

**FEBRUARY  
2026**

**TRAFFIC IMPACT STUDY**

**TOWN PUMP  
SITE DEVELOPMENT**

Frenchtown, Missoula County, Montana



**Prepared For**  
Keeping Frenchtown LLC





## Traffic Impact Study

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**Keeping Frenchtown LLC**

**February 2026**

Project No. 25-0113



PTOE Certification - 2020



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## Executive Summary

### Purpose of Report & Study Objectives

This report summarizes the results of a traffic impact study conducted by E5 Engineering, PLLC for the proposed development of the Town Pump site development project in Frenchtown, Missoula County, Montana. The objectives of the traffic study are as follows:

- Perform an independent traffic impact analysis of the proposed site development project.
- Determine the existing vehicle, pedestrian, bicycle, and transit conditions in the study area to establish a base condition.
- Assess the impact that the proposed development will have on transportation conditions in the area.
- Determine any street, access, bicycle, and pedestrian modifications and/or improvements that will be necessary to effectively accommodate and mitigate future conditions.

### Study Area & Land Use

The proposed Town Pump site development project is to be located in Frenchtown, Missoula County, Montana on the north side of Interstate 90 at the Frenchtown interchange (Exit 89) on portions of Parcel 2A of Certificate of Survey No. 7046 and Deed 2581. The Frenchtown Frontage Road (Montana State Secondary Highway 574, S-574) is adjacent to the south of the project, Belker Lane to the east, and a mix of agricultural and residential properties to the west and north. The surrounding area is also a mix of agricultural, residential, and commercial properties.

### Transportation Network

#### Study Roadway – Frenchtown Frontage Road (S-574)

The Frenchtown Frontage Road is a Montana State Secondary Highway (S-574, C000574) and is functionally classified as a major collector by MDT. Within the study area, it has a single travel lane in each direction. The posted speed limit is 50 miles per hour (50 mph). Per MDT data, the roadway has an asphalt paved surface width of approximately 26 feet, inclusive of 12-foot-wide travel lanes in each direction.

#### Study Intersections

The following existing intersections were evaluated as a part of this study in consideration of the characteristics of the proposed Town Pump site development project as well as the surrounding transportation network.

- |  |   |
|--|---|
| ▪ Ducharme Street (C230274) & Marion Street (C231377)                          | ▪ Demer Street (C032165) & the I-90 Westbound Ramps (C229176   C229175) |
| ▪ Beckwith Street (S-263, C000263) & Ducharme Street (C230274)                 | ▪ Frenchtown Frontage Road (S-574, C000574) & Demer Street (C032165)    |
| ▪ Beckwith Street (S-263, C000263   C032164) & Demer Street (S-263, C000263)   | ▪ Frenchtown Frontage Road (S-574, C000574) & Belker Lane (C231897)     |
| ▪ Demer Street (S-263, C000263) & the I-90 Eastbound Ramps (C228975   C228974) |   |

Current vehicle, pedestrian, and bicycle counts were utilized for the study area intersections based on averages taken for two weekdays at each location on January 7 and 8, 2026 (Wednesday and Thursday). With the exception of the intersection of the Frenchtown Frontage Road (S-574) and Belker Lane, each of the intersection counts were completed for a 14-hour period – between 6:00 a.m. and 8:00 p.m. (PM peak period). The counts for the intersection of the Frenchtown Frontage Road (S-574) and Belker Lane were completed for three 2-hour periods – between 7:00 and 9:00 a.m. (AM peak period), 2:00 and 4:00 p.m. (school PM peak period), and 4:00 and 6:00 p.m. (PM peak period). The results of the traffic counts showed average weekday peak hours occurring between 7:15 and 8:15 a.m. (AM), 3:00 and 4:00 p.m. (school PM), and 4:45 and 5:45 p.m. (PM).

The count data were adjusted to account for seasonal or daily variations that may occur throughout the year from when the counts were taken. Seasonal and daily adjustment factors available through MDT were utilized with the average count data. Intersection counts were balanced to account for any human or rounding errors.

### Alternative Modes of Transportation

The A.J. Hoyt Memorial Trail is located adjacent to the proposed Town Pump site development project on the north side of the Frenchtown Frontage Road (S-574). It is a paved, multi-use trail that serves as a flat, accessible path for walking, biking (including e-bikes), running, and other non-motorized activities. It is approximately 11 miles long, linking near Huson on the north side of Interstate 90 (I-90) to just outside Missoula at the intersection of Waldo Williams Road (continuation of the Frenchtown Frontage Road) and United States Highway 93 (US 93). It passes by Frenchtown Pond State Park as well as Frenchtown High School and Jr. High School.

Sidewalks and pathways are generally not available for pedestrians and cyclists within the remainder of the study area nor are there any additional dedicated bicycle facilities. There is not currently a public bus system within the community of Frenchtown.

### Safety

Traffic safety conditions were documented by reviewing the crash history of the study area intersections using data provided from the MDT crash database. Public crash information for the period 2020 through 2024, the most recent five years available, was reviewed. MDT reported thirty-four (34) crashes within the evaluated study area over the five-year period. Of those, twenty-three (23) were identified at the intersections evaluated with this study.

### Proposed Development

The proposed Town Pump site development project has been evaluated based on the following:

Included elements that have been evaluated were based on information described in a letter from Joey Staszczuk, PE, PTOE, RSP1 of Sanbell to Mr. Dan Sampson of Town Pump, Inc. dated October 20, 2025, that was obtained from the Montana Department of Transportation (MDT) via a public information request. Additional project information was obtained through an article written by Cynthia Carranza of KPAX entitled “Potential Town Pump store in Frenchtown raises concerns among residents” dated June 20, 2025.

Consists of a convenience store and gas station that also includes a casino:

- [Convenience Store with Casino](#)  
As denoted in the Cynthia Carranza article, Town Pump had not finalized the design of the site development project as of June 20, 2025. The building shown in figures in the Sanbell letter scales to approximately 34,575 square feet (ft<sup>2</sup>) that is inclusive of a 2,200 ft<sup>2</sup> casino.

o **Gas Station**

Evaluated based on 16 fueling stations that would accommodate 21 vehicle fueling positions.

Estimated trip generation for the proposed development was derived utilizing rates published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual, 12th Edition* published in August 2025. The rates were based on the convenience store / gas station land use (ITE Land Use Code 945) with a general urban / suburban setting or location and a gross floor area greater than 10,000 ft². The proposed number of vehicle fueling positions was utilized as the independent variable.

- o The casino use was considered to be ancillary to the convenience store / gas station use for this study based on general observations of similar sites throughout Montana. In support of this consideration, the ITE *Trip Generation Manual, 12th Edition* notes that for Land Use Code 473 – Casino, “All study sites are isolated from other complementary or competitive development. Most of the casinos in the land use are physically connected to a hotel.”
- o Estimated Average Weekday Vehicle Trips: 3,090 Total (1,640 Pass-By | 1,450 Net New)
- o Estimated Average Weekday, AM Peak Hour Trips: 236 Total (180 Pass-By | 56 Net New)
- o Estimated Average Weekday, School PM Peak Hour Trips: 198 Total (148 Pass-By | 50 Net New)
- o Estimated Average Weekday, PM Peak Hour Trips: 256 Total (192 Pass-By | 64 Net New)

Access to the development is proposed via two approaches to the Frenchtown Frontage Road (S-574) – one on either side of its intersection with Demer Street.

No off-site facilities for pedestrians and bicyclists were shown in the figures included as part of the Sanbell traffic analysis and site accessibility study for the proposed Town Pump site development project. Limited sidewalks are anticipated to be included within the site around the perimeter of the building. No specific transit-oriented improvements are known to be included with the proposed development.

The proposed development has been evaluated as having full utilization by the year 2028 for this study, anticipating completion of permitting, construction, and full utilization.

**Through Traffic Projections**

Estimated traffic volumes projected for the year 2028 were generated by applying an average annual growth rate (AAGR) to the 2026 traffic volumes. Historical traffic growth trends in the area were evaluated to develop estimates for 2-year AAGR values based on available average annual daily traffic (AADT) from MDT to develop forecasted growth trends through the year 2028. The rates utilized considered historical averages as well as recent post-2020 (after the COVID-19 pandemic) trends. The AAGRs utilized as a part of this study are summarized below:

- Ducharme Street | 1.90%
- Beckwith Street – East of Ducharme Street | 0.40%
- Beckwith Street – West of Demer Street | 1.40%
- Demer Street | 1.00%
- Interstate 90 (I-90) – Eastbound Off-Ramp | 8.00%
- Interstate 90 (I-90) Eastbound On-Ramp | 6.90%
- Interstate 90 (I-90) Westbound Off-Ramp | 9.10%
- Interstate 90 (I-90) Westbound On-Ramp | 2.40%
- Frenchtown Frontage Road (S-574) – West of Demer Street | 3.80%
- Frenchtown Frontage Road (S-574) – East of Demer Street | 4.90%

## Total Traffic Projections

Estimated 2028 total traffic volumes include the combination of background traffic volumes with those projected for the proposed Town Pump site development project.

## Transportation Analyses

### Analysis Scenarios

To identify significant project impacts, the following scenarios for study area intersections were evaluated:

#### [Existing Conditions \(2026\)](#)

Consists of an operational analysis of January 2026 counts collected as part of this study.

#### [No Build Scenario – Estimated 2028 Background Traffic Volumes](#)

Consists of projected, non-site background traffic volumes resulting from applied AAGR values.

#### [Full Utilization Scenario – Estimated 2028 Total Traffic Volumes](#)

Consists of estimated 2028 background traffic volumes in combination with forecast traffic from the proposed Town Pump site development project.

## Assessment of Impacts

### Traffic Operations

#### [Existing Conditions \(2026\)](#)

The operational analyses revealed substandard operations (LOS D or lower) occurring during the weekday, AM peak hour at the intersections of Beckwith Street (S-263) and Ducharme Street, Beckwith Street (S-263) and Demer Street (S-263), and the Frenchtown Frontage Road (S-574) and Demer Street. A significant driver for the substandard operations is school related traffic. Those intersections do function acceptably (LOS C or better) during the weekday, school PM and PM peak hours. Each of the remaining study intersections function acceptably during each of the analyzed time periods.

#### [No Build Scenario – Estimated 2028 Background Traffic Volumes](#)

With estimated background traffic growth through the year 2028, declines in operations to substandard conditions are projected for the Interstate 90 (I-90) eastbound and westbound off-ramps at their intersection with Demer Street during the weekday, AM peak hour. Each of the remaining study intersections and time periods are anticipated to operate within acceptable levels of service.

#### [Full Utilization Scenario – Estimated 2028 Total Traffic Volumes](#)

The addition of traffic generated from the proposed Town Pump site development project is not expected to significantly impact traffic operations for the Ducharme Street and Beckwith Street (S-263) intersections. It does, however, have significant impact on traffic operations at the Demer Street (S-263) intersections with the I-90 eastbound and westbound ramps plus the Frenchtown Frontage Road (S-574) during the weekday, AM peak hour. Additionally, declines in level of service (LOS) to substandard conditions are envisaged for the weekday, school PM peak hour on the I-90 eastbound and westbound off-ramps. A decline in LOS is anticipated on the I-90 westbound off-ramp during the weekday, PM peak hour as well.

## Safety

A significant crash experience trend was not identified at any of the study area intersections. Although the annual crash rate at the intersection of Demer Street and the Interstate 90 (I-90) westbound off-ramp is greater than what might be expected based on Highway Safety Manual (HSM) analysis methodology the crash experience rate based on entering traffic volumes is less than the HSM expected crash rate. Monitoring the intersection for crash experience in the future may be beneficial.

## Conclusions & Recommendations

### 2026 Existing Conditions

The following recommendations are based on the analyses of 2026 existing conditions included herein, excluding the addition of background traffic growth or the proposed Town Pump site development generated traffic. The following are recommended as appropriate:

#### **Beckwith Street (S-263) & Ducharme Street**

Citizens in Frenchtown as well as the local fire department noted concerns with vehicle queuing on Ducharme Street during the weekday, AM peak period and blockage of its intersection with Marion Street as well as the alley to the south. Marion Street and the alley are primary means of access for the fire department and excessive queues impact its ability to respond to emergencies. Substandard operations at the Beckwith Street (S-263) and Ducharme Street intersection as well as train activity at the Ducharme Street at-grade rail crossing are causes of longer vehicle queues. The intersection was evaluated for alternative traffic control, the addition of auxiliary turn lanes, and/or redirection of school related traffic to improve traffic operations during peak periods. The analyses found that the addition of auxiliary turn lanes in combination with the conversion to all-way stop control or redirection of an estimated seventy percent (70%) of school related traffic would be viable options for traffic operations mitigation.

#### Option 1 | Redirection of School Related Traffic

Redirection of school related traffic involves focusing student drop-off and pick-up to the east side of the Frenchtown Elementary and Intermediate School. Each approach at the intersection of Beckwith Street (S-263) and Ducharme Street is forecast to operate at LOS C or better with redirected traffic. Key points for consideration include the following:

- Student bussing would remain unchanged with the proposed redirection.
- Communication with parents or guardians and adherence to student drop-off and pick-up procedures by school officials would be required to ensure proper functioning.
- Site modifications to accommodate the revised drop-off and pick-up location and procedures and adequate on-site queue storage of vehicles may require expenditures for implementation but the overall cost may be less than that for turn lane and traffic control modifications at the intersection of Beckwith Street (S-263) and Ducharme Street.

#### Option 2 | Installation of Auxiliary Turn Lanes and All-Way Stop Control (AWSC)

The intersection of Beckwith Street (S-263) and Ducharme Street does not satisfy MUTCD minimum warrant criteria for installation of AWSC based on crash experience, sight distance, future traffic signal installation, or traffic volumes. Utilizing the fire department concern for emergency responsiveness, there may be a case for satisfaction of Warrant E: Other Factors. Auxiliary left-turn lane criteria suggested in the AASHTO publication *A Policy on*

*Geometric Design of Highways and Streets, 2018 – 7th Edition, 2nd Printing* showed that the Beckwith Street (S-263) approaches at its intersection with Ducharme Street would meet minimum criteria for consideration of both a left- and right-turn lane based on existing volumes. Each approach at the intersection is forecast to operate at LOS C or better with installation of auxiliary turn lanes and AWSC.

A conceptual layout of the intersection with auxiliary turn lanes and AWSC is shown in Figure 33 on page 65.

Key points for consideration with the installation of auxiliary turn lanes and AWSC at the intersection of Beckwith Street (S-263) and Ducharme Street include:

- Installation of all-way stop control with the eastbound, left-turn lane as well as the westbound, right-turn lane may present challenges with the location of the existing coffee kiosk on the northwest corner of the intersection that includes drive-through windows on both its north and south sides.
- Impacts to parking areas in the vicinity of the intersection could pose concern for businesses.

### ***Beckwith Street (S-263) & Demer Street (S-263)***

The southbound approach at the intersection of Beckwith Street (S-263) and Demer Street currently operates at LOS F during the weekday, AM peak hour and queues from the excessive delays impact operations at upstream intersections. The intersection was evaluated for alternatives to improve traffic operations.

#### Intersection Traffic Control Alternatives Evaluation

Analyses of MUTCD warrants for AWSC or signalized control found that the intersection does not currently meet the minimum criteria for installation of either of those traffic control alternatives. Auxiliary turn lane analyses were not performed as their installation would not mitigate traffic operations for the southbound left-turn movement at the intersection of Beckwith Street (S-263) and Demer Street (S-263).

The introduction of a curved roadway to align the centerlines of the westbound segment of Beckwith Street (S-263) and the southbound, Demer Street (S-263) approach to convert the major traffic flows to through movements at the intersection was considered. The proximity of existing businesses adjacent to the roadways as well as adjacent intersections limit the ability to perform the realignment. Additionally, the introduction of turn lanes to promote improved operations and safety is restricted due to available space for queue storage and transition tapers. This was not evaluated any further.

#### Roundabout Control Alternative

Installation of roundabout control was evaluated for the intersection of Beckwith Street (S-263) and Demer Street (S-263) to improve traffic operations. The analyses found that installation of roundabout control would improve traffic operations at the intersection. This mitigation would also provide a significant benefit to overall operations and queue reduction on Demer Street (S-263) during the weekday, AM peak period that is currently experienced. A conceptual layout of the intersection with a roundabout is shown in Figure 33 on page 65. Key points for consideration include the following:

- Installation of roundabout control may potentially provide additional safety benefits through the reduction of the crash experience rate at the intersection.
- Installation of roundabout control would require right-of-way acquisition and construction would need to be coordinated to allow for continued traffic flow while also limiting school and business operations.

### ***Frenchtown Frontage Road (S-574) & Demer Street***

During the weekday, AM peak period under 2026 existing conditions, the northbound, Demer Street approach operates at LOS D. The operational delays contribute to vehicle queues extending southerly along Demer Street during this time, impacting upstream intersections. Alternatives for improved traffic operations were evaluated. AWSC warrant criteria analyses for the intersection of the Frenchtown Frontage Road (S-574) and Demer Street under 2026 existing conditions found that it would satisfy minimum warrant criteria potentially based on 36-month crash experience as well as the eighth highest hourly volume. Analyses of traffic operations under all-way stop control revealed that the intersection would operate satisfactorily (LOS C or better) during each of the analysis periods. Installation of all-way stop control to mitigate 2026 existing conditions at the intersection of the Frenchtown Frontage Road (S-574) and Demer Street is recommended. As this is a traffic control revision, the following are recommended with the installation:

- Install all-way stop control (AWSC) utilizing light-emitting diode (LED) blinker stop signs that include solar power to draw attention to the signage for drivers. An available power source may also be utilized with the installation of conduit runs, pull boxes, and service assembly. Radar detection may also be incorporated so that the blinking light elements of the signage are only activated when vehicles are approaching, saving on battery life if solar power is utilized and potentially limiting driver ignorance.
- In conjunction with AWSC installation, temporary installation of “NEW TRAFFIC PATTERN AHEAD” signage (MUTCD W23-2) on each approach to the intersection is recommended in accordance with MUTCD requirements for a minimum 14-day notification period.

### ***Demer Street & the Interstate 90 (I-90) Westbound Ramps***

The annual crash rate at the intersection of Demer Street and the Interstate 90 (I-90) westbound off-ramp is greater than what might be expected based on Highway Safety Manual (HSM) analysis methodology, but the crash experience rate based on entering traffic volumes is less than the HSM expected crash rate. Monitoring the intersection for crash experience in the future may be beneficial.

### **No Build Scenario – Estimated 2028 Background Traffic Volumes**

With estimated background traffic growth through the year 2028, declines in operations to substandard conditions (LOS D or lower) are projected for the Interstate 90 (I-90) eastbound and westbound off-ramps at their intersection with Demer Street during the weekday, AM peak hour. No additional substandard operations beyond those identified for 2026 existing conditions were noted through the analyses.

A preliminary analysis of operations with the installation of AWSC at the I-90 eastbound and westbound off-ramp intersections with Demer Street found adverse impacts to southbound traffic operations during the weekday, AM peak hour. Therefore, this was discounted as a viable means of mitigation. Noting that estimated queue lengths on each of the I-90 off-ramps during the weekday, AM peak hour were reasonable and are not anticipated to impact Interstate 90 traffic plus operations during the weekday, school PM peak period as well as the weekday, PM peak period are acceptable, no additional mitigation for estimated 2028 background traffic is recommended.

### **Full Utilization Scenario – Estimated 2028 Total Traffic Volumes**

The addition of traffic generated from the proposed Town Pump site development project is not expected to significantly impact traffic operations for the Ducharme Street and Beckwith Street (S-263) intersections. It does, however, have significant impact on traffic operations at the Demer Street (S-263) intersections with the I-90 eastbound and westbound ramps plus the Frenchtown Frontage Road (S-574) during the weekday, AM peak hour.

Additionally, declines in level of service (LOS) to substandard conditions are envisaged for the weekday, school PM peak hour on the I-90 eastbound and westbound off-ramps. A decline in LOS is anticipated on the I-90 westbound off-ramp during the weekday, PM peak hour as well.

### ***Demer Street (S-263) & the Interstate 90 (I-90) Eastbound Ramps***

The I-90 eastbound off-ramp approach at its intersection with Demer Street (S-263) is projected to decline to LOS F and significant vehicle queues are anticipated with the addition of site generated traffic from the proposed Town Pump development through the year 2028. The intersection is also projected to decline to LOS D during the weekday, school PM peak hour for estimated 2028 total traffic conditions. The intersection was evaluated for alternatives to improve traffic operations.

### **All-Way Stop Control (AWSC) Warrant Analyses**

AWSC warrants were evaluated for the intersection of Demer Street (S-263) and the I-90 eastbound ramps. The intersection was found to satisfy minimum warrant criteria based on 2026 existing conditions for the eighth highest hourly volume; however, an operational analysis check noted adverse impacts to the northbound and southbound approaches. With the installation of all-way stop control, excessive average vehicle delays as well as long queue lengths were found with the conversion to AWSC for the intersection.

### **Signal Warrant Analysis**

A preliminary signal warrant analysis was performed for the intersection of Demer Street (S-263) and the I-90 eastbound ramps based on forecast 2028 total traffic volumes for meeting minimum traffic signal warrant criteria for Warrant #1: Eight Hour Vehicular Volume and Warrant #2: Four-Hour Vehicular Volume as delineated in the MUTCD. This evaluation utilized a procedure developed by the Oregon Department of Transportation for performing a preliminary signal warrant analysis based on estimated average daily traffic volumes. Based on this procedure, installation of a traffic signal was not found to be warranted at the intersection.

### **Auxiliary Turn Lane Analyses**

Auxiliary turn lane analyses were not performed as their installation would not mitigate traffic operations for the eastbound left-turn movement at the intersection of Demer Street (S-263) and the I-90 eastbound ramps.

