	162	981	1,761	975	165	16	2	0	0	0	2	0	0	4,111
<b>Percent</b>	0.0%	0.0%	0.2%	0.2%	0.7%	3.9%	23.9%	42.8%	23.7%	4.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
<b>Total</b>	1	2	7	12	102	854	3,151	3,112	1,150	175	16	5	0	0	0	2	1	0	8,590
<b>Percent</b>	0.0%	0.0%	0.1%	0.1%	1.2%	9.9%	36.7%	36.2%	13.4%	2.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Speed Summary		Total Study Speed Statistics	
<b>Northbound</b>		<b>Northbound</b>	
50th Percentile (Median)	38.5 mph	Mean (Average) Speed	38.5 mph
85th Percentile	42.3 mph	10 mph Pace	33.6 - 43.6 mph
95th Percentile	44.7 mph	Percent in Pace	82.4 %
<b>Southbound</b>		<b>Southbound</b>	
50th Percentile (Median)	42.5 mph	Mean (Average) Speed	42.4 mph
85th Percentile	47.0 mph	10 mph Pace	37.0 - 47.0 mph
95th Percentile	49.8 mph	Percent in Pace	74.1 %

Location: DILLON DAM RD MIDWAY S/O SOUTH SECURITY GATE  
 Date Range: 7/12/2022 - 7/18/2022  
 Site Code: 01

Time	Tuesday			Wednesday			Thursday			Friday			Saturday			Sunday			Monday			Mid-Week Average		
	7/12/2022			7/13/2022			7/14/2022			7/15/2022			7/16/2022			7/17/2022			7/18/2022			7/16/2022		
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	6	3	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	3	9
1:00 AM	5	5	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5	10
2:00 AM	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	3
3:00 AM	0	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	1
4:00 AM	4	4	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	8
5:00 AM	12	32	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	32	44
6:00 AM	43	70	113	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43	70	113
7:00 AM	98	177	275	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	98	177	275
8:00 AM	186	250	436	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	186	250	436
9:00 AM	215	260	475	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	215	260	475
10:00 AM	265	263	528	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	265	263	528
11:00 AM	277	299	576	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	277	299	576
12:00 PM	375	332	707	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	375	332	707
1:00 PM	325	298	623	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	325	298	623
2:00 PM	308	291	599	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	308	291	599
3:00 PM	391	315	706	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	391	315	706
4:00 PM	497	280	777	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	497	280	777
5:00 PM	511	288	799	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	511	288	799
6:00 PM	366	221	587	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	366	221	587
7:00 PM	227	189	416	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	227	189	416
8:00 PM	157	168	325	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	157	168	325
9:00 PM	113	121	234	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	113	121	234
10:00 PM	62	209	271	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62	209	271
11:00 PM	35	33	68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35	33	68
<b>Total</b>	<b>4,479</b>	<b>4,111</b>	<b>8,590</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<b>4,479</b>	<b>4,111</b>	<b>8,590</b>
<b>Percent</b>	<b>52%</b>	<b>48%</b>		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<b>52%</b>	<b>48%</b>	

1. Mid-week average includes data between Tuesday and Thursday.

## Vehicle Classification Report Summary

**Location:** DILLON DAM RD N/O TEN MILE DR  
**Count Direction:** Northbound / Southbound  
**Date Range:** 7/12/2022 to 7/12/2022  
**Site Code:** 02

		FHWA Vehicle Classification													Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total															
Northbound		39	3,605	886	1	213	2	0	1	1	0	0	0	0	4,748
Percent		0.8%	75.9%	18.7%	0.0%	4.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound		55	2,834	968	2	526	73	0	3	1	2	0	0	0	4,464
Percent		1.2%	63.5%	21.7%	0.0%	11.8%	1.6%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total		94	6,439	1,854	3	739	75	0	4	2	2	0	0	0	9,212
Percent		1.0%	69.9%	20.1%	0.0%	8.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	



## Vehicle Speed Report Summary

**Location:** DILLON DAM RD N/O TEN MILE DR  
**Count Direction:** Northbound / Southbound  
**Date Range:** 7/12/2022 to 7/12/2022  
**Site Code:** 02

	Speed Range (mph)																Total	
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
Study Total																		
Northbound	2	4	48	582	1,890	1,863	330	21	4	3	1	0	0	0	0	0	0	4,748
Percent	0.0%	0.1%	1.0%	12.3%	39.8%	39.2%	7.0%	0.4%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	0	7	35	122	894	2,039	1,164	187	16	0	0	0	0	0	0	0	0	4,464
Percent	0.0%	0.2%	0.8%	2.7%	20.0%	45.7%	26.1%	4.2%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	2	11	83	704	2,784	3,902	1,494	208	20	3	1	0	0	0	0	0	0	9,212
Percent	0.0%	0.1%	0.9%	7.6%	30.2%	42.4%	16.2%	2.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
<b>Northbound</b>			<b>Northbound</b>		
50th Percentile (Median)	29.8	mph	Mean (Average) Speed	29.6	mph
85th Percentile	33.6	mph	10 mph Pace	25.1 - 35.1	mph
95th Percentile	35.9	mph	Percent in Pace	79.0	%
<b>Southbound</b>			<b>Southbound</b>		
50th Percentile (Median)	32.9	mph	Mean (Average) Speed	32.8	mph
85th Percentile	37.2	mph	10 mph Pace	27.8 - 37.8	mph
95th Percentile	39.7	mph	Percent in Pace	77.5	%

Location: DILLON DAM RD N/O TEN MILE DR  
 Date Range: 7/12/2022 - 7/18/2022  
 Site Code: 02

Time	Tuesday			Wednesday			Thursday			Friday			Saturday			Sunday			Monday			Mid-Week Average
	7/12/2022			7/13/2022			7/14/2022			7/15/2022			7/16/2022			7/17/2022			7/18/2022			
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	
12:00 AM	5	5	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5 5 10
1:00 AM	5	5	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5 5 10
2:00 AM	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 2 3
3:00 AM	0	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0 1 1
4:00 AM	4	6	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4 6 10
5:00 AM	15	35	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15 35 50
6:00 AM	45	87	132	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45 87 132
7:00 AM	101	199	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	101 199 300
8:00 AM	204	278	482	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	204 278 482
9:00 AM	238	292	530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	238 292 530
10:00 AM	266	318	584	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	266 318 584
11:00 AM	328	318	646	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	328 318 646
12:00 PM	388	361	749	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	388 361 749
1:00 PM	351	303	654	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	351 303 654
2:00 PM	349	315	664	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	349 315 664
3:00 PM	421	330	751	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	421 330 751
4:00 PM	501	289	790	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	501 289 790
5:00 PM	530	306	836	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	530 306 836
6:00 PM	371	267	638	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	371 267 638
7:00 PM	245	209	454	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	245 209 454
8:00 PM	153	167	320	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	153 167 320
9:00 PM	138	139	277	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	138 139 277
10:00 PM	55	199	254	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	55 199 254
11:00 PM	34	33	67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34 33 67
Total	4,748	4,464	9,212	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,748 4,464 9,212
Percent	52%	48%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52% 48% -

1. Mid-week average includes data between Tuesday and Thursday.

## Vehicle Classification Report Summary

**Location:** DILLON DAM RD S/O TEN MILE RD  
**Count Direction:** Northbound / Southbound  
**Date Range:** 7/12/2022 to 7/12/2022  
**Site Code:** 03

		FHWA Vehicle Classification													Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total															
Northbound	23	1,973	2,121	3	835	7	0	2	0	0	0	0	0	0	4,964
Percent	0.5%	39.7%	42.7%	0.1%	16.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	68	3,463	953	3	338	32	0	3	5	2	0	0	0	0	4,867
Percent	1.4%	71.2%	19.6%	0.1%	6.9%	0.7%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	91	5,436	3,074	6	1,173	39	0	5	5	2	0	0	0	0	9,831
Percent	0.9%	55.3%	31.3%	0.1%	11.9%	0.4%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

## Vehicle Speed Report Summary

**Location:** DILLON DAM RD S/O TEN MILE RD  
**Count Direction:** Northbound / Southbound  
**Date Range:** 7/12/2022 to 7/12/2022  
**Site Code:** 03

		Speed Range (mph)																Total	
		0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	Volume
		Study Total																	
<b>Northbound</b>		9	153	859	905	1,728	1,184	112	9	5	0	0	0	0	0	0	0	0	4,964
<b>Percent</b>		0.2%	3.1%	17.3%	18.2%	34.8%	23.9%	2.3%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
<b>Southbound</b>		17	202	977	1,855	1,652	160	3	1	0	0	0	0	0	0	0	0	0	4,867
<b>Percent</b>		0.3%	4.2%	20.1%	38.1%	33.9%	3.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
<b>Total</b>		26	355	1,836	2,760	3,380	1,344	115	10	5	0	0	0	0	0	0	0	0	9,831
<b>Percent</b>		0.3%	3.6%	18.7%	28.1%	34.4%	13.7%	1.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Speed Summary		Total Study Speed Statistics	
<b>Northbound</b>		<b>Northbound</b>	
50th Percentile (Median)	27.1 mph	Mean (Average) Speed	25.9 mph
85th Percentile	31.5 mph	10 mph Pace	23.5 - 33.5 mph
95th Percentile	33.9 mph	Percent in Pace	60.5 %
<b>Southbound</b>		<b>Southbound</b>	
50th Percentile (Median)	23.7 mph	Mean (Average) Speed	23.1 mph
85th Percentile	27.4 mph	10 mph Pace	18.7 - 28.7 mph
95th Percentile	29.3 mph	Percent in Pace	74.9 %



Location: DILLON DAM RD S/O TEN MILE RD  
 Date Range: 7/12/2022 - 7/18/2022  
 Site Code: 03

Time	Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday		Monday		Mid-Week Average			
	7/12/2022		7/13/2022		7/14/2022		7/15/2022		7/16/2022		7/17/2022		7/18/2022					
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB		Total		
12:00 AM	5	5	10	-	-	-	-	-	-	-	-	-	-	-	-	5	5	10
1:00 AM	7	5	12	-	-	-	-	-	-	-	-	-	-	-	-	7	5	12
2:00 AM	2	3	5	-	-	-	-	-	-	-	-	-	-	-	-	2	3	5
3:00 AM	0	1	1	-	-	-	-	-	-	-	-	-	-	-	-	0	1	1
4:00 AM	6	14	20	-	-	-	-	-	-	-	-	-	-	-	-	6	14	20
5:00 AM	20	45	65	-	-	-	-	-	-	-	-	-	-	-	-	20	45	65
6:00 AM	79	109	188	-	-	-	-	-	-	-	-	-	-	-	-	79	109	188
7:00 AM	130	233	363	-	-	-	-	-	-	-	-	-	-	-	-	130	233	363
8:00 AM	251	278	529	-	-	-	-	-	-	-	-	-	-	-	-	251	278	529
9:00 AM	246	293	539	-	-	-	-	-	-	-	-	-	-	-	-	246	293	539
10:00 AM	285	343	628	-	-	-	-	-	-	-	-	-	-	-	-	285	343	628
11:00 AM	339	352	691	-	-	-	-	-	-	-	-	-	-	-	-	339	352	691
12:00 PM	396	375	771	-	-	-	-	-	-	-	-	-	-	-	-	396	375	771
1:00 PM	361	360	721	-	-	-	-	-	-	-	-	-	-	-	-	361	360	721
2:00 PM	328	348	676	-	-	-	-	-	-	-	-	-	-	-	-	328	348	676
3:00 PM	424	375	799	-	-	-	-	-	-	-	-	-	-	-	-	424	375	799
4:00 PM	504	318	822	-	-	-	-	-	-	-	-	-	-	-	-	504	318	822
5:00 PM	506	336	842	-	-	-	-	-	-	-	-	-	-	-	-	506	336	842
6:00 PM	387	299	686	-	-	-	-	-	-	-	-	-	-	-	-	387	299	686
7:00 PM	271	233	504	-	-	-	-	-	-	-	-	-	-	-	-	271	233	504
8:00 PM	179	195	374	-	-	-	-	-	-	-	-	-	-	-	-	179	195	374
9:00 PM	138	129	267	-	-	-	-	-	-	-	-	-	-	-	-	138	129	267
10:00 PM	63	191	254	-	-	-	-	-	-	-	-	-	-	-	-	63	191	254
11:00 PM	37	27	64	-	-	-	-	-	-	-	-	-	-	-	-	37	27	64
Total	4,964	4,867	9,831	-	-	-	-	-	-	-	-	-	-	-	-	4,964	4,867	9,831
Percent	50%	50%		-	-	-	-	-	-	-	-	-	-	-	-	50%	50%	

1. Mid-week average includes data between Tuesday and Thursday.

## Vehicle Classification Report Summary

**Location:** TEN MILE RD E-O DILLON DAM RD  
**Count Direction:** Eastbound / Westbound  
**Date Range:** 7/14/2022 to 7/14/2022  
**Site Code:** 04

		FHWA Vehicle Classification													Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total															
Eastbound	9	1,138	359	1	242	7	0	0	2	0	0	0	0	0	1,758
Percent	0.5%	64.7%	20.4%	0.1%	13.8%	0.4%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Westbound	10	1,171	386	1	256	11	0	0	0	0	0	0	0	0	1,835
Percent	0.5%	63.8%	21.0%	0.1%	14.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	19	2,309	745	2	498	18	0	0	2	0	0	0	0	0	3,593
Percent	0.5%	64.3%	20.7%	0.1%	13.9%	0.5%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

## Vehicle Speed Report Summary

Location: TEN MILE RD E-O DILLON DAM RD  
 Count Direction: Eastbound / Westbound  
 Date Range: 7/14/2022 to 7/14/2022  
 Site Code: 04

	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
Study Total																		
Eastbound	39	557	873	270	19	0	0	0	0	0	0	0	0	0	0	0	0	1,758
Percent	2.2%	31.7%	49.7%	15.4%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Westbound	63	461	987	315	9	0	0	0	0	0	0	0	0	0	0	0	0	1,835
Percent	3.4%	25.1%	53.8%	17.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	102	1,018	1,860	585	28	0	0	0	0	0	0	0	0	0	0	0	0	3,593
Percent	2.8%	28.3%	51.8%	16.3%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Speed Summary		Total Study Speed Statistics	
Eastbound		Eastbound	
50th Percentile (Median)	16.7 mph	Mean (Average) Speed	16.6 mph
85th Percentile	20.2 mph	10 mph Pace	11.4 - 21.4 mph
95th Percentile	22.6 mph	Percent in Pace	85.6 %
Westbound		Westbound	
50th Percentile (Median)	17.1 mph	Mean (Average) Speed	16.8 mph
85th Percentile	20.2 mph	10 mph Pace	11.5 - 21.5 mph
95th Percentile	21.9 mph	Percent in Pace	85.7 %

Location: TEN MILE RD E-O DILLON DAM RD  
 Date Range: 7/14/2022 - 7/20/2022  
 Site Code: 04

Time	Thursday		Friday		Saturday		Sunday		Monday		Tuesday		Wednesday		Mid-Week Average	
	7/14/2022		7/15/2022		7/16/2022		7/17/2022		7/18/2022		7/19/2022		7/20/2022			
	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	Total
12:00 AM	7	4	11	-	-	-	-	-	-	-	-	-	-	-	7	4
1:00 AM	2	2	4	-	-	-	-	-	-	-	-	-	-	-	2	2
2:00 AM	1	1	2	-	-	-	-	-	-	-	-	-	-	-	1	1
3:00 AM	2	1	3	-	-	-	-	-	-	-	-	-	-	-	2	1
4:00 AM	1	8	9	-	-	-	-	-	-	-	-	-	-	-	1	8
5:00 AM	12	16	28	-	-	-	-	-	-	-	-	-	-	-	12	16
6:00 AM	51	56	107	-	-	-	-	-	-	-	-	-	-	-	51	56
7:00 AM	95	78	173	-	-	-	-	-	-	-	-	-	-	-	95	78
8:00 AM	106	89	195	-	-	-	-	-	-	-	-	-	-	-	106	89
9:00 AM	95	100	195	-	-	-	-	-	-	-	-	-	-	-	95	100
10:00 AM	121	129	250	-	-	-	-	-	-	-	-	-	-	-	121	129
11:00 AM	110	159	269	-	-	-	-	-	-	-	-	-	-	-	110	159
12:00 PM	132	148	280	-	-	-	-	-	-	-	-	-	-	-	132	148
1:00 PM	142	144	286	-	-	-	-	-	-	-	-	-	-	-	142	144
2:00 PM	137	162	299	-	-	-	-	-	-	-	-	-	-	-	137	162
3:00 PM	121	141	262	-	-	-	-	-	-	-	-	-	-	-	121	141
4:00 PM	146	138	284	-	-	-	-	-	-	-	-	-	-	-	146	138
5:00 PM	148	173	321	-	-	-	-	-	-	-	-	-	-	-	148	173
6:00 PM	101	89	190	-	-	-	-	-	-	-	-	-	-	-	101	89
7:00 PM	82	83	165	-	-	-	-	-	-	-	-	-	-	-	82	83
8:00 PM	57	46	103	-	-	-	-	-	-	-	-	-	-	-	57	46
9:00 PM	59	40	99	-	-	-	-	-	-	-	-	-	-	-	59	40
10:00 PM	17	21	38	-	-	-	-	-	-	-	-	-	-	-	17	21
11:00 PM	13	7	20	-	-	-	-	-	-	-	-	-	-	-	13	7
<b>Total</b>	<b>1,758</b>	<b>1,835</b>	<b>3,593</b>	-	-	-	-	-	-	-	-	-	-	-	<b>1,758</b>	<b>1,835</b>
<b>Percent</b>	<b>49%</b>	<b>51%</b>	-	-	-	-	-	-	-	-	-	-	-	-	<b>49%</b>	<b>51%</b>

1. Mid-week average includes data between Tuesday and Thursday.



## Vehicle Classification Report Summary

**Location:** DILLON DAM RD S/O NORTH SECURITY GATE  
**Count Direction:** Northbound / Southbound  
**Date Range:** 7/12/2022 to 7/12/2022  
**Site Code:** 05

		FHWA Vehicle Classification												Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total															
Northbound		37	3,158	882	0	435	2	0	0	0	0	0	0	0	4,514
Percent		0.8%	70.0%	19.5%	0.0%	9.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound		32	3,095	827	0	211	0	0	0	0	0	0	0	0	4,165
Percent		0.8%	74.3%	19.9%	0.0%	5.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total		69	6,253	1,709	0	646	2	0	0	0	0	0	0	0	8,679
Percent		0.8%	72.0%	19.7%	0.0%	7.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	

## Vehicle Speed Report Summary

**Location:** DILLON DAM RD S/O NORTH SECURITY GATE  
**Count Direction:** Northbound / Southbound  
**Date Range:** 7/12/2022 to 7/12/2022  
**Site Code:** 05

	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
Study Total																		
Northbound	19	27	84	204	830	1,937	1,179	219	14	1	0	0	0	0	0	0	0	4,514
Percent	0.4%	0.6%	1.9%	4.5%	18.4%	42.9%	26.1%	4.9%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	1	3	7	61	948	2,140	885	102	14	3	1	0	0	0	0	0	0	4,165
Percent	0.0%	0.1%	0.2%	1.5%	22.8%	51.4%	21.2%	2.4%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	20	30	91	265	1,778	4,077	2,064	321	28	4	1	0	0	0	0	0	0	8,679
Percent	0.2%	0.3%	1.0%	3.1%	20.5%	47.0%	23.8%	3.7%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Speed Summary		Total Study Speed Statistics	
<b>Northbound</b>		<b>Northbound</b>	
50th Percentile (Median)	33.0 mph	Mean (Average) Speed	32.4 mph
85th Percentile	37.2 mph	10 mph Pace	28.3 - 38.3 mph
95th Percentile	40.1 mph	Percent in Pace	73.9 %
<b>Southbound</b>		<b>Southbound</b>	
50th Percentile (Median)	32.4 mph	Mean (Average) Speed	32.5 mph
85th Percentile	36.4 mph	10 mph Pace	27.4 - 37.4 mph
95th Percentile	38.8 mph	Percent in Pace	82.2 %

Location: DILLON DAM RD S/O NORTH SECURITY GATE  
 Date Range: 7/12/2022 - 7/18/2022  
 Site Code: 05

Time	Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday		Monday		Mid-Week Average		
	7/12/2022		7/13/2022		7/14/2022		7/15/2022		7/16/2022		7/17/2022		7/18/2022				
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB		Total	
12:00 AM	8	3	11	-	-	-	-	-	-	-	-	-	-	-	8	3	11
1:00 AM	4	6	10	-	-	-	-	-	-	-	-	-	-	-	4	6	10
2:00 AM	2	2	4	-	-	-	-	-	-	-	-	-	-	-	2	2	4
3:00 AM	1	2	3	-	-	-	-	-	-	-	-	-	-	-	1	2	3
4:00 AM	3	4	7	-	-	-	-	-	-	-	-	-	-	-	3	4	7
5:00 AM	11	34	45	-	-	-	-	-	-	-	-	-	-	-	11	34	45
6:00 AM	49	80	129	-	-	-	-	-	-	-	-	-	-	-	49	80	129
7:00 AM	94	186	280	-	-	-	-	-	-	-	-	-	-	-	94	186	280
8:00 AM	176	249	425	-	-	-	-	-	-	-	-	-	-	-	176	249	425
9:00 AM	228	250	478	-	-	-	-	-	-	-	-	-	-	-	228	250	478
10:00 AM	260	274	534	-	-	-	-	-	-	-	-	-	-	-	260	274	534
11:00 AM	282	296	578	-	-	-	-	-	-	-	-	-	-	-	282	296	578
12:00 PM	379	335	714	-	-	-	-	-	-	-	-	-	-	-	379	335	714
1:00 PM	339	287	626	-	-	-	-	-	-	-	-	-	-	-	339	287	626
2:00 PM	318	296	614	-	-	-	-	-	-	-	-	-	-	-	318	296	614
3:00 PM	382	305	687	-	-	-	-	-	-	-	-	-	-	-	382	305	687
4:00 PM	486	295	781	-	-	-	-	-	-	-	-	-	-	-	486	295	781
5:00 PM	517	276	793	-	-	-	-	-	-	-	-	-	-	-	517	276	793
6:00 PM	356	255	611	-	-	-	-	-	-	-	-	-	-	-	356	255	611
7:00 PM	241	189	430	-	-	-	-	-	-	-	-	-	-	-	241	189	430
8:00 PM	161	180	341	-	-	-	-	-	-	-	-	-	-	-	161	180	341
9:00 PM	117	123	240	-	-	-	-	-	-	-	-	-	-	-	117	123	240
10:00 PM	64	209	273	-	-	-	-	-	-	-	-	-	-	-	64	209	273
11:00 PM	36	29	65	-	-	-	-	-	-	-	-	-	-	-	36	29	65
Total	4,514	4,165	8,679	-	-	-	-	-	-	-	-	-	-	-	4,514	4,165	8,679
Percent	52%	48%		-	-	-	-	-	-	-	-	-	-	-	52%	48%	

1. Mid-week average includes data between Tuesday and Thursday.

## Vehicle Classification Report Summary

**Location:** DILLON DAM RD BTWN NORTH SECURITY GATE & DAM  
**Count Direction:** Northbound / Southbound  
**Date Range:** 7/12/2022 to 7/12/2022  
**Site Code:** 06

		FHWA Vehicle Classification												Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	Volume
Study Total															
Northbound		34	2,945	1,014	0	547	1	0	1	0	0	0	0	0	4,542
Percent		0.7%	64.8%	22.3%	0.0%	12.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound		35	2,659	934	0	502	6	0	0	0	0	0	0	0	4,136
Percent		0.8%	64.3%	22.6%	0.0%	12.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total		69	5,604	1,948	0	1,049	7	0	1	0	0	0	0	0	8,678
Percent		0.8%	64.6%	22.4%	0.0%	12.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	



## Vehicle Speed Report Summary

**Location:** DILLON DAM RD BTWN NORTH SECURITY GATE & DAM  
**Count Direction:** Northbound / Southbound  
**Date Range:** 7/12/2022 to 7/12/2022  
**Site Code:** 06