### **Roundabout Control Alternative**

Installation of roundabout control at the intersection of Demer Street (S-263) and the I-90 eastbound ramps was evaluated and found to operate satisfactorily, having LOS C or better projected for each of the approaches at the intersection during each of the weekday peak analysis periods evaluated with this study. The analyses were based on installation of a single-lane roundabout, which is conceptually shown in Figure 33 on page 65. Key aspects for consideration include the following:

- Installation of roundabout control may potentially provide additional safety benefits through the reduction of the crash experience rate at the intersection.
- Installation of roundabout control may require right-of-way acquisition and additional design considerations for embankment fills plus construction would need to be coordinated to allow for continued traffic flow while also limiting school and business operations.

### ***Demer Street & the Interstate 90 (I-90) Westbound Ramps***

The I-90 westbound off-ramp approach at its intersection with Demer Street (S-263) is projected to decline to LOS F and significant vehicle queues are anticipated with the addition of site generated traffic from the proposed Town Pump development through the year 2028. The intersection is also projected to decline to LOS E during the weekday, school PM peak hour, and LOS D for the weekday, PM peak hour for estimated 2028 total traffic conditions. Alternatives for improved traffic operations were evaluated for consideration at the intersection.

#### **All-Way Stop Control (AWSC) Warrant Analyses**

The intersection of Demer Street (S-263) and the I-90 westbound ramps was also evaluated against AWSC warrant criteria delineated in the MUTCD. The intersection was found to satisfy minimum warrant criteria based on estimated 2028 total traffic volumes for the eighth highest hourly volume; however, an operational analysis check noted adverse impacts to the southbound approach, particularly during the weekday, AM peak hour, that may result in vehicle queues extending through the Frenchtown Frontage Road (S-574) and Demer Street intersection.

#### **Signal Warrant Analysis**

A preliminary signal warrant analysis was also performed for the intersection of Demer Street (S-263) and the I-90 eastbound ramps based on forecast 2028 total traffic volumes for meeting minimum traffic signal warrant criteria for Warrant #1: Eight Hour Vehicular Volume and Warrant #2: Four-Hour Vehicular Volume utilizing the Oregon Department of Transportation procedure. Based on this procedure, installation of a traffic signal was not found to be warranted at the intersection.

#### **Auxiliary Turn Lane Analyses**

Auxiliary turn lane analyses were not performed as their installation would not mitigate traffic operations for the westbound left-turn movement at the intersection of Demer Street and the I-90 westbound ramps.

#### **Roundabout Control Alternative**

Installation of roundabout control at the intersection of Demer Street (S-263) and the I-90 westbound ramps was evaluated and found to operate satisfactorily with LOS B or better projected for each of the approaches at the intersection during each of the weekday peak analysis periods evaluated with this study. The analyses were based on installation of a single-lane roundabout, which is conceptually shown in Figure 37 on page 72. Key elements for consideration include the following:

- Installation of roundabout control may potentially provide additional safety benefits through the reduction of the crash experience rate at the intersection.
- Installation of roundabout control will require additional design considerations for coordination with the intersection of the Frenchtown Frontage Road (S-574) and Demer Street as well as embankment fills.
- Construction would need to be coordinated to allow for continued traffic flow while also limiting school and business operations.

### ***Frenchtown Frontage Road (S-574) Intersections***

During the weekday, AM peak period the northbound, Demer Street approach is projected to decline to LOS F with traffic contributions from the proposed Town Pump site development project.

### Town Pump Proposed Eastern Site Access

The proposed eastern site access location for the Town Pump site development project presents concerns in relation to the Frenchtown Frontage Road (S-574) intersections with Demer Street and Belker Lane. The access spacing does not allow for the development of auxiliary turn lanes to serve any of the intersections, including the proposed site access according to design criteria included in the MDT *Traffic Engineering Manual* without allowing for design exceptions. It is recommended that the eastern site access for the proposed Town Pump site development project be relocated to align with Demer Street.

### Frenchtown Frontage Road (S-574) & Demer Street Intersection

#### *Two-Way Stop Control (TWSC) Analyses*

As a check, two-way stop-controlled intersection analyses were performed for the intersection of the Frenchtown Frontage Road (S-574) with the revised access location. Options were evaluated for having either the east-west or north-south movements as the major street. Poor traffic operations were shown under both the alternatives; therefore, TWSC was not considered viable for the intersection.

#### *AWSC Warrant & Operational Analyses*

AWSC warrant criteria were evaluated for the intersection of the Frenchtown Frontage Road (S-574) and Demer Street for estimated 2028 traffic volumes with the revised access location, finding that minimum warrant criteria may potentially be satisfied based the eighth highest hourly volume. An operational analysis check noted adverse impacts that may result in vehicle queues extending through the Demer Street intersections to the south. Therefore, AWSC was not deemed a viable option for mitigating estimated 2028 total traffic conditions with the addition of traffic generated by the proposed Town Pump site development.

#### *Signal Warrant Analysis*

A preliminary signal warrant analysis was performed for the intersection of the Frenchtown Frontage Road (S-574) and Demer Street based on forecast 2028 total traffic volumes for meeting minimum traffic signal warrant criteria for Warrant #1: Eight Hour Vehicular Volume and Warrant #2: Four-Hour Vehicular Volume using the Oregon Department of Transportation procedure based on delineations in the MUTCD. This evaluation found that installation of a traffic signal at the intersection is not projected to be warranted.

#### *Roundabout Control Alternative*

Installation of roundabout control at the intersection of the Frenchtown Frontage Road (S-574) and Demer Street plus the relocated site access for the proposed Town Pump site development project was evaluated and found to operate satisfactorily with LOS A or better projected for each of the approaches at the intersection during each of the weekday peak analysis periods evaluated with this study. The analyses were based on installation of a single-lane roundabout, which is conceptually shown in Figure 37 on page 72. Key features for consideration include the following:

- Installation of roundabout control may potentially provide additional safety benefits through the reduction of the crash experience rate at the intersection.
- Consideration of pedestrian and bicyclist accommodation must be incorporated with the installation of roundabout control, particularly with respect to the A.J. Hoyt Memorial Trail. Existing topography at the intersection may suggest consideration for installation of a pedestrian / bicyclist underpass for the A.J. Hoyt Memorial Trail, depending on intersection layout and grading.

- Installation of roundabout control will require additional design considerations for coordination with the intersection of Demer Street and the Interstate 90 (I-90) westbound ramps, the Frenchtown Frontage Road (S-574) and Belker Lane intersection, and embankment fills.
- Construction would need to be coordinated to allow for continued traffic flow while also limiting school and business operations.

#### Town Pump Proposed Western Site Access

Auxiliary turn lane analyses were performed for the intersection of the Frenchtown Frontage Road (S-574) and the western access for the proposed Town Pump site development project with redistributed traffic volumes resulting from relocating the eastern proposed site access to align with Demer Street. Using guidelines delineated in the MDT *Traffic Engineering Manual*, the intersection did not warrant the installation of auxiliary left- or right-turn lanes.

The western proposed site access to the Town Pump site development project should be designed to accommodate the appropriate design vehicles, include considerations of the needs for non-motorized users, and provide adequate intersection sight distance in accordance with MDT and AASHTO standards.

### **Alternative Modes of Transportation**

#### *Pedestrians & Bicyclists*

Future connectivity to the existing A.J. Hoyt Memorial Trail network is recommended to be installed with the proposed Town Pump site development project to accommodate non-motorized users for the site. Sidewalks, bicycle facilities, and other non-motorized user elements should be installed per MDT and Missoula County standards.

#### *Transit Service*

No specific transit-oriented improvements are included with the proposed Town Pump site development project.

### **Improvements & Traffic Control Guidance**

Included recommendations for the proposed Town Pump site development project should be installed according to Missoula County requirements (as applicable), the most current editions of the *Montana Public Works Standard Specifications*, MDT requirements, and the *Manual on Uniform Traffic Control Devices*.

## Proposed Study Area Development

### Proposed Development Plan

The proposed development of the Town Pump site to be located in Frenchtown, Missoula County, Montana on the north side of Interstate 90 at the Frenchtown interchange (Exit 89) on portions of Parcel 2A of Certificate of Survey No. 7046 and Deed 2581 situated in the northeast quarter of Section 34 and the northwest quarter of Section 35 in Township 15 North, Range 21 West of the Principal Meridian of Montana (NE ¼ of Sec. 34 & NW ¼ of Sec. 35, T15N, R21W, P.M.M.). Included elements of the proposed project that have been evaluated were based on information described in a letter from Joey Staszczuk, PE, PTOE, RSP1 of Sanbell to Mr. Dan Sampson of Town Pump, Inc. dated October 20, 2025, that was obtained from the Montana Department of Transportation (MDT) via a public information request. Additional project information was obtained through an article written by Cynthia Carranza of KPAX entitled “Potential Town Pump store in Frenchtown raises concerns among residents” dated June 20, 2025. The proposed Town Pump site development project, as described, consists of a convenience store and gas station that also includes a casino more particularly described as follows:

#### Convenience Store with Casino

As denoted in the Cynthia Carranza article, Town Pump had not finalized the design of the site development project as of June 20, 2025. The building shown in figures in the Sanbell letter scales to approximately 34,575 square feet (ft<sup>2</sup>) that is inclusive of a 2,200 ft<sup>2</sup> casino.

#### Gas Station

Evaluated based on 16 fueling stations that would accommodate 21 vehicle fueling positions.

The project is bounded by the Frenchtown Frontage Road (Montana State Secondary Highway 574) to the south, Belker Lane to the east, and a mix of agricultural and residential properties to the west and north. The surrounding area is also a mix of agricultural, residential, and commercial properties. Access to the development is proposed via two approaches to the Frenchtown Frontage Road (S-574) – one on either side of its intersection with Demer Street. The subject property location and study area are shown in Figure 1 on the following page and the site layout, as included in the Sanbell letter, is shown in Figure 2 on page 14.

### Traffic Impact Analysis Horizon

The proposed Town Pump site development project has been evaluated as having full utilization by the year 2028 for this study, anticipating completion of permitting, construction, and full utilization.

### Transportation Elements of the Proposed Development

#### Trip Generation

Estimated trip generation for the proposed development was derived utilizing rates published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual, 12th Edition* published in August 2025. The rates were based on the convenience store / gas station land use (ITE Land Use Code 945) with a general urban / suburban setting or location and a gross floor area greater than 10,000 ft<sup>2</sup>. The proposed number of vehicle fueling positions was utilized as the independent variable. The casino use was considered to be ancillary to the convenience store / gas station use for this study based on general observations of similar sites throughout Montana. In support of this consideration, the ITE *Trip Generation Manual, 12th Edition* notes that for Land Use Code 473 – Casino, “All study sites are isolated from other complementary or competitive development. Most of the casinos in the land use are physically connected to a hotel.”



Figure 1: Site Location & Study Area



Figure 2: Site Layout

Based on the ITE trip generation rates, the proposed project is estimated to generate a total of 3,090 average weekday vehicle trips; 236 vehicle trips during weekday, AM peak hour; 198 vehicle trips during the weekday, school PM peak hour; and 256 vehicle trips during the weekday, PM peak hour. Although there may be some pedestrian and/or bicyclist related trips associated with the proposed Town Pump site development project due to its location in relation to activity centers near the study area, they are not anticipated to comprise a significant number of trips with the proposed development.

Pass-by trips are projected to represent a substantial portion of site traffic. Pass-by trips are those that result from traffic passing on an adjacent roadway that enters the site and then exits, resuming travel in the same direction. Pass-by trips are anticipated to account for roughly 75% of site traffic. Pass-by trip estimates were obtained from the ITE *Trip Generation Manual, 12th Edition* for the convenience store / gas station land use. A weighted average of weekday, AM and PM peak hour pass-by trips was utilized in estimating weekday pass-by trip composition. The estimated vehicular trip generation for the proposed development is presented in Table 1 below and is provided in Appendix C.

**Table 1: Estimated Project Trip Generation**

Land Use	ITE Code	Quantity	Units	Estimated Vehicle Trip Ends		
				Enter	Exit	Total
<b>Total Estimated Vehicle Trip Ends</b>						
<i>Convenience Store / Gas Station with Casino</i>	945	21	Vehicle Fueling Positions			
		Estimated Average Weekday Trip Ends		1,545	1,545	3,090
		Estimated Weekday, AM Peak Hour of Adjacent Street Traffic One Hour Between 7:00 – 9:00 a.m. Trip Ends		120	116	236
		Estimated Weekday, School PM Peak Hour of Adjacent Street Traffic One Hour Between 2:00 – 4:00 p.m. Trip Ends		99	99	198
		Estimated Weekday, PM Peak Hour of Adjacent Street Traffic One Hour Between 4:00 – 6:00 p.m. Trip Ends		128	128	256
<b>Total Estimated Pass-By Vehicle Trip Ends</b>						
		Estimated Average Weekday Trip Ends		820	820	1,640
		Estimated Weekday, AM Peak Hour of Adjacent Street Traffic One Hour Between 7:00 – 9:00 a.m. Trip Ends		92	88	180
		Estimated Weekday, School PM Peak Hour of Adjacent Street Traffic One Hour Between 2:00 – 4:00 p.m. Trip Ends		74	74	148
		Estimated Weekday, PM Peak Hour of Adjacent Street Traffic One Hour Between 4:00 – 6:00 p.m. Trip Ends		96	96	192
<b>Net New Vehicle Trip Ends for the Proposed Town Pump Site Development Project</b>						
		Estimated Average Weekday Trip Ends		725	725	1,450
		Estimated Weekday, AM Peak Hour of Adjacent Street Traffic One Hour Between 7:00 – 9:00 a.m. Trip Ends		28	28	56
		Estimated Weekday, School PM Peak Hour of Adjacent Street Traffic One Hour Between 2:00 – 4:00 p.m. Trip Ends		25	25	50
		Estimated Weekday, PM Peak Hour of Adjacent Street Traffic One Hour Between 4:00 – 6:00 p.m. Trip Ends		32	32	64

## Trip Distribution

Trip distribution is the process of identifying the probable traffic routes that development related traffic will utilize based on likely trip origins and destinations given the characteristics of the proposed development and the surrounding area. Various methods are available for estimating trip distribution, including the analogy, trip distribution model, area of influence, origin-destination (O-D), and surrogate data methods. This study utilizes a combination of the analogy method that bases the trip distribution on existing travel patterns in the area, and the area of influence method that considers the likely area within which most of the trips are expected to start or end, accounting for practical travel times as well as the location of competing developments. One particular note is the location of existing competing sites at the Interstate 90 and United States Highway 93 (US 93) interchange located roughly seven miles to the east near Missoula plus the existing Frenchie's Super Stop on the south side of the intersection at the southeast corner of the intersection of Beckwith Street and Demer Street. Figure 3 on the following page shows the estimated trip distribution for the proposed Town Pump site development project.

## Traffic Assignment

The assignment of development traffic provides the necessary information to determine the level of site related impacts to the area roadway system and intersections. It involves determining the volume of traffic and its movements within the transportation system. Trip assignment must also consider route choice, how the existing transportation system functions, and travel times to and from the development. Reviewing the Sanbell letter, it did not appear that pass-by trips generated by the site had been incorporated with the site traffic assignment. This study has incorporated the forecast pass-by trip generation and is shown both separately and combined with the included site traffic assignment figures. Pass-by trips are anticipated to originate from Interstate 90, noting the location of the proposed Town Pump site development project. The resulting traffic assignment within the study area for the proposed development is shown in the following figures and on the noted pages:

- Figure 4: Estimated Net New Site Vehicle Traffic Assignment Beckwith Street & Ducharme Street Intersections – [Page 18](#)
- Figure 5: Estimated Net New Site Vehicle Traffic Assignment Demer Street (S-263) Intersections – [Page 19](#)
- Figure 6: Estimated Net New Site Vehicle Traffic Assignment Frenchtown Frontage Road (S-574) Intersections – [Page 20](#)
- Figure 7: Estimated Pass-By Site Vehicle Traffic Assignment Demer Street (S-263) Intersections – [Page 21](#)
- Figure 8: Estimated Pass-By Site Vehicle Traffic Assignment Frenchtown Frontage Road (S-574) Intersections – [Page 22](#)
- Figure 9: Estimated Total Site Vehicle Traffic Assignment Beckwith Street & Ducharme Street Intersections – [Page 23](#)
- Figure 10: Estimated Total Site Vehicle Traffic Assignment Demer Street (S-263) Intersections – [Page 24](#)
- Figure 11: Estimated Total Site Vehicle Traffic Assignment Frenchtown Frontage Road (S-574) Intersections – [Page 25](#)



Figure 3: Estimated Primary Trip Distribution

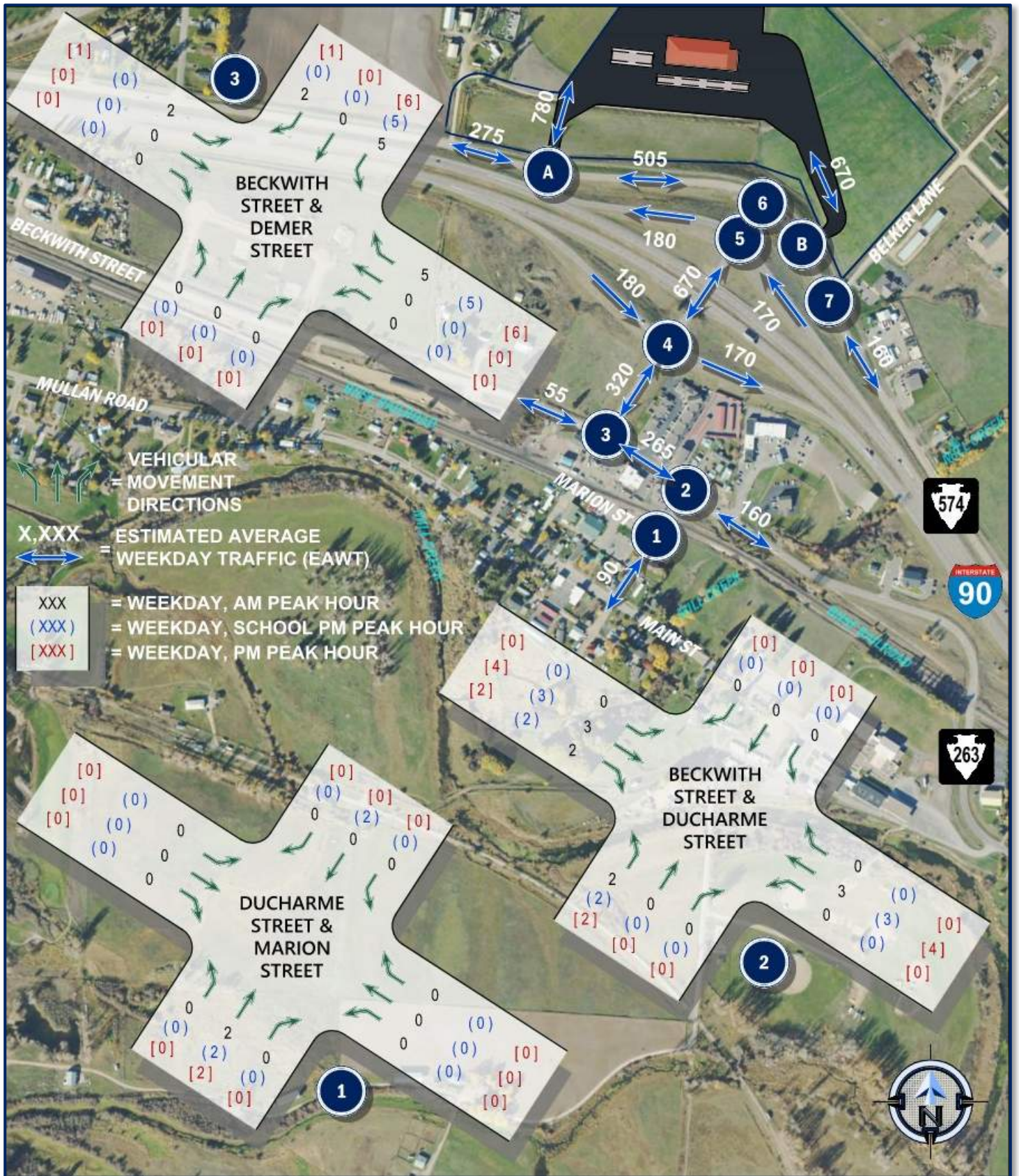


Figure 4: Estimated Net New Site Vehicle Traffic Assignment | Beckwith Street & Ducharme Street Intersections

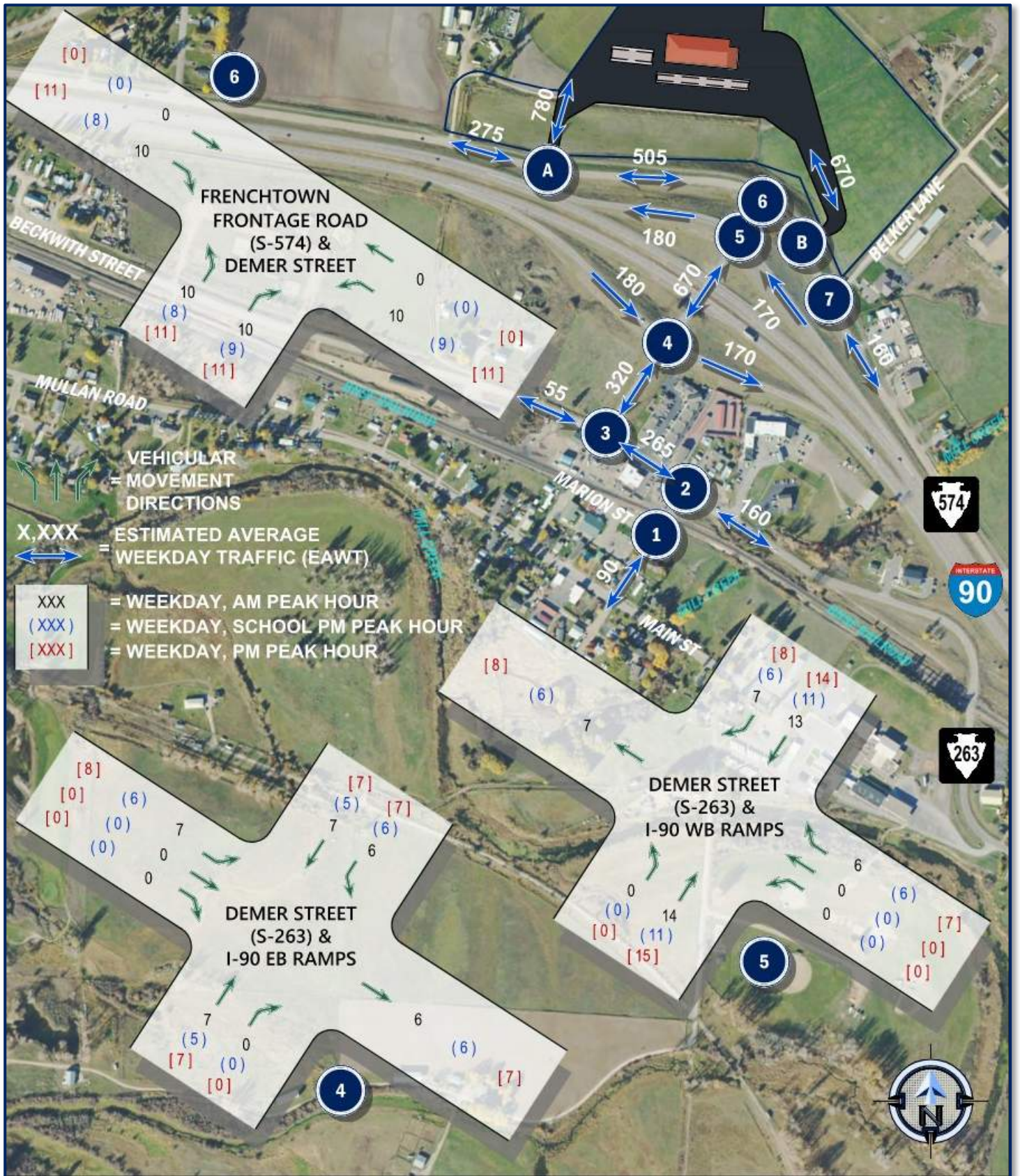


Figure 5: Estimated Net New Site Vehicle Traffic Assignment | Demer Street (S-263) Intersections

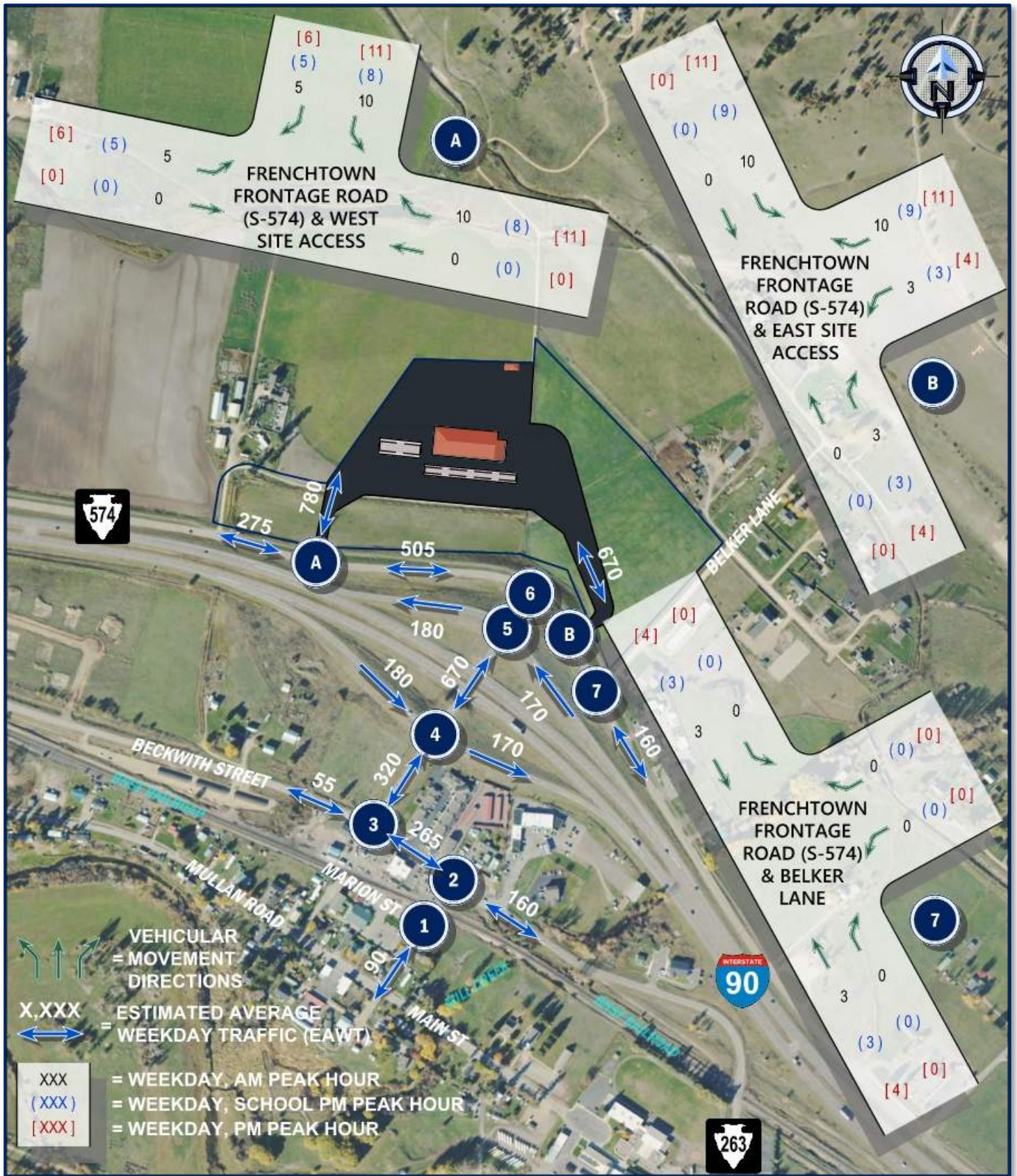


Figure 6: Estimated Net New Site Vehicle Traffic Assignment | Frenchtown Frontage Road (S-574) Intersections

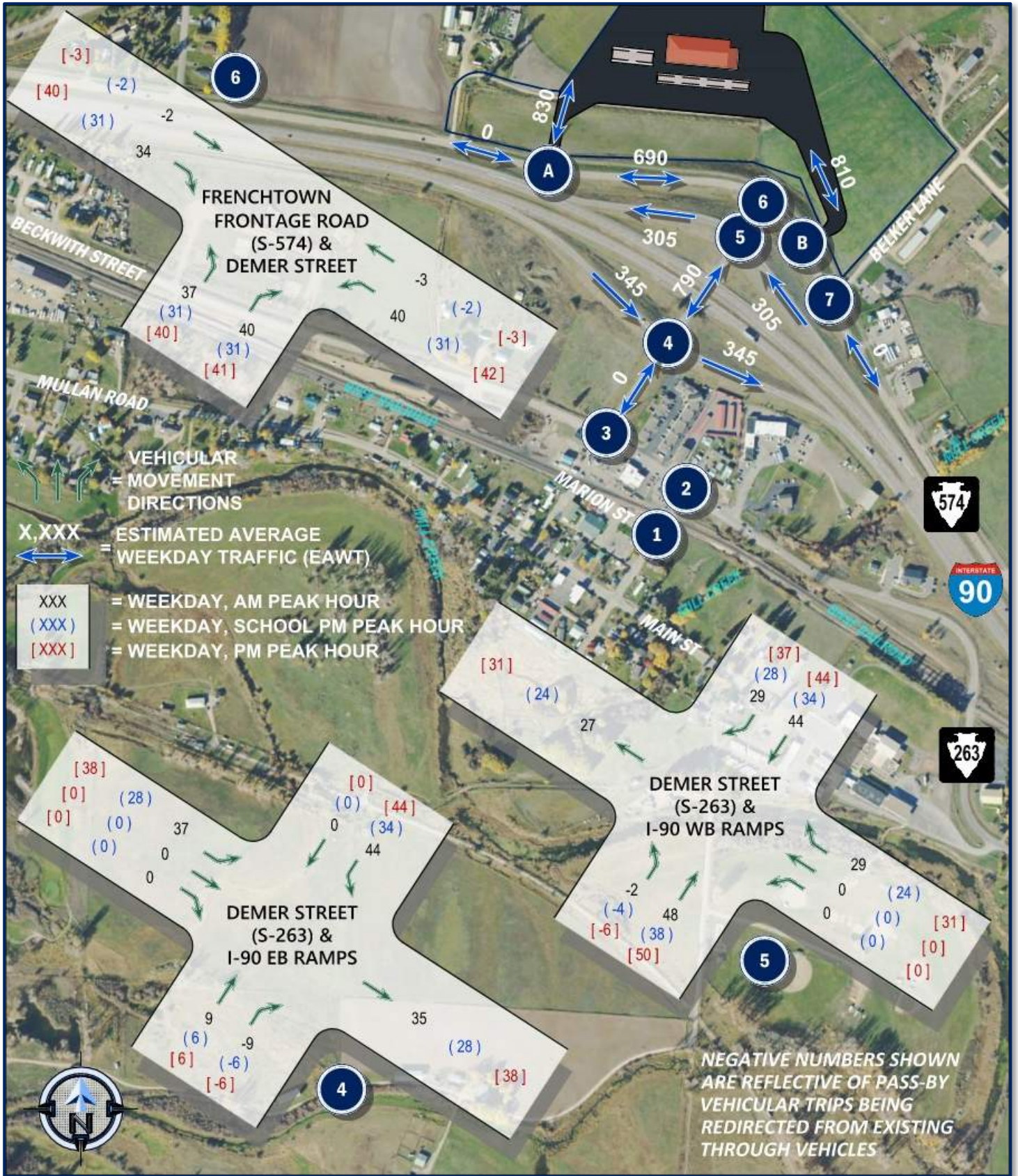


Figure 7: Estimated Pass-By Site Vehicle Traffic Assignment | Demer Street (S-263) Intersections

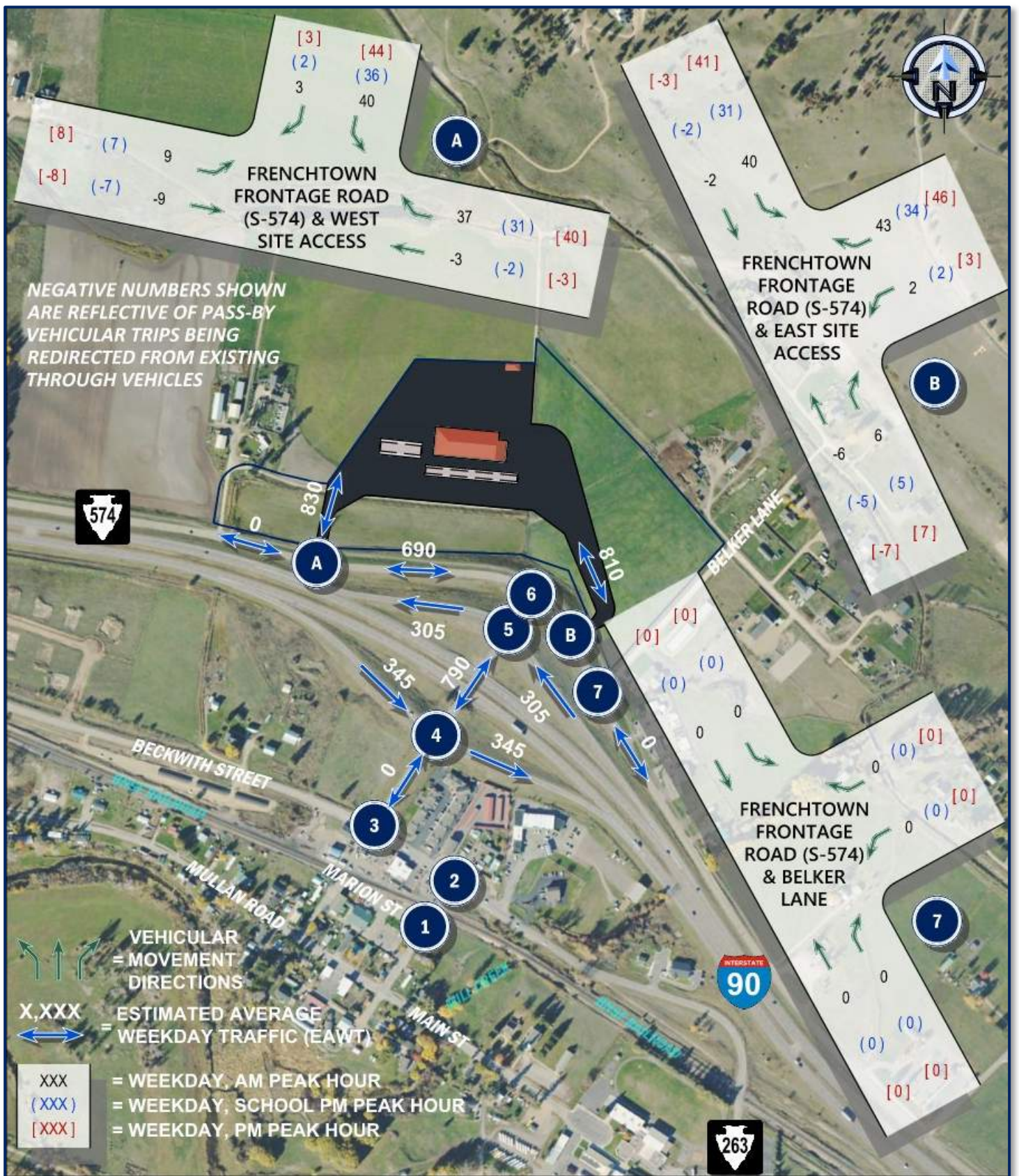


Figure 8: Estimated Pass-By Site Vehicle Traffic Assignment | Frenchtown Frontage Road (S-574) Intersections

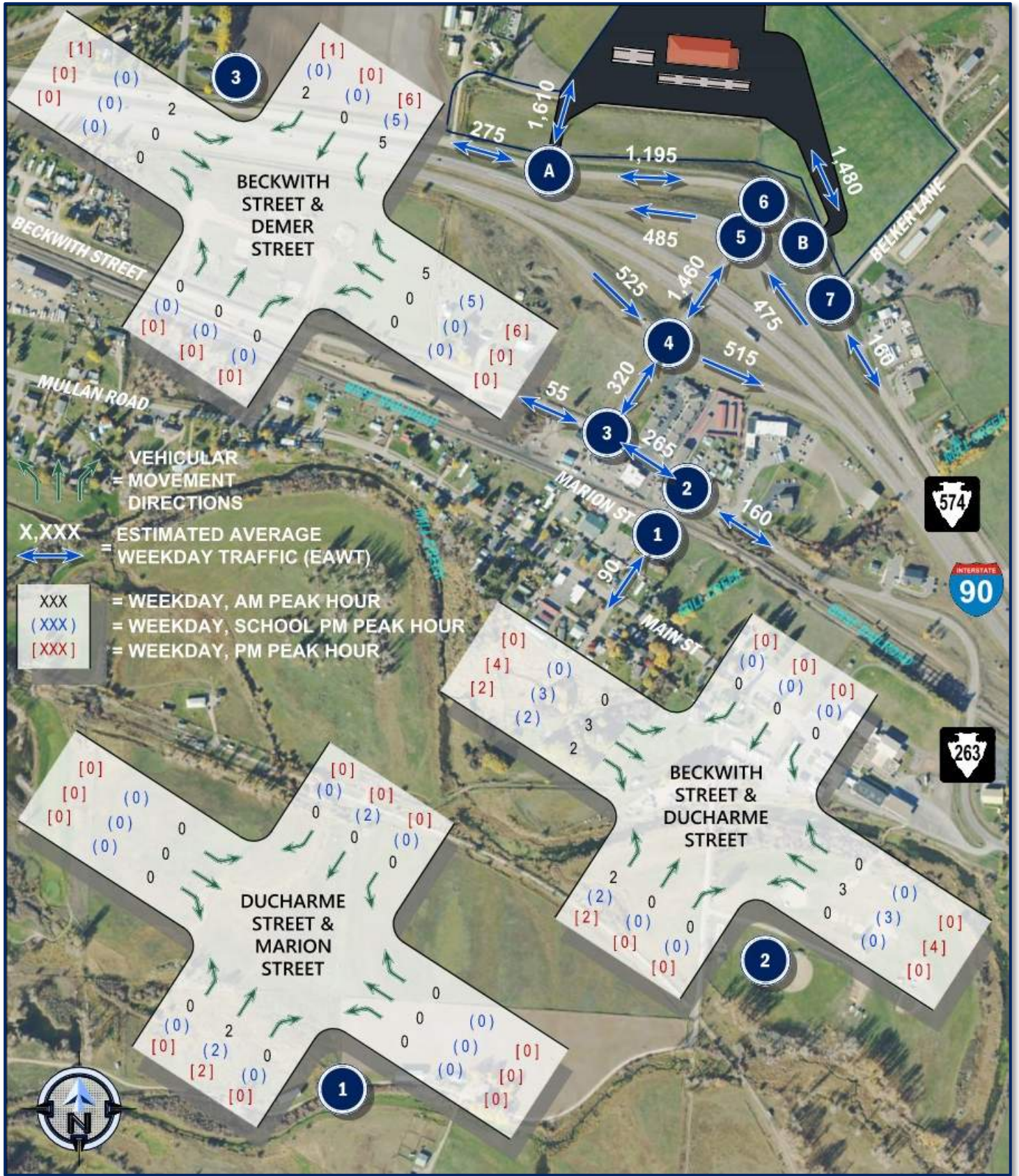


Figure 9: Estimated Total Site Vehicle Traffic Assignment | Beckwith Street & Ducharme Street Intersections

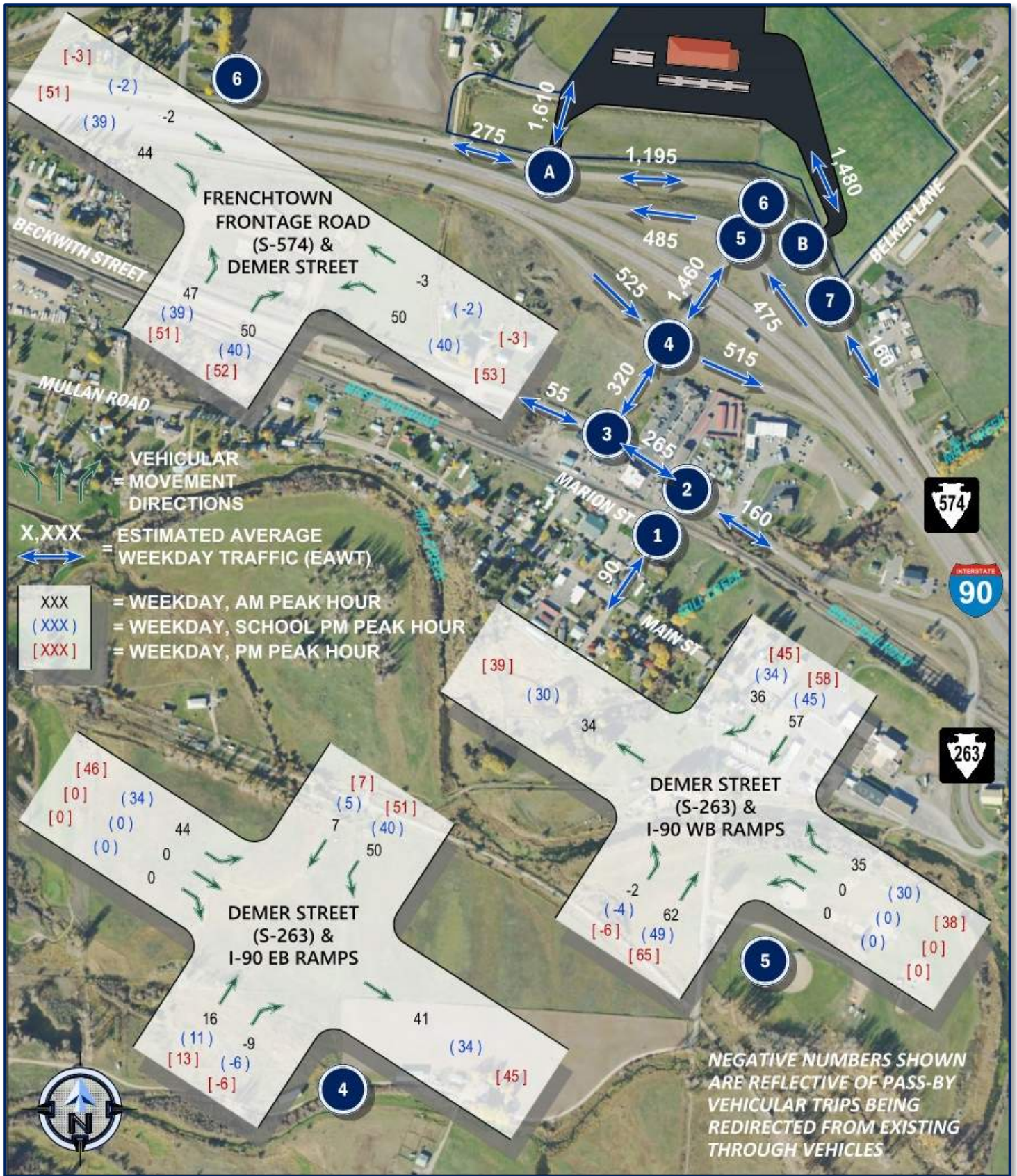


Figure 10: Estimated Total Site Vehicle Traffic Assignment | Demer Street (S-263) Intersections