	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
Study Total																		
Northbound	0	0	9	12	73	521	1,951	1,586	352	33	5	0	0	0	0	0	0	4,542
Percent	0.0%	0.0%	0.2%	0.3%	1.6%	11.5%	43.0%	34.9%	7.7%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Southbound	0	0	0	4	47	422	1,767	1,456	389	42	7	2	0	0	0	0	0	4,136
Percent	0.0%	0.0%	0.0%	0.1%	1.1%	10.2%	42.7%	35.2%	9.4%	1.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Total	0	0	9	16	120	943	3,718	3,042	741	75	12	2	0	0	0	0	0	8,678
Percent	0.0%	0.0%	0.1%	0.2%	1.4%	10.9%	42.8%	35.1%	8.5%	0.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
<b>Northbound</b>			<b>Northbound</b>		
50th Percentile (Median)	39.4	mph	Mean (Average) Speed	39.4	mph
85th Percentile	43.6	mph	10 mph Pace	34.6 - 44.6	mph
95th Percentile	46.3	mph	Percent in Pace	78.6	%
<b>Southbound</b>			<b>Southbound</b>		
50th Percentile (Median)	39.6	mph	Mean (Average) Speed	39.8	mph
85th Percentile	44.0	mph	10 mph Pace	34.7 - 44.7	mph
95th Percentile	46.9	mph	Percent in Pace	78.1	%

Location: DILLON DAM RD BTWN NORTH SECURITY GATE & DAM  
 Date Range: 7/12/2022 - 7/18/2022  
 Site Code: 06

Time	Tuesday		Wednesday			Thursday			Friday			Saturday			Sunday			Monday			Mid-Week Average	
	7/12/2022			7/13/2022			7/14/2022			7/15/2022			7/16/2022			7/17/2022			7/18/2022			
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB		Total
12:00 AM	8	3	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	3	11
1:00 AM	4	6	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	6	10
2:00 AM	2	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	4
3:00 AM	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	3
4:00 AM	3	4	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	4	7
5:00 AM	11	34	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	34	45
6:00 AM	48	80	128	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	80	128
7:00 AM	99	183	282	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	99	183	282
8:00 AM	174	249	423	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	174	249	423
9:00 AM	227	255	482	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	227	255	482
10:00 AM	265	264	529	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	265	264	529
11:00 AM	284	294	578	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	284	294	578
12:00 PM	386	326	712	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	386	326	712
1:00 PM	334	291	625	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	334	291	625
2:00 PM	314	301	615	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	314	301	615
3:00 PM	389	301	690	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	389	301	690
4:00 PM	485	293	778	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	485	293	778
5:00 PM	522	280	802	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	522	280	802
6:00 PM	365	243	608	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	365	243	608
7:00 PM	241	187	428	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	241	187	428
8:00 PM	162	178	340	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	162	178	340
9:00 PM	117	122	239	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	117	122	239
10:00 PM	65	207	272	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65	207	272
11:00 PM	36	31	67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	31	67
Total	4,542	4,136	8,678	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,542	4,136	8,678
Percent	52%	48%		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52%	48%	

1. Mid-week average includes data between Tuesday and Thursday.

## ***Signal Warrant Worksheets***

[illegible]

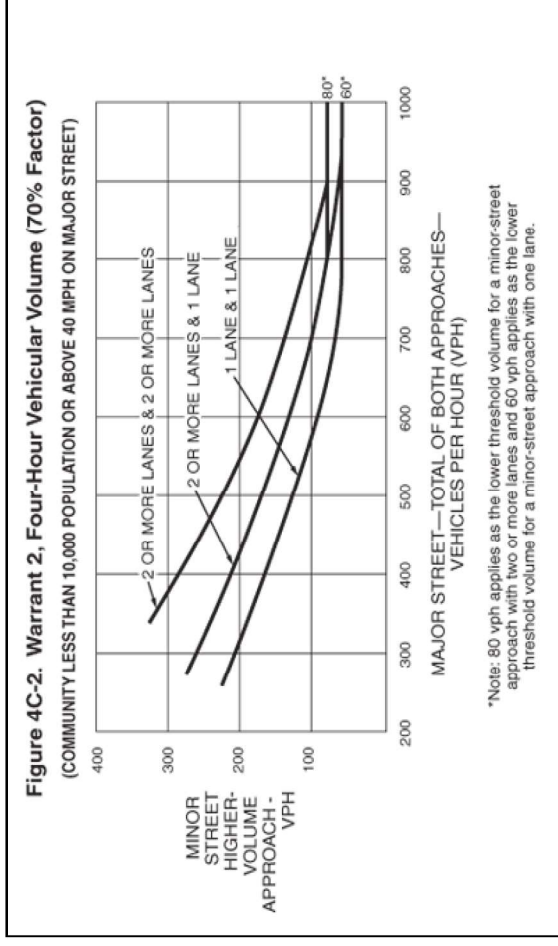
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Intersection: **Dillon Dam Rd & 10 Mile Rd****Warrant 2: 4 Hour Analysis - 2027 Background Volumes**

Day 1	Major Dillon Dam Rd EB / WB	Minor* 10 Mile Rd WB	Warrant 2 (Figure 4C-1)
Time of Day	Number of Lanes		
	1	2	
0:00	10	4	no
1:00	12	2	no
2:00	4	1	no
3:00	1	1	no
4:00	12	8	no
5:00	58	17	no
6:00	174	59	no
7:00	346	82	no
8:00	556	94	no
9:00	566	105	no
10:00	634	136	Warrant is Met (yes/no)
11:00	690	167	
12:00	795	156	
13:00	697	151	
14:00	676	170	
15:00	793	148	
16:00	834	145	
17:00	854	182	
18:00	688	94	no
19:00	505	87	no
20:00	364	48	no
21:00	291	42	no
22:00	275	22	no
23:00	74	7	no
Total	9,909	1,928	8 Met

\*The minor volume used in this analysis comes from the minor approach with the higher total volume during the full study day.



**Lake Hill Development  
Signal Warrant Analysis**

**Warrant 1: 8 Hour Analysis - 2042 Background Volumes**

Day 1	Major Dillon Dam Rd NB/SB	Minor* 10 Mile Rd WB	Warrant Type		Condition A		Condition B		Condition A + B			
			Street Designation	Vehicles per Hour Needed to Meet Warrant	Major	Minor	Major	Minor	Major A	Minor A	Major B	Minor B
Time of Day	1	2										
0:00	12	5										
1:00	14	2										
2:00	5	1										
3:00	2	1										
4:00	15	10										
5:00	74	20										
6:00	208	68										
7:00	436	95										
8:00	664	109										
9:00	683	122										
10:00	758	157										
11:00	801	194										
12:00	917	181										
13:00	792	176										
14:00	786	198										
15:00	888	172										
16:00	883	168										
17:00	912	211										
18:00	753	109										
19:00	564	101										
20:00	421	56										
21:00	341	49										
22:00	383	26										
23:00	84	9										
Total	11,396	2,240										

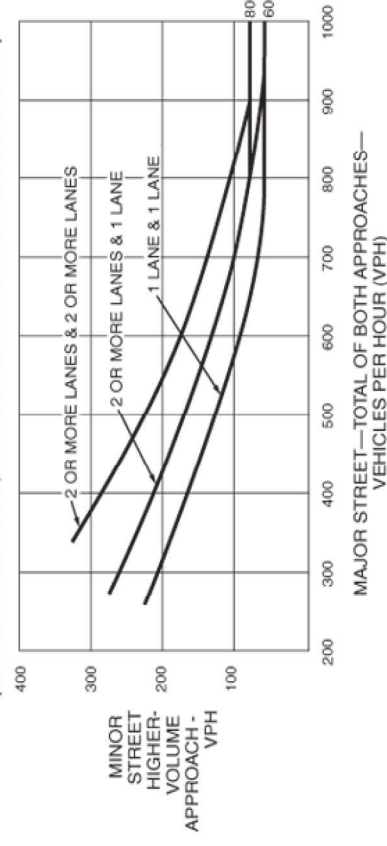
\* Vehicles per hour on higher-volume minor-street approach (one direction only)

Intersection: **Dillon Dam Rd & 10 Mile Rd****Warrant 2: 4 Hour Analysis - 2042 Background Volumes**

Day 1	Major Dillon Dam Rd NB/SB	Minor* 10 Mile Rd WB	Warrant 2 (Figure 4C-1)
Time of Day	Number of Lanes		
	1	2	
0:00	12	5	no
1:00	14	2	no
2:00	5	1	no
3:00	2	1	no
4:00	15	10	no
5:00	74	20	no
6:00	208	68	no
7:00	436	95	no
8:00	664	109	no
9:00	683	122	Warrant is Met (yes/no)
10:00	758	157	
11:00	801	194	
12:00	917	181	
13:00	792	176	
14:00	786	198	
15:00	888	172	
16:00	883	168	
17:00	912	211	yes
18:00	753	109	yes
19:00	564	101	yes
20:00	421	56	no
21:00	341	49	no
22:00	383	26	no
23:00	84	9	no
Total	11,396	2,240	10 Met

\*The minor volume used in this analysis comes from the minor approach with the higher total volume during the full study day.





**Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)**  
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



\*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Intersection Capacity Worksheets:  
2022 Existing***



Intersection						
Int Delay, s/veh	3.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	91	99	285	111	57	311
Future Vol, veh/h	91	99	285	111	57	311
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	91	91	96	96
Heavy Vehicles, %	4	4	2	2	1	1
Mvmt Flow	96	104	313	122	59	324
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	816	374	0	0	435	0
Stage 1	374	-	-	-	-	-
Stage 2	442	-	-	-	-	-
Critical Hdwy	6.44	6.24	-	-	4.11	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	-	-	2.209	-
Pot Cap-1 Maneuver	344	668	-	-	1130	-
Stage 1	691	-	-	-	-	-
Stage 2	644	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	322	668	-	-	1130	-
Mov Cap-2 Maneuver	322	-	-	-	-	-
Stage 1	691	-	-	-	-	-
Stage 2	603	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	15.9	0	1.3			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 322 668 1130	-	-		
HCM Lane V/C Ratio	-	- 0.297 0.156 0.053	-	-		
HCM Control Delay (s)	-	- 20.8 11.4 8.4	0			
HCM Lane LOS	-	- C B A	A			
HCM 95th %tile Q(veh)	-	- 1.2 0.6 0.2	-			

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	3	2	384	8	0	360
Future Vol, veh/h	3	2	384	8	0	360
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	42	42	88	88	95	95
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	7	5	436	9	0	379

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	820	441	0
Stage 1	441	-	-
Stage 2	379	-	-
Critical Hdwy	6.41	6.21	4.11
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	2.209
Pot Cap-1 Maneuver	346	618	1121
Stage 1	651	-	-
Stage 2	694	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	346	618	1121
Mov Cap-2 Maneuver	346	-	-
Stage 1	651	-	-
Stage 2	694	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	420	1121	-
HCM Lane V/C Ratio	-	0.028	-	-
HCM Control Delay (s)	-	13.8	0	-
HCM Lane LOS	-	B	A	-
HCM 95th %tile Q(veh)	-	0.1	0	-

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	11	2	374	12	5	349
Future Vol, veh/h	11	2	374	12	5	349
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	91	91	93	93
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	14	2	411	13	5	375
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	803	418	0	0	424	0
Stage 1	418	-	-	-	-	-
Stage 2	385	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	354	637	-	-	1141	-
Stage 1	666	-	-	-	-	-
Stage 2	690	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	352	637	-	-	1141	-
Mov Cap-2 Maneuver	352	-	-	-	-	-
Stage 1	666	-	-	-	-	-
Stage 2	686	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	14.9	0	0.1			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	378	1141	-	
HCM Lane V/C Ratio	-	-	0.042	0.005	-	
HCM Control Delay (s)	-	-	14.9	8.2	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			Y	Y	
Traffic Vol, veh/h	4	5	6	370	349	4
Future Vol, veh/h	4	5	6	370	349	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	56	56	93	93	87	87
Heavy Vehicles, %	11	11	1	1	1	1
Mvmt Flow	7	9	6	398	401	5

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	814	404	406	0	-	0
Stage 1	404	-	-	-	-	-
Stage 2	410	-	-	-	-	-
Critical Hdwy	6.51	6.31	4.11	-	-	-
Critical Hdwy Stg 1	5.51	-	-	-	-	-
Critical Hdwy Stg 2	5.51	-	-	-	-	-
Follow-up Hdwy	3.599	3.399	2.209	-	-	-
Pot Cap-1 Maneuver	335	628	1158	-	-	-
Stage 1	655	-	-	-	-	-
Stage 2	651	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	333	628	1158	-	-	-
Mov Cap-2 Maneuver	333	-	-	-	-	-
Stage 1	650	-	-	-	-	-
Stage 2	651	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.3	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1158	-	451	-	-
HCM Lane V/C Ratio	0.006	-	0.036	-	-
HCM Control Delay (s)	8.1	0	13.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



























Intersection			
Intersection Delay, s/veh	6.2		
Intersection LOS	A		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	227	434	400
Demand Flow Rate, veh/h	229	439	404
Vehicles Circulating, veh/h	356	134	98
Vehicles Exiting, veh/h	217	368	487
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	6.2	6.6	5.9
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	229	439	404
Cap Entry Lane, veh/h	960	1204	1249
Entry HV Adj Factor	0.991	0.990	0.991
Flow Entry, veh/h	227	434	400
Cap Entry, veh/h	951	1191	1237
V/C Ratio	0.239	0.365	0.324
Control Delay, s/veh	6.2	6.6	5.9
LOS	A	A	A
95th %tile Queue, veh	1	2	1

Timings  
Lake Hill Development Traffic Impact Study - Frisco, CO

7: Dillon Dam Road & State Highway 6







2022 Existing - Mid-Day

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	455	181	107	488	202	199	112	107	160	88	128
Future Volume (vph)	101	455	181	107	488	202	199	112	107	160	88	128
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	1.0	14.0	14.0	1.0	14.0	14.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Split (s)	5.5	20.0	20.0	5.5	20.0	20.0	7.0	7.0	7.0	7.0	7.0	7.0
Total Split (s)	14.0	34.0	34.0	13.0	33.0	33.0	41.0	41.0	41.0	42.0	42.0	42.0
Total Split (%)	10.8%	26.2%	26.2%	10.0%	25.4%	25.4%	31.5%	31.5%	31.5%	32.3%	32.3%	32.3%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	74.4	63.1	63.1	74.9	63.3	63.3	18.6	18.6	18.6	18.8	18.8	18.8
Actuated g/C Ratio	0.57	0.49	0.49	0.58	0.49	0.49	0.14	0.14	0.14	0.14	0.14	0.14
v/c Ratio	0.22	0.29	0.23	0.22	0.31	0.25	0.69	0.69	0.37	0.55	0.55	0.41

Intersection Summary













Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 86 (66%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.69  
 Intersection Signal Delay: 28.4  
 Intersection Capacity Utilization 59.5%  
 Analysis Period (min) 15

Splits and Phases: 7: Dillon Dam Road & State Highway 6

 Ø1	 Ø2 (R)	 Ø4	 Ø8
13 s	34 s	42 s	41 s
 Ø5	 Ø6 (R)		
14 s	33 s		

























Queues  
Lake Hill Development Traffic Impact Study - Frisco, CO

7: Dillon Dam Road & State Highway 6  
2022 Existing - Mid-Day

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	110	495	197	116	530	220	166	172	116	132	138	139
v/c Ratio	0.22	0.29	0.23	0.22	0.31	0.25	0.69	0.69	0.37	0.55	0.55	0.41
Control Delay	15.6	24.3	5.1	15.6	24.4	4.9	67.2	66.6	14.9	58.0	57.9	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.6	24.3	5.1	15.6	24.4	4.9	67.2	66.6	14.9	58.0	57.9	10.0
Queue Length 50th (ft)	34	118	0	36	128	0	142	147	11	113	118	0
Queue Length 95th (ft)	98	247	60	102	264	62	210	216	63	152	158	50
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	531	1718	853	543	1724	883	465	483	511	478	496	540
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.29	0.23	0.21	0.31	0.25	0.36	0.36	0.23	0.28	0.28	0.26
Intersection Summary												

# HCM Signalized Intersection Capacity Analysis Lake Hill Development Traffic Impact Study - Frisco, CO

7: Dillon Dam Road & State Highway 6  
2022 Existing - Mid-Day





















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	455	181	107	488	202	199	112	107	160	88	128
Future Volume (vph)	101	455	181	107	488	202	199	112	107	160	88	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1770	3539	1548	1769	3539	1583	1681	1744	1583	1681	1743	1549
Flt Permitted	0.41	1.00	1.00	0.43	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (perm)	767	3539	1548	800	3539	1583	1681	1744	1583	1681	1743	1549
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	110	495	197	116	530	220	216	122	116	174	96	139
RTOR Reduction (vph)	0	0	101	0	0	113	0	0	87	0	0	119
Lane Group Flow (vph)	110	495	96	116	530	107	166	172	29	132	138	20
Confl. Peds. (#/hr)			1	1			9					9
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	72.4	63.1	63.1	72.8	63.3	63.3	18.6	18.6	18.6	18.8	18.8	18.8
Effective Green, g (s)	72.4	63.1	63.1	72.8	63.3	63.3	18.6	18.6	18.6	18.8	18.8	18.8
Actuated g/C Ratio	0.56	0.49	0.49	0.56	0.49	0.49	0.14	0.14	0.14	0.14	0.14	0.14
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	498	1717	751	518	1723	770	240	249	226	243	252	224
v/s Ratio Prot	0.02	0.14		c0.02	c0.15		c0.10	0.10		0.08	c0.08	
v/s Ratio Perm	0.11		0.06	0.11		0.07			0.02			0.01
v/c Ratio	0.22	0.29	0.13	0.22	0.31	0.14	0.69	0.69	0.13	0.54	0.55	0.09
Uniform Delay, d1	13.8	20.0	18.3	13.6	20.1	18.4	53.0	53.0	48.6	51.6	51.6	48.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.4	0.3	0.2	0.5	0.4	8.3	8.0	0.3	2.5	2.4	0.2
Delay (s)	14.0	20.4	18.7	13.8	20.6	18.7	61.3	61.0	48.9	54.1	54.1	48.4
Level of Service	B	C	B	B	C	B	E	E	D	D	D	D
Approach Delay (s)		19.1			19.2			58.0			52.1	
Approach LOS		B			B			E			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			31.5				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.41									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			59.5%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												



Timings  
Lake Hill Development Traffic Impact Study - Frisco, CO

8: State Highway 9 & Dillon Dam Road









2022 Existing - Mid-Day

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	192	68	234	72	85	588	246	82	619	197
Future Volume (vph)	192	68	234	72	85	588	246	82	619	197
Turn Type	Prot	NA	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases					2		2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	14.0	14.0	5.0	14.0	14.0
Minimum Split (s)	9.5	38.0	9.5	11.0	10.0	20.0	20.0	10.0	39.0	39.0
Total Split (s)	15.0	38.0	15.0	38.0	10.0	36.0	36.0	11.0	37.0	37.0
Total Split (%)	15.0%	38.0%	15.0%	38.0%	10.0%	36.0%	36.0%	11.0%	37.0%	37.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	10.4	12.0	10.6	12.2	58.5	51.0	51.0	58.3	50.8	50.8
Actuated g/C Ratio	0.10	0.12	0.11	0.12	0.58	0.51	0.51	0.58	0.51	0.51
v/c Ratio	0.63	0.61	0.68	0.67	0.19	0.35	0.28	0.18	0.37	0.23

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.68  
 Intersection Signal Delay: 23.0  
 Intersection Capacity Utilization 70.3%  
 Analysis Period (min) 15

Splits and Phases: 8: State Highway 9 & Dillon Dam Road

			
Ø1	Ø2 (R)	Ø3	Ø4
11 s	36 s	15 s	38 s
			
Ø5	Ø6 (R)	Ø7	Ø8
10 s	37 s	15 s	38 s

Queues  
Lake Hill Development Traffic Impact Study - Frisco, CO























8: State Highway 9 & Dillon Dam Road  
2022 Existing - Mid-Day



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	221	147	246	177	89	613	256	85	638	203
v/c Ratio	0.63	0.61	0.68	0.67	0.19	0.35	0.28	0.18	0.37	0.23
Control Delay	51.5	37.9	53.3	36.5	9.9	17.3	3.3	9.8	17.6	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.5	37.9	53.3	36.5	9.9	17.3	3.3	9.8	17.6	3.5
Queue Length 50th (ft)	70	61	78	65	21	123	0	20	130	0
Queue Length 95th (ft)	105	111	120	127	48	197	48	46	206	44
Internal Link Dist (ft)		279		327		602			402	
Turn Bay Length (ft)	145		205		165		200	115		240
Base Capacity (vph)	370	568	374	587	465	1751	909	479	1747	864
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.26	0.66	0.30	0.19	0.35	0.28	0.18	0.37	0.23
Intersection Summary										

HCM 6th Signalized Intersection Summary  
Lake Hill Development Traffic Impact Study - Frisco, CO

8: State Highway 9 & Dillon Dam Road  
2022 Existing - Mid-Day





												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	192	68	60	234	72	96	85	588	246	82	619	197
Future Volume (veh/h)	192	68	60	234	72	96	85	588	246	82	619	197
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1856	1856	1856	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	221	78	69	246	76	101	89	612	256	85	638	203
Peak Hour Factor	0.87	0.87	0.87	0.95	0.95	0.95	0.96	0.96	0.96	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	3	3	3	5	5	5	5	5	5
Cap, veh/h	290	170	150	315	141	187	368	1601	713	366	1600	713
Arrive On Green	0.09	0.19	0.19	0.09	0.20	0.20	0.05	0.46	0.46	0.05	0.46	0.46
Sat Flow, veh/h	3401	887	785	3428	710	944	1739	3469	1546	1739	3469	1546
Grp Volume(v), veh/h	221	0	147	246	0	177	89	612	256	85	638	203
Grp Sat Flow(s),veh/h/ln	1700	0	1673	1714	0	1654	1739	1735	1546	1739	1735	1546
Q Serve(g_s), s	6.4	0.0	7.8	7.0	0.0	9.6	2.7	11.5	10.7	2.5	12.1	8.1
Cycle Q Clear(g_c), s	6.4	0.0	7.8	7.0	0.0	9.6	2.7	11.5	10.7	2.5	12.1	8.1
Prop In Lane	1.00		0.47	1.00		0.57	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	290	0	320	315	0	327	368	1601	713	366	1600	713
V/C Ratio(X)	0.76	0.00	0.46	0.78	0.00	0.54	0.24	0.38	0.36	0.23	0.40	0.28
Avail Cap(c_a), veh/h	374	0	535	377	0	529	376	1601	713	392	1600	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.7	0.0	35.8	44.4	0.0	36.0	13.7	17.6	17.4	13.6	17.8	16.7
Incr Delay (d2), s/veh	6.7	0.0	1.0	8.6	0.0	1.4	0.3	0.7	1.4	0.3	0.7	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	3.2	3.3	0.0	4.0	1.0	4.6	4.0	1.0	4.9	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.5	0.0	36.9	53.0	0.0	37.4	14.0	18.3	18.8	13.9	18.5	17.7
LnGrp LOS	D	A	D	D	A	D	B	B	B	B	B	B
Approach Vol, veh/h		368			423			957			926	
Approach Delay, s/veh		45.6			46.5			18.0			17.9	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	52.2	13.2	25.1	9.6	52.1	12.5	25.8				
Change Period (Y+Rc), s	5.0	6.0	4.0	6.0	5.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	6.0	30.0	11.0	32.0	5.0	31.0	11.0	32.0				
Max Q Clear Time (g_c+l1), s	4.5	13.5	9.0	9.8	4.7	14.1	8.4	11.6				
Green Ext Time (p_c), s	0.0	6.4	0.2	0.8	0.0	6.4	0.2	1.0				

Intersection Summary

HCM 6th Ctrl Delay	26.3
HCM 6th LOS	C




Notes

User approved pedestrian interval to be less than phase max green.

Intersection						
Int Delay, s/veh	4.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	86	113	449	97	51	248
Future Vol, veh/h	86	113	449	97	51	248
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	89	89	88	88
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	99	130	504	109	58	282
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	958	560	0	0	614	0
Stage 1	560	-	-	-	-	-
Stage 2	398	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	287	530	-	-	970	-
Stage 1	574	-	-	-	-	-
Stage 2	681	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	266	529	-	-	969	-
Mov Cap-2 Maneuver	266	-	-	-	-	-
Stage 1	573	-	-	-	-	-
Stage 2	633	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	19.3	0	1.5			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 266 529	969	-		
HCM Lane V/C Ratio	-	- 0.372 0.246	0.06	-		
HCM Control Delay (s)	-	- 26.3 14	9	0		
HCM Lane LOS	-	- D B	A	A		
HCM 95th %tile Q(veh)	-	- 1.6 1	0.2	-		



Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	7	2	546	6	2	285
Future Vol, veh/h	7	2	546	6	2	285
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	56	56	92	92	85	85
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	13	4	593	7	2	335
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	936	597	0	0	600	0
Stage 1	597	-	-	-	-	-
Stage 2	339	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	295	505	-	-	982	-
Stage 1	552	-	-	-	-	-
Stage 2	724	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	294	505	-	-	982	-
Mov Cap-2 Maneuver	294	-	-	-	-	-
Stage 1	552	-	-	-	-	-
Stage 2	722	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	16.7	0	0.1			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	324	982	-	
HCM Lane V/C Ratio	-	-	0.05	0.002	-	
HCM Control Delay (s)	-	-	16.7	8.7	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.2	0	-	

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	5	537	11	6	278
Future Vol, veh/h	9	5	537	11	6	278
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	92	92	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	10	6	584	12	7	331

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	935	590	0	0	596	0
Stage 1	590	-	-	-	-	-
Stage 2	345	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	296	509	-	-	985	-
Stage 1	556	-	-	-	-	-
Stage 2	719	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	293	509	-	-	985	-
Mov Cap-2 Maneuver	293	-	-	-	-	-
Stage 1	556	-	-	-	-	-
Stage 2	713	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.9	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	345	985
HCM Lane V/C Ratio	-	-	0.046	0.007
HCM Control Delay (s)	-	-	15.9	8.7
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			W	W	
Traffic Vol, veh/h	5	4	7	535	280	6
Future Vol, veh/h	5	4	7	535	280	6
Conflicting Peds, #/hr	1	7	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	92	92	81	81
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	7	5	8	582	346	7

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	949	357	353	0	-	0
Stage 1	350	-	-	-	-	-
Stage 2	599	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	290	689	1211	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	551	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	287	684	1211	-	-	-
Mov Cap-2 Maneuver	287	-	-	-	-	-
Stage 1	709	-	-	-	-	-
Stage 2	551	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.6	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1211	-	387	-	-
HCM Lane V/C Ratio	0.006	-	0.031	-	-
HCM Control Delay (s)	8	0	14.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

























Intersection			
Intersection Delay, s/veh	9.9		
Intersection LOS	A		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	146	607	579
Demand Flow Rate, veh/h	146	613	584
Vehicles Circulating, veh/h	391	349	73
Vehicles Exiting, veh/h	571	308	464
Ped Vol Crossing Leg, #/h	1	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.4	13.2	7.5
Approach LOS	A	B	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	146	613	584
Cap Entry Lane, veh/h	926	967	1281
Entry HV Adj Factor	1.000	0.990	0.991
Flow Entry, veh/h	146	607	579
Cap Entry, veh/h	926	957	1269
V/C Ratio	0.158	0.634	0.456
Control Delay, s/veh	5.4	13.2	7.5
LOS	A	B	A
95th %tile Queue, veh	1	5	2



Timings  
Lake Hill Development Traffic Impact Study - Frisco, CO

7: Dillon Dam Road & State Highway 6







2022 Existing - PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	131	538	200	152	550	341	188	105	185	247	204	107
Future Volume (vph)	131	538	200	152	550	341	188	105	185	247	204	107
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	1.0	14.0	14.0	1.0	14.0	14.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Split (s)	5.5	20.0	20.0	5.5	20.0	20.0	7.0	7.0	7.0	7.0	7.0	7.0
Total Split (s)	13.0	34.0	34.0	13.0	34.0	34.0	36.0	36.0	36.0	37.0	37.0	37.0
Total Split (%)	10.8%	28.3%	28.3%	10.8%	28.3%	28.3%	30.0%	30.0%	30.0%	30.8%	30.8%	30.8%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	60.3	47.6	47.6	62.0	48.4	48.4	17.0	17.0	17.0	23.8	23.8	23.8
Actuated g/C Ratio	0.50	0.40	0.40	0.52	0.40	0.40	0.14	0.14	0.14	0.20	0.20	0.20
v/c Ratio	0.33	0.42	0.29	0.38	0.42	0.44	0.66	0.65	0.52	0.72	0.72	0.29

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 92 (77%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.72  
 Intersection Signal Delay: 29.7  
 Intersection Capacity Utilization 69.2%  
 Analysis Period (min) 15

Splits and Phases: 7: Dillon Dam Road & State Highway 6













 Ø1	 Ø2 (R)	 Ø4	 Ø8
13 s	34 s	37 s	36 s
 Ø5	 Ø6 (R)		
13 s	34 s		

## Queues

## 7: Dillon Dam Road &amp; State Highway 6

## Lake Hill Development Traffic Impact Study - Frisco, CO

























2022 Existing - PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	142	585	217	165	598	371	157	161	201	239	251	116
v/c Ratio	0.33	0.42	0.29	0.38	0.42	0.44	0.66	0.65	0.52	0.72	0.72	0.29
Control Delay	18.9	30.6	5.7	19.3	30.1	5.4	61.1	60.2	11.9	56.4	56.0	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.9	30.6	5.7	19.3	30.1	5.4	61.1	60.2	11.9	56.4	56.0	8.2
Queue Length 50th (ft)	52	168	0	61	170	0	123	126	6	183	192	0
Queue Length 95th (ft)	115	285	63	132	292	82	186	189	70	255	266	45
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	435	1404	745	444	1428	850	434	450	551	448	469	501
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.42	0.29	0.37	0.42	0.44	0.36	0.36	0.36	0.53	0.54	0.23
Intersection Summary												

# HCM Signalized Intersection Capacity Analysis Lake Hill Development Traffic Impact Study - Frisco, CO

7: Dillon Dam Road & State Highway 6

2022 Existing - PM Peak Hour





















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	131	538	200	152	550	341	188	105	185	247	204	107
Future Volume (vph)	131	538	200	152	550	341	188	105	185	247	204	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1769	3539	1548	1769	3539	1560	1681	1744	1583	1681	1759	1563
Flt Permitted	0.35	1.00	1.00	0.34	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (perm)	654	3539	1548	642	3539	1560	1681	1744	1583	1681	1759	1563
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	142	585	217	165	598	371	204	114	201	268	222	116
RTOR Reduction (vph)	0	0	131	0	0	221	0	0	165	0	0	93
Lane Group Flow (vph)	142	585	86	165	598	150	157	161	36	239	251	23
Confl. Peds. (#/hr)	2		1	1		2	1					1
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	58.4	47.7	47.7	60.0	48.5	48.5	17.0	17.0	17.0	23.8	23.8	23.8
Effective Green, g (s)	58.4	47.7	47.7	60.0	48.5	48.5	17.0	17.0	17.0	23.8	23.8	23.8
Actuated g/C Ratio	0.49	0.40	0.40	0.50	0.40	0.40	0.14	0.14	0.14	0.20	0.20	0.20
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	417	1406	615	429	1430	630	238	247	224	333	348	309
v/s Ratio Prot	0.03	0.17		c0.04	c0.17		c0.09	0.09		0.14	c0.14	
v/s Ratio Perm	0.14		0.06	0.16		0.10			0.02			0.01
v/c Ratio	0.34	0.42	0.14	0.38	0.42	0.24	0.66	0.65	0.16	0.72	0.72	0.07
Uniform Delay, d1	17.5	26.1	23.1	17.0	25.6	23.6	48.8	48.7	45.2	45.0	45.0	39.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.9	0.5	0.6	0.9	0.9	6.5	6.0	0.3	7.2	7.2	0.1
Delay (s)	18.0	27.0	23.5	17.6	26.5	24.5	55.2	54.7	45.6	52.2	52.2	39.2
Level of Service	B	C	C	B	C	C	E	D	D	D	D	D
Approach Delay (s)		24.9			24.6			51.3			49.7	
Approach LOS		C			C			D			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			33.7				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.53									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			69.2%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												



Timings  
Lake Hill Development Traffic Impact Study - Frisco, CO

8: State Highway 9 & Dillon Dam Road

















2022 Existing - PM Peak Hour

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	256	121	179	62	58	758	342	83	642	247
Future Volume (vph)	256	121	179	62	58	758	342	83	642	247
Turn Type	Prot	NA	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases					2		2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	14.0	14.0	5.0	14.0	14.0
Minimum Split (s)	9.5	38.0	9.5	11.0	10.0	20.0	20.0	10.0	36.0	36.0
Total Split (s)	19.0	38.0	14.0	33.0	10.0	38.0	38.0	10.0	38.0	38.0
Total Split (%)	19.0%	38.0%	14.0%	33.0%	10.0%	38.0%	38.0%	10.0%	38.0%	38.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	13.5	16.4	9.7	12.7	54.3	47.2	47.2	55.4	47.8	47.8
Actuated g/C Ratio	0.14	0.16	0.10	0.13	0.54	0.47	0.47	0.55	0.48	0.48
v/c Ratio	0.67	0.70	0.65	0.64	0.15	0.51	0.41	0.25	0.40	0.30

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 95  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.70  
 Intersection Signal Delay: 24.5  
 Intersection Capacity Utilization 72.3%  
 Analysis Period (min) 15











Splits and Phases: 8: State Highway 9 & Dillon Dam Road

							
10 s	38 s	14 s	38 s	10 s	38 s	19 s	33 s
							
10 s	38 s	19 s	33 s	10 s	38 s	19 s	33 s

























Queues  
Lake Hill Development Traffic Impact Study - Frisco, CO

8: State Highway 9 & Dillon Dam Road  
2022 Existing - PM Peak Hour

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	305	211	216	173	65	852	384	86	669	257
v/c Ratio	0.67	0.70	0.65	0.64	0.15	0.51	0.41	0.25	0.40	0.30
Control Delay	48.8	46.2	53.3	36.3	11.5	22.0	3.8	12.3	19.9	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	46.2	53.3	36.3	11.5	22.0	3.8	12.3	19.9	3.7
Queue Length 50th (ft)	95	113	69	66	17	200	0	22	146	0
Queue Length 95th (ft)	128	160	98	113	41	305	58	52	229	51
Internal Link Dist (ft)		215		327		1020			467	
Turn Bay Length (ft)	145		205		165		200	115		240
Base Capacity (vph)	505	566	343	503	423	1655	943	347	1658	859
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.37	0.63	0.34	0.15	0.51	0.41	0.25	0.40	0.30
Intersection Summary										

HCM 6th Signalized Intersection Summary  
Lake Hill Development Traffic Impact Study - Frisco, CO











8: State Highway 9 & Dillon Dam Road  
2022 Existing - PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	256	121	56	179	62	81	58	758	342	83	642	247
Future Volume (veh/h)	256	121	56	179	62	81	58	758	342	83	642	247
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1870	1870	1856	1856	1856	1841	1841	1841
Adj Flow Rate, veh/h	305	144	67	216	75	98	65	852	384	86	669	257
Peak Hour Factor	0.84	0.84	0.84	0.83	0.83	0.83	0.89	0.89	0.89	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	2	2	2	3	3	3	4	4	4
Cap, veh/h	380	281	131	284	151	197	320	1489	663	257	1490	663
Arrive On Green	0.11	0.24	0.24	0.08	0.21	0.21	0.04	0.42	0.42	0.05	0.43	0.43
Sat Flow, veh/h	3401	1173	546	3456	717	937	1767	3526	1569	1753	3497	1556
Grp Volume(v), veh/h	305	0	211	216	0	173	65	852	384	86	669	257
Grp Sat Flow(s),veh/h/ln	1700	0	1718	1728	0	1654	1767	1763	1569	1753	1749	1556
Q Serve(g_s), s	8.8	0.0	10.6	6.1	0.0	9.2	2.0	18.4	18.7	2.7	13.6	11.4
Cycle Q Clear(g_c), s	8.8	0.0	10.6	6.1	0.0	9.2	2.0	18.4	18.7	2.7	13.6	11.4
Prop In Lane	1.00		0.32	1.00		0.57	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	380	0	412	284	0	348	320	1489	663	257	1490	663
V/C Ratio(X)	0.80	0.00	0.51	0.76	0.00	0.50	0.20	0.57	0.58	0.33	0.45	0.39
Avail Cap(c_a), veh/h	510	0	550	346	0	447	334	1489	663	265	1490	663
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.3	0.0	32.9	44.9	0.0	34.8	15.9	22.0	22.1	17.0	20.4	19.7
Incr Delay (d2), s/veh	6.6	0.0	1.0	7.7	0.0	1.1	0.3	1.6	3.7	0.8	1.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	4.5	2.9	0.0	3.8	0.8	7.3	7.4	1.1	5.3	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.9	0.0	33.9	52.6	0.0	35.9	16.2	23.6	25.8	17.8	21.3	21.4
LnGrp LOS	D	A	C	D	A	D	B	C	C	B	C	C
Approach Vol, veh/h		516			389			1301			1012	
Approach Delay, s/veh		43.4			45.2			23.9			21.1	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	48.2	12.2	30.0	9.2	48.6	15.2	27.0				
Change Period (Y+Rc), s	5.0	6.0	4.0	6.0	5.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	5.0	32.0	10.0	32.0	5.0	32.0	15.0	27.0				
Max Q Clear Time (g_c+l1), s	4.7	20.7	8.1	12.6	4.0	15.6	10.8	11.2				
Green Ext Time (p_c), s	0.0	5.1	0.1	1.1	0.0	4.6	0.4	0.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			28.7									
HCM 6th LOS			C									

***Intersection Capacity Worksheets:  
2027 Background***

Timings  
Lake Hill Development Traffic Impact Study - Frisco, CO

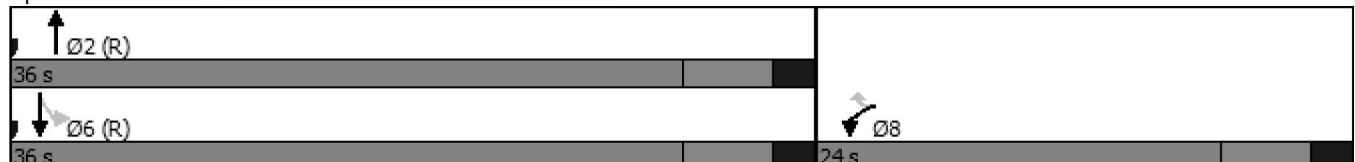
1: Dillon Dam Road & N. Ten Mile Road  
2027 Background - Mid-Day

					
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	96	104	300	60	327
Future Volume (vph)	96	104	300	60	327
Turn Type	Prot	Perm	NA	Perm	NA
Protected Phases	8		2		6
Permitted Phases		8		6	
Detector Phase	8	8	2	6	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0
Total Split (s)	24.0	24.0	36.0	36.0	36.0
Total Split (%)	40.0%	40.0%	60.0%	60.0%	60.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	8.8	8.8	42.7		42.7
Actuated g/C Ratio	0.15	0.15	0.71		0.71
v/c Ratio	0.40	0.34	0.36		0.34

Intersection Summary

Cycle Length: 60  
Actuated Cycle Length: 60  
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
Natural Cycle: 50  
Control Type: Actuated-Coordinated  
Maximum v/c Ratio: 0.40  
Intersection Signal Delay: 8.0  
Intersection Capacity Utilization 63.8%  
Analysis Period (min) 15

Splits and Phases: 1: Dillon Dam Road & N. Ten Mile Road
























Lane Group	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	101	109	459	404
v/c Ratio	0.40	0.34	0.36	0.34
Control Delay	27.0	8.4	5.5	6.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	27.0	8.4	5.5	6.0
Queue Length 50th (ft)	34	0	55	55
Queue Length 95th (ft)	68	34	120	117
Internal Link Dist (ft)	227		327	780
Turn Bay Length (ft)		100		
Base Capacity (vph)	520	542	1288	1181
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.19	0.20	0.36	0.34
Intersection Summary				

HCM 6th Signalized Intersection Summary  
Lake Hill Development Traffic Impact Study - Frisco, CO

1: Dillon Dam Road & N. Ten Mile Road  
2027 Background - Mid-Day

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	96	104	300	117	60	327
Future Volume (veh/h)	96	104	300	117	60	327
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1841	1841	1870	1870	1885	1885
Adj Flow Rate, veh/h	101	109	330	129	62	341
Peak Hour Factor	0.95	0.95	0.91	0.91	0.96	0.96
Percent Heavy Veh, %	4	4	2	2	1	1
Cap, veh/h	185	164	889	348	199	1049
Arrive On Green	0.11	0.11	0.69	0.69	0.69	0.69
Sat Flow, veh/h	1753	1560	1280	500	187	1510
Grp Volume(v), veh/h	101	109	0	459	403	0
Grp Sat Flow(s),veh/h/ln	1753	1560	0	1780	1697	0
Q Serve(g_s), s	3.3	4.0	0.0	6.4	0.0	0.0
Cycle Q Clear(g_c), s	3.3	4.0	0.0	6.4	5.0	0.0
Prop In Lane	1.00	1.00		0.28	0.15	
Lane Grp Cap(c), veh/h	185	164	0	1237	1248	0
V/C Ratio(X)	0.55	0.66	0.00	0.37	0.32	0.00
Avail Cap(c_a), veh/h	526	468	0	1237	1248	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.93	1.00	0.00
Uniform Delay (d), s/veh	25.5	25.8	0.0	3.8	3.6	0.0
Incr Delay (d2), s/veh	2.5	4.5	0.0	0.8	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.6	0.0	1.6	1.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.0	30.4	0.0	4.6	4.2	0.0
LnGrp LOS	C	C	A	A	A	A
Approach Vol, veh/h	210		459			403
Approach Delay, s/veh	29.2		4.6			4.2
Approach LOS	C		A			A
Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	47.7		47.7		12.3	
Change Period (Y+Rc), s	6.0		6.0		6.0	
Max Green Setting (Gmax), s	30.0		30.0		18.0	
Max Q Clear Time (g_c+I1), s	8.4		7.0		6.0	
Green Ext Time (p_c), s	3.0		2.7		0.5	
Intersection Summary						
HCM 6th Ctrl Delay			9.3			
HCM 6th LOS			A			

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	2	404	8	0	378
Future Vol, veh/h	3	2	404	8	0	378
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	42	42	88	88	95	95
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	7	5	459	9	0	398
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	862	464	0	0	468	0
Stage 1	464	-	-	-	-	-
Stage 2	398	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	327	600	-	-	1099	-
Stage 1	635	-	-	-	-	-
Stage 2	681	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	327	600	-	-	1099	-
Mov Cap-2 Maneuver	327	-	-	-	-	-
Stage 1	635	-	-	-	-	-
Stage 2	681	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	14.3	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	400	1099	-	
HCM Lane V/C Ratio	-	-	0.03	-	-	
HCM Control Delay (s)	-	-	14.3	0	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	2	393	13	5	367
Future Vol, veh/h	12	2	393	13	5	367
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	91	91	93	93
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	15	2	432	14	5	395

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	844	439	0
Stage 1	439	-	-
Stage 2	405	-	-
Critical Hdwy	6.41	6.21	4.11
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	2.209
Pot Cap-1 Maneuver	335	620	1120
Stage 1	652	-	-
Stage 2	676	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	333	620	1120
Mov Cap-2 Maneuver	333	-	-
Stage 1	652	-	-
Stage 2	672	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.6	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	357	1120
HCM Lane V/C Ratio	-	-	0.048	0.005
HCM Control Delay (s)	-	-	15.6	8.2
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.2	0



Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			W	W	
Traffic Vol, veh/h	4	5	6	389	367	4
Future Vol, veh/h	4	5	6	389	367	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	56	56	93	93	87	87
Heavy Vehicles, %	11	11	1	1	1	1
Mvmt Flow	7	9	6	418	422	5

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	855	425	427	0	-	0
Stage 1	425	-	-	-	-	-
Stage 2	430	-	-	-	-	-
Critical Hdwy	6.51	6.31	4.11	-	-	-
Critical Hdwy Stg 1	5.51	-	-	-	-	-
Critical Hdwy Stg 2	5.51	-	-	-	-	-
Follow-up Hdwy	3.599	3.399	2.209	-	-	-
Pot Cap-1 Maneuver	317	610	1138	-	-	-
Stage 1	641	-	-	-	-	-
Stage 2	637	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	315	610	1138	-	-	-
Mov Cap-2 Maneuver	315	-	-	-	-	-
Stage 1	637	-	-	-	-	-
Stage 2	637	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.7	0.1	0
HCM LOS	B		

























Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1138	-	431	-	-
HCM Lane V/C Ratio	0.006	-	0.037	-	-
HCM Control Delay (s)	8.2	0	13.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection			
Intersection Delay, s/veh	6.5		
Intersection LOS	A		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	240	459	420
Demand Flow Rate, veh/h	242	464	424
Vehicles Circulating, veh/h	376	140	104
Vehicles Exiting, veh/h	228	388	514
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	6.5	6.9	6.1
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	242	464	424
Cap Entry Lane, veh/h	940	1196	1241
Entry HV Adj Factor	0.992	0.990	0.991
Flow Entry, veh/h	240	459	420
Cap Entry, veh/h	933	1184	1230
V/C Ratio	0.257	0.388	0.342
Control Delay, s/veh	6.5	6.9	6.1
LOS	A	A	A
95th %tile Queue, veh	1	2	2

Timings  
Lake Hill Development Traffic Impact Study - Frisco, CO

7: Dillon Dam Road & State Highway 6







2027 Background - Mid-Day

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	478	190	112	513	212	209	118	112	168	92	135
Future Volume (vph)	106	478	190	112	513	212	209	118	112	168	92	135
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	1.0	14.0	14.0	1.0	14.0	14.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Split (s)	5.5	20.0	20.0	5.5	20.0	20.0	7.0	7.0	7.0	7.0	7.0	7.0
Total Split (s)	14.0	34.0	34.0	13.0	33.0	33.0	41.0	41.0	41.0	42.0	42.0	42.0
Total Split (%)	10.8%	26.2%	26.2%	10.0%	25.4%	25.4%	31.5%	31.5%	31.5%	32.3%	32.3%	32.3%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	73.4	61.9	61.9	73.9	62.1	62.1	19.2	19.2	19.2	19.1	19.1	19.1
Actuated g/C Ratio	0.56	0.48	0.48	0.57	0.48	0.48	0.15	0.15	0.15	0.15	0.15	0.15
v/c Ratio	0.23	0.31	0.25	0.24	0.33	0.26	0.71	0.70	0.38	0.56	0.56	0.42

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 86 (66%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  
 Natural Cycle: 50  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.71  
 Intersection Signal Delay: 29.0  
 Intersection Capacity Utilization 60.0%  
 Analysis Period (min) 15

Splits and Phases: 7: Dillon Dam Road & State Highway 6













 Ø1	 Ø2 (R)	 Ø4	 Ø8
13 s	34 s	42 s	41 s
 Ø5	 Ø6 (R)		
14 s	33 s		

## Queues

## 7: Dillon Dam Road &amp; State Highway 6

## Lake Hill Development Traffic Impact Study - Frisco, CO

























2027 Background - Mid-Day

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	115	520	207	122	558	230	175	180	122	139	144	147
v/c Ratio	0.23	0.31	0.25	0.24	0.33	0.26	0.71	0.70	0.38	0.56	0.56	0.42
Control Delay	16.2	25.4	5.2	16.2	25.5	5.0	67.3	66.3	15.9	58.4	58.2	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.2	25.4	5.2	16.2	25.5	5.0	67.3	66.3	15.9	58.4	58.2	9.8
Queue Length 50th (ft)	37	129	0	39	140	0	150	153	16	120	124	0
Queue Length 95th (ft)	103	264	62	108	283	64	220	223	69	160	164	52
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	509	1684	844	522	1690	876	465	483	511	478	496	546
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.31	0.25	0.23	0.33	0.26	0.38	0.37	0.24	0.29	0.29	0.27
Intersection Summary												