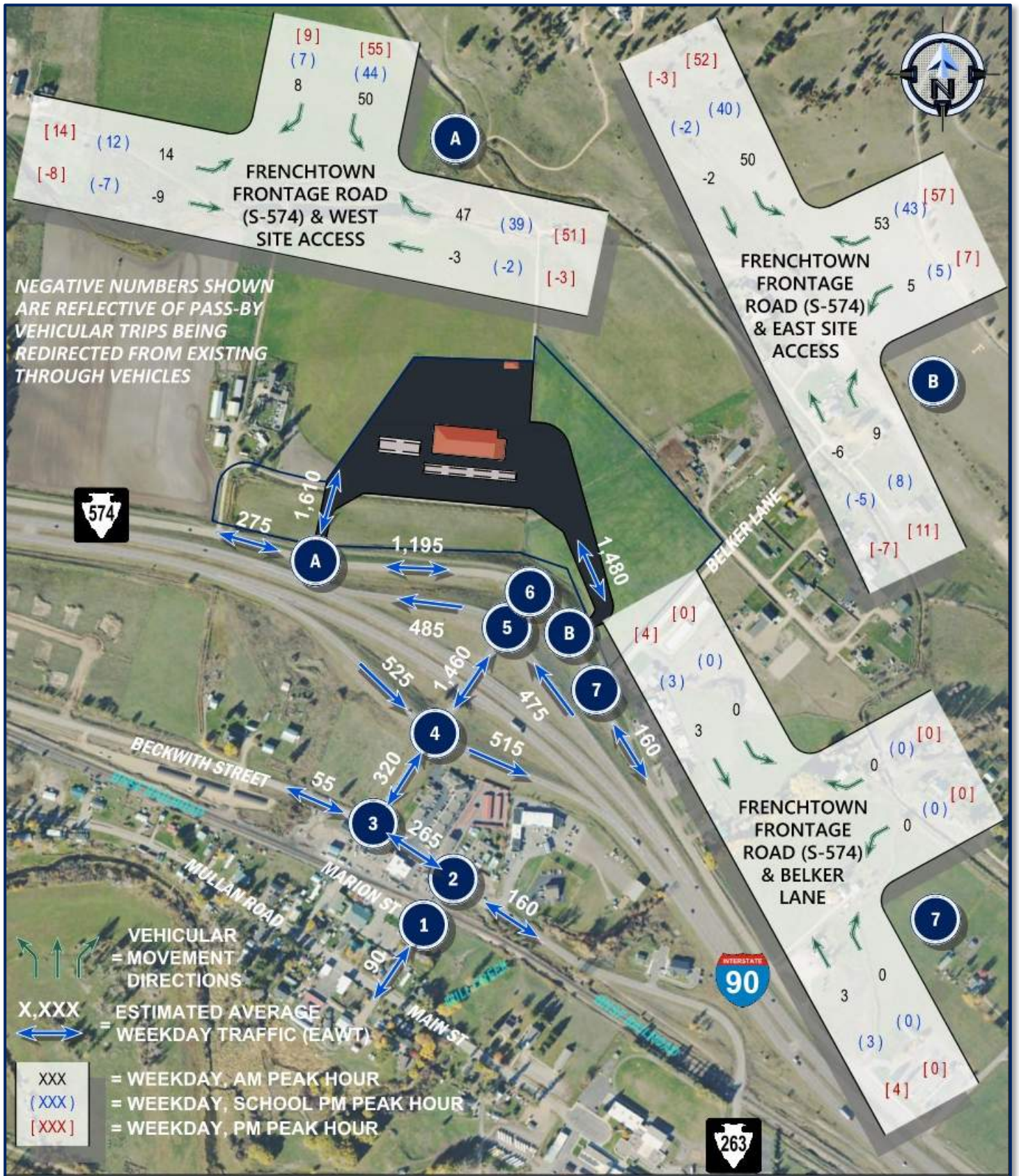


Figure 11: Estimated Total Site Vehicle Traffic Assignment | Frenchtown Frontage Road (S-574) Intersections

## Alternative Modes of Transportation

No off-site facilities for pedestrians and bicyclists were shown in the figures included as part of the Sanbell traffic analysis and site accessibility study for the proposed Town Pump site development project. Limited sidewalks are anticipated to be included within the site around the perimeter of the building. No specific transit-oriented improvements are known to be included with the proposed development.

## Existing Conditions

### Study Area Land Use

As noted previously, the proposed development of the Town Pump site is to be located in Frenchtown, Missoula County, Montana on the north side of Interstate 90 at the Frenchtown interchange (Exit 89) on portions of Parcel 2A of Certificate of Survey No. 7046 and Deed 2581. The project is bounded by the Frenchtown Frontage Road (Montana State Secondary Highway 574) to the south, Belker Lane to the east, and a mix of agricultural and residential properties to the west and north. The surrounding area is also a mix of agricultural, residential, and commercial properties. The surrounding area can be seen in the aerial imagery shown in Figure 2 on page 14.

### Transportation Network

#### Study Roadway – Frenchtown Frontage Road (S-574)

The Frenchtown Frontage Road is a Montana State Secondary Highway (S-574, C000574) and is functionally classified as a major collector by MDT. The roadway links to the Town of Huson approximately four miles to the west of Frenchtown, continuing westerly another 1.25 miles to its transition to 6 Mile Road. East of the Frenchtown interchange on Interstate 90 (I-90), the Frenchtown Frontage Road travels southeasterly towards Missoula for approximately 5.25 miles to its transition to Waldo Williams Road.




















Within the study area, the Frenchtown Frontage Road (S-574) has a single travel lane in each direction. The posted speed limit is 50 miles per hour (50 mph). Per MDT data, the roadway has an asphalt paved surface width of approximately 26 feet, inclusive of 12-foot-wide travel lanes in each direction. Land uses along the roadway within the study area are primarily commercial, agricultural, and some residential properties as well as the Frenchtown High School and Jr. High School to the west of the proposed Town Pump site development project.

#### Study Intersections

The following existing intersections were evaluated as a part of this study in consideration of the characteristics of the proposed Town Pump site development project as well as the surrounding transportation network.

- Ducharme Street (C230274) & Marion Street (C231377)
- Beckwith Street (S-263, C000263) & Ducharme Street (C230274)
- Beckwith Street (S-263, C000263 | C032164) & Demer Street (S-263, C000263)
- Demer Street (S-263, C000263) & the I-90 Eastbound Ramps (C228975 | C228974)
- Demer Street (C032165) & the I-90 Westbound Ramps (C229176 | C229175)
- Frenchtown Frontage Road (S-574, C000574) & Demer Street (C032165)
- Frenchtown Frontage Road (S-574, C000574) & Belker Lane (C231897)

**Table 2: Study Area Intersections Existing Characteristics**

Intersection		Traffic Control	Approach	Lane Configuration	Bike Lane	Pedestrian Accommodations	
ID	Roadways					Crossing	Marked Crosswalk
1	Ducharme Street & Marion Street / Private Driveway  <i>The center of the intersection is located approximately 110 feet south of the centerline of the existing at-grade crossing of the BNSF railroad tracks.</i>	 2-Way (EB & WB) <i>WB Approach is not Signed but Operates as Stop-Controlled</i>	EB				
			WB				
			NB				
			SB				
2	Beckwith Street (S-263) & Ducharme Street / Private Driveway  <i>The center of the intersection is located approximately 155 feet north of the centerline of the existing at-grade crossing of the BNSF railroad tracks.</i>	 2-Way (NB & SB) <i>SB Approach is not Signed but Operates as Stop-Controlled</i>	EB				
			WB				
			NB				
			SB				
3	Beckwith Street (S-263) & Demer Street (S-263) / Private Driveway	 2-Way (NB & SB) <i>NB Approach is not Signed but Operates as Stop-Controlled</i>	EB				
			WB				
			NB				
			SB				
4	Demer Street (S-263) & Interstate 90 (I-90) Eastbound Ramps	 1-Way (EB)	EB				
			NB				
			SB				

EB = Eastbound; WB = Westbound; NB = Northbound; and SB = Southbound

**Table 2 (continued): Study Area Intersections Existing Characteristics**

Intersection		Traffic Control	Approach	Lane Configuration	Bike Lane	Pedestrian Accommodations	
ID	Roadways					Crossing	Marked Crosswalk
5	Demer Street & Interstate 90 (I-90) Westbound Ramps	 1-Way (WB)	WB				
			NB				
			SB				
6	Frenchtown Frontage Road (S-574) & Demer Street	 1-Way (NB)	EB				
			WB				
			NB				
7	Frenchtown Frontage Road (S-574) & Belker Lane	 1-Way (SB)	EB			 	+/-50 feet north of intersection
			WB				
			SB				

EB = Eastbound; WB = Westbound; NB = Northbound; and SB = Southbound

**Alternative Modes of Transportation**

The A.J. Hoyt Memorial Trail is located adjacent to the proposed Town Pump site development project on the north side of the Frenchtown Frontage Road (S-574). It is a paved, multi-use trail that serves as a flat, accessible path for walking, biking (including e-bikes), running, and other non-motorized activities. It is approximately 11 miles long, linking near Huson on the north side of Interstate 90 (I-90) to just outside Missoula at the intersection of Waldo Williams Road (continuation of the Frenchtown Frontage Road) and United States Highway 93 (US 93). It passes by Frenchtown Pond State Park as well as Frenchtown High School and Jr. High School.

Sidewalks and pathways are generally not available for pedestrians and cyclists within the remainder of the study area nor are there any additional dedicated bicycle facilities. There is not currently a public bus system within the community of Frenchtown.

## Traffic Volumes

Current vehicle, pedestrian, and bicycle counts were utilized for the study area intersections based on averages taken for two weekdays at each location on January 7 and 8, 2026 (Wednesday and Thursday). With the exception of the intersection of the Frenchtown Frontage Road (S-574) and Belker Lane, each of the intersection counts were completed for a 14-hour period – between 6:00 a.m. and 8:00 p.m. (PM peak period). The counts for the intersection of the Frenchtown Frontage Road (S-574) and Belker Lane were completed for three 2-hour periods – between 7:00 and 9:00 a.m. (AM peak period), 2:00 and 4:00 p.m. (school PM peak period), and 4:00 and 6:00 p.m. (PM peak period). The results of the traffic counts showed average weekday peak hours occurring between 7:15 and 8:15 a.m. (AM), 3:00 and 4:00 p.m. (school PM), and 4:45 and 5:45 p.m. (PM).

The count data were adjusted to account for seasonal or daily variations that may occur throughout the year from when the counts were taken. Seasonal and daily adjustment factors available through MDT were utilized with the average count data. Intersection counts were balanced to account for any human or rounding errors. Summaries of the count data are provided in the following figures on the noted pages as well as in Appendix B.

- Figure 12: 2026 Existing Traffic Volumes | Beckwith Street & Ducharme Street Intersections – [Page 30](#)
- Figure 13: 2026 Existing Traffic Volumes | Demer Street (S-263) Intersections – [Page 31](#)
- Figure 14: 2026 Existing Traffic Volumes | Frenchtown Frontage Road (S-574) & Belker Lane – [Page 32](#)

## Safety

Traffic safety conditions were documented by reviewing the crash history of the study area intersections using data provided from the MDT crash database. Public crash information for the period 2020 through 2024, the most recent five years available, was reviewed. MDT reported thirty-four (34) crashes within the evaluated study area over the five-year period, which are shown in Figure 15 on page 33. Of those, twenty-three (23) were identified at the intersections evaluated with this study that are summarized in Table 3 on page 34.

To assess crash experience at the study area intersections and ascertain the potential need for further evaluation, the rates of crashes were calculated for each of the study area intersections. These were also compared to predicted crash rates determined from preliminary, high-level analyses utilizing *Highway Safety Software Version 8.5* (HSS) developed and maintained by the McTrans Center at the University of Florida. The methodology used to evaluate predicted crash experience rates is based on the American Association of State Highway and Transportation Officials (AASHTO) *Highway Safety Manual*. The calculated and comparative predicted crash experience rates are summarized in Table 4 on page 35, and the HSS analyses are included in Appendix D.

## Projected Traffic

An estimate of non-site related traffic growth in the study area is necessary to reflect potential impacts more accurately from the proposed Town Pump site development project through the year 2028. Three primary means are typically used to estimate growth of non-site generated traffic (background traffic growth) – the use of transportation plans or models and the build-up or growth rate methods. This study utilized the growth rate method that involves evaluating the historic traffic growth rates within a study area, assuming that those trends will remain approximately the same and continue in the future.

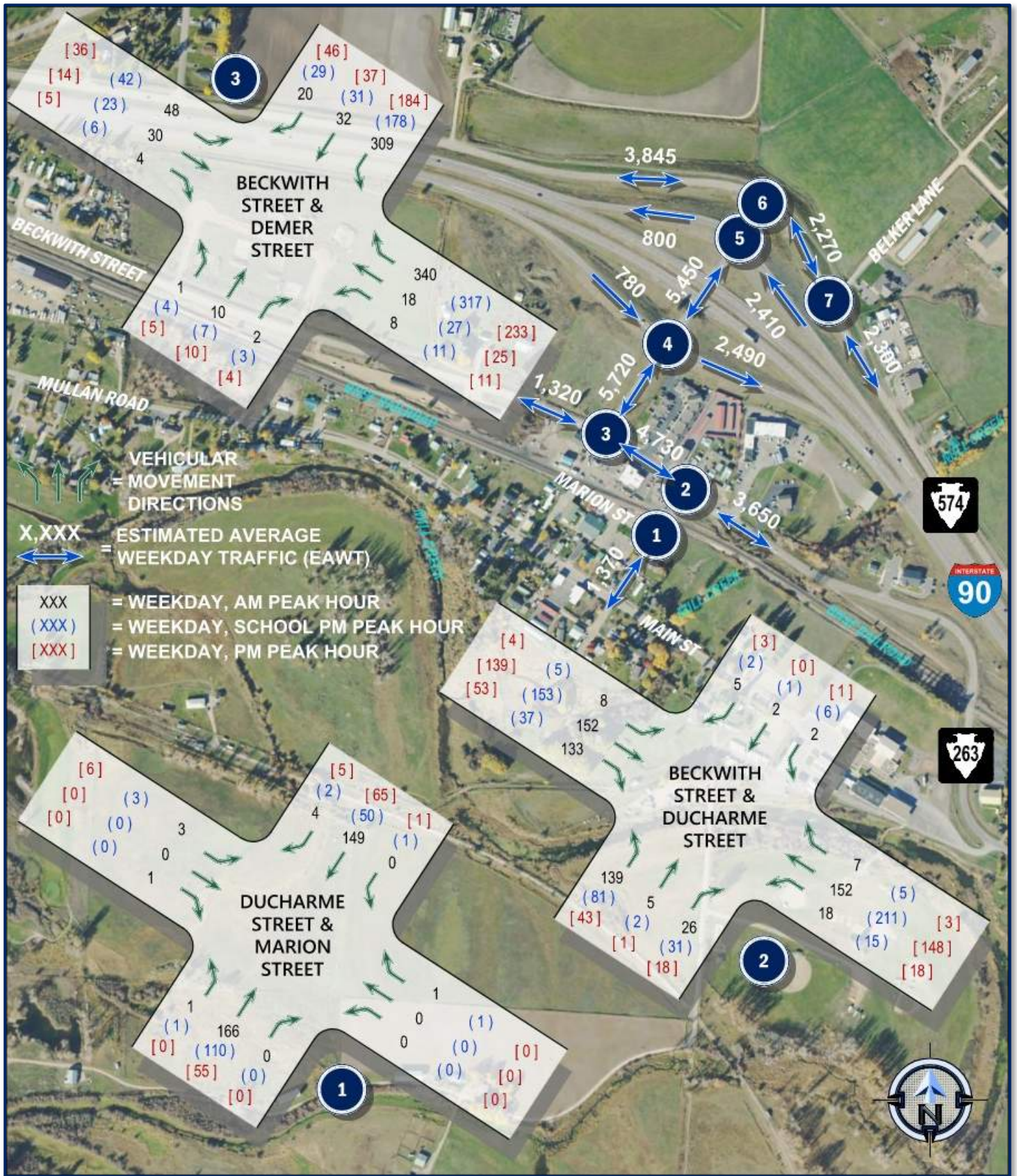


Figure 12: 2026 Existing Traffic Volumes | Beckwith Street & Ducharme Street Intersections

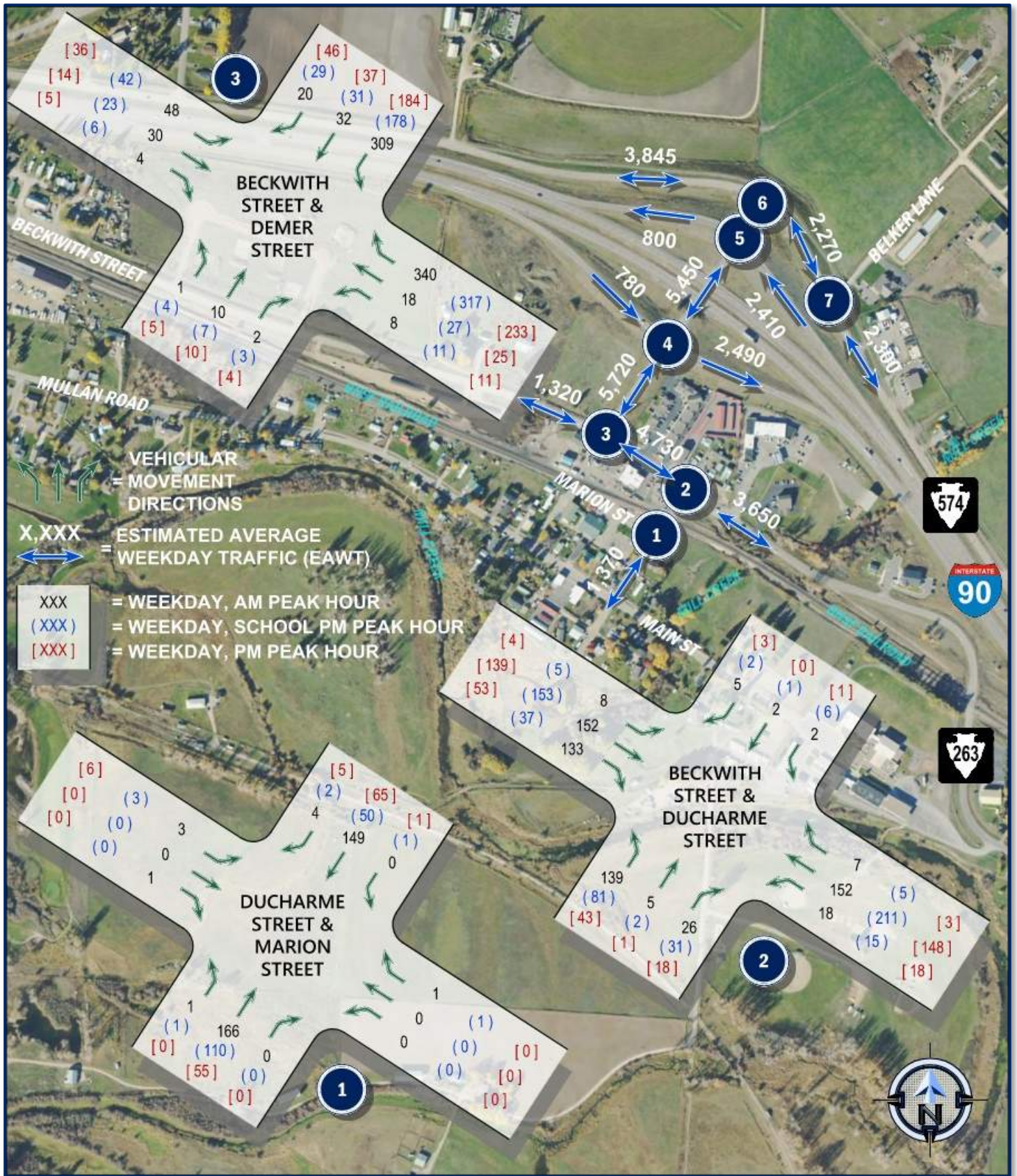


Figure 13: 2026 Existing Traffic Volumes | Demer Street (S-263) Intersections



Figure 14: 2026 Existing Traffic Volumes | Frenchtown Frontage Road (S-574) & Belker Lane