# HCM Signalized Intersection Capacity Analysis Lake Hill Development Traffic Impact Study - Frisco, CO





















7: Dillon Dam Road & State Highway 6  
2027 Background - Mid-Day

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	478	190	112	513	212	209	118	112	168	92	135
Future Volume (vph)	106	478	190	112	513	212	209	118	112	168	92	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.98	1.00
Satd. Flow (prot)	1770	3539	1548	1769	3539	1583	1681	1744	1583	1681	1743	1549
Flt Permitted	0.39	1.00	1.00	0.41	1.00	1.00	0.95	0.99	1.00	0.95	0.98	1.00
Satd. Flow (perm)	731	3539	1548	767	3539	1583	1681	1744	1583	1681	1743	1549
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	115	520	207	122	558	230	227	128	122	183	100	147
RTOR Reduction (vph)	0	0	108	0	0	120	0	0	86	0	0	125
Lane Group Flow (vph)	115	520	99	122	558	110	175	180	36	139	144	22
Confl. Peds. (#/hr)			1	1			9					9
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	71.5	61.9	61.9	71.9	62.1	62.1	19.2	19.2	19.2	19.1	19.1	19.1
Effective Green, g (s)	71.5	61.9	61.9	71.9	62.1	62.1	19.2	19.2	19.2	19.1	19.1	19.1
Actuated g/C Ratio	0.55	0.48	0.48	0.55	0.48	0.48	0.15	0.15	0.15	0.15	0.15	0.15
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	478	1685	737	499	1690	756	248	257	233	246	256	227
v/s Ratio Prot	0.02	0.15		c0.02	c0.16		c0.10	0.10		c0.08	0.08	
v/s Ratio Perm	0.11		0.06	0.12		0.07			0.02			0.01
v/c Ratio	0.24	0.31	0.13	0.24	0.33	0.15	0.71	0.70	0.15	0.57	0.56	0.10
Uniform Delay, d1	14.3	20.9	19.1	14.1	21.1	19.1	52.7	52.7	48.3	51.6	51.6	48.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.5	0.4	0.3	0.5	0.4	8.8	8.3	0.3	3.0	2.8	0.2
Delay (s)	14.6	21.4	19.4	14.4	21.6	19.5	61.5	61.0	48.6	54.5	54.4	48.2
Level of Service	B	C	B	B	C	B	E	E	D	D	D	D
Approach Delay (s)		20.0			20.1			58.0			52.3	
Approach LOS		B			C			E			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			32.1				HCM 2000 Level of Service		C			
HCM 2000 Volume to Capacity ratio			0.43									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)		20.0			
Intersection Capacity Utilization			60.0%				ICU Level of Service		B			
Analysis Period (min)			15									
c Critical Lane Group												

Timings  
Lake Hill Development Traffic Impact Study - Frisco, CO

8: State Highway 9 & Dillon Dam Road









2027 Background - Mid-Day

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	202	71	246	76	89	618	259	86	651	207
Future Volume (vph)	202	71	246	76	89	618	259	86	651	207
Turn Type	Prot	NA	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases					2		2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	14.0	14.0	5.0	14.0	14.0
Minimum Split (s)	9.5	38.0	9.5	11.0	10.0	20.0	20.0	10.0	36.0	36.0
Total Split (s)	15.0	38.0	15.0	38.0	10.0	36.0	36.0	11.0	37.0	37.0
Total Split (%)	15.0%	38.0%	15.0%	38.0%	10.0%	36.0%	36.0%	11.0%	37.0%	37.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	10.5	12.5	10.7	12.7	57.9	50.2	50.2	57.7	50.1	50.1
Actuated g/C Ratio	0.10	0.12	0.11	0.13	0.58	0.50	0.50	0.58	0.50	0.50
v/c Ratio	0.66	0.62	0.71	0.68	0.21	0.37	0.30	0.19	0.39	0.25

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 95  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.71  
 Intersection Signal Delay: 23.7  
 Intersection Capacity Utilization 71.1%  
 Analysis Period (min) 15

Splits and Phases: 8: State Highway 9 & Dillon Dam Road

			
Ø1	Ø2 (R)	Ø3	Ø4
11 s	36 s	15 s	38 s
			
Ø5	Ø6 (R)	Ø7	Ø8
10 s	37 s	15 s	38 s

Queues  
Lake Hill Development Traffic Impact Study - Frisco, CO

8: State Highway 9 & Dillon Dam Road  
2027 Background - Mid-Day



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	232	154	259	186	93	644	270	89	671	213
v/c Ratio	0.66	0.62	0.71	0.68	0.21	0.37	0.30	0.19	0.39	0.25
Control Delay	52.3	38.7	54.8	37.5	10.3	18.1	3.4	10.2	18.3	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.3	38.7	54.8	37.5	10.3	18.1	3.4	10.2	18.3	3.5
Queue Length 50th (ft)	74	65	83	71	22	133	0	21	141	0
Queue Length 95th (ft)	109	116	#126	134	51	211	49	49	222	45
Internal Link Dist (ft)		279		327		602			402	
Turn Bay Length (ft)	145		205		165		200	115		240
Base Capacity (vph)	370	567	374	587	446	1726	906	458	1723	860
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.27	0.69	0.32	0.21	0.37	0.30	0.19	0.39	0.25























Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.



HCM 6th Signalized Intersection Summary  
Lake Hill Development Traffic Impact Study - Frisco, CO

8: State Highway 9 & Dillon Dam Road  
2027 Background - Mid-Day

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	71	63	246	76	101	89	618	259	86	651	207
Future Volume (veh/h)	202	71	63	246	76	101	89	618	259	86	651	207
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1856	1856	1856	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	232	82	72	259	80	106	93	644	270	89	671	213
Peak Hour Factor	0.87	0.87	0.87	0.95	0.95	0.95	0.96	0.96	0.96	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	3	3	3	5	5	5	5	5	5
Cap, veh/h	301	173	152	327	143	189	351	1578	703	349	1577	703
Arrive On Green	0.09	0.19	0.19	0.10	0.20	0.20	0.05	0.45	0.45	0.05	0.45	0.45
Sat Flow, veh/h	3401	891	782	3428	712	943	1739	3469	1546	1739	3469	1546
Grp Volume(v), veh/h	232	0	154	259	0	186	93	644	270	89	671	213
Grp Sat Flow(s),veh/h/ln	1700	0	1673	1714	0	1655	1739	1735	1546	1739	1735	1546
Q Serve(g_s), s	6.7	0.0	8.2	7.4	0.0	10.1	2.8	12.4	11.5	2.7	13.1	8.7
Cycle Q Clear(g_c), s	6.7	0.0	8.2	7.4	0.0	10.1	2.8	12.4	11.5	2.7	13.1	8.7
Prop In Lane	1.00		0.47	1.00		0.57	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	301	0	324	327	0	332	351	1578	703	349	1577	703
V/C Ratio(X)	0.77	0.00	0.47	0.79	0.00	0.56	0.27	0.41	0.38	0.26	0.43	0.30
Avail Cap(c_a), veh/h	374	0	536	377	0	530	357	1578	703	374	1577	703
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.94	0.00	0.94	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	0.0	35.8	44.3	0.0	36.0	14.2	18.2	18.0	14.1	18.4	17.3
Incr Delay (d2), s/veh	7.6	0.0	1.1	9.2	0.0	1.4	0.4	0.8	1.6	0.4	0.8	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	3.4	3.5	0.0	4.2	1.0	4.8	4.3	1.0	5.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.2	0.0	36.9	53.4	0.0	37.4	14.6	19.0	19.6	14.4	19.3	18.4
LnGrp LOS	D	A	D	D	A	D	B	B	B	B	B	B
Approach Vol, veh/h		386			445			1007			973	
Approach Delay, s/veh		46.1			46.7			18.8			18.6	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	51.5	13.5	25.4	9.6	51.5	12.8	26.1				
Change Period (Y+Rc), s	5.0	6.0	4.0	6.0	5.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	6.0	30.0	11.0	32.0	5.0	31.0	11.0	32.0				
Max Q Clear Time (g_c+l1), s	4.7	14.4	9.4	10.2	4.8	15.1	8.7	12.1				
Green Ext Time (p_c), s	0.0	4.4	0.1	0.8	0.0	4.4	0.2	1.0				

Intersection Summary

HCM 6th Ctrl Delay	26.9
HCM 6th LOS	C










Notes

User approved pedestrian interval to be less than phase max green.



Timings  
Lake Hill Development Traffic Impact Study - Frisco, CO

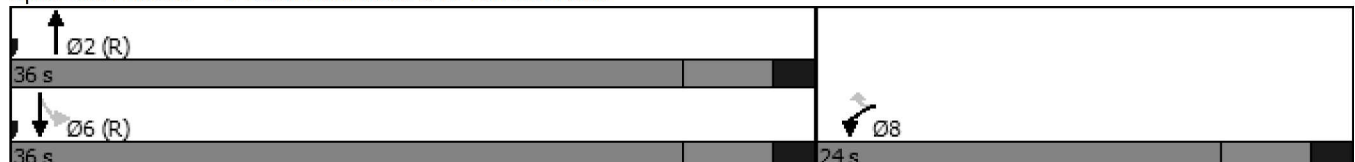
1: Dillon Dam Road & N. Ten Mile Road  
2027 Background - PM Peak Hour

					
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	90	119	543	54	261
Future Volume (vph)	90	119	543	54	261
Turn Type	Prot	Perm	NA	Perm	NA
Protected Phases	8		2		6
Permitted Phases		8		6	
Detector Phase	8	8	2	6	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0
Total Split (s)	24.0	24.0	36.0	36.0	36.0
Total Split (%)	40.0%	40.0%	60.0%	60.0%	60.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	8.8	8.8	42.7		42.7
Actuated g/C Ratio	0.15	0.15	0.71		0.71
v/c Ratio	0.39	0.39	0.55		0.32

Intersection Summary

Cycle Length: 60  
Actuated Cycle Length: 60  
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
Natural Cycle: 60  
Control Type: Actuated-Coordinated  
Maximum v/c Ratio: 0.55  
Intersection Signal Delay: 9.2  
Intersection Capacity Utilization 71.5%  
Analysis Period (min) 15

Splits and Phases: 1: Dillon Dam Road & N. Ten Mile Road



Queues  
Lake Hill Development Traffic Impact Study - Frisco, CO












1: Dillon Dam Road & N. Ten Mile Road  
2027 Background - PM Peak Hour






Lane Group	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	103	137	725	358
v/c Ratio	0.39	0.39	0.55	0.32
Control Delay	26.9	8.3	8.0	6.0
Queue Delay	0.0	0.0	0.5	0.0
Total Delay	26.9	8.3	8.5	6.0
Queue Length 50th (ft)	34	0	118	48
Queue Length 95th (ft)	66	35	241	101
Internal Link Dist (ft)	227		327	780
Turn Bay Length (ft)		100		
Base Capacity (vph)	536	575	1313	1103
Starvation Cap Reductn	0	0	217	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.19	0.24	0.66	0.32
Intersection Summary				

HCM 6th Signalized Intersection Summary  
Lake Hill Development Traffic Impact Study - Frisco, CO

1: Dillon Dam Road & N. Ten Mile Road  
2027 Background - PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	90	119	543	102	54	261
Future Volume (veh/h)	90	119	543	102	54	261
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	103	137	610	115	61	297
Peak Hour Factor	0.87	0.87	0.89	0.89	0.88	0.88
Percent Heavy Veh, %	1	1	1	1	1	1
Cap, veh/h	220	196	1045	197	188	875
Arrive On Green	0.12	0.12	0.68	0.68	0.68	0.68
Sat Flow, veh/h	1795	1598	1542	291	175	1291
Grp Volume(v), veh/h	103	137	0	725	358	0
Grp Sat Flow(s),veh/h/ln	1795	1598	0	1833	1466	0
Q Serve(g_s), s	3.2	4.9	0.0	12.7	1.0	0.0
Cycle Q Clear(g_c), s	3.2	4.9	0.0	12.7	13.7	0.0
Prop In Lane	1.00	1.00		0.16	0.17	
Lane Grp Cap(c), veh/h	220	196	0	1242	1063	0
V/C Ratio(X)	0.47	0.70	0.00	0.58	0.34	0.00
Avail Cap(c_a), veh/h	539	479	0	1242	1063	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.86	1.00	0.00
Uniform Delay (d), s/veh	24.5	25.3	0.0	5.2	4.0	0.0
Incr Delay (d2), s/veh	1.5	4.5	0.0	1.7	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	2.0	0.0	3.6	1.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.1	29.8	0.0	6.9	4.8	0.0
LnGrp LOS	C	C	A	A	A	A
Approach Vol, veh/h	240		725		358	
Approach Delay, s/veh	28.2		6.9		4.8	
Approach LOS	C		A		A	
Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	46.7		46.7		13.3	
Change Period (Y+Rc), s	6.0		6.0		6.0	
Max Green Setting (Gmax), s	30.0		30.0		18.0	
Max Q Clear Time (g_c+l1), s	14.7		15.7		6.9	
Green Ext Time (p_c), s	4.7		2.1		0.5	
Intersection Summary						
HCM 6th Ctrl Delay			10.2			
HCM 6th LOS			B			




Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	2	645	6	2	300
Future Vol, veh/h	7	2	645	6	2	300
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	56	56	92	92	85	85
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	13	4	701	7	2	353

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1062	705	0	0	708	0
Stage 1	705	-	-	-	-	-
Stage 2	357	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	249	438	-	-	895	-
Stage 1	492	-	-	-	-	-
Stage 2	710	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	248	438	-	-	895	-
Mov Cap-2 Maneuver	248	-	-	-	-	-
Stage 1	492	-	-	-	-	-
Stage 2	708	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	274	895
HCM Lane V/C Ratio	-	-	0.059	0.003
HCM Control Delay (s)	-	-	19	9
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.2	0



Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	5	636	12	6	292
Future Vol, veh/h	9	5	636	12	6	292
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	92	92	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	10	6	691	13	7	348

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1060	698	0	0	704
Stage 1	698	-	-	-	-
Stage 2	362	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11
Critical Hdwy Stg 1	5.41	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209
Pot Cap-1 Maneuver	249	442	-	-	898
Stage 1	495	-	-	-	-
Stage 2	707	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	247	442	-	-	898
Mov Cap-2 Maneuver	247	-	-	-	-
Stage 1	495	-	-	-	-
Stage 2	700	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	293	898
HCM Lane V/C Ratio	-	-	0.054	0.008
HCM Control Delay (s)	-	-	18	9
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			Y	Y	
Traffic Vol, veh/h	5	4	7	634	294	6
Future Vol, veh/h	5	4	7	634	294	6
Conflicting Peds, #/hr	1	7	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	92	92	81	81
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	7	5	8	689	363	7

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1073	374	370	0	-	0
Stage 1	367	-	-	-	-	-
Stage 2	706	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	245	674	1194	-	-	-
Stage 1	703	-	-	-	-	-
Stage 2	491	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	242	670	1194	-	-	-
Mov Cap-2 Maneuver	242	-	-	-	-	-
Stage 1	695	-	-	-	-	-
Stage 2	491	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16	0.1	0
HCM LOS	C		

























Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1194	-	338	-	-
HCM Lane V/C Ratio	0.006	-	0.036	-	-
HCM Control Delay (s)	8	0	16	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection			
Intersection Delay, s/veh	13.1		
Intersection LOS	B		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	154	718	609
Demand Flow Rate, veh/h	156	725	615
Vehicles Circulating, veh/h	492	368	78
Vehicles Exiting, veh/h	601	325	570
Ped Vol Crossing Leg, #/h	1	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	6.3	18.9	7.9
Approach LOS	A	C	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	156	725	615
Cap Entry Lane, veh/h	835	948	1274
Entry HV Adj Factor	0.987	0.991	0.990
Flow Entry, veh/h	154	718	609
Cap Entry, veh/h	825	939	1261
V/C Ratio	0.187	0.765	0.483
Control Delay, s/veh	6.3	18.9	7.9
LOS	A	C	A
95th %tile Queue, veh	1	8	3

Timings  
Lake Hill Development Traffic Impact Study - Frisco, CO

7: Dillon Dam Road & State Highway 6







2027 Background - PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	138	565	210	160	578	358	198	110	194	260	214	112
Future Volume (vph)	138	565	210	160	578	358	198	110	194	260	214	112
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	1.0	14.0	14.0	1.0	14.0	14.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Split (s)	5.5	20.0	20.0	5.5	20.0	20.0	7.0	7.0	7.0	7.0	7.0	7.0
Total Split (s)	13.0	34.0	34.0	13.0	34.0	34.0	36.0	36.0	36.0	37.0	37.0	37.0
Total Split (%)	10.8%	28.3%	28.3%	10.8%	28.3%	28.3%	30.0%	30.0%	30.0%	30.8%	30.8%	30.8%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	58.8	45.8	45.8	60.9	46.8	46.8	17.7	17.7	17.7	24.5	24.5	24.5
Actuated g/C Ratio	0.49	0.38	0.38	0.51	0.39	0.39	0.15	0.15	0.15	0.20	0.20	0.20
v/c Ratio	0.37	0.45	0.31	0.42	0.45	0.46	0.67	0.66	0.53	0.74	0.74	0.29

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 92 (77%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 30.6  
 Intersection Capacity Utilization 70.6%  
 Analysis Period (min) 15

Splits and Phases: 7: Dillon Dam Road & State Highway 6

 Ø1	 Ø2 (R)	 Ø4	 Ø8
13 s	34 s	37 s	36 s
 Ø5	 Ø6 (R)		
13 s	34 s		















## Queues

## 7: Dillon Dam Road &amp; State Highway 6





























## Lake Hill Development Traffic Impact Study - Frisco, CO

2027 Background - PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	150	614	228	174	628	389	166	169	211	252	264	122
v/c Ratio	0.37	0.45	0.31	0.42	0.45	0.46	0.67	0.66	0.53	0.74	0.74	0.29
Control Delay	20.2	32.3	5.8	20.7	31.7	5.5	61.0	59.7	13.0	57.0	56.6	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.2	32.3	5.8	20.7	31.7	5.5	61.0	59.7	13.0	57.0	56.6	8.0
Queue Length 50th (ft)	57	185	0	67	186	0	130	132	13	192	202	0
Queue Length 95th (ft)	122	300	64	141	308	84	194	195	79	270	280	47
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	411	1350	731	421	1381	845	434	450	551	448	469	506
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.45	0.31	0.41	0.45	0.46	0.38	0.38	0.38	0.56	0.56	0.24
Intersection Summary												

# HCM Signalized Intersection Capacity Analysis Lake Hill Development Traffic Impact Study - Frisco, CO





















7: Dillon Dam Road & State Highway 6  
2027 Background - PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (vph)	138	565	210	160	578	358	198	110	194	260	214	112
Future Volume (vph)	138	565	210	160	578	358	198	110	194	260	214	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1769	3539	1548	1769	3539	1560	1681	1744	1583	1681	1759	1563
Flt Permitted	0.33	1.00	1.00	0.32	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (perm)	612	3539	1548	591	3539	1560	1681	1744	1583	1681	1759	1563
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	150	614	228	174	628	389	215	120	211	283	233	122
RTOR Reduction (vph)	0	0	141	0	0	237	0	0	164	0	0	97
Lane Group Flow (vph)	150	614	87	174	628	152	166	169	47	252	264	25
Confl. Peds. (#/hr)	2		1	1		2	1					1
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	56.7	45.7	45.7	58.9	46.8	46.8	17.7	17.7	17.7	24.5	24.5	24.5
Effective Green, g (s)	56.7	45.7	45.7	58.9	46.8	46.8	17.7	17.7	17.7	24.5	24.5	24.5
Actuated g/C Ratio	0.47	0.38	0.38	0.49	0.39	0.39	0.15	0.15	0.15	0.20	0.20	0.20
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	395	1347	589	408	1380	608	247	257	233	343	359	319
v/s Ratio Prot	0.03	0.17		c0.04	c0.18		c0.10	0.10		0.15	c0.15	
v/s Ratio Perm	0.14		0.06	0.17		0.10			0.03			0.02
v/c Ratio	0.38	0.46	0.15	0.43	0.46	0.25	0.67	0.66	0.20	0.73	0.74	0.08
Uniform Delay, d1	18.7	27.8	24.4	17.9	27.1	24.7	48.4	48.3	45.0	44.7	44.7	38.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	1.1	0.5	0.7	1.1	1.0	7.0	6.0	0.4	7.9	7.6	0.1
Delay (s)	19.3	28.9	24.9	18.7	28.2	25.7	55.4	54.2	45.4	52.6	52.3	38.7
Level of Service	B	C	C	B	C	C	E	D	D	D	D	D
Approach Delay (s)		26.6			26.0			51.2			49.9	
Approach LOS		C			C			D			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			34.8				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			70.6%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

Timings  
Lake Hill Development Traffic Impact Study - Frisco, CO

8: State Highway 9 & Dillon Dam Road








2027 Background - PM Peak Hour

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	269	127	188	65	61	797	359	87	675	260
Future Volume (vph)	269	127	188	65	61	797	359	87	675	260
Turn Type	Prot	NA	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases					2		2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	14.0	14.0	5.0	14.0	14.0
Minimum Split (s)	9.5	38.0	9.5	24.0	10.0	24.0	24.0	10.0	36.0	36.0
Total Split (s)	19.0	38.0	14.0	33.0	10.0	38.0	38.0	10.0	38.0	38.0
Total Split (%)	19.0%	38.0%	14.0%	33.0%	10.0%	38.0%	38.0%	10.0%	38.0%	38.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	13.7	17.1	9.7	13.1	53.6	46.4	46.4	54.8	47.0	47.0
Actuated g/C Ratio	0.14	0.17	0.10	0.13	0.54	0.46	0.46	0.55	0.47	0.47
v/c Ratio	0.69	0.71	0.68	0.65	0.17	0.55	0.43	0.28	0.43	0.32

Intersection Summary











Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 95  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.71  
 Intersection Signal Delay: 25.2  
 Intersection Capacity Utilization 72.8%  
 Analysis Period (min) 15

Splits and Phases: 8: State Highway 9 & Dillon Dam Road

						
Ø1	Ø2 (R)	Ø3	Ø4	Ø5	Ø6 (R)	Ø7
10 s	38 s	14 s	38 s	10 s	38 s	19 s
						33 s

Queues  
Lake Hill Development Traffic Impact Study - Frisco, CO























8: State Highway 9 & Dillon Dam Road  
2027 Background - PM Peak Hour

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	320	221	227	180	69	896	403	91	703	271
v/c Ratio	0.69	0.71	0.68	0.65	0.17	0.55	0.43	0.28	0.43	0.32
Control Delay	49.4	46.2	54.6	37.0	11.9	23.2	3.9	13.0	20.8	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.4	46.2	54.6	37.0	11.9	23.2	3.9	13.0	20.8	3.8
Queue Length 50th (ft)	100	119	73	71	18	220	0	24	158	0
Queue Length 95th (ft)	134	168	103	117	43	328	59	55	246	52
Internal Link Dist (ft)		215		327		1020			467	
Turn Bay Length (ft)	145		205		165		200	115		240
Base Capacity (vph)	505	566	343	503	402	1627	943	327	1631	856
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.39	0.66	0.36	0.17	0.55	0.43	0.28	0.43	0.32
Intersection Summary										



HCM 6th Signalized Intersection Summary  
Lake Hill Development Traffic Impact Study - Frisco, CO











8: State Highway 9 & Dillon Dam Road  
2027 Background - PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	269	127	59	188	65	85	61	797	359	87	675	260
Future Volume (veh/h)	269	127	59	188	65	85	61	797	359	87	675	260
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1870	1870	1856	1856	1856	1841	1841	1841
Adj Flow Rate, veh/h	320	151	70	227	78	102	69	896	403	91	703	271
Peak Hour Factor	0.84	0.84	0.84	0.83	0.83	0.83	0.89	0.89	0.89	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	2	2	2	3	3	3	4	4	4
Cap, veh/h	395	285	132	295	152	199	304	1467	653	243	1467	653
Arrive On Green	0.12	0.24	0.24	0.09	0.21	0.21	0.04	0.42	0.42	0.05	0.42	0.42
Sat Flow, veh/h	3401	1174	544	3456	717	937	1767	3526	1569	1753	3497	1556
Grp Volume(v), veh/h	320	0	221	227	0	180	69	896	403	91	703	271
Grp Sat Flow(s),veh/h/ln	1700	0	1719	1728	0	1654	1767	1763	1569	1753	1749	1556
Q Serve(g_s), s	9.2	0.0	11.2	6.4	0.0	9.6	2.2	19.9	20.2	2.9	14.6	12.2
Cycle Q Clear(g_c), s	9.2	0.0	11.2	6.4	0.0	9.6	2.2	19.9	20.2	2.9	14.6	12.2
Prop In Lane	1.00		0.32	1.00		0.57	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	395	0	417	295	0	350	304	1467	653	243	1467	653
V/C Ratio(X)	0.81	0.00	0.53	0.77	0.00	0.51	0.23	0.61	0.62	0.37	0.48	0.42
Avail Cap(c_a), veh/h	510	0	550	346	0	447	317	1467	653	250	1467	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.95	0.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.1	0.0	32.9	44.8	0.0	34.9	16.4	22.9	22.9	17.8	21.1	20.4
Incr Delay (d2), s/veh	7.5	0.0	1.0	8.3	0.0	1.1	0.4	1.9	4.3	1.0	1.1	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	4.7	3.1	0.0	3.9	0.9	8.0	8.0	1.2	5.7	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.6	0.0	34.0	53.1	0.0	36.0	16.8	24.8	27.3	18.7	22.2	22.3
LnGrp LOS	D	A	C	D	A	D	B	C	C	B	C	C
Approach Vol, veh/h		541			407			1368			1065	
Approach Delay, s/veh		43.8			45.5			25.1			21.9	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	47.6	12.5	30.2	9.3	48.0	15.6	27.2				
Change Period (Y+Rc), s	5.0	6.0	4.0	6.0	5.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	5.0	32.0	10.0	32.0	5.0	32.0	15.0	27.0				
Max Q Clear Time (g_c+I1), s	4.9	22.2	8.4	13.2	4.2	16.6	11.2	11.6				
Green Ext Time (p_c), s	0.0	5.0	0.1	1.2	0.0	4.8	0.4	0.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			29.6									
HCM 6th LOS			C									

***Intersection Capacity Worksheets:  
2042 Background***

Timings  
Lake Hill Development Traffic Impact Study - Frisco, CO

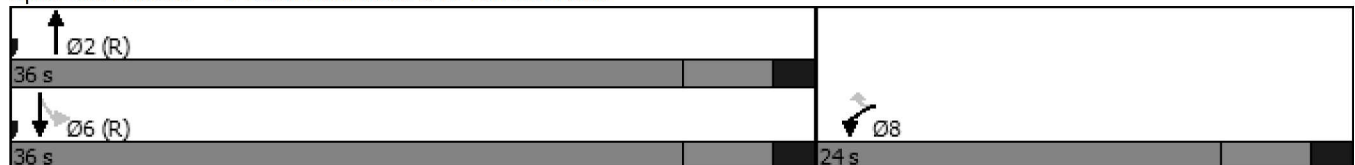
1: Dillon Dam Road & N. Ten Mile Road  
2042 Background - Mid-Day

					
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	25	205	215	120	325
Future Volume (vph)	25	205	215	120	325
Turn Type	Prot	Perm	NA	Perm	NA
Protected Phases	8		2		6
Permitted Phases		8		6	
Detector Phase	8	8	2	6	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0
Total Split (s)	24.0	24.0	36.0	36.0	36.0
Total Split (%)	40.0%	40.0%	60.0%	60.0%	60.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	7.4	7.4	40.6		40.6
Actuated g/C Ratio	0.12	0.12	0.68		0.68
v/c Ratio	0.12	0.56	0.27		0.45

Intersection Summary

Cycle Length: 60  
Actuated Cycle Length: 60  
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
Natural Cycle: 55  
Control Type: Actuated-Coordinated  
Maximum v/c Ratio: 0.56  
Intersection Signal Delay: 7.1  
Intersection Capacity Utilization 59.4%  
Analysis Period (min) 15

Splits and Phases: 1: Dillon Dam Road & N. Ten Mile Road



Queues  
Lake Hill Development Traffic Impact Study - Frisco, CO

1: Dillon Dam Road & N. Ten Mile Road  
2042 Background - Mid-Day
















Lane Group	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	26	216	326	464
v/c Ratio	0.12	0.56	0.27	0.45
Control Delay	23.2	10.1	4.3	6.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	23.2	10.1	4.3	6.8
Queue Length 50th (ft)	9	0	28	57
Queue Length 95th (ft)	25	48	74	144
Internal Link Dist (ft)	227		327	780
Turn Bay Length (ft)		100		
Base Capacity (vph)	531	626	1227	1034
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.05	0.35	0.27	0.45
Intersection Summary				



HCM 6th Signalized Intersection Summary  
Lake Hill Development Traffic Impact Study - Frisco, CO

1: Dillon Dam Road & N. Ten Mile Road  
2042 Background - Mid-Day




						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	25	205	215	85	120	325
Future Volume (veh/h)	25	205	215	85	120	325
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	216	234	92	125	339
Peak Hour Factor	0.95	0.95	0.92	0.92	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	302	269	806	317	301	780
Arrive On Green	0.17	0.17	0.63	0.63	0.63	0.63
Sat Flow, veh/h	1781	1585	1278	502	357	1236
Grp Volume(v), veh/h	26	216	0	326	464	0
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1780	1594	0
Q Serve(g_s), s	0.7	7.9	0.0	5.0	2.5	0.0
Cycle Q Clear(g_c), s	0.7	7.9	0.0	5.0	7.9	0.0
Prop In Lane	1.00	1.00		0.28	0.27	
Lane Grp Cap(c), veh/h	302	269	0	1122	1081	0
V/C Ratio(X)	0.09	0.80	0.00	0.29	0.43	0.00
Avail Cap(c_a), veh/h	534	476	0	1122	1081	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	21.0	24.0	0.0	5.0	5.5	0.0
Incr Delay (d2), s/veh	0.1	5.6	0.0	0.7	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	3.2	0.0	1.5	2.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.1	29.5	0.0	5.7	6.7	0.0
LnGrp LOS	C	C	A	A	A	A
Approach Vol, veh/h	242		326		464	
Approach Delay, s/veh	28.6		5.7		6.7	
Approach LOS	C		A		A	
Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	43.8		43.8		16.2	
Change Period (Y+Rc), s	6.0		6.0		6.0	
Max Green Setting (Gmax), s	30.0		30.0		18.0	
Max Q Clear Time (g_c+l1), s	7.0		9.9		9.9	
Green Ext Time (p_c), s	2.0		3.1		0.5	
Intersection Summary						
HCM 6th Ctrl Delay			11.5			
HCM 6th LOS			B			

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	5	470	10	5	440
Future Vol, veh/h	5	5	470	10	5	440
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	5	511	11	5	463

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	990	517	0	0	522	0
Stage 1	517	-	-	-	-	-
Stage 2	473	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	273	558	-	-	1044	-
Stage 1	598	-	-	-	-	-
Stage 2	627	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	271	558	-	-	1044	-
Mov Cap-2 Maneuver	271	-	-	-	-	-
Stage 1	598	-	-	-	-	-
Stage 2	623	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.2	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	365	1044
HCM Lane V/C Ratio	-	-	0.03	0.005
HCM Control Delay (s)	-	-	15.2	8.5
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	5	455	15	5	425
Future Vol, veh/h	15	5	455	15	5	425
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	5	495	16	5	457

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	970	503	0
Stage 1	503	-	-
Stage 2	467	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	281	569	-
Stage 1	607	-	-
Stage 2	631	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	279	569	-
Mov Cap-2 Maneuver	279	-	-
Stage 1	607	-	-
Stage 2	627	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.1	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	320	1054
HCM Lane V/C Ratio	-	-	0.068	0.005
HCM Control Delay (s)	-	-	17.1	8.4
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			Y	Y	
Traffic Vol, veh/h	5	5	5	450	425	5
Future Vol, veh/h	5	5	5	450	425	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	93	93	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	5	5	484	462	5

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	959	465	467	0	-	0
Stage 1	465	-	-	-	-	-
Stage 2	494	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	285	597	1094	-	-	-
Stage 1	632	-	-	-	-	-
Stage 2	613	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	283	597	1094	-	-	-
Mov Cap-2 Maneuver	283	-	-	-	-	-
Stage 1	628	-	-	-	-	-
Stage 2	613	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.6	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1094	-	384	-	-
HCM Lane V/C Ratio	0.005	-	0.028	-	-
HCM Control Delay (s)	8.3	0	14.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



























Intersection			
Intersection Delay, s/veh	7.4		
Intersection LOS	A		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	239	516	489
Demand Flow Rate, veh/h	244	526	498
Vehicles Circulating, veh/h	426	168	105
Vehicles Exiting, veh/h	268	435	565
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	7.0	8.0	6.9
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	244	526	498
Cap Entry Lane, veh/h	894	1163	1240
Entry HV Adj Factor	0.980	0.980	0.981
Flow Entry, veh/h	239	516	489
Cap Entry, veh/h	875	1140	1216
V/C Ratio	0.273	0.452	0.402
Control Delay, s/veh	7.0	8.0	6.9
LOS	A	A	A
95th %tile Queue, veh	1	2	2

Timings  
Lake Hill Development Traffic Impact Study - Frisco, CO

7: Dillon Dam Road & State Highway 6







2042 Background - Mid-Day

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	555	220	130	595	245	245	135	130	195	105	155
Future Volume (vph)	125	555	220	130	595	245	245	135	130	195	105	155
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	1.0	14.0	14.0	1.0	14.0	14.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Split (s)	5.5	20.0	20.0	5.5	20.0	20.0	7.0	7.0	7.0	7.0	7.0	7.0
Total Split (s)	14.0	34.0	34.0	13.0	33.0	33.0	41.0	41.0	41.0	42.0	42.0	42.0
Total Split (%)	10.8%	26.2%	26.2%	10.0%	25.4%	25.4%	31.5%	31.5%	31.5%	32.3%	32.3%	32.3%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	69.5	56.5	56.5	69.7	56.6	56.6	21.7	21.7	21.7	20.7	20.7	20.7
Actuated g/C Ratio	0.53	0.43	0.43	0.54	0.44	0.44	0.17	0.17	0.17	0.16	0.16	0.16
v/c Ratio	0.32	0.39	0.30	0.32	0.42	0.32	0.72	0.73	0.41	0.60	0.60	0.43

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 86 (66%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 31.1  
 Intersection Capacity Utilization 71.4%  
 Analysis Period (min) 15

Splits and Phases: 7: Dillon Dam Road & State Highway 6













			
Ø1	Ø2 (R)	Ø4	Ø8
13 s	34 s	42 s	41 s
			
Ø5	Ø6 (R)		
14 s	33 s		

## Queues

## 7: Dillon Dam Road &amp; State Highway 6

## Lake Hill Development Traffic Impact Study - Frisco, CO

2042 Background - Mid-Day

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	136	603	239	141	647	266	202	211	141	161	165	168
v/c Ratio	0.32	0.39	0.30	0.32	0.42	0.32	0.72	0.73	0.41	0.60	0.60	0.43
Control Delay	19.2	30.0	5.6	19.1	30.4	5.5	65.0	64.9	18.3	58.7	58.1	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.2	30.0	5.6	19.1	30.4	5.5	65.0	64.9	18.3	58.7	58.1	9.2
Queue Length 50th (ft)	50	173	0	52	188	0	171	178	29	136	140	0
Queue Length 95th (ft)	124	325	70	129	#372	73	244	252	85	183	186	54
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	435	1539	808	449	1541	839	465	482	511	478	496	561
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.39	0.30	0.31	0.42	0.32	0.43	0.44	0.28	0.34	0.33	0.30

## Intersection Summary

























# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.



# HCM Signalized Intersection Capacity Analysis Lake Hill Development Traffic Impact Study - Frisco, CO

7: Dillon Dam Road & State Highway 6

2042 Background - Mid-Day











												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	555	220	130	595	245	245	135	130	195	105	155
Future Volume (vph)	125	555	220	130	595	245	245	135	130	195	105	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.98	1.00
Satd. Flow (prot)	1770	3539	1548	1769	3539	1583	1681	1743	1583	1681	1743	1549
Flt Permitted	0.33	1.00	1.00	0.35	1.00	1.00	0.95	0.99	1.00	0.95	0.98	1.00
Satd. Flow (perm)	609	3539	1548	652	3539	1583	1681	1743	1583	1681	1743	1549
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	136	603	239	141	647	266	266	147	141	212	114	168
RTOR Reduction (vph)	0	0	135	0	0	150	0	0	84	0	0	141
Lane Group Flow (vph)	136	603	104	141	647	116	202	211	57	161	165	27
Confl. Peds. (#/hr)			1	1			9					9
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	67.5	56.5	56.5	67.7	56.6	56.6	21.7	21.7	21.7	20.7	20.7	20.7
Effective Green, g (s)	67.5	56.5	56.5	67.7	56.6	56.6	21.7	21.7	21.7	20.7	20.7	20.7
Actuated g/C Ratio	0.52	0.43	0.43	0.52	0.44	0.44	0.17	0.17	0.17	0.16	0.16	0.16
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	414	1538	672	434	1540	689	280	290	264	267	277	246
v/s Ratio Prot	c0.03	0.17		0.03	c0.18		0.12	c0.12		c0.10	0.09	
v/s Ratio Perm	0.14		0.07	0.14		0.07			0.04			0.02
v/c Ratio	0.33	0.39	0.15	0.32	0.42	0.17	0.72	0.73	0.22	0.60	0.60	0.11
Uniform Delay, d1	16.8	25.0	22.3	16.7	25.4	22.4	51.3	51.3	46.8	50.8	50.8	46.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.8	0.5	0.4	0.8	0.5	8.8	8.8	0.4	3.8	3.4	0.2
Delay (s)	17.3	25.8	22.8	17.1	26.2	22.9	60.1	60.1	47.2	54.6	54.2	47.0
Level of Service	B	C	C	B	C	C	E	E	D	D	D	D
Approach Delay (s)		23.9			24.2			56.8			51.9	
Approach LOS		C			C			E			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			34.4				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.51									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			71.4%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												



Intersection												
Int Delay, s/veh	5.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗	↘	↗	↘		↗	↘
Traffic Vol, veh/h	0	0	360	0	0	350	105	715	300	0	755	340
Future Vol, veh/h	0	0	360	0	0	350	105	715	300	0	755	340
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	165	-	200	-	-	240
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	95	96	96	96	97	97	97
Heavy Vehicles, %	2	2	4	2	2	3	5	5	5	2	5	5
Mvmt Flow	0	0	391	0	0	368	109	745	313	0	778	351
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	389	-	-	373	1129	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.98	-	-	6.96	4.2	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.34	-	-	3.33	2.25	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	604	0	0	622	597	-	-	0	-	-
Stage 1	0	0	-	0	0	-	-	-	-	0	-	-
Stage 2	0	0	-	0	0	-	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	604	-	-	622	597	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	21.3		18.8		1.2		0					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR					
Capacity (veh/h)	597	-	-	604	622	-	-					
HCM Lane V/C Ratio	0.183	-	-	0.648	0.592	-	-					
HCM Control Delay (s)	12.4	-	-	21.3	18.8	-	-					
HCM Lane LOS	B	-	-	C	C	-	-					
HCM 95th %tile Q(veh)	0.7	-	-	4.7	3.9	-	-					

Timings  
Lake Hill Development Traffic Impact Study - Frisco, CO

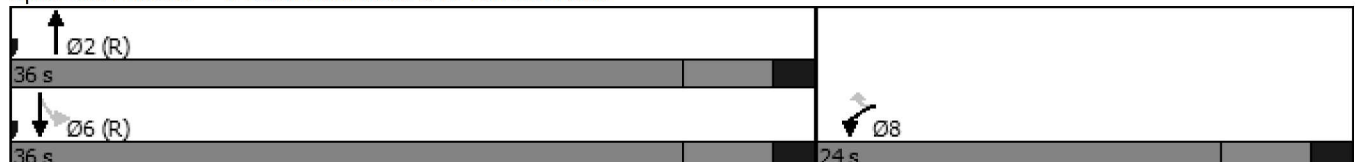
1: Dillon Dam Road & N. Ten Mile Road  
2042 Background - PM Peak Hour

					
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	30	215	420	100	395
Future Volume (vph)	30	215	420	100	395
Turn Type	Prot	Perm	NA	Perm	NA
Protected Phases	8		2		6
Permitted Phases		8		6	
Detector Phase	8	8	2	6	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0
Total Split (s)	24.0	24.0	36.0	36.0	36.0
Total Split (%)	40.0%	40.0%	60.0%	60.0%	60.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	7.6	7.6	40.4		40.4
Actuated g/C Ratio	0.13	0.13	0.67		0.67
v/c Ratio	0.15	0.58	0.44		0.53

Intersection Summary

Cycle Length: 60  
Actuated Cycle Length: 60  
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
Natural Cycle: 60  
Control Type: Actuated-Coordinated  
Maximum v/c Ratio: 0.58  
Intersection Signal Delay: 8.0  
Intersection Capacity Utilization 72.5%  
Analysis Period (min) 15

Splits and Phases: 1: Dillon Dam Road & N. Ten Mile Road



Queues  
Lake Hill Development Traffic Impact Study - Frisco, CO












1: Dillon Dam Road & N. Ten Mile Road  
2042 Background - PM Peak Hour



Lane Group	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	33	234	544	538
v/c Ratio	0.15	0.58	0.44	0.53
Control Delay	23.4	10.0	6.2	8.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	23.4	10.0	6.2	8.0
Queue Length 50th (ft)	11	0	64	73
Queue Length 95th (ft)	29	49	156	188
Internal Link Dist (ft)	227		327	780
Turn Bay Length (ft)		100		
Base Capacity (vph)	531	638	1230	1015
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.06	0.37	0.44	0.53
Intersection Summary				

HCM 6th Signalized Intersection Summary  
Lake Hill Development Traffic Impact Study - Frisco, CO

1: Dillon Dam Road & N. Ten Mile Road  
2042 Background - PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	30	215	420	80	100	395
Future Volume (veh/h)	30	215	420	80	100	395
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	234	457	87	109	429
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	324	288	944	180	212	791
Arrive On Green	0.18	0.18	0.62	0.62	0.62	0.62
Sat Flow, veh/h	1781	1585	1527	291	226	1279
Grp Volume(v), veh/h	33	234	0	544	538	0
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1818	1504	0
Q Serve(g_s), s	0.9	8.5	0.0	9.8	3.2	0.0
Cycle Q Clear(g_c), s	0.9	8.5	0.0	9.8	12.9	0.0
Prop In Lane	1.00	1.00		0.16	0.20	
Lane Grp Cap(c), veh/h	324	288	0	1124	1002	0
V/C Ratio(X)	0.10	0.81	0.00	0.48	0.54	0.00
Avail Cap(c_a), veh/h	534	476	0	1124	1002	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.5	23.6	0.0	6.2	6.4	0.0
Incr Delay (d2), s/veh	0.1	5.5	0.0	1.5	2.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.4	0.0	3.2	3.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.6	29.1	0.0	7.7	8.5	0.0
LnGrp LOS	C	C	A	A	A	A
Approach Vol, veh/h	267		544			538
Approach Delay, s/veh	28.0		7.7			8.5
Approach LOS	C		A			A
Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	43.1		43.1		16.9	
Change Period (Y+Rc), s	6.0		6.0		6.0	
Max Green Setting (Gmax), s	30.0		30.0		18.0	
Max Q Clear Time (g_c+l1), s	11.8		14.9		10.5	
Green Ext Time (p_c), s	3.5		3.5		0.5	
Intersection Summary						
HCM 6th Ctrl Delay			12.0			
HCM 6th LOS			B			



Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	10	5	750	5	5	350
Future Vol, veh/h	10	5	750	5	5	350
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	5	815	5	5	380
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1208	818	0	0	820	0
Stage 1	818	-	-	-	-	-
Stage 2	390	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	202	376	-	-	809	-
Stage 1	434	-	-	-	-	-
Stage 2	684	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	200	376	-	-	809	-
Mov Cap-2 Maneuver	200	-	-	-	-	-
Stage 1	434	-	-	-	-	-
Stage 2	679	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	21.3	0	0.1			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	237	809	-	
HCM Lane V/C Ratio	-	-	0.069	0.007	-	
HCM Control Delay (s)	-	-	21.3	9.5	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.2	0	-	

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	10	5	740	15	5	340
Future Vol, veh/h	10	5	740	15	5	340
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	5	804	16	5	370

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1192	812	0	0	820	0
Stage 1	812	-	-	-	-	-
Stage 2	380	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	207	379	-	-	809	-
Stage 1	437	-	-	-	-	-
Stage 2	691	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	205	379	-	-	809	-
Mov Cap-2 Maneuver	205	-	-	-	-	-
Stage 1	437	-	-	-	-	-
Stage 2	685	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.9	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	242	809
HCM Lane V/C Ratio	-	-	0.067	0.007
HCM Control Delay (s)	-	-	20.9	9.5
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			Y	Y	
Traffic Vol, veh/h	5	5	10	735	340	5
Future Vol, veh/h	5	5	10	735	340	5
Conflicting Peds, #/hr	1	7	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	5	11	799	370	5

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1195	380	375	0	-	0
Stage 1	373	-	-	-	-	-
Stage 2	822	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	206	667	1183	-	-	-
Stage 1	696	-	-	-	-	-
Stage 2	432	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	202	663	1183	-	-	-
Mov Cap-2 Maneuver	202	-	-	-	-	-
Stage 1	684	-	-	-	-	-
Stage 2	432	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1183	-	310	-	-
HCM Lane V/C Ratio	0.009	-	0.035	-	-
HCM Control Delay (s)	8.1	0	17	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

























Intersection			
Intersection Delay, s/veh	20.3		
Intersection LOS	C		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	174	785	708
Demand Flow Rate, veh/h	178	801	722
Vehicles Circulating, veh/h	543	430	89
Vehicles Exiting, veh/h	688	381	632
Ped Vol Crossing Leg, #/h	1	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	7.1	32.8	9.6
Approach LOS	A	D	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	178	801	722
Cap Entry Lane, veh/h	793	890	1260
Entry HV Adj Factor	0.978	0.980	0.981
Flow Entry, veh/h	174	785	708
Cap Entry, veh/h	775	873	1236
V/C Ratio	0.224	0.900	0.573
Control Delay, s/veh	7.1	32.8	9.6
LOS	A	D	A
95th %tile Queue, veh	1	13	4



Timings  
Lake Hill Development Traffic Impact Study - Frisco, CO

7: Dillon Dam Road & State Highway 6







2042 Background - PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	655	245	185	670	415	230	130	225	300	250	130
Future Volume (vph)	160	655	245	185	670	415	230	130	225	300	250	130
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	1.0	14.0	14.0	1.0	14.0	14.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Split (s)	5.5	20.0	20.0	5.5	20.0	20.0	7.0	7.0	7.0	7.0	7.0	7.0
Total Split (s)	13.0	34.0	34.0	13.0	34.0	34.0	36.0	36.0	36.0	37.0	37.0	37.0
Total Split (%)	10.8%	28.3%	28.3%	10.8%	28.3%	28.3%	30.0%	30.0%	30.0%	30.8%	30.8%	30.8%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	52.3	37.5	37.5	57.4	40.3	40.3	20.0	20.0	20.0	26.9	26.9	26.9
Actuated g/C Ratio	0.44	0.31	0.31	0.48	0.34	0.34	0.17	0.17	0.17	0.22	0.22	0.22
v/c Ratio	0.51	0.64	0.40	0.55	0.61	0.55	0.69	0.69	0.58	0.78	0.77	0.31

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 92 (77%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.78  
 Intersection Signal Delay: 34.5  
 Intersection Capacity Utilization 75.4%  
 Analysis Period (min) 15

Splits and Phases: 7: Dillon Dam Road & State Highway 6













 Ø1	 Ø2 (R)	 Ø4	 Ø8
13 s	34 s	37 s	36 s
 Ø5	 Ø6 (R)		
13 s	34 s		

## Queues

## 7: Dillon Dam Road &amp; State Highway 6

## Lake Hill Development Traffic Impact Study - Frisco, CO

2042 Background - PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	174	712	266	201	728	451	192	199	245	293	305	141
v/c Ratio	0.51	0.64	0.40	0.55	0.61	0.55	0.69	0.69	0.58	0.78	0.77	0.31
Control Delay	26.3	41.0	6.4	27.9	38.9	6.3	58.9	58.3	17.0	57.7	56.7	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	41.0	6.4	27.9	38.9	6.3	58.9	58.3	17.0	57.7	56.7	7.3
Queue Length 50th (ft)	76	260	0	89	257	0	149	154	38	222	230	0
Queue Length 95th (ft)	147	#376	69	#180	#391	91	215	221	111	316	326	49
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	339	1105	666	363	1188	823	434	450	549	448	469	520
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.64	0.40	0.55	0.61	0.55	0.44	0.44	0.45	0.65	0.65	0.27

























## Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis Lake Hill Development Traffic Impact Study - Frisco, CO