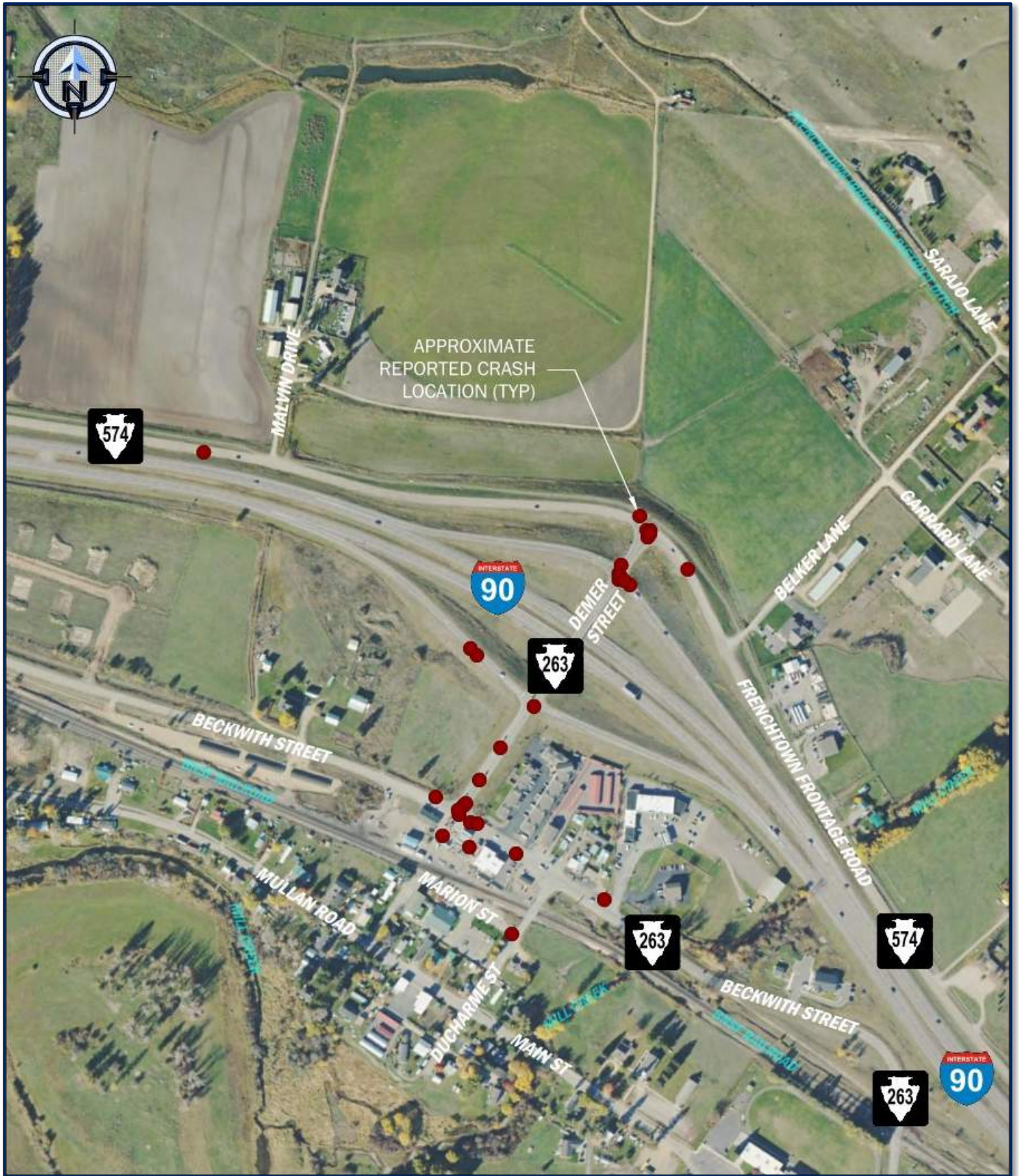


Figure 15: Evaluated Study Area Reported Crash Locations | 2020 – 2024

**Table 3: 2020 – 2024 Study Area Intersections Reported Crash Experience Summary**

Intersection	Reported Crashes																
	2020			2021			2022			2023			2024			5-Year Summary	
	PDO	INJ	FAT	PDO	INJ	FAT	PDO	INJ	FAT	PDO	INJ	FAT	PDO	INJ	FAT	Total	Average
1 Ducharme Street & Marion Street	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.20
2 Beckwith Street (S-263) & Ducharme Street	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
3 Beckwith Street (S-263) & Demer Street (S-263)	0	0	0	2	0	0	2	0	0	0	1	0	2	0	0	7	1.40
4 Demer Street (S-263) & I-90 Eastbound Ramps	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.20
5 Demer Street & I-90 Westbound Ramps	2	0	0	2*	0	0	1*	0	0	0	0	0	1	0	1	7	1.40
6 Frenchtown Frontage Road (S-574) & Demer Street	0	0	0	1	0	0	1	2	0	1	0	0	2	0	0	7	1.40
7 Frenchtown Frontage Road (S-574) & Belker Lane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
<b>Study Area Totals</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>1</b>	<b>23</b>	<b>4.60</b>

PDO = Reported Crashes Involving Property Damage Only  
 INJ = Reported Crashes Involving Injuries  
 FAT = Reported Crashes Involving Fatalities

\*Includes reported crashes that were not included with data provided by the Montana Department of Transportation and assumed as property damage only crashes for study purposes.

**Table 4: Study Area Intersections Reported Crash Experience Rate Summary**

Intersection	2026 Estimated Average Annual Daily Traffic (AADT) Entering Intersection	Reported 5-Year Crash Total (2020 – 2024)	Reported 5-Year Average Crash Rate for Intersection Crashes Per Year (CPY)	HSS Expected Crash Rate for Intersection Crashes Per Year (CPY)	Reported 5-Year Average Crash Rate for Intersection Per Million Entering Vehicles (MEV)	HSS Expected Crash Rate for Intersection Per Million Entering Vehicles (MEV)
1 Ducharme Street & Marion Street	1,545	1	0.20	0.33	0.35	0.57
2 Beckwith Street (S-263) & Ducharme Street	4,905	0	0.00	2.43	0.00	1.21
3 Beckwith Street (S-263) & Demer Street (S-263)	6,335	7	1.40	6.22	0.61	1.59
4 Demer Street (S-263) & I-90 Eastbound Ramps	7,255	1	0.20	1.12	0.08	1.53
5 Demer Street & I-90 Westbound Ramps	6,785	7	1.40	0.92	0.57	1.26
6 Frenchtown Frontage Road (S-574) & Demer Street	5,300	7	1.40	2.58	0.72	0.94
7 Frenchtown Frontage Road (S-574) & Belker Lane	2,645	0	0.00	0.65	0.00	0.62

Estimated growth rate generated traffic volumes were projected for the year 2028 by applying an average annual growth rate (AAGR) to the 2026 traffic volumes. Historical traffic growth trends in the area were evaluated to develop estimates for 2-year AAGR values based on available average annual daily traffic (AADT) from MDT to develop forecasted growth trends through the year 2028. The rates utilized took into account historical averages as well as recent post-2020 (after the COVID-19 pandemic) trends. The AAGRs utilized as a part of this study are summarized Table 5 below and the historical data and analyses are provided in Appendix E.

**Table 5: Estimated Average Annual Growth Rates | 2026 – 2028**

Roadway	Segment	Roadway Segment 2026 – 2028 AAGR
Ducharme Street	South of Beckwith Street (S-263)	1.90%
Beckwith Street (S-263)	East of Ducharme Street	0.40%
Beckwith Street	West of Demer Street (S-263)	1.40%
Demer Street (S-263)	North of Beckwith Street (S-263)	1.00%
Interstate 90 (I-90) Eastbound Off-Ramp	Eastbound, West of Demer Street (S-263)	8.00%
Interstate 90 (I-90) Eastbound On-Ramp	Eastbound, East of Demer Street (S-263)	6.90%
Interstate 90 (I-90) Westbound Off-Ramp	Westbound, East of Demer Street	9.10%
Interstate 90 (I-90) Westbound On-Ramp	Westbound, West of Demer Street	2.40%
Frenchtown Frontage Road (S-574)	West of Demer Street	3.80%
Frenchtown Frontage Road (S-574)	East of Demer Street	4.90%

## Projected Through Traffic Volumes

The estimated 2028 background volumes within the study area that have been used in the analyses are shown in the following figures and on the noted pages:

- Figure 16: Estimated 2028 Background Traffic Volumes  
Beckwith Street & Ducharme Street Intersections – [Page 37](#)
- Figure 17: Estimated 2028 Background Traffic Volumes | Demer Street (S-263) Intersections – [Page 38](#)
- Figure 18: Estimated 2028 Background Traffic Volumes  
Frenchtown Frontage Road (S-574) & Belker Lane – [Page 39](#)

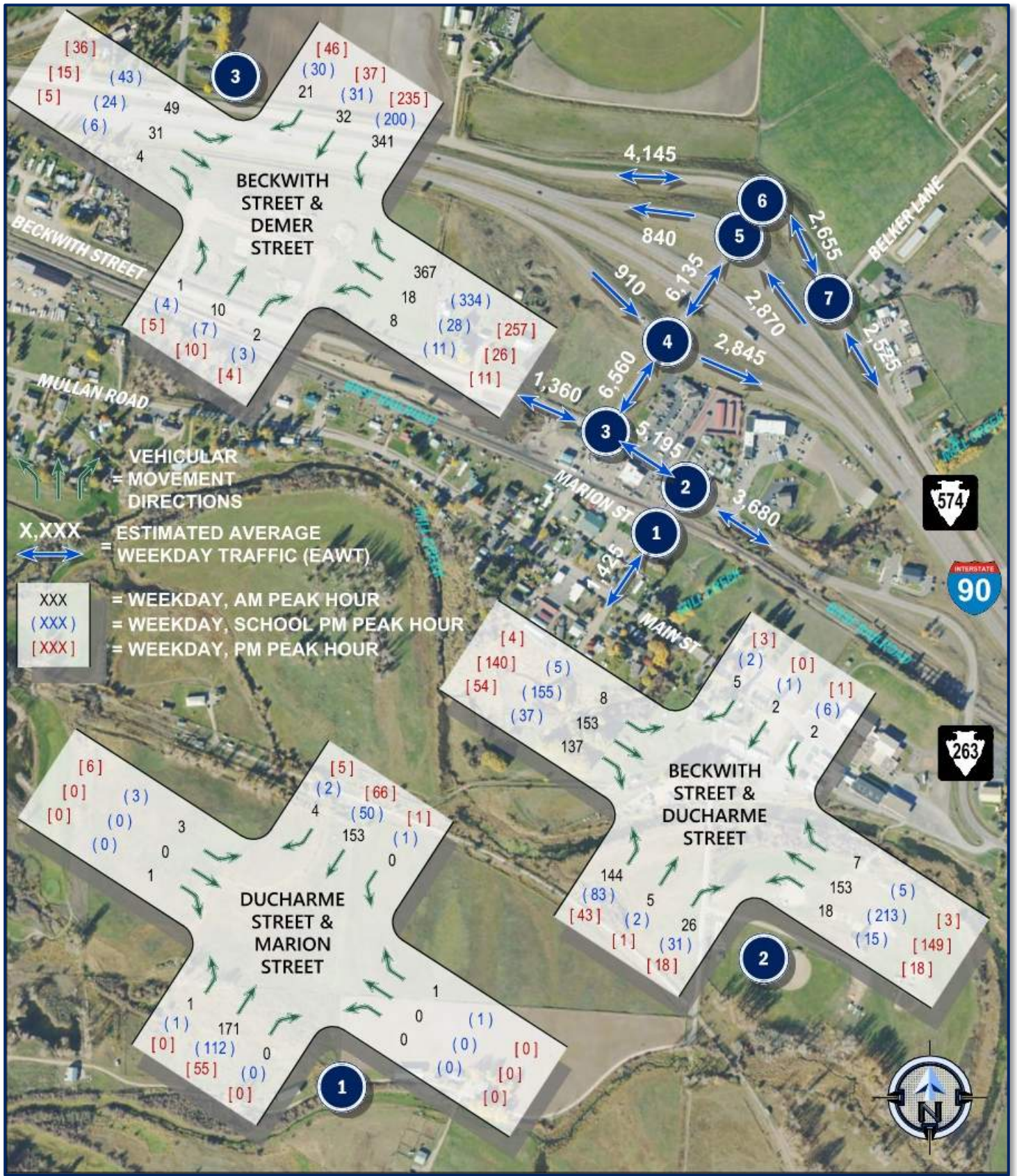


Figure 16: Estimated 2028 Background Traffic Volumes | Beckwith Street & Ducharme Street Intersections

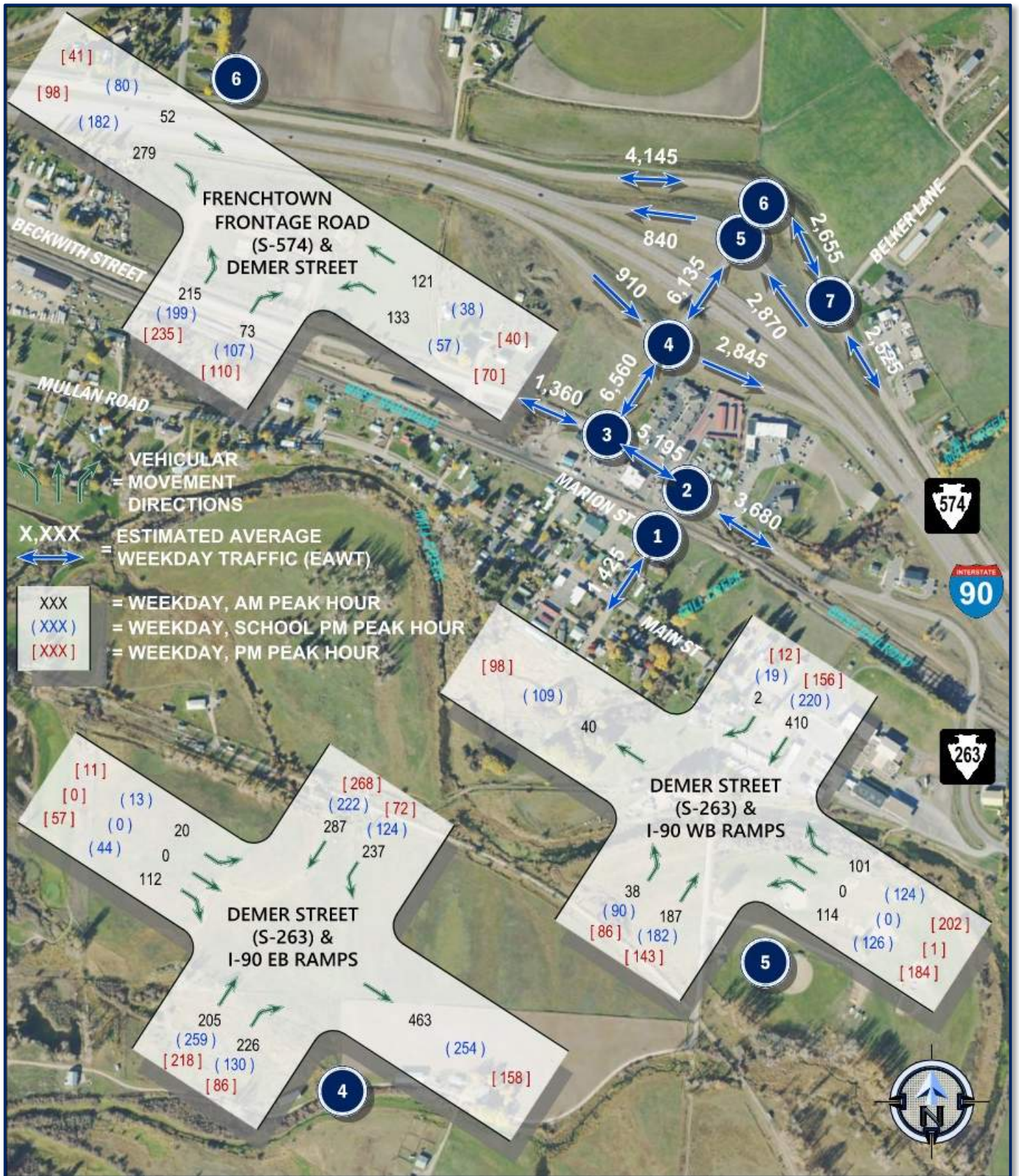


Figure 17: Estimated 2028 Background Traffic Volumes | Demer Street (S-263) Intersections



Figure 18: Estimated 2028 Background Traffic Volumes | Frenchtown Frontage Road (S-574) & Belker Lane

## Total Traffic Projections

Estimated 2028 total traffic volumes include the combination of background traffic volumes with those projected for the proposed Town Pump site development project, which are shown in the following figures and on the noted pages:

- Figure 19: Estimated 2028 Total Traffic Volumes  
Beckwith Street & Ducharme Street Intersections – [Page 41](#)
- Figure 20: Estimated 2028 Total Traffic Volumes | Demer Street (S-263) Intersections – [Page 42](#)
- Figure 21: Estimated 2028 Total Traffic Volumes  
Frenchtown Frontage Road (S-574) Intersections – [Page 43](#)

## Transportation Analyses

### Analysis Scenarios

To identify significant project impacts, the following scenarios for study area intersections were evaluated:

#### [Existing Conditions \(2026\)](#)

Consists of an operational analysis of January 2026 counts collected as part of this study.

#### [No Build Scenario – Estimated 2028 Background Traffic Volumes](#)

Consists of projected, non-site background traffic volumes resulting from applied AAGR values.

#### [Full Utilization Scenario – Estimated 2028 Total Traffic Volumes](#)

Consists of estimated 2028 background traffic volumes in combination with forecast traffic from the proposed Town Pump site development project.

### Analysis Methodologies

#### Operations

The intersection analyses employ methodologies based on empirical research conducted by the Transportation Research Board (TRB) and other authorities, utilizing level of service (LOS) as the performance measure to evaluate the cumulative effects of such things as travel speed, traffic volumes, roadway and intersection capacity, travel delay, and traffic interruptions. Operating conditions are designated as LOS A through LOS F, representing the most to least favorable.

LOS for intersections is determined by control delay, which is defined as the total elapsed time from when a vehicle stops at the end of a queue to the time the vehicle departs from the stop line. The total elapsed time includes the time required for the vehicle to travel from the last-in-queue position to the first-in-queue position, including deceleration of vehicles from the free flow speed to the speed of vehicles in the queue. LOS characteristics based on varying durations of average vehicle delay as listed in the *Highway Capacity Manual, 7th Edition | A Guide for Multimodal Mobility Analysis* (HCM) published by the TRB are summarized in Appendix A.

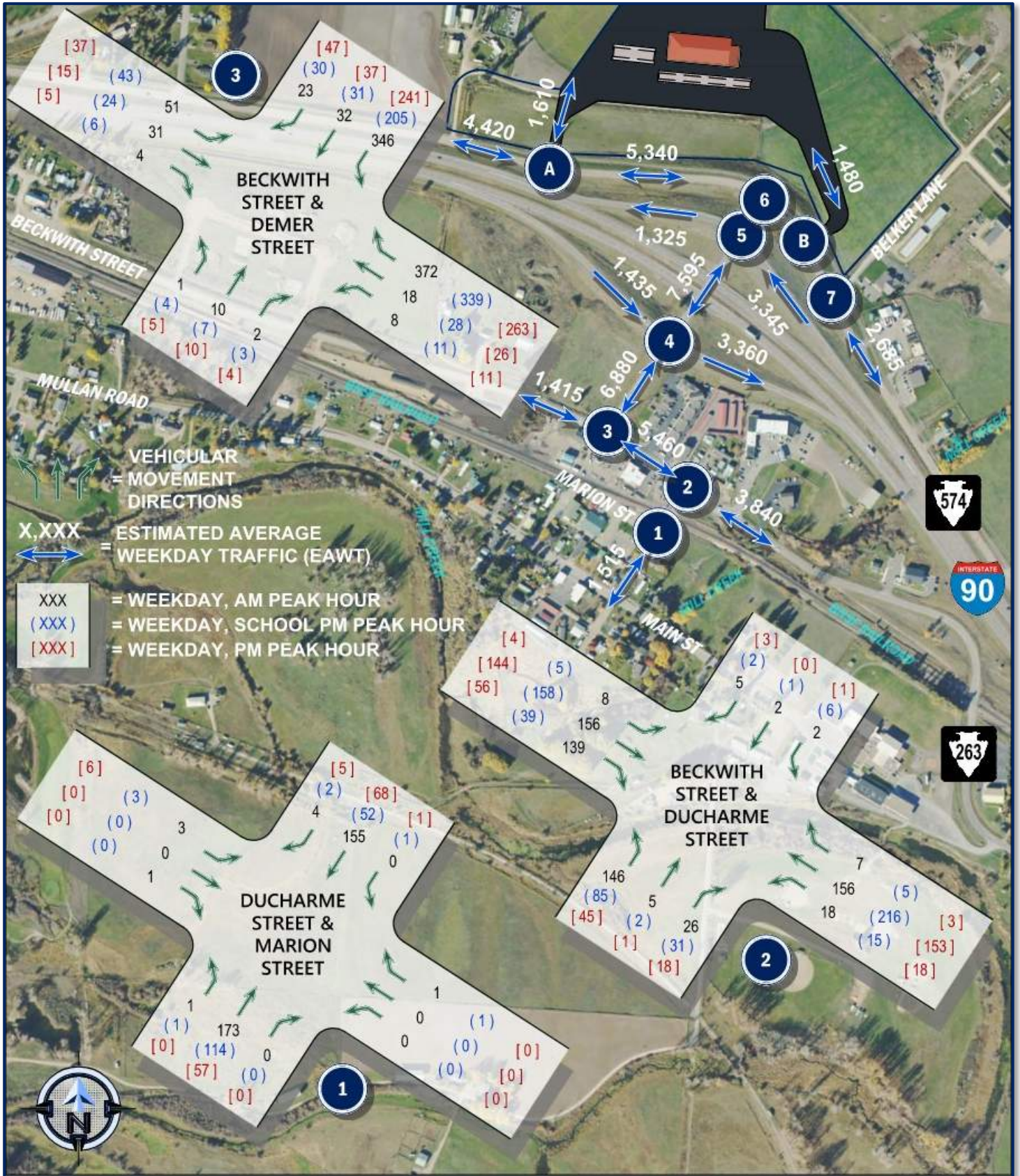


Figure 19: Estimated 2028 Total Traffic Volumes | Beckwith Street & Ducharme Street Intersections