7: Dillon Dam Road & State Highway 6  
2042 Background - PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	655	245	185	670	415	230	130	225	300	250	130
Future Volume (vph)	160	655	245	185	670	415	230	130	225	300	250	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1769	3539	1548	1769	3539	1560	1681	1744	1583	1681	1760	1563
Flt Permitted	0.25	1.00	1.00	0.21	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (perm)	461	3539	1548	384	3539	1560	1681	1744	1583	1681	1760	1563
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	174	712	266	201	728	451	250	141	245	326	272	141
RTOR Reduction (vph)	0	0	183	0	0	300	0	0	158	0	0	109
Lane Group Flow (vph)	174	712	83	201	728	151	192	199	88	293	305	32
Confl. Peds. (#/hr)	2		1	1		2	1					1
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	50.3	37.5	37.5	55.9	40.3	40.3	20.0	20.0	20.0	26.9	26.9	26.9
Effective Green, g (s)	50.3	37.5	37.5	55.9	40.3	40.3	20.0	20.0	20.0	26.9	26.9	26.9
Actuated g/C Ratio	0.42	0.31	0.31	0.47	0.34	0.34	0.17	0.17	0.17	0.22	0.22	0.22
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	332	1105	483	358	1188	523	280	290	263	376	394	350
v/s Ratio Prot	0.06	0.20		c0.07	c0.21		c0.11	0.11		c0.17	0.17	
v/s Ratio Perm	0.16		0.05	0.19		0.10			0.06			0.02
v/c Ratio	0.52	0.64	0.17	0.56	0.61	0.29	0.69	0.69	0.33	0.78	0.77	0.09
Uniform Delay, d1	23.4	35.5	30.0	21.3	33.3	29.3	47.0	47.0	44.1	43.8	43.7	36.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.5	2.9	0.8	2.0	2.4	1.4	6.8	6.6	0.7	9.8	9.2	0.1
Delay (s)	24.8	38.4	30.7	23.3	35.7	30.7	53.8	53.6	44.9	53.6	52.9	37.0
Level of Service	C	D	C	C	D	C	D	D	D	D	D	D
Approach Delay (s)		34.6			32.3			50.3			50.1	
Approach LOS		C			C			D			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			39.3				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.68									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			75.4%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												



Intersection												
Int Delay, s/veh	6.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↰			↰	↰	↰	↰		↰	↰
Traffic Vol, veh/h	0	0	285	0	0	410	70	925	415	0	785	400
Future Vol, veh/h	0	0	285	0	0	410	70	925	415	0	785	400
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Free	-	-	None
Storage Length	-	-	0	-	-	0	165	-	200	-	-	240
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	4	4	4	2	2	2	3	3	3	4	4	4
Mvmt Flow	0	0	297	0	0	427	73	964	432	0	818	417

Major/Minor	Minor2		Minor1		Major1		Major2	
Conflicting Flow All	-	-	409	-	-	482	1235	0
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.98	-	-	6.94	4.16	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.34	-	-	3.32	2.23	-
Pot Cap-1 Maneuver	0	0	586	0	0	530	554	-
Stage 1	0	0	-	0	0	-	-	0
Stage 2	0	0	-	0	0	-	-	0
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	586	-	-	530	554	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.3	34.2	0.9	0
HCM LOS	C	D		










Minor Lane/Major Mvmt	NBL	NBT	EBLn1WBLn1	SBT	SBR
Capacity (veh/h)	554	-	586	530	-
HCM Lane V/C Ratio	0.132	-	0.507	0.806	-
HCM Control Delay (s)	12.5	-	17.3	34.2	-
HCM Lane LOS	B	-	C	D	-
HCM 95th %tile Q(veh)	0.5	-	2.9	7.8	-



***Intersection Capacity Worksheets:  
2027 Background + Project***

Timings  
Lake Hill Development Traffic Impact Study - Frisco, CO

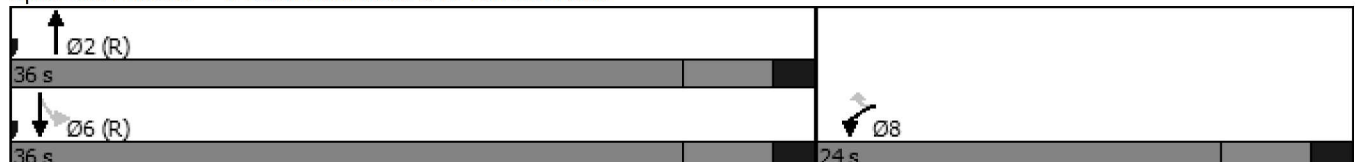
1: Dillon Dam Road & N. Ten Mile Road  
2027 Background + Project - Mid-Day

					
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	96	108	338	72	454
Future Volume (vph)	96	108	338	72	454
Turn Type	Prot	Perm	NA	Perm	NA
Protected Phases	8		2		6
Permitted Phases		8		6	
Detector Phase	8	8	2	6	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0
Total Split (s)	24.0	24.0	36.0	36.0	36.0
Total Split (%)	40.0%	40.0%	60.0%	60.0%	60.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	8.8	8.8	42.7		42.7
Actuated g/C Ratio	0.15	0.15	0.71		0.71
v/c Ratio	0.40	0.35	0.39		0.46

Intersection Summary

Cycle Length: 60  
Actuated Cycle Length: 60  
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
Natural Cycle: 60  
Control Type: Actuated-Coordinated  
Maximum v/c Ratio: 0.46  
Intersection Signal Delay: 8.5  
Intersection Capacity Utilization 73.1%  
Analysis Period (min) 15

Splits and Phases: 1: Dillon Dam Road & N. Ten Mile Road















Lane Group	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	101	114	500	548
v/c Ratio	0.40	0.35	0.39	0.46
Control Delay	27.0	8.4	5.8	7.3
Queue Delay	0.0	0.0	0.2	0.0
Total Delay	27.0	8.4	6.0	7.3
Queue Length 50th (ft)	34	0	64	84
Queue Length 95th (ft)	68	35	136	178
Internal Link Dist (ft)	227		327	780
Turn Bay Length (ft)		100		
Base Capacity (vph)	520	545	1291	1181
Starvation Cap Reductn	0	0	249	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.19	0.21	0.48	0.46
Intersection Summary				

HCM 6th Signalized Intersection Summary  
Lake Hill Development Traffic Impact Study - Frisco, CO

1: Dillon Dam Road & N. Ten Mile Road  
2027 Background + Project - Mid-Day

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	96	108	338	117	72	454
Future Volume (veh/h)	96	108	338	117	72	454
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1841	1841	1870	1870	1885	1885
Adj Flow Rate, veh/h	101	114	371	129	75	473
Peak Hour Factor	0.95	0.95	0.91	0.91	0.96	0.96
Percent Heavy Veh, %	4	4	2	2	1	1
Cap, veh/h	191	170	917	319	179	1073
Arrive On Green	0.11	0.11	0.69	0.69	0.69	0.69
Sat Flow, veh/h	1753	1560	1326	461	160	1553
Grp Volume(v), veh/h	101	114	0	500	548	0
Grp Sat Flow(s),veh/h/ln	1753	1560	0	1787	1712	0
Q Serve(g_s), s	3.3	4.2	0.0	7.2	0.0	0.0
Cycle Q Clear(g_c), s	3.3	4.2	0.0	7.2	7.6	0.0
Prop In Lane	1.00	1.00		0.26	0.14	
Lane Grp Cap(c), veh/h	191	170	0	1236	1252	0
V/C Ratio(X)	0.53	0.67	0.00	0.40	0.44	0.00
Avail Cap(c_a), veh/h	526	468	0	1236	1252	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.93	1.00	0.00
Uniform Delay (d), s/veh	25.3	25.7	0.0	4.0	4.0	0.0
Incr Delay (d2), s/veh	2.3	4.6	0.0	0.9	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.7	0.0	1.9	2.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.6	30.3	0.0	4.9	5.1	0.0
LnGrp LOS	C	C	A	A	A	A
Approach Vol, veh/h	215		500			548
Approach Delay, s/veh	29.0		4.9			5.1
Approach LOS	C		A			A
Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	47.5		47.5		12.5	
Change Period (Y+Rc), s	6.0		6.0		6.0	
Max Green Setting (Gmax), s	30.0		30.0		18.0	
Max Q Clear Time (g_c+l1), s	9.2		9.6		6.2	
Green Ext Time (p_c), s	3.3		3.9		0.5	
Intersection Summary						
HCM 6th Ctrl Delay			9.1			
HCM 6th LOS			A			






Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	3	2	446	8	0	517
Future Vol, veh/h	3	2	446	8	0	517
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	42	42	88	88	95	95
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	7	5	507	9	0	544

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1056	512	0
Stage 1	512	-	-
Stage 2	544	-	-
Critical Hdwy	6.41	6.21	4.11
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	2.209
Pot Cap-1 Maneuver	251	564	1055
Stage 1	604	-	-
Stage 2	584	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	251	564	1055
Mov Cap-2 Maneuver	251	-	-
Stage 1	604	-	-
Stage 2	584	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.6	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	323	1055
HCM Lane V/C Ratio	-	-	0.037	-
HCM Control Delay (s)	-	-	16.6	0
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	2	435	13	5	506
Future Vol, veh/h	12	2	435	13	5	506
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	91	91	93	93
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	15	2	478	14	5	544

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1039	485	0	0	492	0
Stage 1	485	-	-	-	-	-
Stage 2	554	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	257	584	-	-	1077	-
Stage 1	621	-	-	-	-	-
Stage 2	577	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	255	584	-	-	1077	-
Mov Cap-2 Maneuver	255	-	-	-	-	-
Stage 1	621	-	-	-	-	-
Stage 2	573	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.9	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	277	1077
HCM Lane V/C Ratio	-	-	0.062	0.005
HCM Control Delay (s)	-	-	18.9	8.4
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.2	0

























Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			Y	Y	
Traffic Vol, veh/h	4	5	6	431	506	4
Future Vol, veh/h	4	5	6	431	506	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	56	56	93	93	87	87
Heavy Vehicles, %	11	11	1	1	1	1
Mvmt Flow	7	9	6	463	582	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1060	585	587	0	-	0
Stage 1	585	-	-	-	-	-
Stage 2	475	-	-	-	-	-
Critical Hdwy	6.51	6.31	4.11	-	-	-
Critical Hdwy Stg 1	5.51	-	-	-	-	-
Critical Hdwy Stg 2	5.51	-	-	-	-	-
Follow-up Hdwy	3.599	3.399	2.209	-	-	-
Pot Cap-1 Maneuver	239	494	993	-	-	-
Stage 1	540	-	-	-	-	-
Stage 2	607	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	237	494	993	-	-	-
Mov Cap-2 Maneuver	237	-	-	-	-	-
Stage 1	536	-	-	-	-	-
Stage 2	607	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	16.4	0.1		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	993	-	333	-	-	
HCM Lane V/C Ratio	0.006	-	0.048	-	-	
HCM Control Delay (s)	8.6	0	16.4	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0	-	0.2	-	-	

Intersection			
Intersection Delay, s/veh	7.4		
Intersection LOS	A		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	245	563	445
Demand Flow Rate, veh/h	247	569	449
Vehicles Circulating, veh/h	468	140	109
Vehicles Exiting, veh/h	241	418	606
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	7.4	8.1	6.4
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	247	569	449
Cap Entry Lane, veh/h	856	1196	1235
Entry HV Adj Factor	0.992	0.990	0.991
Flow Entry, veh/h	245	563	445
Cap Entry, veh/h	849	1184	1224
V/C Ratio	0.289	0.476	0.364
Control Delay, s/veh	7.4	8.1	6.4
LOS	A	A	A
95th %tile Queue, veh	1	3	2



Timings  
Lake Hill Development Traffic Impact Study - Frisco, CO







7: Dillon Dam Road & State Highway 6  
2027 Background + Project - Mid-Day

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	478	202	120	513	212	250	130	140	168	96	135
Future Volume (vph)	106	478	202	120	513	212	250	130	140	168	96	135
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	1.0	14.0	14.0	1.0	14.0	14.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Split (s)	5.5	20.0	20.0	5.5	20.0	20.0	7.0	7.0	7.0	7.0	7.0	7.0
Total Split (s)	14.0	34.0	34.0	13.0	33.0	33.0	41.0	41.0	41.0	42.0	42.0	42.0
Total Split (%)	10.8%	26.2%	26.2%	10.0%	25.4%	25.4%	31.5%	31.5%	31.5%	32.3%	32.3%	32.3%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	70.5	58.7	58.7	71.6	59.3	59.3	21.8	21.8	21.8	19.2	19.2	19.2
Actuated g/C Ratio	0.54	0.45	0.45	0.55	0.46	0.46	0.17	0.17	0.17	0.15	0.15	0.15
v/c Ratio	0.24	0.33	0.27	0.26	0.35	0.27	0.73	0.72	0.43	0.57	0.57	0.42

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 86 (66%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 30.5  
 Intersection Capacity Utilization 70.1%  
 Analysis Period (min) 15

Splits and Phases: 7: Dillon Dam Road & State Highway 6













 Ø1	 Ø2 (R)	 Ø4	 Ø8
13 s	34 s	42 s	41 s
 Ø5	 Ø6 (R)		
14 s	33 s		

## Queues

## 7: Dillon Dam Road &amp; State Highway 6

























## Lake Hill Development Traffic Impact Study - Frisco, CO

2027 Background + Project - Mid-Day

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	115	520	220	130	558	230	204	209	152	141	146	147
v/c Ratio	0.24	0.33	0.27	0.26	0.35	0.27	0.73	0.72	0.43	0.57	0.57	0.42
Control Delay	17.9	27.8	5.6	17.9	27.7	5.4	65.3	64.3	19.2	58.7	58.3	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.9	27.8	5.6	17.9	27.7	5.4	65.3	64.3	19.2	58.7	58.3	9.8
Queue Length 50th (ft)	40	137	0	45	148	0	173	176	34	121	125	0
Queue Length 95th (ft)	108	276	66	120	295	67	245	249	92	163	167	52
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	489	1598	820	502	1613	846	465	482	515	478	496	546
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.33	0.27	0.26	0.35	0.27	0.44	0.43	0.30	0.29	0.29	0.27
Intersection Summary												

# HCM Signalized Intersection Capacity Analysis Lake Hill Development Traffic Impact Study - Frisco, CO

7: Dillon Dam Road & State Highway 6  
2027 Background + Project - Mid-Day

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	478	202	120	513	212	250	130	140	168	96	135
Future Volume (vph)	106	478	202	120	513	212	250	130	140	168	96	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1770	3539	1548	1769	3539	1583	1681	1741	1583	1681	1745	1549
Flt Permitted	0.39	1.00	1.00	0.40	1.00	1.00	0.95	0.98	1.00	0.95	0.99	1.00
Satd. Flow (perm)	722	3539	1548	751	3539	1583	1681	1741	1583	1681	1745	1549
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	115	520	220	130	558	230	272	141	152	183	104	147
RTOR Reduction (vph)	0	0	121	0	0	125	0	0	88	0	0	125
Lane Group Flow (vph)	115	520	99	130	558	105	204	209	64	141	146	22
Confl. Peds. (#/hr)			1	1			9					9
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	68.5	58.7	58.7	69.5	59.2	59.2	21.8	21.8	21.8	19.2	19.2	19.2
Effective Green, g (s)	68.5	58.7	58.7	69.5	59.2	59.2	21.8	21.8	21.8	19.2	19.2	19.2
Actuated g/C Ratio	0.53	0.45	0.45	0.53	0.46	0.46	0.17	0.17	0.17	0.15	0.15	0.15
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	459	1597	698	482	1611	720	281	291	265	248	257	228
v/s Ratio Prot	0.02	0.15		c0.02	c0.16		c0.12	0.12		c0.08	0.08	
v/s Ratio Perm	0.11		0.06	0.12		0.07			0.04			0.01
v/c Ratio	0.25	0.33	0.14	0.27	0.35	0.15	0.73	0.72	0.24	0.57	0.57	0.10
Uniform Delay, d1	15.8	22.9	20.9	15.4	22.9	20.6	51.3	51.2	46.9	51.5	51.5	47.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.5	0.4	0.3	0.6	0.4	9.0	8.2	0.5	3.0	2.9	0.2
Delay (s)	16.1	23.5	21.3	15.7	23.5	21.1	60.3	59.4	47.4	54.5	54.4	48.1
Level of Service	B	C	C	B	C	C	E	E	D	D	D	D
Approach Delay (s)		21.9			21.8			56.5			52.3	
Approach LOS		C			C			E			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			33.7				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.45									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			70.1%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

Intersection			
Intersection Delay, s/veh 6.0			
Intersection LOS A			
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	126	472	461
Demand Flow Rate, veh/h	129	482	470
Vehicles Circulating, veh/h	462	25	31
Vehicles Exiting, veh/h	39	565	476
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.8	6.0	6.0
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	129	482	470
Cap Entry Lane, veh/h	861	1345	1337
Entry HV Adj Factor	0.977	0.980	0.981
Flow Entry, veh/h	126	472	461
Cap Entry, veh/h	841	1318	1311
V/C Ratio	0.150	0.358	0.352
Control Delay, s/veh	5.8	6.0	6.0
LOS	A	A	A
95th %tile Queue, veh	1	2	2























Intersection			
Intersection Delay, s/veh 6.0			
Intersection LOS A			
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	126	467	434
Demand Flow Rate, veh/h	129	476	442
Vehicles Circulating, veh/h	419	78	15
Vehicles Exiting, veh/h	38	470	539
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.5	6.5	5.6
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	129	476	442
Cap Entry Lane, veh/h	900	1274	1359
Entry HV Adj Factor	0.977	0.981	0.981
Flow Entry, veh/h	126	467	434
Cap Entry, veh/h	879	1250	1334
V/C Ratio	0.143	0.374	0.325
Control Delay, s/veh	5.5	6.5	5.6
LOS	A	A	A
95th %tile Queue, veh	0	2	1

Timings  
Lake Hill Development Traffic Impact Study - Frisco, CO

10: State Highway 9 & Dillon Dam Road









2027 Background + Project - Mid-Day

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	202	79	322	104	89	618	282	93	651	207
Future Volume (vph)	202	79	322	104	89	618	282	93	651	207
Turn Type	Prot	NA	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases					2		2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	14.0	14.0	5.0	14.0	14.0
Minimum Split (s)	9.5	38.0	9.5	11.0	10.0	20.0	20.0	10.0	36.0	36.0
Total Split (s)	15.0	36.0	17.0	38.0	10.0	36.0	36.0	11.0	37.0	37.0
Total Split (%)	15.0%	36.0%	17.0%	38.0%	10.0%	36.0%	36.0%	11.0%	37.0%	37.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	10.5	14.1	12.7	16.3	54.1	46.2	46.2	54.3	46.3	46.3
Actuated g/C Ratio	0.10	0.14	0.13	0.16	0.54	0.46	0.46	0.54	0.46	0.46
v/c Ratio	0.66	0.60	0.79	0.73	0.22	0.41	0.34	0.22	0.42	0.26

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 95  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 26.7  
 Intersection Capacity Utilization 73.5%  
 Analysis Period (min) 15

Splits and Phases: 10: State Highway 9 & Dillon Dam Road

			
Ø1	Ø2 (R)	Ø3	Ø4
11 s	36 s	17 s	36 s
			
Ø5	Ø6 (R)	Ø7	Ø8
10 s	37 s	15 s	38 s

## Queues

## Lake Hill Development Traffic Impact Study - Frisco, CO

## 10: State Highway 9 &amp; Dillon Dam Road

2027 Background + Project - Mid-Day



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	232	163	339	240	93	644	294	96	671	213
v/c Ratio	0.66	0.60	0.79	0.73	0.22	0.41	0.34	0.22	0.42	0.26
Control Delay	52.3	37.9	56.3	41.3	12.3	21.2	4.0	12.3	21.3	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.3	37.9	56.3	41.3	12.3	21.2	4.0	12.3	21.3	4.1
Queue Length 50th (ft)	74	73	109	108	25	145	0	26	153	0
Queue Length 95th (ft)	109	122	#170	176	57	232	56	58	242	49
Internal Link Dist (ft)		279		327		602			402	
Turn Bay Length (ft)	145		205		165		200	115		240
Base Capacity (vph)	370	534	442	585	415	1588	868	429	1591	810
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.31	0.77	0.41	0.22	0.41	0.34	0.22	0.42	0.26























## Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary  
Lake Hill Development Traffic Impact Study - Frisco, CO

10: State Highway 9 & Dillon Dam Road  
2027 Background + Project - Mid-Day

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	79	63	322	104	124	89	618	282	93	651	207
Future Volume (veh/h)	202	79	63	322	104	124	89	618	282	93	651	207
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1856	1856	1856	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	232	91	72	339	109	131	93	644	294	96	671	213
Peak Hour Factor	0.87	0.87	0.87	0.95	0.95	0.95	0.96	0.96	0.96	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	3	3	3	5	5	5	5	5	5
Cap, veh/h	301	178	140	406	166	199	337	1510	673	332	1513	674
Arrive On Green	0.09	0.19	0.19	0.12	0.22	0.22	0.05	0.44	0.44	0.05	0.44	0.44
Sat Flow, veh/h	3401	939	743	3428	756	909	1739	3469	1546	1739	3469	1546
Grp Volume(v), veh/h	232	0	163	339	0	240	93	644	294	96	671	213
Grp Sat Flow(s),veh/h/ln	1700	0	1681	1714	0	1665	1739	1735	1546	1739	1735	1546
Q Serve(g_s), s	6.7	0.0	8.7	9.7	0.0	13.1	2.9	12.9	13.3	3.0	13.5	9.0
Cycle Q Clear(g_c), s	6.7	0.0	8.7	9.7	0.0	13.1	2.9	12.9	13.3	3.0	13.5	9.0
Prop In Lane	1.00		0.44	1.00		0.55	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	301	0	318	406	0	365	337	1510	673	332	1513	674
V/C Ratio(X)	0.77	0.00	0.51	0.83	0.00	0.66	0.28	0.43	0.44	0.29	0.44	0.32
Avail Cap(c_a), veh/h	374	0	504	446	0	533	343	1510	673	355	1513	674
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	0.89	0.00	0.89	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	0.0	36.4	43.1	0.0	35.6	15.3	19.6	19.7	15.2	19.7	18.4
Incr Delay (d2), s/veh	7.6	0.0	1.3	10.8	0.0	1.8	0.4	0.9	2.1	0.5	0.9	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	3.7	4.7	0.0	5.5	1.1	5.0	5.0	1.1	5.2	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.2	0.0	37.7	53.9	0.0	37.4	15.7	20.5	21.7	15.6	20.7	19.7
LnGrp LOS	D	A	D	D	A	D	B	C	C	B	C	B
Approach Vol, veh/h		395			579			1031			980	
Approach Delay, s/veh		46.2			47.1			20.4			20.0	
Approach LOS		D			D			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.7	49.5	15.9	24.9	9.6	49.6	12.8	27.9				
Change Period (Y+Rc), s	5.0	6.0	4.0	6.0	5.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	6.0	30.0	13.0	30.0	5.0	31.0	11.0	32.0				
Max Q Clear Time (g_c+l1), s	5.0	15.3	11.7	10.7	4.9	15.5	8.7	15.1				
Green Ext Time (p_c), s	0.0	4.4	0.2	0.8	0.0	4.4	0.2	1.3				

Intersection Summary

HCM 6th Ctrl Delay	28.8
HCM 6th LOS	C











Notes

User approved pedestrian interval to be less than phase max green.



Timings  
Lake Hill Development Traffic Impact Study - Frisco, CO

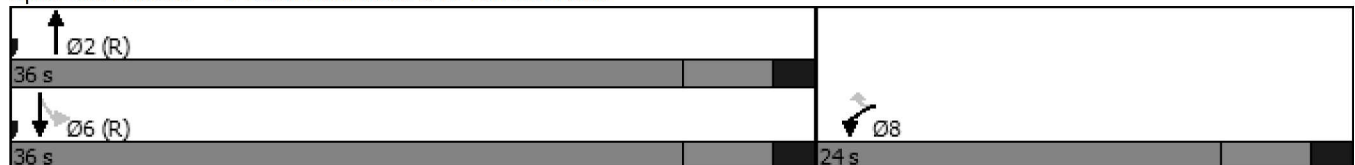
1: Dillon Dam Road & N. Ten Mile Road  
2027 Background + Project - PM Peak Hour

					
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	90	129	649	60	331
Future Volume (vph)	90	129	649	60	331
Turn Type	Prot	Perm	NA	Perm	NA
Protected Phases	8		2		6
Permitted Phases		8		6	
Detector Phase	8	8	2	6	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0
Total Split (s)	24.0	24.0	36.0	36.0	36.0
Total Split (%)	40.0%	40.0%	60.0%	60.0%	60.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	8.8	8.8	42.7		42.7
Actuated g/C Ratio	0.15	0.15	0.71		0.71
v/c Ratio	0.39	0.41	0.64		0.42

Intersection Summary

Cycle Length: 60  
Actuated Cycle Length: 60  
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
Natural Cycle: 65  
Control Type: Actuated-Coordinated  
Maximum v/c Ratio: 0.64  
Intersection Signal Delay: 10.4  
Intersection Capacity Utilization 81.1%  
Analysis Period (min) 15

Splits and Phases: 1: Dillon Dam Road & N. Ten Mile Road



Queues  
Lake Hill Development Traffic Impact Study - Frisco, CO












1: Dillon Dam Road & N. Ten Mile Road  
2027 Background + Project - PM Peak Hour



Lane Group	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	103	148	844	444
v/c Ratio	0.39	0.41	0.64	0.42
Control Delay	26.9	8.3	9.9	7.0
Queue Delay	0.0	0.0	0.7	0.0
Total Delay	26.9	8.3	10.6	7.0
Queue Length 50th (ft)	34	0	155	66
Queue Length 95th (ft)	66	36	320	138
Internal Link Dist (ft)	227		327	780
Turn Bay Length (ft)		100		
Base Capacity (vph)	536	583	1317	1045
Starvation Cap Reductn	0	0	194	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.19	0.25	0.75	0.42
Intersection Summary				




HCM 6th Signalized Intersection Summary  
Lake Hill Development Traffic Impact Study - Frisco, CO

1: Dillon Dam Road & N. Ten Mile Road  
2027 Background + Project - PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	90	129	649	102	60	331
Future Volume (veh/h)	90	129	649	102	60	331
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	103	148	729	115	68	376
Peak Hour Factor	0.87	0.87	0.89	0.89	0.88	0.88
Percent Heavy Veh, %	1	1	1	1	1	1
Cap, veh/h	233	207	1065	168	157	820
Arrive On Green	0.13	0.13	0.67	0.67	0.67	0.67
Sat Flow, veh/h	1795	1598	1589	251	131	1224
Grp Volume(v), veh/h	103	148	0	844	444	0
Grp Sat Flow(s),veh/h/ln	1795	1598	0	1840	1355	0
Q Serve(g_s), s	3.2	5.3	0.0	16.8	2.6	0.0
Cycle Q Clear(g_c), s	3.2	5.3	0.0	16.8	19.4	0.0
Prop In Lane	1.00	1.00		0.14	0.15	
Lane Grp Cap(c), veh/h	233	207	0	1233	977	0
V/C Ratio(X)	0.44	0.71	0.00	0.68	0.45	0.00
Avail Cap(c_a), veh/h	539	479	0	1233	977	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.81	1.00	0.00
Uniform Delay (d), s/veh	24.1	25.0	0.0	6.0	4.7	0.0
Incr Delay (d2), s/veh	1.3	4.5	0.0	2.5	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	2.2	0.0	4.9	1.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.4	29.6	0.0	8.5	6.2	0.0
LnGrp LOS	C	C	A	A	A	A
Approach Vol, veh/h	251		844			444
Approach Delay, s/veh	27.9		8.5			6.2
Approach LOS	C		A			A
Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	46.2		46.2		13.8	
Change Period (Y+Rc), s	6.0		6.0		6.0	
Max Green Setting (Gmax), s	30.0		30.0		18.0	
Max Q Clear Time (g_c+l1), s	18.8		21.4		7.3	
Green Ext Time (p_c), s	4.8		2.0		0.6	
Intersection Summary						
HCM 6th Ctrl Delay			11.0			
HCM 6th LOS			B			

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	7	2	761	6	2	376
Future Vol, veh/h	7	2	761	6	2	376
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	56	56	92	92	85	85
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	13	4	827	7	2	442
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1277	831	0	0	834	0
Stage 1	831	-	-	-	-	-
Stage 2	446	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	185	371	-	-	804	-
Stage 1	429	-	-	-	-	-
Stage 2	647	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	184	371	-	-	804	-
Mov Cap-2 Maneuver	184	-	-	-	-	-
Stage 1	429	-	-	-	-	-
Stage 2	645	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	23.9	0	0.1			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	207	804	-	
HCM Lane V/C Ratio	-	-	0.078	0.003	-	
HCM Control Delay (s)	-	-	23.9	9.5	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.2	0	-	



Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	5	752	12	6	368
Future Vol, veh/h	9	5	752	12	6	368
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	92	92	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	10	6	817	13	7	438
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1276	824	0	0	830	0
Stage 1	824	-	-	-	-	-
Stage 2	452	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	185	374	-	-	806	-
Stage 1	433	-	-	-	-	-
Stage 2	643	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	183	374	-	-	806	-
Mov Cap-2 Maneuver	183	-	-	-	-	-
Stage 1	433	-	-	-	-	-
Stage 2	636	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	22.3	0	0.2			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	224	806	-	
HCM Lane V/C Ratio	-	-	0.071	0.009	-	
HCM Control Delay (s)	-	-	22.3	9.5	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.2	0	-	

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			W	W	
Traffic Vol, veh/h	5	4	7	750	370	6
Future Vol, veh/h	5	4	7	750	370	6
Conflicting Peds, #/hr	1	7	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	92	92	81	81
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	7	5	8	815	457	7

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1293	468	464	0	-	0
Stage 1	461	-	-	-	-	-
Stage 2	832	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	181	597	1103	-	-	-
Stage 1	637	-	-	-	-	-
Stage 2	429	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	179	593	1103	-	-	-
Mov Cap-2 Maneuver	179	-	-	-	-	-
Stage 1	629	-	-	-	-	-
Stage 2	429	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.5	0.1	0
HCM LOS	C		

























Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1103	-	260	-	-
HCM Lane V/C Ratio	0.007	-	0.046	-	-
HCM Control Delay (s)	8.3	0	19.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection			
Intersection Delay, s/veh	15.5		
Intersection LOS	C		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	165	774	680
Demand Flow Rate, veh/h	167	781	687
Vehicles Circulating, veh/h	541	368	89
Vehicles Exiting, veh/h	608	408	619
Ped Vol Crossing Leg, #/h	1	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	6.9	23.0	9.0
Approach LOS	A	C	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	167	781	687
Cap Entry Lane, veh/h	795	948	1260
Entry HV Adj Factor	0.988	0.991	0.990
Flow Entry, veh/h	165	774	680
Cap Entry, veh/h	785	939	1247
V/C Ratio	0.210	0.824	0.545
Control Delay, s/veh	6.9	23.0	9.0
LOS	A	C	A
95th %tile Queue, veh	1	10	3

Timings  
Lake Hill Development Traffic Impact Study - Frisco, CO

7: Dillon Dam Road & State Highway 6







2027 Background + Project - PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	138	565	245	183	578	358	221	116	209	260	224	112
Future Volume (vph)	138	565	245	183	578	358	221	116	209	260	224	112
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	1.0	14.0	14.0	1.0	14.0	14.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Split (s)	5.5	20.0	20.0	5.5	20.0	20.0	7.0	7.0	7.0	7.0	7.0	7.0
Total Split (s)	13.0	34.0	34.0	13.0	34.0	34.0	36.0	36.0	36.0	37.0	37.0	37.0
Total Split (%)	10.8%	28.3%	28.3%	10.8%	28.3%	28.3%	30.0%	30.0%	30.0%	30.8%	30.8%	30.8%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	55.7	42.8	42.8	61.0	45.5	45.5	18.9	18.9	18.9	24.8	24.8	24.8
Actuated g/C Ratio	0.46	0.36	0.36	0.51	0.38	0.38	0.16	0.16	0.16	0.21	0.21	0.21
v/c Ratio	0.38	0.49	0.37	0.48	0.47	0.47	0.68	0.68	0.56	0.73	0.75	0.29

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 92 (77%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.75  
 Intersection Signal Delay: 31.4  
 Intersection Capacity Utilization 73.0%  
 Analysis Period (min) 15

Splits and Phases: 7: Dillon Dam Road & State Highway 6

 Ø1	 Ø2 (R)	 Ø4	 Ø8
13 s	34 s	37 s	36 s
 Ø5	 Ø6 (R)		
13 s	34 s		















## Queues

## Lake Hill Development Traffic Impact Study - Frisco, CO

























## 7: Dillon Dam Road &amp; State Highway 6

2027 Background + Project - PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	150	614	266	199	628	389	180	186	227	255	271	122
v/c Ratio	0.38	0.49	0.37	0.48	0.47	0.47	0.68	0.68	0.56	0.73	0.75	0.29
Control Delay	21.3	34.7	6.0	22.7	32.8	5.6	60.1	59.5	15.2	56.7	56.9	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.3	34.7	6.0	22.7	32.8	5.6	60.1	59.5	15.2	56.7	56.9	8.0
Queue Length 50th (ft)	60	199	0	82	194	0	140	144	26	194	207	0
Queue Length 95th (ft)	124	300	69	162	308	84	207	211	97	273	287	47
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	398	1261	722	416	1340	832	434	449	548	448	469	506
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.49	0.37	0.48	0.47	0.47	0.41	0.41	0.41	0.57	0.58	0.24
Intersection Summary												

# HCM Signalized Intersection Capacity Analysis Lake Hill Development Traffic Impact Study - Frisco, CO

7: Dillon Dam Road & State Highway 6  
2027 Background + Project - PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	138	565	245	183	578	358	221	116	209	260	224	112
Future Volume (vph)	138	565	245	183	578	358	221	116	209	260	224	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1769	3539	1548	1769	3539	1560	1681	1742	1583	1681	1761	1563
Flt Permitted	0.34	1.00	1.00	0.29	1.00	1.00	0.95	0.98	1.00	0.95	0.99	1.00
Satd. Flow (perm)	625	3539	1548	547	3539	1560	1681	1742	1583	1681	1761	1563
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	150	614	266	199	628	389	240	126	227	283	243	122
RTOR Reduction (vph)	0	0	171	0	0	242	0	0	158	0	0	97
Lane Group Flow (vph)	150	614	95	199	628	147	180	186	69	255	271	25
Confl. Peds. (#/hr)	2		1	1		2	1					1
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	53.6	42.7	42.7	59.0	45.4	45.4	18.9	18.9	18.9	24.8	24.8	24.8
Effective Green, g (s)	53.6	42.7	42.7	59.0	45.4	45.4	18.9	18.9	18.9	24.8	24.8	24.8
Actuated g/C Ratio	0.45	0.36	0.36	0.49	0.38	0.38	0.16	0.16	0.16	0.21	0.21	0.21
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	383	1259	550	407	1338	590	264	274	249	347	363	323
v/s Ratio Prot	0.04	0.17		c0.06	0.18		c0.11	0.11		0.15	c0.15	
v/s Ratio Perm	0.14		0.06	c0.18		0.09			0.04			0.02
v/c Ratio	0.39	0.49	0.17	0.49	0.47	0.25	0.68	0.68	0.28	0.73	0.75	0.08
Uniform Delay, d1	20.4	30.1	26.5	18.5	28.2	25.6	47.7	47.7	44.5	44.5	44.7	38.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	1.4	0.7	0.9	1.2	1.0	7.1	6.5	0.6	7.9	8.1	0.1
Delay (s)	21.1	31.5	27.2	19.4	29.4	26.6	54.8	54.2	45.1	52.4	52.8	38.5
Level of Service	C	C	C	B	C	C	D	D	D	D	D	D
Approach Delay (s)		28.9			26.9			50.9			49.9	
Approach LOS		C			C			D			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			35.8				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.60									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			73.0%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

Intersection			
Intersection Delay, s/veh 8.4			
Intersection LOS A			
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	68	821	376
Demand Flow Rate, veh/h	69	838	383
Vehicles Circulating, veh/h	361	13	87
Vehicles Exiting, veh/h	109	417	764
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.5	10.0	5.7
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	69	838	383
Cap Entry Lane, veh/h	955	1362	1263
Entry HV Adj Factor	0.986	0.980	0.982
Flow Entry, veh/h	68	821	376
Cap Entry, veh/h	941	1334	1239
V/C Ratio	0.072	0.615	0.303
Control Delay, s/veh	4.5	10.0	5.7
LOS	A	A	A
95th %tile Queue, veh	0	4	1

Intersection			
Intersection Delay, s/veh 7.9			
Intersection LOS A			
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	68	749	412
Demand Flow Rate, veh/h	70	764	420
Vehicles Circulating, veh/h	356	42	42
Vehicles Exiting, veh/h	106	384	764
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.5	9.4	5.7
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	70	764	420
Cap Entry Lane, veh/h	960	1322	1322
Entry HV Adj Factor	0.971	0.980	0.981
Flow Entry, veh/h	68	749	412
Cap Entry, veh/h	932	1296	1297
V/C Ratio	0.073	0.578	0.318
Control Delay, s/veh	4.5	9.4	5.7
LOS	A	A	A
95th %tile Queue, veh	0	4	1























# Timings

## Lake Hill Development Traffic Impact Study - Frisco, CO

# 10: State Highway 9 & Dillon Dam Road

2027 Background + Project - PM Peak Hour

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	269	150	230	80	61	797	423	106	675	260
Future Volume (vph)	269	150	230	80	61	797	423	106	675	260
Turn Type	Prot	NA	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases					2		2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	14.0	14.0	5.0	14.0	14.0
Minimum Split (s)	9.5	38.0	9.5	24.0	10.0	24.0	24.0	10.0	36.0	36.0
Total Split (s)	19.0	37.0	15.0	33.0	10.0	38.0	38.0	10.0	38.0	38.0
Total Split (%)	19.0%	37.0%	15.0%	33.0%	10.0%	38.0%	38.0%	10.0%	38.0%	38.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	13.7	18.7	10.8	15.7	49.3	40.9	40.9	52.6	44.2	44.2
Actuated g/C Ratio	0.14	0.19	0.11	0.16	0.49	0.41	0.41	0.53	0.44	0.44
v/c Ratio	0.69	0.73	0.75	0.67	0.18	0.63	0.52	0.36	0.46	0.33

## Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated









Maximum v/c Ratio: 0.75

Intersection Signal Delay: 27.4

Intersection Capacity Utilization 74.4%

Analysis Period (min) 15

Splits and Phases: 10: State Highway 9 & Dillon Dam Road

							
Ø1	Ø2 (R)	Ø3	Ø4	Ø5	Ø6 (R)	Ø7	Ø8
10 s	38 s	15 s	37 s	10 s	38 s	19 s	33 s

## Queues

## Lake Hill Development Traffic Impact Study - Frisco, CO

## 10: State Highway 9 &amp; Dillon Dam Road

2027 Background + Project - PM Peak Hour

























Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	320	249	277	214	69	896	475	110	703	271
v/c Ratio	0.69	0.73	0.75	0.67	0.18	0.63	0.52	0.36	0.46	0.33
Control Delay	49.4	47.6	56.9	38.4	13.4	27.4	4.6	15.6	22.9	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.4	47.6	56.9	38.4	13.4	27.4	4.6	15.6	22.9	4.2
Queue Length 50th (ft)	100	139	89	93	19	235	0	32	167	0
Queue Length 95th (ft)	134	188	121	141	46	344	66	69	259	55
Internal Link Dist (ft)		215		327		1020			467	
Turn Bay Length (ft)	145		205		165		200	115		240
Base Capacity (vph)	505	550	377	502	381	1432	921	302	1534	822
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.45	0.73	0.43	0.18	0.63	0.52	0.36	0.46	0.33
Intersection Summary										

# HCM 6th Signalized Intersection Summary

## Lake Hill Development Traffic Impact Study - Frisco, CO

10: State Highway 9 & Dillon Dam Road  
2027 Background + Project - PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	269	150	59	230	80	98	61	797	423	106	675	260
Future Volume (veh/h)	269	150	59	230	80	98	61	797	423	106	675	260
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1870	1870	1870	1856	1856	1856	1841	1841	1841
Adj Flow Rate, veh/h	320	179	70	277	96	118	69	896	475	110	703	271
Peak Hour Factor	0.84	0.84	0.84	0.83	0.83	0.83	0.89	0.89	0.89	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	2	2	2	3	3	3	4	4	4
Cap, veh/h	395	304	119	344	170	209	293	1398	622	234	1412	628
Arrive On Green	0.12	0.24	0.24	0.10	0.23	0.23	0.04	0.40	0.40	0.05	0.40	0.40
Sat Flow, veh/h	3401	1245	487	3456	746	917	1767	3526	1569	1753	3497	1556
Grp Volume(v), veh/h	320	0	249	277	0	214	69	896	475	110	703	271
Grp Sat Flow(s),veh/h/ln	1700	0	1732	1728	0	1662	1767	1763	1569	1753	1749	1556
Q Serve(g_s), s	9.2	0.0	12.7	7.8	0.0	11.4	2.3	20.6	26.2	3.7	15.0	12.6
Cycle Q Clear(g_c), s	9.2	0.0	12.7	7.8	0.0	11.4	2.3	20.6	26.2	3.7	15.0	12.6
Prop In Lane	1.00		0.28	1.00		0.55	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	395	0	423	344	0	378	293	1398	622	234	1412	628
V/C Ratio(X)	0.81	0.00	0.59	0.80	0.00	0.57	0.24	0.64	0.76	0.47	0.50	0.43
Avail Cap(c_a), veh/h	510	0	537	380	0	449	306	1398	622	234	1412	628
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	0.91	0.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.1	0.0	33.4	44.1	0.0	34.2	17.5	24.4	26.1	19.3	22.2	21.5
Incr Delay (d2), s/veh	7.5	0.0	1.3	10.1	0.0	1.2	0.4	2.3	8.7	1.5	1.3	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	5.4	3.8	0.0	4.7	0.9	8.4	11.0	1.5	6.0	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.6	0.0	34.7	54.2	0.0	35.4	17.9	26.7	34.8	20.8	23.5	23.7
LnGrp LOS	D	A	C	D	A	D	B	C	C	C	C	C
Approach Vol, veh/h		569			491			1440			1084	
Approach Delay, s/veh		43.6			46.0			28.9			23.3	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	45.6	14.0	30.4	9.3	46.4	15.6	28.8				
Change Period (Y+Rc), s	5.0	6.0	4.0	6.0	5.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	5.0	32.0	11.0	31.0	5.0	32.0	15.0	27.0				
Max Q Clear Time (g_c+l1), s	5.7	28.2	9.8	14.7	4.3	17.0	11.2	13.4				
Green Ext Time (p_c), s	0.0	2.4	0.1	1.3	0.0	4.7	0.4	1.0				

### Intersection Summary

HCM 6th Ctrl Delay	31.9
HCM 6th LOS	C

### Notes











User approved pedestrian interval to be less than phase max green.

***Intersection Capacity Worksheets:  
2042 Background + Project***



Timings  
Lake Hill Development Traffic Impact Study - Frisco, CO

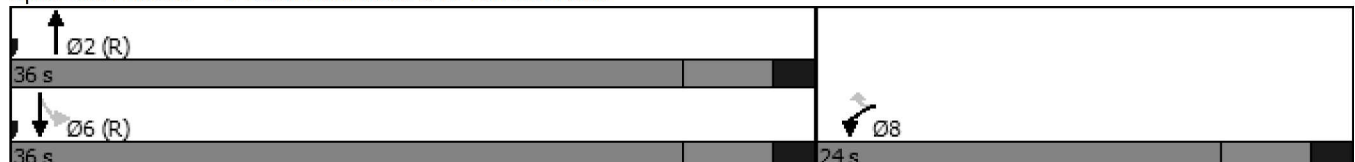
1: Dillon Dam Road & N. Ten Mile Road  
2042 Background + Project - Mid-Day

					
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	25	209	238	32	348
Future Volume (vph)	25	209	238	32	348
Turn Type	Prot	Perm	NA	Perm	NA
Protected Phases	8		2		6
Permitted Phases		8		6	
Detector Phase	8	8	2	6	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0
Total Split (s)	24.0	24.0	36.0	36.0	36.0
Total Split (%)	40.0%	40.0%	60.0%	60.0%	60.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	7.4	7.4	40.6		40.6
Actuated g/C Ratio	0.12	0.12	0.68		0.68
v/c Ratio	0.12	0.57	0.29		0.33

Intersection Summary

Cycle Length: 60  
Actuated Cycle Length: 60  
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
Natural Cycle: 50  
Control Type: Actuated-Coordinated  
Maximum v/c Ratio: 0.57  
Intersection Signal Delay: 6.6  
Intersection Capacity Utilization 56.9%  
Analysis Period (min) 15

Splits and Phases: 1: Dillon Dam Road & N. Ten Mile Road



Queues  
Lake Hill Development Traffic Impact Study - Frisco, CO











1: Dillon Dam Road & N. Ten Mile Road  
2042 Background + Project - Mid-Day






Lane Group	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	26	220	351	396
v/c Ratio	0.12	0.57	0.29	0.33
Control Delay	23.1	10.1	4.5	5.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	23.1	10.1	4.5	5.4
Queue Length 50th (ft)	9	0	32	44
Queue Length 95th (ft)	25	48	83	108
Internal Link Dist (ft)	227		327	780
Turn Bay Length (ft)		100		
Base Capacity (vph)	531	628	1230	1203
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.05	0.35	0.29	0.33
Intersection Summary				

HCM 6th Signalized Intersection Summary  
Lake Hill Development Traffic Impact Study - Frisco, CO

1: Dillon Dam Road & N. Ten Mile Road  
2042 Background + Project - Mid-Day

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	25	209	238	85	32	348
Future Volume (veh/h)	25	209	238	85	32	348
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	220	259	92	33	362
Peak Hour Factor	0.95	0.95	0.92	0.92	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	307	273	827	294	114	1086
Arrive On Green	0.17	0.17	0.63	0.63	0.63	0.63
Sat Flow, veh/h	1781	1585	1318	468	78	1730
Grp Volume(v), veh/h	26	220	0	351	395	0
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1786	1807	0
Q Serve(g_s), s	0.7	8.0	0.0	5.5	0.0	0.0
Cycle Q Clear(g_c), s	0.7	8.0	0.0	5.5	6.0	0.0
Prop In Lane	1.00	1.00		0.26	0.08	
Lane Grp Cap(c), veh/h	307	273	0	1121	1200	0
V/C Ratio(X)	0.08	0.81	0.00	0.31	0.33	0.00
Avail Cap(c_a), veh/h	534	476	0	1121	1200	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.9	23.9	0.0	5.2	5.3	0.0
Incr Delay (d2), s/veh	0.1	5.6	0.0	0.7	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	3.3	0.0	1.7	1.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.0	29.5	0.0	5.9	6.0	0.0
LnGrp LOS	C	C	A	A	A	A
Approach Vol, veh/h	246		351			395
Approach Delay, s/veh	28.6		5.9			6.0
Approach LOS	C		A			A
Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	43.7		43.7		16.3	
Change Period (Y+Rc), s	6.0		6.0		6.0	
Max Green Setting (Gmax), s	30.0		30.0		18.0	
Max Q Clear Time (g_c+I1), s	7.5		8.0		10.0	
Green Ext Time (p_c), s	2.2		2.5		0.5	
Intersection Summary						
HCM 6th Ctrl Delay			11.6			
HCM 6th LOS			B			




Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	5	512	10	5	579
Future Vol, veh/h	5	5	512	10	5	579
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	5	557	11	5	609

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1182	563	0	0	568
Stage 1	563	-	-	-	-
Stage 2	619	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	210	526	-	-	1004
Stage 1	570	-	-	-	-
Stage 2	537	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	208	526	-	-	1004
Mov Cap-2 Maneuver	208	-	-	-	-
Stage 1	570	-	-	-	-
Stage 2	533	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.5	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	298	1004
HCM Lane V/C Ratio	-	-	0.036	0.005
HCM Control Delay (s)	-	-	17.5	8.6
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.1	0



Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	5	497	15	5	564
Future Vol, veh/h	15	5	497	15	5	564
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	5	540	16	5	606

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1164	548	0	0	556
Stage 1	548	-	-	-	-
Stage 2	616	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	215	536	-	-	1015
Stage 1	579	-	-	-	-
Stage 2	539	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	213	536	-	-	1015
Mov Cap-2 Maneuver	213	-	-	-	-
Stage 1	579	-	-	-	-
Stage 2	535	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.7	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	251	1015
HCM Lane V/C Ratio	-	-	0.087	0.005
HCM Control Delay (s)	-	-	20.7	8.6
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.3	0