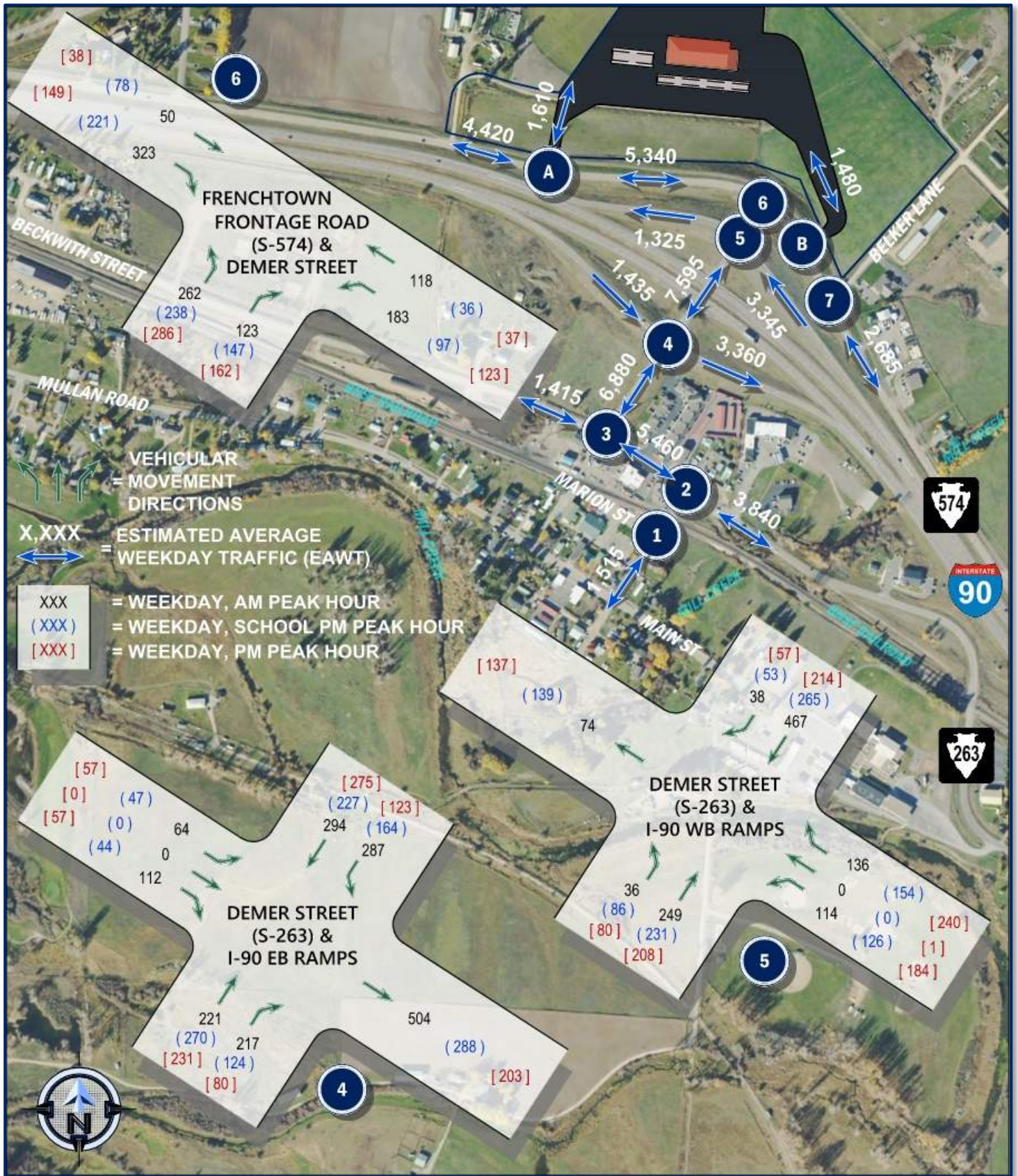


Figure 20: Estimated 2028 Total Traffic Volumes | Demer Street (S-263) Intersections

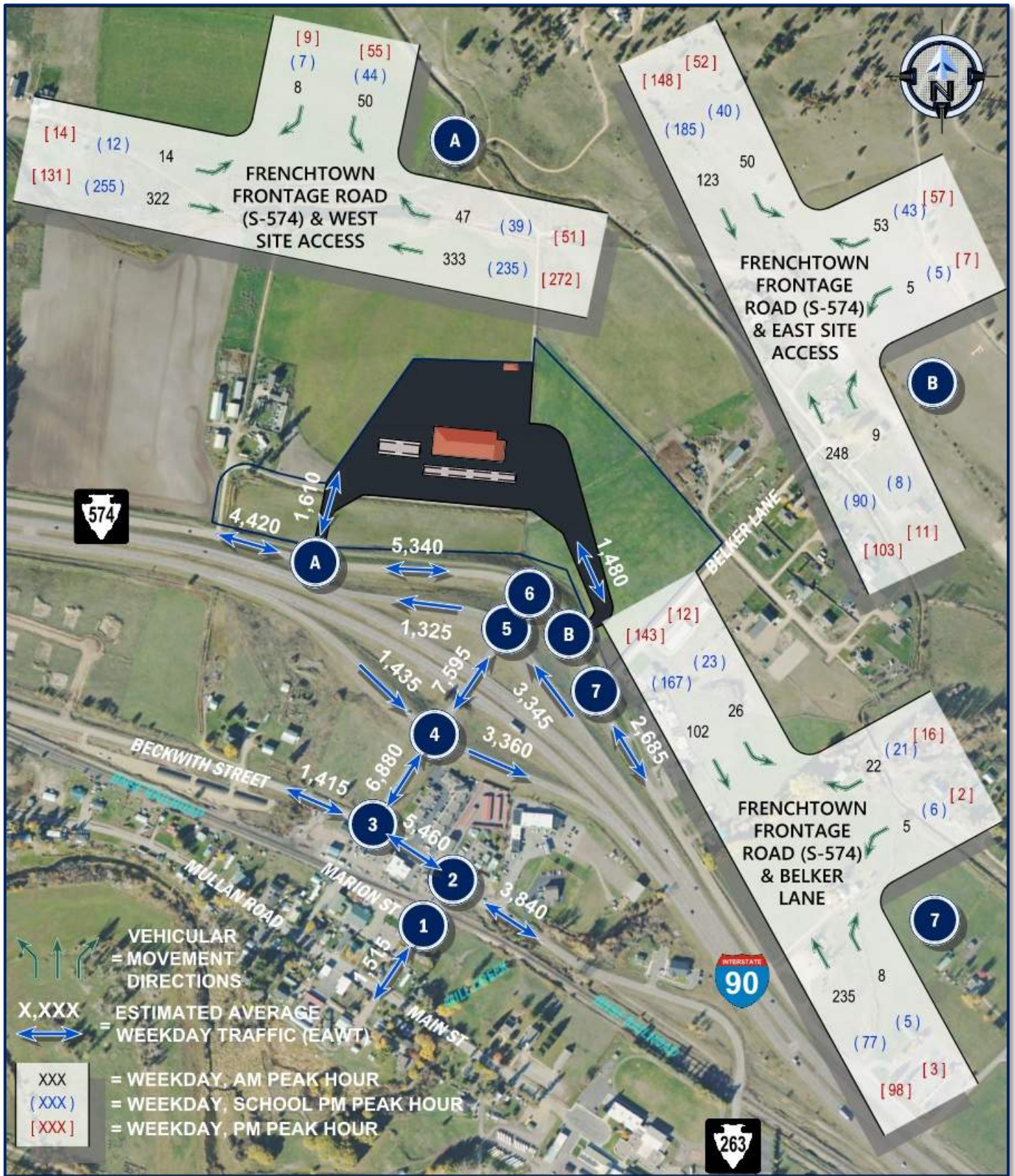


Figure 21: Estimated 2028 Total Traffic Volumes | Frenchtown Frontage Road (S-574) Intersections

The methodology used to determine the level of service for unsignalized intersections is based on Chapter 20 of the HCM for two-way stop controlled (TWSC) intersections. The TWSC analyses were performed using *HCS TWSC Version 8.4* developed and maintained by the McTrans Center at the University of Florida. The HCM methodology for evaluating TWSC intersections is based on gap acceptance and conflicting traffic for vehicles stopped on minor street approaches. The critical gap (or minimum acceptable gap) is defined as the minimum time interval in the major street traffic stream that allows entry for one minor street vehicle. Average control delay and LOS for the minor street approach(es) is/are reported. LOS is not defined by the HCM for the intersection because major street traffic volumes and operations may skew the results of the LOS analyses.

## Study Scenario Analyses

Intersection capacity and LOS analyses for the study scenarios were performed using the existing geometry and traffic control at each of the study area intersections. The analyses are summarized in the following figures and detailed results are included in Appendix F.

- Figure 22: Traffic Operations Summary | 2026 Existing Conditions – Weekday, AM Peak Hour – [Page 45](#)
- Figure 23: Traffic Operations Summary | 2026 Existing Conditions Weekday, School PM Peak Hour – [Page 46](#)
- Figure 24: Traffic Operations Summary | 2026 Existing Conditions – Weekday, PM Peak Hour – [Page 47](#)
- Figure 25: Traffic Operations Summary | Estimated 2028 Background Traffic Volumes Weekday, AM Peak Hour – [Page 48](#)
- Figure 26: Traffic Operations Summary | Estimated 2028 Background Traffic Volumes Weekday, School PM Peak Hour – [Page 49](#)
- Figure 27: Traffic Operations Summary | Estimated 2028 Background Traffic Volumes Weekday, PM Peak Hour – [Page 50](#)
- Figure 28: Traffic Operations Summary | Estimated 2028 Total Traffic Volumes Weekday, AM Peak Hour – [Page 51](#)
- Figure 29: Traffic Operations Summary | Estimated 2028 Total Traffic Volumes Weekday, School PM Peak Hour – [Page 52](#)
- Figure 30: Traffic Operations Summary | Estimated 2028 Total Traffic Volumes Weekday, PM Peak Hour – [Page 53](#)

## Assessment of Impacts

### Traffic Operations

#### Existing Conditions (2026)

The operational analyses revealed substandard operations (LOS D or lower) occurring during the weekday, AM peak hour at the intersections of Beckwith Street (S-263) and Ducharme Street, Beckwith Street (S-263) and Demer Street (S-263), and the Frenchtown Frontage Road (S-574) and Demer Street. A significant driver for the substandard operations is school related traffic. Those intersections do function acceptably (LOS C or better) during the weekday, school PM and PM peak hours. Each of the remaining study intersections function acceptably during each of the analyzed time periods.

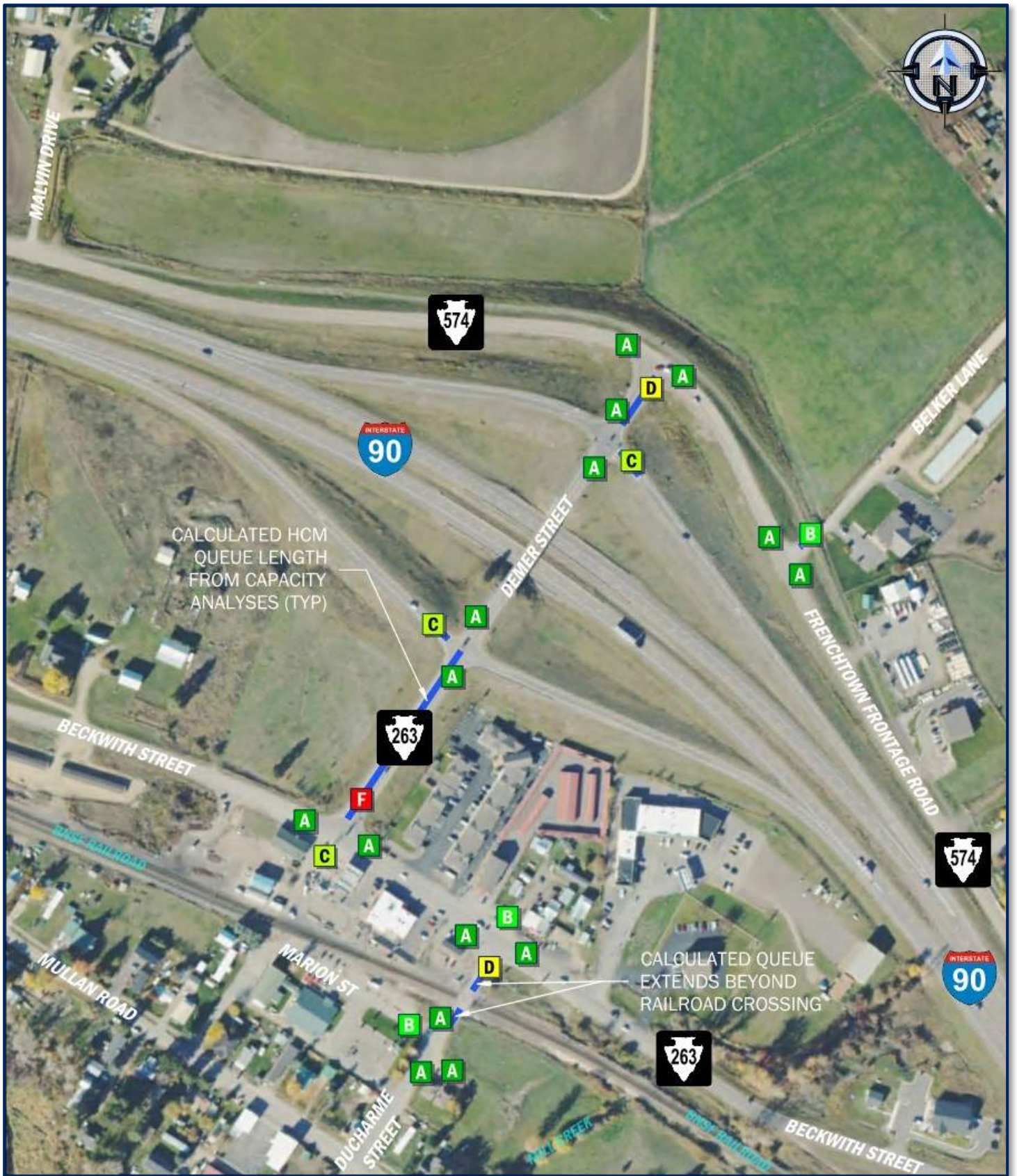


Figure 22: Traffic Operations Summary | 2026 Existing Conditions – Weekday, AM Peak Hour

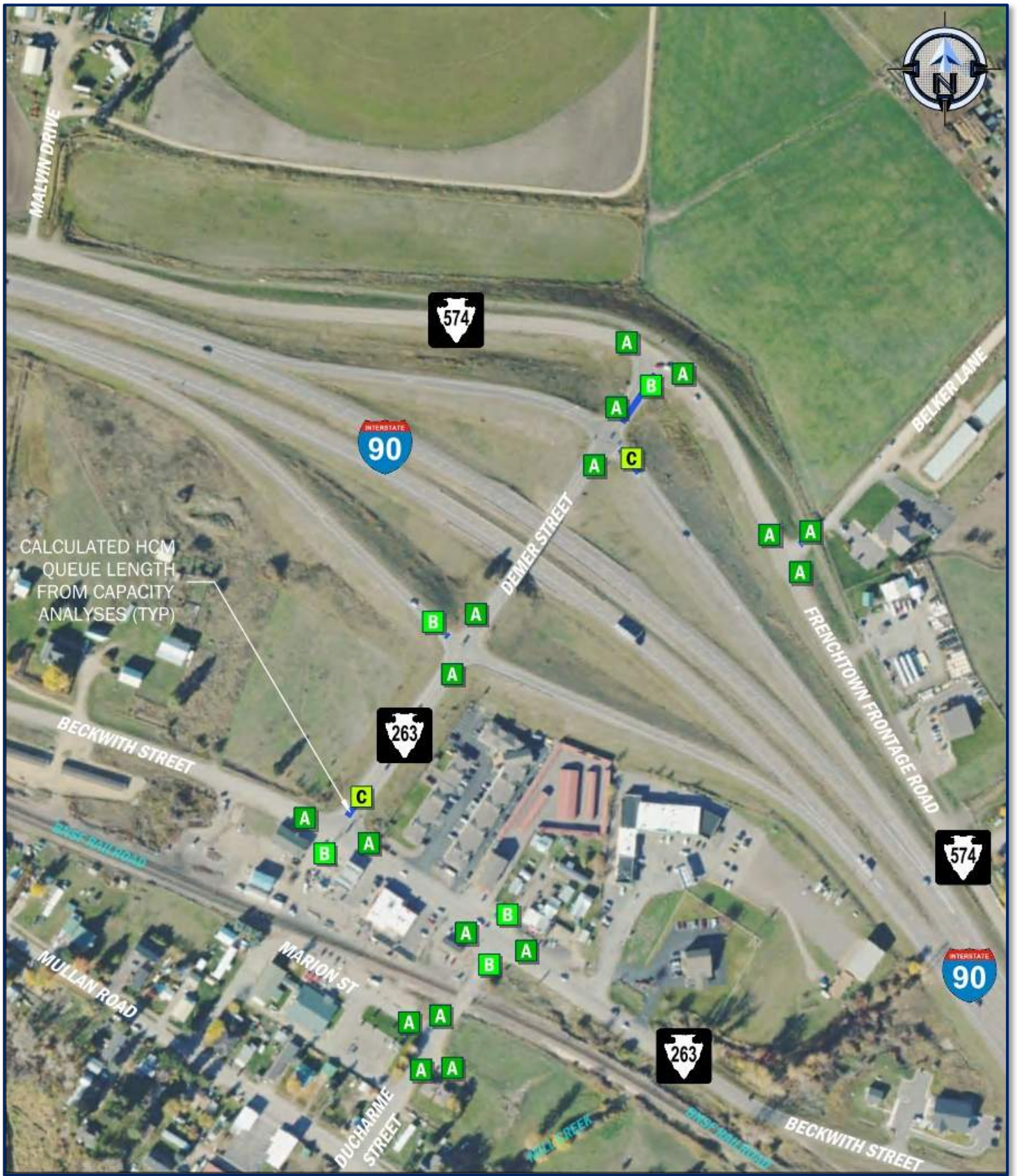


Figure 23: Traffic Operations Summary | 2026 Existing Conditions – Weekday, School PM Peak Hour

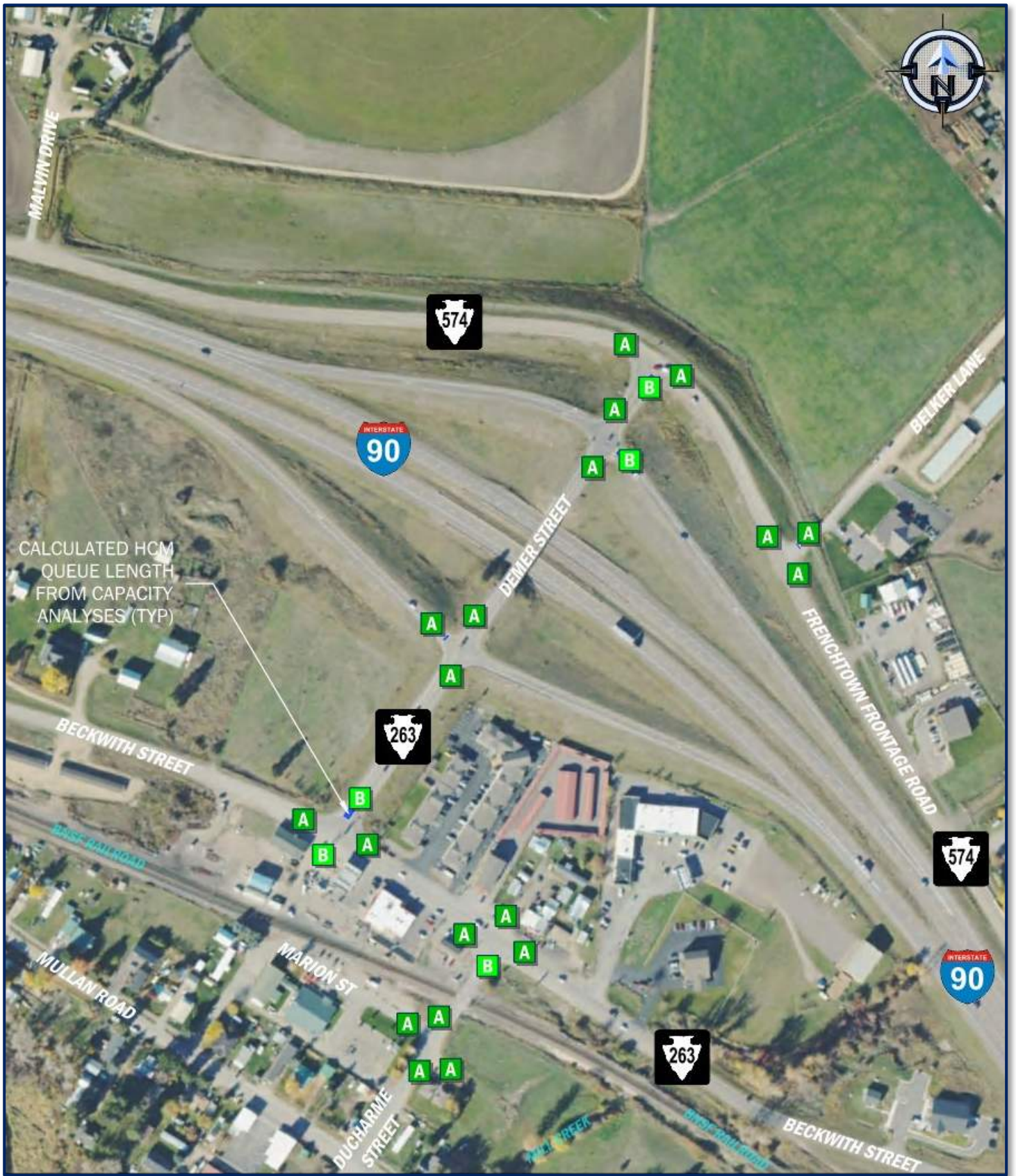


Figure 24: Traffic Operations Summary | 2026 Existing Conditions – Weekday, PM Peak Hour