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			Y	Y	
Traffic Vol, veh/h	5	5	5	492	564	5
Future Vol, veh/h	5	5	5	492	564	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	93	93	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	5	5	529	613	5

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1155	616	618	0	-	0
Stage 1	616	-	-	-	-	-
Stage 2	539	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	218	491	962	-	-	-
Stage 1	539	-	-	-	-	-
Stage 2	585	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	216	491	962	-	-	-
Mov Cap-2 Maneuver	216	-	-	-	-	-
Stage 1	535	-	-	-	-	-
Stage 2	585	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.5	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	962	-	300	-	-
HCM Lane V/C Ratio	0.006	-	0.036	-	-
HCM Control Delay (s)	8.8	0	17.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

























Intersection			
Intersection Delay, s/veh	8.4		
Intersection LOS	A		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	244	618	515
Demand Flow Rate, veh/h	249	630	525
Vehicles Circulating, veh/h	517	168	110
Vehicles Exiting, veh/h	281	467	656
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	8.0	9.5	7.3
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	249	630	525
Cap Entry Lane, veh/h	814	1163	1233
Entry HV Adj Factor	0.980	0.981	0.981
Flow Entry, veh/h	244	618	515
Cap Entry, veh/h	798	1140	1210
V/C Ratio	0.306	0.542	0.426
Control Delay, s/veh	8.0	9.5	7.3
LOS	A	A	A
95th %tile Queue, veh	1	3	2

# Timings

## Lake Hill Development Traffic Impact Study - Frisco, CO

## 7: Dillon Dam Road & State Highway 6

2042 Background + Project - Mid-Day

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	555	232	138	595	245	286	147	158	195	109	155
Future Volume (vph)	125	555	232	138	595	245	286	147	158	195	109	155
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	1.0	14.0	14.0	1.0	14.0	14.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Split (s)	5.5	20.0	20.0	5.5	20.0	20.0	7.0	7.0	7.0	7.0	7.0	7.0
Total Split (s)	14.0	34.0	34.0	13.0	33.0	33.0	41.0	41.0	41.0	42.0	42.0	42.0
Total Split (%)	10.8%	26.2%	26.2%	10.0%	25.4%	25.4%	31.5%	31.5%	31.5%	32.3%	32.3%	32.3%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	66.5	53.9	53.9	67.4	54.4	54.4	24.3	24.3	24.3	20.8	20.8	20.8
Actuated g/C Ratio	0.51	0.41	0.41	0.52	0.42	0.42	0.19	0.19	0.19	0.16	0.16	0.16
v/c Ratio	0.34	0.41	0.32	0.35	0.44	0.33	0.73	0.74	0.45	0.61	0.60	0.43

### Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 86 (66%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated







Maximum v/c Ratio: 0.74

Intersection Signal Delay: 32.3

Intersection Capacity Utilization 73.3%

Analysis Period (min) 15

Splits and Phases: 7: Dillon Dam Road & State Highway 6

			
Ø1	Ø2 (R)	Ø4	Ø8
13 s	34 s	42 s	41 s
			
Ø5	Ø6 (R)		
14 s	33 s		















## Queues

## 7: Dillon Dam Road &amp; State Highway 6

## Lake Hill Development Traffic Impact Study - Frisco, CO

2042 Background + Project - Mid-Day

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	136	603	252	150	647	266	230	241	172	163	167	168
v/c Ratio	0.34	0.41	0.32	0.35	0.44	0.33	0.73	0.74	0.45	0.61	0.60	0.43
Control Delay	21.2	31.8	5.8	21.2	32.0	5.7	62.9	63.1	21.7	58.8	58.1	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.2	31.8	5.8	21.2	32.0	5.7	62.9	63.1	21.7	58.8	58.1	9.2
Queue Length 50th (ft)	52	182	0	58	195	0	194	204	49	138	142	0
Queue Length 95th (ft)	130	325	71	142	#380	73	267	277	110	186	188	54
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	412	1468	789	427	1479	816	465	481	513	478	496	561
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.41	0.32	0.35	0.44	0.33	0.49	0.50	0.34	0.34	0.34	0.30

























## Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis Lake Hill Development Traffic Impact Study - Frisco, CO

7: Dillon Dam Road & State Highway 6  
2042 Background + Project - Mid-Day

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	555	232	138	595	245	286	147	158	195	109	155
Future Volume (vph)	125	555	232	138	595	245	286	147	158	195	109	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1770	3539	1548	1769	3539	1583	1681	1740	1583	1681	1744	1549
Flt Permitted	0.32	1.00	1.00	0.34	1.00	1.00	0.95	0.98	1.00	0.95	0.99	1.00
Satd. Flow (perm)	598	3539	1548	634	3539	1583	1681	1740	1583	1681	1744	1549
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	136	603	252	150	647	266	311	160	172	212	118	168
RTOR Reduction (vph)	0	0	148	0	0	155	0	0	85	0	0	141
Lane Group Flow (vph)	136	603	104	150	647	111	230	241	87	163	167	27
Confl. Peds. (#/hr)			1	1			9					9
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	64.5	53.9	53.9	65.3	54.3	54.3	24.3	24.3	24.3	20.8	20.8	20.8
Effective Green, g (s)	64.5	53.9	53.9	65.3	54.3	54.3	24.3	24.3	24.3	20.8	20.8	20.8
Actuated g/C Ratio	0.50	0.41	0.41	0.50	0.42	0.42	0.19	0.19	0.19	0.16	0.16	0.16
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	392	1467	641	414	1478	661	314	325	295	268	279	247
v/s Ratio Prot	0.03	0.17		c0.03	c0.18		0.14	c0.14		c0.10	0.10	
v/s Ratio Perm	0.14		0.07	0.15		0.07			0.06			0.02
v/c Ratio	0.35	0.41	0.16	0.36	0.44	0.17	0.73	0.74	0.30	0.61	0.60	0.11
Uniform Delay, d1	18.5	26.8	23.9	18.1	27.0	23.7	49.8	49.9	45.5	50.8	50.7	46.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.9	0.5	0.5	0.9	0.5	8.5	8.8	0.6	3.9	3.4	0.2
Delay (s)	19.0	27.7	24.4	18.7	27.9	24.3	58.3	58.7	46.1	54.7	54.2	46.9
Level of Service	B	C	C	B	C	C	E	E	D	D	D	D
Approach Delay (s)		25.7			25.7			55.2			51.9	
Approach LOS		C			C			E			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			35.7				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.53									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			73.3%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

Intersection			
Intersection Delay, s/veh 6.7			
Intersection LOS A			
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	137	546	530
Demand Flow Rate, veh/h	140	557	540
Vehicles Circulating, veh/h	527	31	37
Vehicles Exiting, veh/h	50	636	551
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	6.4	6.8	6.7
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	140	557	540
Cap Entry Lane, veh/h	806	1337	1329
Entry HV Adj Factor	0.979	0.980	0.981
Flow Entry, veh/h	137	546	530
Cap Entry, veh/h	789	1310	1303
V/C Ratio	0.174	0.417	0.406
Control Delay, s/veh	6.4	6.8	6.7
LOS	A	A	A
95th %tile Queue, veh	1	2	2











Intersection			
Intersection Delay, s/veh 6.7			
Intersection LOS A			
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	137	541	503
Demand Flow Rate, veh/h	140	551	513
Vehicles Circulating, veh/h	484	84	21
Vehicles Exiting, veh/h	50	540	614
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	6.1	7.3	6.3
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	140	551	513
Cap Entry Lane, veh/h	842	1267	1351
Entry HV Adj Factor	0.979	0.981	0.980
Flow Entry, veh/h	137	541	503
Cap Entry, veh/h	824	1243	1323
V/C Ratio	0.166	0.435	0.380
Control Delay, s/veh	6.1	7.3	6.3
LOS	A	A	A
95th %tile Queue, veh	1	2	2



Intersection													
Int Delay, s/veh	7.2												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations			↗			↗	↘	↗	↘		↗	↘	
Traffic Vol, veh/h	0	0	436	0	0	373	105	715	323	0	755	347	
Future Vol, veh/h	0	0	436	0	0	373	105	715	323	0	755	347	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None	
Storage Length	-	-	0	-	-	0	165	-	200	-	-	240	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	92	92	92	92	92	95	96	96	96	97	97	97	
Heavy Vehicles, %	2	2	4	2	2	3	5	5	5	2	5	5	
Mvmt Flow	0	0	474	0	0	393	109	745	336	0	778	358	
Major/Minor	Minor2		Minor1		Major1		Major2						
Conflicting Flow All	-	-	389	-	-	373	1136	0	0	-	-	0	
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-	
Critical Hdwy	-	-	6.98	-	-	6.96	4.2	-	-	-	-	-	
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-	
Follow-up Hdwy	-	-	3.34	-	-	3.33	2.25	-	-	-	-	-	
Pot Cap-1 Maneuver	0	0	604	0	0	622	594	-	-	0	-	-	
Stage 1	0	0	-	0	0	-	-	-	-	0	-	-	
Stage 2	0	0	-	0	0	-	-	-	-	0	-	-	
Platoon blocked, %								-	-		-	-	
Mov Cap-1 Maneuver	-	-	604	-	-	622	594	-	-	-	-	-	
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-	
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-	
Approach	EB		WB		NB		SB						
HCM Control Delay, s	29.2		20.2		1.1		0						
HCM LOS	D		C										
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBT	SBR							
Capacity (veh/h)	594	-	-	604	622	-	-						
HCM Lane V/C Ratio	0.184	-	-	0.785	0.631	-	-						
HCM Control Delay (s)	12.4	-	-	29.2	20.2	-	-						
HCM Lane LOS	B	-	-	D	C	-	-						
HCM 95th %tile Q(veh)	0.7	-	-	7.5	4.4	-	-						

Timings  
Lake Hill Development Traffic Impact Study - Frisco, CO

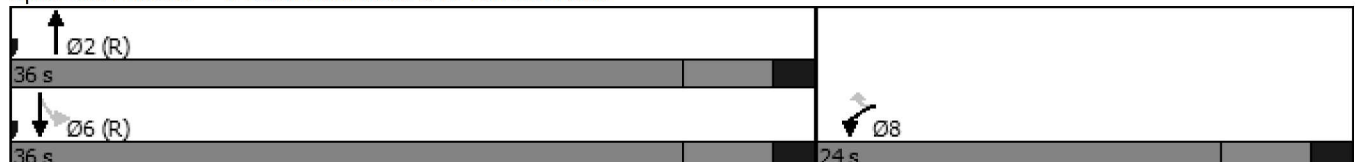
1: Dillon Dam Road & N. Ten Mile Road  
2042 Background + Project - PM Peak Hour

					
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	30	225	484	106	408
Future Volume (vph)	30	225	484	106	408
Turn Type	Prot	Perm	NA	Perm	NA
Protected Phases	8		2		6
Permitted Phases		8		6	
Detector Phase	8	8	2	6	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0
Total Split (s)	24.0	24.0	36.0	36.0	36.0
Total Split (%)	40.0%	40.0%	60.0%	60.0%	60.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	7.6	7.6	40.4		40.4
Actuated g/C Ratio	0.13	0.13	0.67		0.67
v/c Ratio	0.15	0.59	0.50		0.57

Intersection Summary

Cycle Length: 60  
Actuated Cycle Length: 60  
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
Natural Cycle: 65  
Control Type: Actuated-Coordinated  
Maximum v/c Ratio: 0.59  
Intersection Signal Delay: 8.5  
Intersection Capacity Utilization 76.8%  
Analysis Period (min) 15

Splits and Phases: 1: Dillon Dam Road & N. Ten Mile Road



Queues  
Lake Hill Development Traffic Impact Study - Frisco, CO












1: Dillon Dam Road & N. Ten Mile Road  
2042 Background + Project - PM Peak Hour






Lane Group	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	33	245	613	558
v/c Ratio	0.15	0.59	0.50	0.57
Control Delay	23.3	10.0	6.9	8.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	23.3	10.0	6.9	8.8
Queue Length 50th (ft)	11	0	76	79
Queue Length 95th (ft)	29	50	189	207
Internal Link Dist (ft)	227		327	780
Turn Bay Length (ft)		100		
Base Capacity (vph)	531	646	1232	984
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.06	0.38	0.50	0.57
Intersection Summary				

HCM 6th Signalized Intersection Summary  
Lake Hill Development Traffic Impact Study - Frisco, CO

1: Dillon Dam Road & N. Ten Mile Road  
2042 Background + Project - PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	30	225	484	80	106	408
Future Volume (veh/h)	30	225	484	80	106	408
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	245	526	87	115	443
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	336	299	956	158	198	721
Arrive On Green	0.19	0.19	0.61	0.61	0.61	0.61
Sat Flow, veh/h	1781	1585	1565	259	206	1180
Grp Volume(v), veh/h	33	245	0	613	558	0
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1824	1385	0
Q Serve(g_s), s	0.9	8.9	0.0	11.8	5.9	0.0
Cycle Q Clear(g_c), s	0.9	8.9	0.0	11.8	17.7	0.0
Prop In Lane	1.00	1.00		0.14	0.21	
Lane Grp Cap(c), veh/h	336	299	0	1115	919	0
V/C Ratio(X)	0.10	0.82	0.00	0.55	0.61	0.00
Avail Cap(c_a), veh/h	534	476	0	1115	919	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.1	23.4	0.0	6.8	7.4	0.0
Incr Delay (d2), s/veh	0.1	6.1	0.0	2.0	3.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.6	0.0	3.9	3.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.2	29.4	0.0	8.8	10.3	0.0
LnGrp LOS	C	C	A	A	B	A
Approach Vol, veh/h	278		613		558	
Approach Delay, s/veh	28.3		8.8		10.3	
Approach LOS	C		A		B	
Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	42.7		42.7		17.3	
Change Period (Y+Rc), s	6.0		6.0		6.0	
Max Green Setting (Gmax), s	30.0		30.0		18.0	
Max Q Clear Time (g_c+I1), s	13.8		19.7		10.9	
Green Ext Time (p_c), s	3.9		3.0		0.5	
Intersection Summary						
HCM 6th Ctrl Delay			13.1			
HCM 6th LOS			B			






Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	5	866	5	5	426
Future Vol, veh/h	10	5	866	5	5	426
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	5	941	5	5	463

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1417	944	0	0	946	0
Stage 1	944	-	-	-	-	-
Stage 2	473	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	151	318	-	-	725	-
Stage 1	378	-	-	-	-	-
Stage 2	627	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	150	318	-	-	725	-
Mov Cap-2 Maneuver	150	-	-	-	-	-
Stage 1	378	-	-	-	-	-
Stage 2	621	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	26.7	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	182	725
HCM Lane V/C Ratio	-	-	0.09	0.007
HCM Control Delay (s)	-	-	26.7	10
HCM Lane LOS	-	-	D	B
HCM 95th %tile Q(veh)	-	-	0.3	0

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	5	856	15	5	416
Future Vol, veh/h	10	5	856	15	5	416
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	5	930	16	5	452
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1400	938	0	0	946	0
Stage 1	938	-	-	-	-	-
Stage 2	462	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	155	321	-	-	725	-
Stage 1	381	-	-	-	-	-
Stage 2	634	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	154	321	-	-	725	-
Mov Cap-2 Maneuver	154	-	-	-	-	-
Stage 1	381	-	-	-	-	-
Stage 2	628	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	26.2	0	0.1			
HCM LOS	D					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	186	725	-	
HCM Lane V/C Ratio	-	-	0.088	0.007	-	
HCM Control Delay (s)	-	-	26.2	10	0	
HCM Lane LOS	-	-	D	B	A	
HCM 95th %tile Q(veh)	-	-	0.3	0	-	

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			Y	Y	
Traffic Vol, veh/h	5	5	10	851	416	5
Future Vol, veh/h	5	5	10	851	416	5
Conflicting Peds, #/hr	1	7	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	5	11	925	452	5

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1403	462	457	0	-	0
Stage 1	455	-	-	-	-	-
Stage 2	948	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	154	600	1104	-	-	-
Stage 1	639	-	-	-	-	-
Stage 2	377	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	151	596	1104	-	-	-
Mov Cap-2 Maneuver	151	-	-	-	-	-
Stage 1	626	-	-	-	-	-
Stage 2	377	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.6	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1104	-	241	-	-
HCM Lane V/C Ratio	0.01	-	0.045	-	-
HCM Control Delay (s)	8.3	0	20.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

























Intersection			
Intersection Delay, s/veh	21.7		
Intersection LOS	C		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	185	828	779
Demand Flow Rate, veh/h	189	844	794
Vehicles Circulating, veh/h	583	430	100
Vehicles Exiting, veh/h	691	464	672
Ped Vol Crossing Leg, #/h	1	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	7.7	34.7	11.2
Approach LOS	A	D	B
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.700	4.976
Entry Flow, veh/h	189	844	794
Cap Entry Lane, veh/h	761	920	1246
Entry HV Adj Factor	0.979	0.981	0.981
Flow Entry, veh/h	185	828	779
Cap Entry, veh/h	745	902	1222
V/C Ratio	0.248	0.918	0.637
Control Delay, s/veh	7.7	34.7	11.2
LOS	A	D	B
95th %tile Queue, veh	1	14	5



Timings  
Lake Hill Development Traffic Impact Study - Frisco, CO

7: Dillon Dam Road & State Highway 6







2042 Background + Project - PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	655	280	208	670	415	253	136	240	300	260	130
Future Volume (vph)	160	655	280	208	670	415	253	136	240	300	260	130
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	1.0	14.0	14.0	1.0	14.0	14.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Split (s)	5.5	20.0	20.0	5.5	20.0	20.0	7.0	7.0	7.0	7.0	7.0	7.0
Total Split (s)	13.0	34.0	34.0	13.0	34.0	34.0	36.0	36.0	36.0	37.0	37.0	37.0
Total Split (%)	10.8%	28.3%	28.3%	10.8%	28.3%	28.3%	30.0%	30.0%	30.0%	30.8%	30.8%	30.8%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	47.6	33.2	33.2	55.8	39.0	39.0	21.3	21.3	21.3	27.3	27.3	27.3
Actuated g/C Ratio	0.40	0.28	0.28	0.46	0.32	0.32	0.18	0.18	0.18	0.23	0.23	0.23
v/c Ratio	0.54	0.73	0.47	0.62	0.63	0.56	0.70	0.69	0.60	0.77	0.79	0.30

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 92 (77%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 35.8  
 Intersection Capacity Utilization 77.7%  
 Analysis Period (min) 15

Splits and Phases: 7: Dillon Dam Road & State Highway 6













 Ø1	 Ø2 (R)	 Ø4	 Ø8
13 s	34 s	37 s	36 s
 Ø5	 Ø6 (R)		
13 s	34 s		

## Queues

## Lake Hill Development Traffic Impact Study - Frisco, CO

## 7: Dillon Dam Road &amp; State Highway 6

2042 Background + Project - PM Peak Hour

























												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	174	712	304	226	728	451	209	214	261	293	316	141
v/c Ratio	0.54	0.73	0.47	0.62	0.63	0.56	0.70	0.69	0.60	0.77	0.79	0.30
Control Delay	28.8	45.7	6.8	32.2	40.1	6.4	58.2	57.3	18.8	56.6	57.8	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.8	45.7	6.8	32.2	40.1	6.4	58.2	57.3	18.8	56.6	57.8	7.3
Queue Length 50th (ft)	78	274	0	105	263	0	162	165	50	220	238	0
Queue Length 95th (ft)	150	#376	73	#275	#391	91	229	233	126	316	338	49
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	325	980	648	365	1150	811	434	450	547	448	469	520
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.73	0.47	0.62	0.63	0.56	0.48	0.48	0.48	0.65	0.67	0.27

## Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis Lake Hill Development Traffic Impact Study - Frisco, CO

7: Dillon Dam Road & State Highway 6  
2042 Background + Project - PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	655	280	208	670	415	253	136	240	300	260	130
Future Volume (vph)	160	655	280	208	670	415	253	136	240	300	260	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1769	3539	1548	1769	3539	1560	1681	1743	1583	1681	1760	1563
Flt Permitted	0.26	1.00	1.00	0.17	1.00	1.00	0.95	0.98	1.00	0.95	0.99	1.00
Satd. Flow (perm)	486	3539	1548	312	3539	1560	1681	1743	1583	1681	1760	1563
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	174	712	304	226	728	451	275	148	261	326	283	141
RTOR Reduction (vph)	0	0	220	0	0	304	0	0	154	0	0	109
Lane Group Flow (vph)	174	712	84	226	728	147	209	214	107	293	316	32
Confl. Peds. (#/hr)	2		1	1		2	1					1
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	45.6	33.2	33.2	55.4	39.0	39.0	21.3	21.3	21.3	27.3	27.3	27.3
Effective Green, g (s)	45.6	33.2	33.2	55.4	39.0	39.0	21.3	21.3	21.3	27.3	27.3	27.3
Actuated g/C Ratio	0.38	0.28	0.28	0.46	0.32	0.32	0.18	0.18	0.18	0.23	0.23	0.23
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	317	979	428	365	1150	507	298	309	280	382	400	355
v/s Ratio Prot	0.06	c0.20		c0.09	0.21		c0.12	0.12		0.17	c0.18	
v/s Ratio Perm	0.15		0.05	0.19		0.09			0.07			0.02
v/c Ratio	0.55	0.73	0.20	0.62	0.63	0.29	0.70	0.69	0.38	0.77	0.79	0.09
Uniform Delay, d1	26.1	39.3	33.2	22.6	34.4	30.2	46.4	46.3	43.5	43.4	43.7	36.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.9	4.7	1.0	3.1	2.7	1.4	7.3	6.6	0.9	8.9	10.2	0.1
Delay (s)	28.1	44.0	34.2	25.7	37.1	31.6	53.6	52.8	44.4	52.3	53.8	36.7
Level of Service	C	D	C	C	D	C	D	D	D	D	D	D
Approach Delay (s)		39.2			33.5			49.9			50.0	
Approach LOS		D			C			D			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			41.0				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.72									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			77.7%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												



Intersection			
Intersection Delay, s/veh	10.2		
Intersection LOS	B		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	79	936	435
Demand Flow Rate, veh/h	80	955	444
Vehicles Circulating, veh/h	416	18	92
Vehicles Exiting, veh/h	120	478	881
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.9	12.4	6.3
Approach LOS	A	B	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	80	955	444
Cap Entry Lane, veh/h	903	1355	1256
Entry HV Adj Factor	0.988	0.980	0.979
Flow Entry, veh/h	79	936	435
Cap Entry, veh/h	891	1328	1230
V/C Ratio	0.089	0.705	0.353
Control Delay, s/veh	4.9	12.4	6.3
LOS	A	B	A
95th %tile Queue, veh	0	6	2



Intersection			
Intersection Delay, s/veh	9.4		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	80	864	470
Demand Flow Rate, veh/h	82	881	479
Vehicles Circulating, veh/h	410	48	48
Vehicles Exiting, veh/h	117	444	881
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.9	11.6	6.2
Approach LOS	A	B	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	82	881	479
Cap Entry Lane, veh/h	908	1314	1314
Entry HV Adj Factor	0.976	0.980	0.981
Flow Entry, veh/h	80	864	470
Cap Entry, veh/h	886	1288	1289
V/C Ratio	0.090	0.671	0.365
Control Delay, s/veh	4.9	11.6	6.2
LOS	A	B	A
95th %tile Queue, veh	0	6	2

Intersection												
Int Delay, s/veh	7.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↰			↰	↰	↰	↰		↰	↰
Traffic Vol, veh/h	0	0	327	0	0	423	70	925	479	0	785	419
Future Vol, veh/h	0	0	327	0	0	423	70	925	479	0	785	419
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Free	-	-	None
Storage Length	-	-	0	-	-	0	165	-	200	-	-	240
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	4	4	4	2	2	2	3	3	3	4	4	4
Mvmt Flow	0	0	341	0	0	441	73	964	499	0	818	436

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	409	-	-	482	1254	0	-	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.98	-	-	6.94	4.16	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.34	-	-	3.32	2.23	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	586	0	0	530	545	-	0	0	-	-
Stage 1	0	0	-	0	0	-	-	-	0	0	-	-
Stage 2	0	0	-	0	0	-	-	-	0	0	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	586	-	-	530	545	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.3	36.9	0.9	0
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	545	-	586	530	-	-
HCM Lane V/C Ratio	0.134	-	0.581	0.831	-	-
HCM Control Delay (s)	12.6	-	19.3	36.9	-	-
HCM Lane LOS	B	-	C	E	-	-
HCM 95th %tile Q(veh)	0.5	-	3.7	8.4	-	-