Figure 25: Traffic Operations Summary | Estimated 2028 Background Traffic Volumes – Weekday, AM Peak Hour

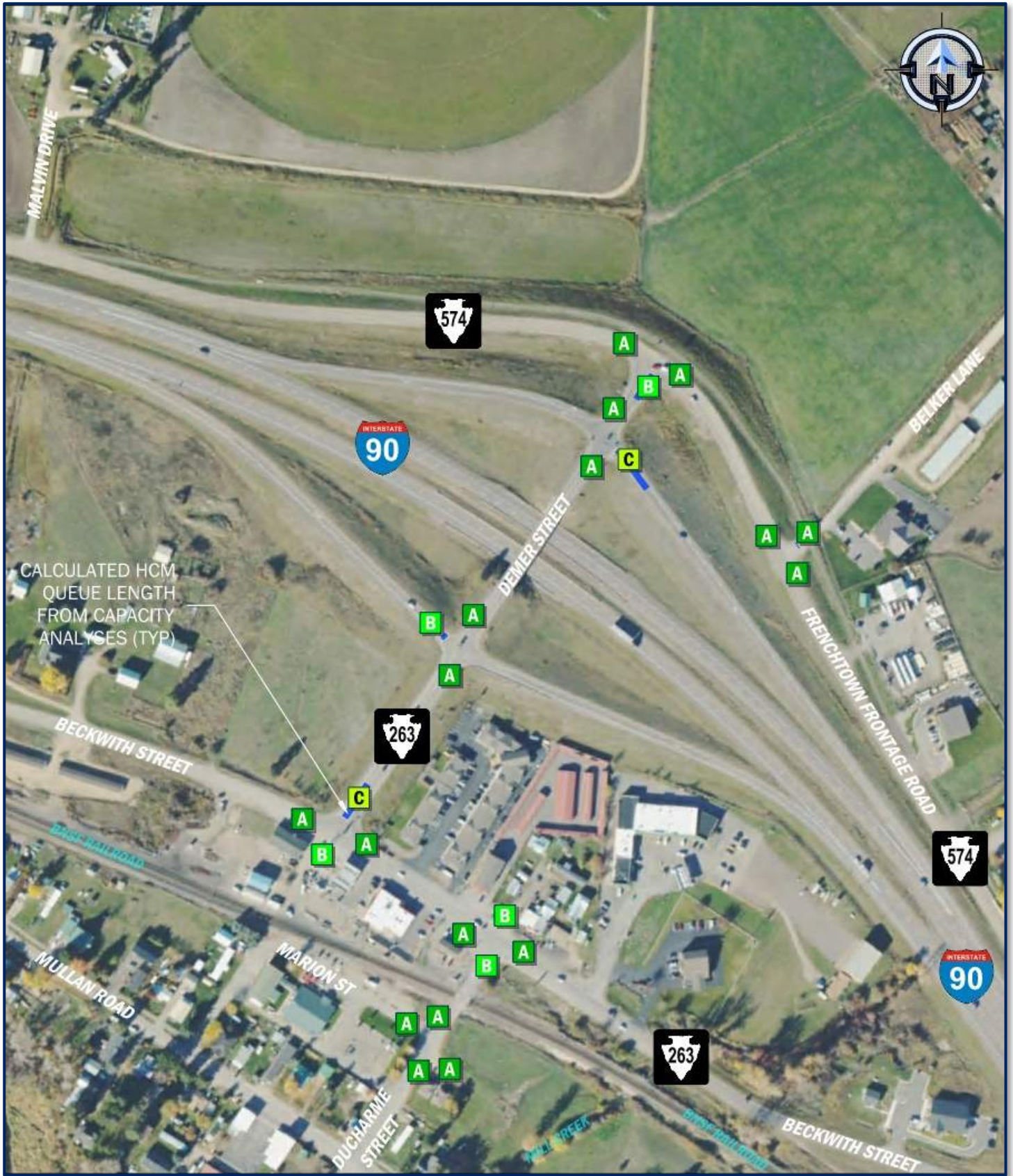


Figure 26: Traffic Operations Summary | Estimated 2028 Background Traffic Volumes – Weekday, School PM Peak Hour

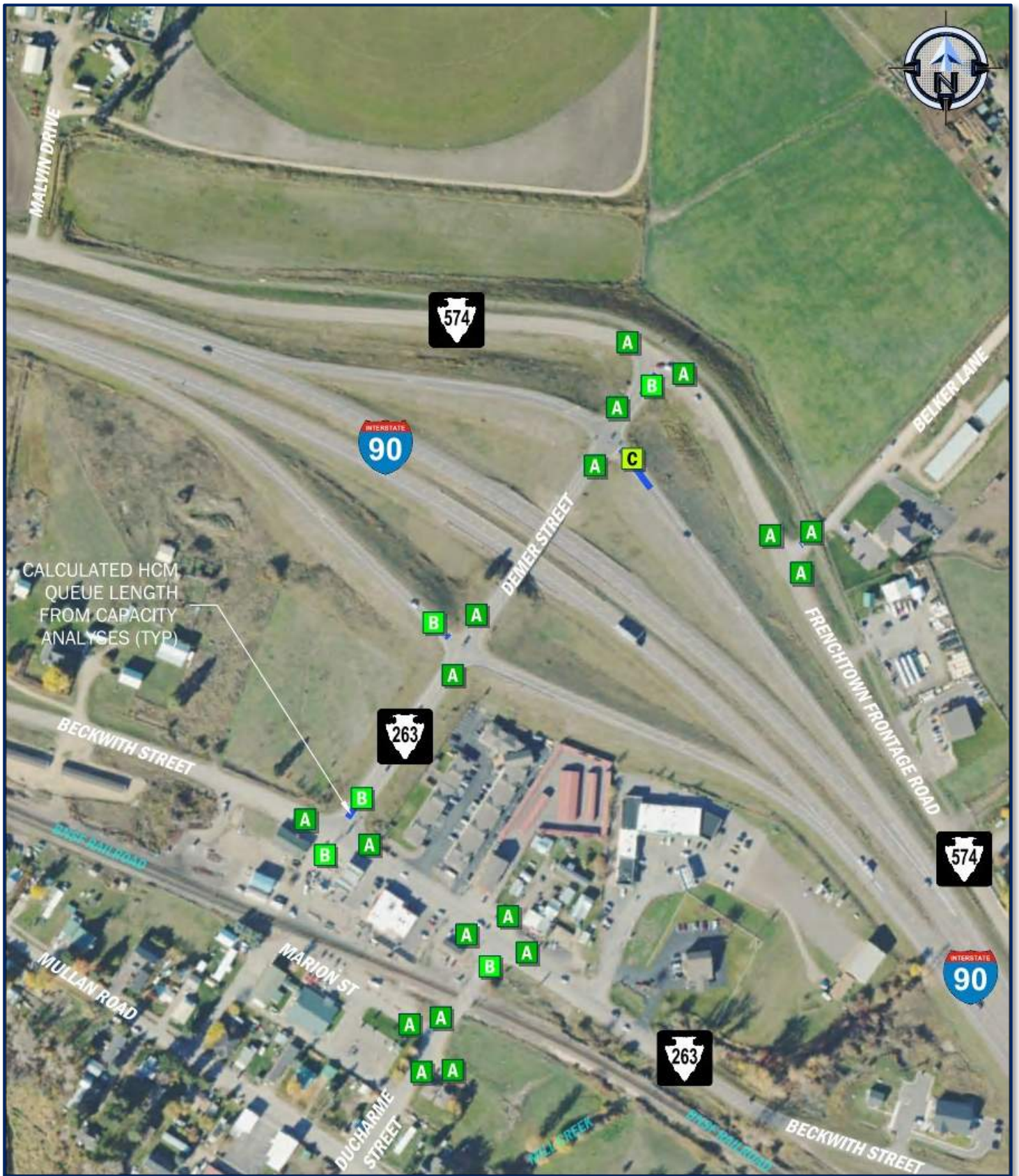


Figure 27: Traffic Operations Summary | Estimated 2028 Background Traffic Volumes – Weekday, PM Peak Hour

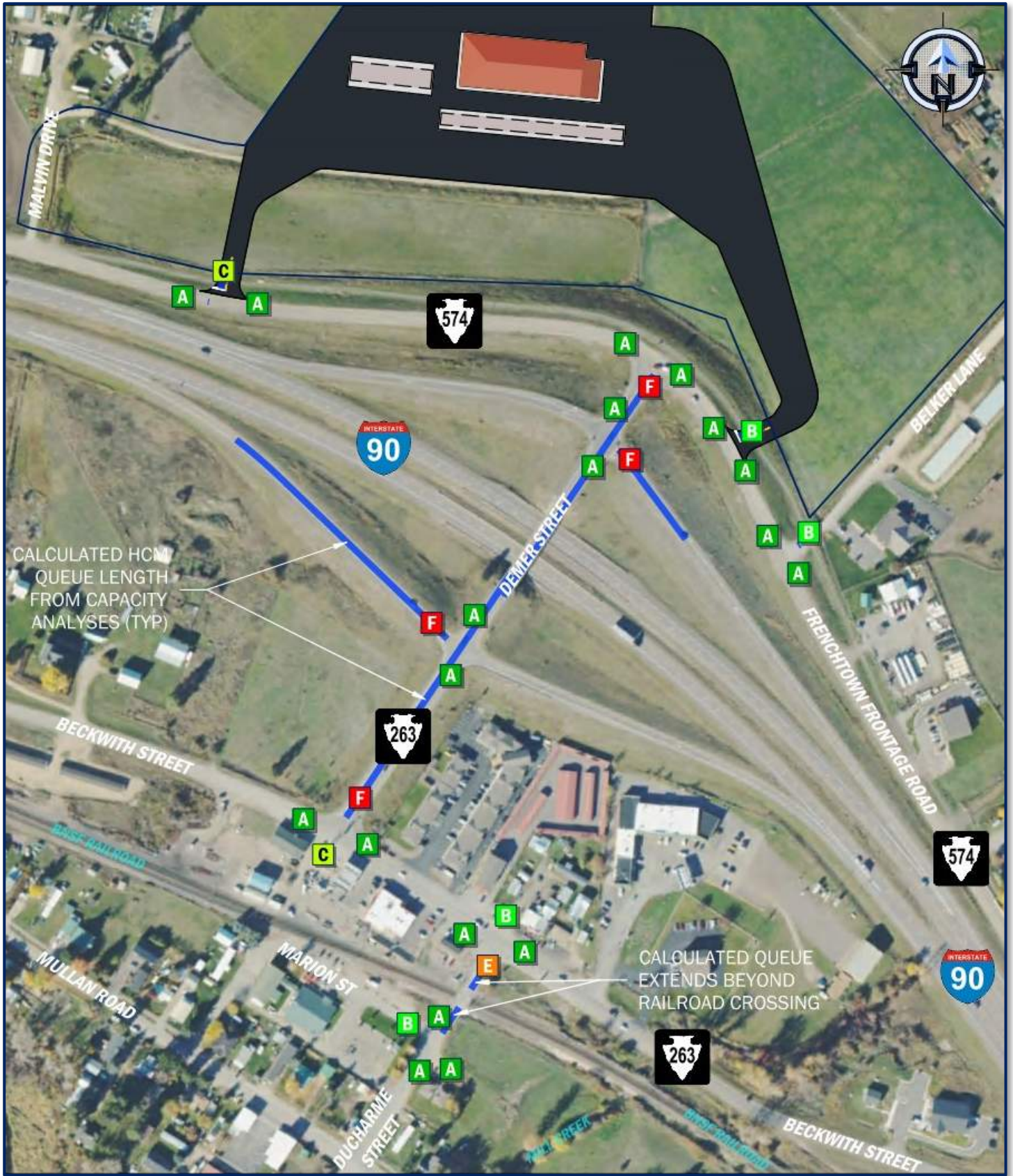


Figure 28: Traffic Operations Summary | Estimated 2028 Total Traffic Volumes – Weekday, AM Peak Hour

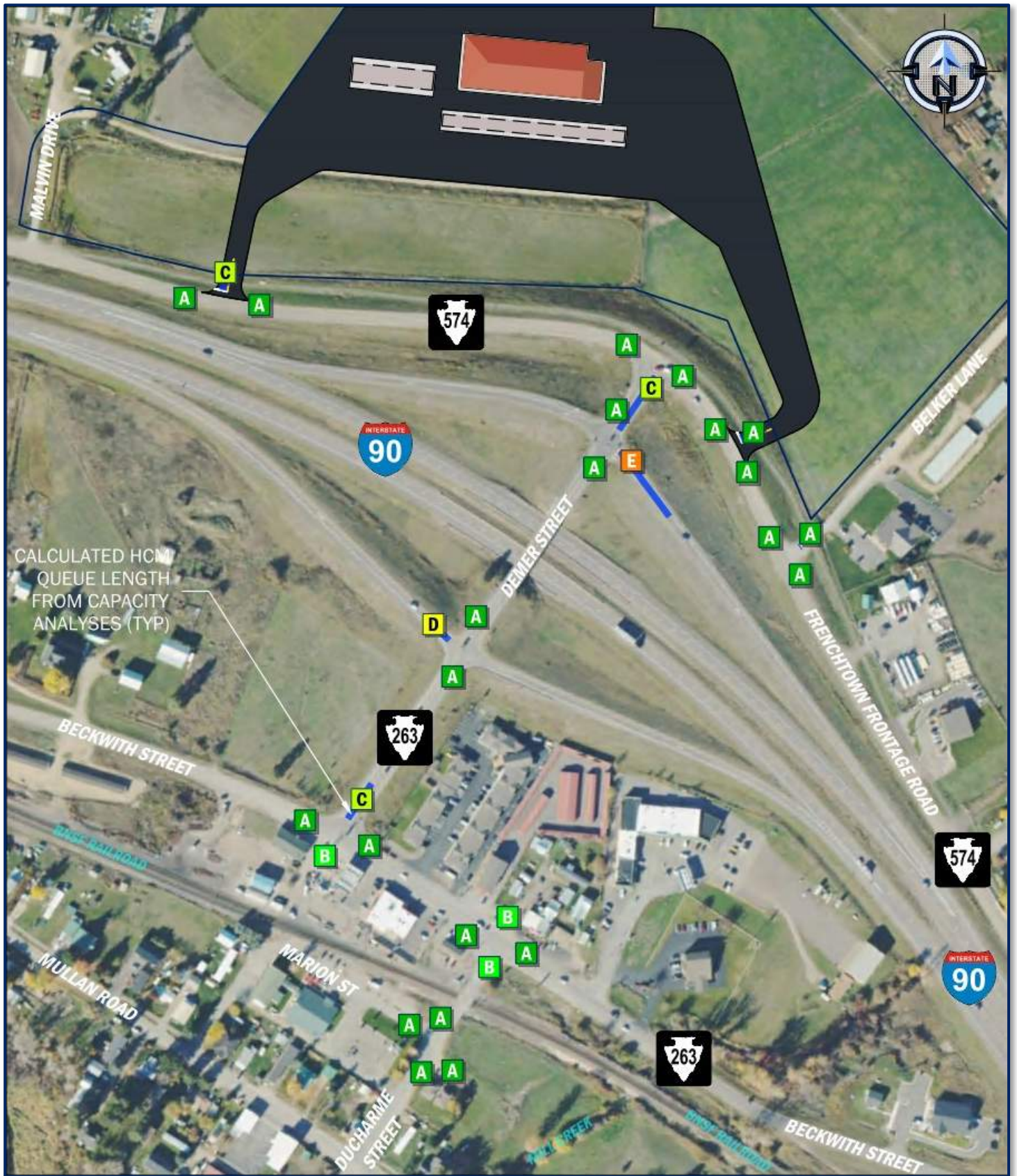


Figure 29: Traffic Operations Summary | Estimated 2028 Total Traffic Volumes – Weekday, School PM Peak Hour

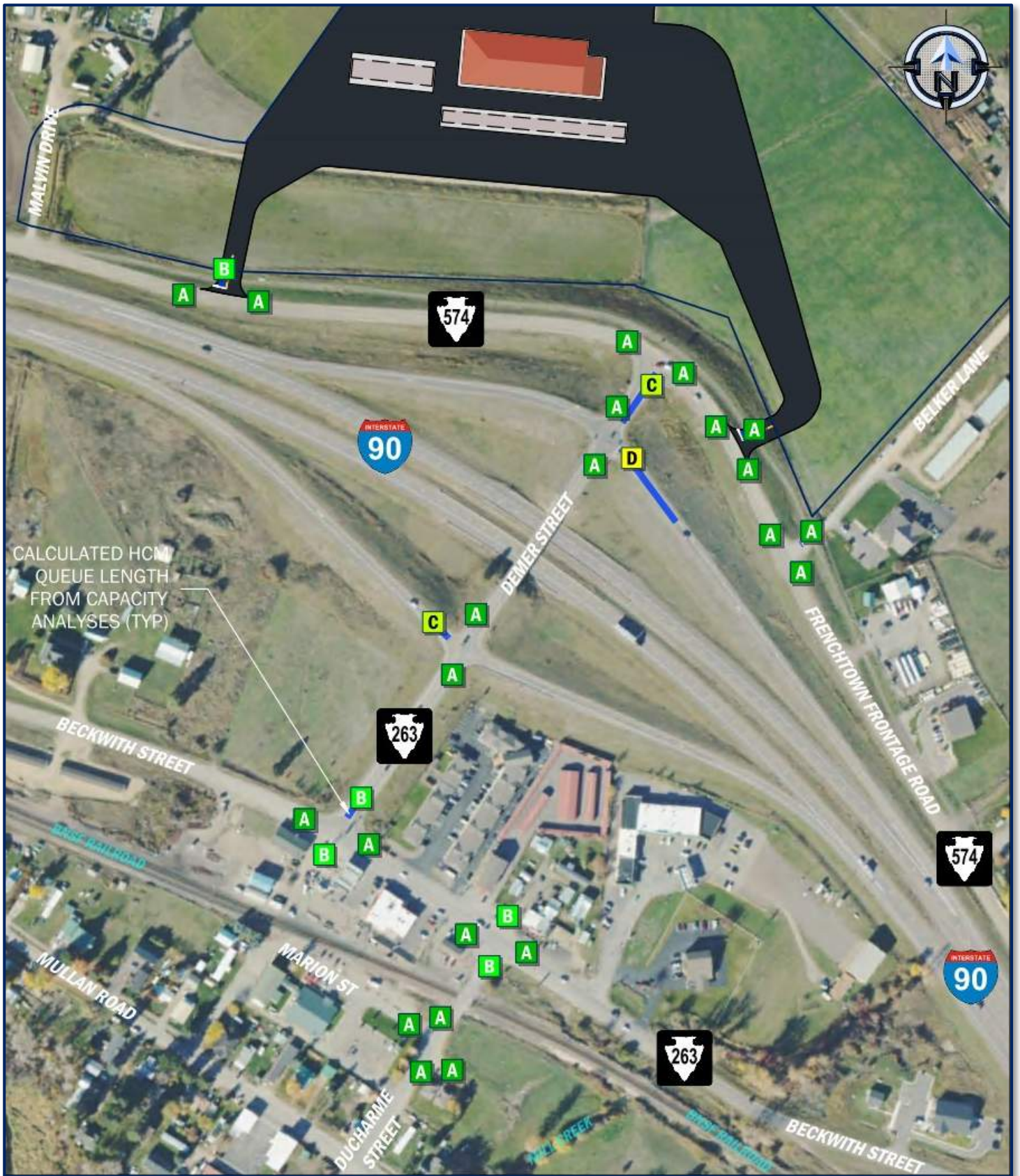


Figure 30: Traffic Operations Summary | Estimated 2028 Total Traffic Volumes – Weekday, PM Peak Hour

## No Build Scenario – Estimated 2028 Background Traffic Volumes

With estimated background traffic growth through the year 2028, declines in operations to substandard conditions are projected for the Interstate 90 (I-90) eastbound and westbound off-ramps at their intersection with Demer Street during the weekday, AM peak hour. Each of the remaining study intersections and time periods are anticipated to operate within acceptable levels of service.

## Full Utilization Scenario – Estimated 2028 Total Traffic Volumes

The addition of traffic generated from the proposed Town Pump site development project is not expected to significantly impact traffic operations for the Ducharme Street and Beckwith Street (S-263) intersections. It does, however, have significant impact on traffic operations at the Demer Street (S-263) intersections with the I-90 eastbound and westbound ramps plus the Frenchtown Frontage Road (S-574) during the weekday, AM peak hour. Additionally, declines in level of service (LOS) to substandard conditions are envisaged for the weekday, school PM peak hour on the I-90 eastbound and westbound off-ramps. A decline in LOS is anticipated on the I-90 westbound off-ramp during the weekday, PM peak hour as well.

## Mitigation Analyses

### Ducharme Street Intersections

**Impact:** Citizens in Frenchtown as well as the local fire department noted concerns with vehicle queuing on Ducharme Street during the weekday, AM peak period and blockage of its intersection with Marion Street as well as the alley to the south. This is shown in Figure 31 below. Marion Street and the alley are primary means of access for the fire department and excessive queues impact its ability to respond to emergencies. Substandard operations at the Beckwith Street (S-263) and Ducharme Street intersection as well as train activity at the Ducharme Street at-grade rail crossing are causes of longer vehicle queues.



**Figure 31: Ducharme Street Weekday, AM Peak Period Vehicle Queuing**

**Mitigation:** Evaluate alternatives for improved operations including alternative traffic control, the addition of auxiliary turn lanes, and/or redirection of school related traffic.

### All-Way Stop Control (AWSC) Warrant Analyses

The intersection of Beckwith Street (S-263) and Ducharme Street was evaluated for satisfying warrant criteria outlined in the *Manual on Uniform Traffic Control Devices, 11th Edition* (MUTCD) published by the United States Department of Transportation – Federal Highway Administration dated December 2023 for installation of all-way stop control. The intersection does not satisfy minimum warrant criteria based on crash experience, sight distance, future traffic signal installation, or traffic volumes. Utilizing the fire department concern for emergency responsiveness, there may be a case for satisfaction of Warrant E: Other Factors. The AWSC warrant analyses are provided in Appendix G.

### Auxiliary Turn Lane Analyses

The intersection of Beckwith Street (S-263) and Ducharme Street was evaluated for consideration of installing auxiliary left- and right-turn lanes. Auxiliary left-turn lane criteria suggested in the American Association of State Highway and Transportation Officials (AASHTO) publication *A Policy on Geometric Design of Highways and Streets, 2018 – 7th Edition, 2nd Printing* were utilized in the evaluation. The analyses were based on rural conditions, noting the current population of Frenchtown being less than 5,000 people. The *MDT Traffic Engineering Manual* (August 2009) was used in the evaluation of auxiliary right-turn lane criteria. The analyses showed that the Beckwith Street (S-263) approaches at its intersection with Ducharme Street would meet minimum criteria for consideration of both a left- and right-turn lane based on existing volumes. Auxiliary right-turn lane criteria were only satisfied for the weekday, AM peak hour. The analyses are provided in Appendix H.

### AWSC Operational Analyses

#### *Methodology*

AWSC intersection operations with the inclusion of an eastbound right-turn lane and a westbound left-turn lane at the intersection of Beckwith Street (S-263) and Ducharme Street were performed using *HCS AWSC Version 8.4* developed and maintained by the McTrans Center at the University of Florida. The methodology for evaluating AWSC intersections is based on Chapter 21 of the HCM. Drivers approaching AWSC intersections must stop and determine that there are no conflicting vehicles in the intersection before proceeding. Average control delay and LOS for each of the approaches is reported as well as for the overall intersection.

#### *Analyses*

Estimated 2028 total traffic operations for the intersection of Beckwith Street (S-263) and Ducharme Street with the installation of all-way stop control the addition of an eastbound, right-turn lane plus a westbound, left-turn lane are summarized in Table 6 on page 56 for the weekday, AM peak hour; in Table 7 on page 56 for the weekday, school PM peak hour; and in Table 8 on page 57 for the weekday, PM peak hour. The analyses are also included in Appendix I-1. Without the addition of the turn lanes, the eastbound approach was estimated to experience a sizeable increase in delay along with an extended queue length that may impact upstream driveways.

### Redirection of School Related Traffic

The intersection of Beckwith Street (S-263) and Ducharme Street was evaluated with an estimated seventy percent (70%) redirection of school related traffic to the existing approach to Beckwith Street / Mullan Road (S-263) on the east side of the Frenchtown Elementary and Intermediate School. The redirection would primarily involve focusing student drop-off and pick-up to the east side of the school. Student bussing would remain unchanged with the proposed redirection. Site circulation and parking modifications may be required on the east side of the school to accommodate changes to student drop-off and pick-up that would allow for adequate on-site queue storage of vehicles. Additionally, communication with parents or guardians would be required to ensure proper functioning.

**Table 6: Beckwith Street (S-263) & Ducharme Street Weekday, AM Peak Hour AWSC Traffic Operations Summary**

Analysis Scenario	Performance Measure	Intersection	Minor Approaches	Beckwith Street		Beckwith Street		Ducharme Street	Private Driveway
				EB		WB		NB	SB
				LT	R	L	TR	LTR	LTR
<b>Estimated 2028 Total Traffic</b>  <i>AWSC with an EB Right-Turn Lane &amp; WB Left-Turn Lane</i>	Level of Service (LOS)	<b>B</b>	<b>B</b>	B	B	A	B	B	A
	Delay (sec/veh)	<b>12.9</b>	<b>13.8</b>	13.6	10.5	9.7	13.8	14.0	9.3
	Adjusted Entry Volume (veh/hr)	<b>1,081</b>	<b>300</b>	265	224	29	263	285	582
	Ped + Bike Volume (ped+bike/hr)	<b>0</b>	<b>0</b>	0		0		0	0
	Volume-to-Capacity Ratio (v/c)	<b>0.30</b>	<b>0.25</b>	0.45	0.33	0.05	0.45	0.47	0.02
	HCM 95% Max Queue Length (veh)			2.3	1.4	0.2	2.3	2.5	0.1
	HCM 95% Max Queue Length (ft)			61.6	36.1	5.0	59.3	64.5	2.5
	Available Queue Storage (ft)			130	75	100	160	100	70

EB = Eastbound; WB = Westbound; NB = Northbound; and SB = Southbound

LT = Left-Through; R = Right; L = Left; TR = Through-Right; and LTR = Left-Through-Right

**Table 7: Beckwith Street (S-263) & Ducharme Street Weekday, School PM Peak Hour AWSC Traffic Operations Summary**

Analysis Scenario	Performance Measure	Intersection	Minor Approaches	Beckwith Street		Beckwith Street		Ducharme Street	Private Driveway
				EB		WB		NB	SB
				LT	R	L	TR	LTR	LTR
<b>Estimated 2028 Total Traffic</b>  <i>AWSC with an EB Right-Turn Lane &amp; WB Left-Turn Lane</i>	Level of Service (LOS)	<b>B</b>	<b>B</b>	B	A	A	B	B	A
	Delay (sec/veh)	<b>10.8</b>	<b>10.2</b>	10.7	7.9	8.7	12.0	10.3	8.7
	Adjusted Entry Volume (veh/hr)	<b>753</b>	<b>169</b>	217	52	20	295	157	12
	Ped + Bike Volume (ped+bike/hr)	<b>3</b>	<b>0</b>	2		1		0	0
	Volume-to-Capacity Ratio (v/c)	<b>0.19</b>	<b>0.13</b>	0.33	0.07	0.03	0.43	0.24	0.02
	HCM 95% Max Queue Length (veh)			1.4	0.2	0.1	2.2	0.9	0.1
	HCM 95% Max Queue Length (ft)			36.1	5.4	2.5	55.9	24.8	2.5
	Available Queue Storage (ft)			130	75	100	160	100	70

EB = Eastbound; WB = Westbound; NB = Northbound; and SB = Southbound

LT = Left-Through; R = Right; L = Left; TR = Through-Right; and LTR = Left-Through-Right

**Table 8: Beckwith Street (S-263) & Ducharme Street Weekday, PM Peak Hour AWSC Traffic Operations Summary**

Analysis Scenario	Performance Measure	Intersection	Minor Approaches	Beckwith Street		Beckwith Street		Ducharme Street	Private Driveway
				EB		WB		NB	SB
				LT	R	L	TR	LTR	LTR
<b>Estimated 2028 Total Traffic</b>  <i>AWSC with an EB Right-Turn Lane &amp; WB Left-Turn Lane</i>	Level of Service (LOS)	<b>A</b>	<b>A</b>	A	A	A	A	A	A
	Delay (sec/veh)	<b>8.9</b>	<b>8.4</b>	9.8	7.2	8.3	9.0	8.4	7.6
	Adjusted Entry Volume (veh/hr)	<b>474</b>	<b>72</b>	157	60	19	166	68	4
	Ped + Bike Volume (ped+bike/hr)	<b>4</b>	<b>4</b>	0		0		0	4
	Volume-to-Capacity Ratio (v/c)	<b>0.11</b>	<b>0.05</b>	0.24	0.07	0.03	0.23	0.09	0.01
	HCM 95% Max Queue Length (veh)			0.9	0.2	0.1	0.9	0.3	0.0
	HCM 95% Max Queue Length (ft)			28.4	5.1	2.6	22.9	7.9	0.0
	Available Queue Storage (ft)			130	75	100	160	100	70

EB = Eastbound; WB = Westbound; NB = Northbound; and SB = Southbound | LTR = Left-Through-Right

Forecast traffic operations with the estimated seventy percent (70%) redirection of school related traffic for the projected 2028 total traffic volumes are summarized on page 58 for the weekday, AM peak hour in Table 9 and Table 10 for the weekday, school PM peak hour. Table 11 on page 59 shows the weekday, PM peak hour. The analyses are also included in Appendix I-1.

### Summary

Either alternative for mitigation at the intersection of Beckwith Street (S-263) and Ducharme Street appear to be viable options based on the traffic operations analyses and are projected to improve queuing conflicts currently experienced on Ducharme Street south of its intersection with Beckwith Street (S-263). Each approach at the intersection is forecast to operate at LOS C or better under the analyzed scenarios. A conceptual layout of the intersection with turn lanes is shown in Figure 33 on page 65. Key points for consideration include:

- Installation of all-way stop control with the eastbound, left-turn lane as well as the westbound, right-turn lane may present challenges with the location of the existing coffee kiosk on the northwest corner of the intersection that includes drive-through windows on both its north and south sides.
- Additionally, impacts to parking areas in the vicinity of the intersection could pose concern for businesses.
- Redirection of school related traffic would take a considerable communication effort to ensure adherence by parents and guardians for student drop-off and pick-up.
- Site modifications to accommodate the revised drop-off and pick-up location and procedures may require expenditures for implementation but the overall cost may be less than that for turn lane modifications at the intersection of Beckwith Street (S-263) and Ducharme Street.

**Table 9: Beckwith Street (S-263) & Ducharme Street Weekday, AM Peak Hour Redirected School Traffic Operations Summary**

Analysis Scenario	Performance Measure	Intersection	Minor Approaches	Beckwith Street	Beckwith Street	Ducharme Street	Private Driveway
				EB LTR	WB LTR	NB LTR	SB LTR
<b>Estimated 2028 Total Traffic</b>  <i>70% Redirection of School Related Traffic</i>	Level of Service (LOS)	<b>A</b>	<b>C</b>	A	A	C	C
	Delay (sec/veh)	<b>2.7</b>	<b>23.6</b>	0.3	0.2	24.9	15.0
	Adjusted Entry Volume (veh/hr)	<b>1,031</b>	<b>106</b>	489	435	92	15
	Ped + Bike Volume (ped+bike/hr)	<b>0</b>	<b>0</b>	0	0	0	0
	Volume-to-Capacity Ratio (v/c)	<b>0.36</b>	<b>0.16</b>	0.43	0.40	0.34	0.04
	HCM 95% Max Queue Length (veh)			0.0	0.0	1.4	0.1
	HCM 95% Max Queue Length (ft)			0.0	0.0	38.0	2.5
	Available Queue Storage (ft)			130	160	100	70

EB = Eastbound; WB = Westbound; NB = Northbound; and SB = Southbound | LTR = Left-Through-Right

**Table 10: Beckwith Street (S-263) & Ducharme Street Weekday, School PM Peak Hour Redirected School Traffic Operations Summary**

Analysis Scenario	Performance Measure	Intersection	Minor Approaches	Beckwith Street	Beckwith Street	Ducharme Street	Private Driveway
				EB LTR	WB LTR	NB LTR	SB LTR
<b>Estimated 2028 Total Traffic</b>  <i>70% Redirection of School Related Traffic</i>	Level of Service (LOS)	<b>A</b>	<b>B</b>	A	A	B	B
	Delay (sec/veh)	<b>1.4</b>	<b>14.5</b>	0.3	0.2	14.6	14.1
	Adjusted Entry Volume (veh/hr)	<b>711</b>	<b>60</b>	269	381	48	12
	Ped + Bike Volume (ped+bike/hr)	<b>3</b>	<b>0</b>	2	1	0	0
	Volume-to-Capacity Ratio (v/c)	<b>0.21</b>	<b>0.07</b>	0.23	0.29	0.11	0.03
	HCM 95% Max Queue Length (veh)			0.0	0.0	0.4	0.1
	HCM 95% Max Queue Length (ft)			0.0	0.0	13.4	2.5
	Available Queue Storage (ft)			130	160	100	70

EB = Eastbound; WB = Westbound; NB = Northbound; and SB = Southbound | LTR = Left-Through-Right

**Table 11: Beckwith Street (S-263) & Ducharme Street Weekday, PM Peak Hour Redirected School Traffic Operations Summary**

Analysis Scenario	Performance Measure	Intersection	Minor Approaches	Beckwith Street	Beckwith Street	Ducharme Street	Private Driveway
				EB LTR	WB LTR	NB LTR	SB LTR
<b>Estimated 2028 Total Traffic</b>  <i>No Redirection of School Related Traffic was Analyzed for the Weekday, PM Peak Hour</i>	Level of Service (LOS)	A	B	A	A	B	A
	Delay (sec/veh)	2.0	10.4	0.2	0.9	10.4	9.8
	Adjusted Entry Volume (veh/hr)	474	72	217	185	68	4
	Ped + Bike Volume (ped+bike/hr)	4	4	0	0	0	4
	Volume-to-Capacity Ratio (v/c)	0.12	0.05	0.18	0.14	0.09	0.01
	HCM 95% Max Queue Length (veh)			0.0	0.0	0.3	0.0
	HCM 95% Max Queue Length (ft)			0.0	0.0	7.9	0.0
	Available Queue Storage (ft)			130	160	100	70

EB = Eastbound; WB = Westbound; NB = Northbound; and SB = Southbound | LTR = Left-Through-Right

**Beckwith Street (S-263) & Demer Street (S-263)**

**Impact:**

The southbound approach at the intersection of Beckwith Street (S-263) and Demer Street currently operates at LOS F during the weekday, AM peak hour and queues from the excessive delays impact operations at upstream intersections. Vehicle queuing on Demer Street (S-263) during the weekday, AM peak period and blockage of its intersection with the Interstate 90 (I-90) eastbound ramps is shown in Figure 32 below.



**Figure 32: Demer Street (S-263) Weekday, AM Peak Period Vehicle Queuing**

**Mitigation:**

Evaluate alternatives for improved traffic operations.

### All-Way Stop Control (AWSC) Warrant Analyses

The intersection of Beckwith Street (S-263) and Demer Street (S-263) was evaluated for MUTCD AWSC warrant criteria. The intersection does not satisfy minimum warrant criteria based on crash experience, sight distance, future traffic signal installation, or traffic volumes. The AWSC warrant analyses are provided in Appendix G.

### Signal Warrant Analysis

A signal warrant analysis was performed and the traffic and non-motorized user volumes did not meet minimum thresholds for traffic signal installation, accounting for the exclusion of right-turn volumes from the analyses. The evaluation of crashes for the intersection revealed there is not a significant crash experience concern that could potentially be mitigated through the installation of a traffic signal.

### Auxiliary Turn Lane Analyses

Auxiliary turn lane analyses were not performed as their installation would not mitigate traffic operations for the southbound left-turn movement at the intersection of Beckwith Street (S-263) and Demer Street (S-263).

### Roundabout Control Analyses

#### *Methodology*

Roundabout operations at the intersection of Beckwith Street (S-263) and Demer Street (S-263) were performed using *HCS Roundabouts Version 8.4* developed and maintained by the McTrans Center at the University of Florida. The methodology for evaluating roundabout controlled intersections is based on Chapter 22 of the HCM. Roundabouts are typified by drivers having to yield to other vehicles within the roundabout and move counterclockwise (in the United States) around the circulatory roadway. Average control delay and LOS for each of the approaches is reported as well as for the overall intersection.

#### *Analyses*

Estimated 2028 total traffic operations for Beckwith Street (S-263) and Demer Street (S-263) with a roundabout are summarized on page 61 in Table 12 and in Table 13 for the weekday, AM and school PM peak hours, respectively; and in Table 14 on page 62 for the weekday, PM peak hour. The analyses are also included in Appendix I-2.

### Summary

One additional consideration included the introduction of a curved roadway to align the centerlines of the westbound segment of Beckwith Street (S-263) and the southbound, Demer Street (S-263) approach to convert the major traffic flows to through movements at the intersection. The proximity of existing businesses adjacent to the roadways as well as adjacent intersections limit the ability to perform the realignment. Additionally, the introduction of turn lanes to promote improved operations and safety is restricted due to available space for queue storage and transition tapers. This was not evaluated any further.

Installation of roundabout control would improve traffic operations at the intersection of Beckwith Street (S-263) and Demer Street (S-263). This mitigation would also provide a significant benefit to overall operations and queue reduction on Demer Street (S-263) during the weekday, AM peak period that is currently experienced as shown in Figure 32 on the previous page. A conceptual layout of the intersection with a roundabout is shown in Figure 33 on page 65. Installation of roundabout control would require right-of-way acquisition and construction would need to be coordinated to allow for continued traffic flow while also limiting school and business operations.

**Table 12: Beckwith Street (S-263) & Demer Street (S-263) Weekday, AM Peak Hour Roundabout Traffic Operations Summary**

Analysis Scenario	Performance Measure	Intersection	Minor Approaches	Beckwith Street	Beckwith Street	Private Driveway	Demer Street
				EB LTR	WB LTR	NB LTR	SB LTR
<b>Estimated 2028 Total Traffic</b>  <i>Installation of Roundabout Control</i>	Level of Service (LOS)	<b>A</b>	<b>A</b>	A	A	A	A
	Delay (sec/veh)	<b>7.7</b>	<b>6.7</b>	6.7	8.1	6.6	7.6
	Adjusted Entry Volume (veh/hr)	<b>1,283</b>	<b>91</b>	123	569	19	573
	Ped + Bike Volume (ped+bike/hr)	<b>0</b>	<b>0</b>	0	0	0	0
	Volume-to-Capacity Ratio (v/c)	<b>0.34</b>	<b>0.07</b>	0.17	0.48	0.03	0.46
	HCM 95% Max Queue Length (veh)			0.6	2.6	0.1	2.5
	HCM 95% Max Queue Length (ft)			15.4	67.6	3.0	65.4
	Available Queue Storage (ft)			140	160	60	260

EB = Eastbound; WB = Westbound; NB = Northbound; and SB = Southbound | LTR = Left-Through-Right

**Table 13: Beckwith Street (S-263) & Demer Street (S-263) Weekday, School PM Peak Hour Roundabout Traffic Operations Summary**

Analysis Scenario	Performance Measure	Intersection	Minor Approaches	Beckwith Street	Beckwith Street	Private Driveway	Demer Street
				EB LTR	WB LTR	NB LTR	SB LTR
<b>Estimated 2028 Total Traffic</b>  <i>Installation of Roundabout Control</i>	Level of Service (LOS)	<b>A</b>	<b>A</b>	A	A	A	A
	Delay (sec/veh)	<b>5.8</b>	<b>4.4</b>	4.5	6.5	3.9	5.2
	Adjusted Entry Volume (veh/hr)	<b>902</b>	<b>107</b>	90	467	17	328
	Ped + Bike Volume (ped+bike/hr)	<b>2</b>	<b>2</b>	1	0	1	0
	Volume-to-Capacity Ratio (v/c)	<b>0.20</b>	<b>0.06</b>	0.09	0.38	0.02	0.26
	HCM 95% Max Queue Length (veh)			0.3	1.8	0.1	1.1
	HCM 95% Max Queue Length (ft)			7.6	46.5	2.5	28.5
	Available Queue Storage (ft)			140	160	60	260

EB = Eastbound; WB = Westbound; NB = Northbound; and SB = Southbound | LTR = Left-Through-Right

**Table 14: Beckwith Street (S-263) & Demer Street (S-263) Weekday, PM Peak Hour Roundabout Traffic Operations Summary**

Analysis Scenario	Performance Measure	Intersection	Minor Approaches	Beckwith Street	Beckwith Street	Private Driveway	Demer Street
				EB LTR	WB LTR	NB LTR	SB LTR
<b>Estimated 2028 Total Traffic</b>  <i>Installation of Roundabout Control</i>	Level of Service (LOS)	<b>A</b>	<b>A</b>	A	A	A	A
	Delay (sec/veh)	<b>5.1</b>	<b>4.3</b>	4.4	5.1	4.1	5.3
	Adjusted Entry Volume (veh/hr)	<b>779</b>	<b>84</b>	63	333	21	361
	Ped + Bike Volume (ped+bike/hr)	<b>1</b>	<b>0</b>	0	1	0	0
	Volume-to-Capacity Ratio (v/c)	<b>0.18</b>	<b>0.04</b>	0.07	0.26	0.02	0.28
	HCM 95% Max Queue Length (veh)			0.2	1.1	0.1	1.2
	HCM 95% Max Queue Length (ft)			5.2	28	2.6	30.7
	Available Queue Storage (ft)			140	160	60	260

EB = Eastbound; WB = Westbound; NB = Northbound; and SB = Southbound | LTR = Left-Through-Right

### **Demer Street (S-263) & the Interstate 90 (I-90) Eastbound Ramps**

**Impact:** The I-90 eastbound off-ramp approach at its intersection with Demer Street (S-263) is projected to decline to LOS F and significant vehicle queues are anticipated with the addition of site generated traffic from the proposed Town Pump development through the year 2028. The intersection is also projected to decline to LOS D during the weekday, school PM peak hour for estimated 2028 total traffic conditions.

**Mitigation:** Evaluate alternatives for improved operations.

### All-Way Stop Control (AWSC) Warrant Analyses

AWSC warrants were evaluated for the intersection of Demer Street (S-263) and the I-90 eastbound ramps. The intersection was found to satisfy minimum warrant criteria based on 2026 existing conditions for the eighth highest hourly volume; however, an operational analysis check noted adverse impacts to the northbound and southbound approaches. With the installation of all-way stop control, excessive average vehicle delays as well as long queue lengths were found with the conversion to AWSC for the intersection.

### Signal Warrant Analysis

A preliminary signal warrant analysis was performed for the intersection of Demer Street (S-263) and the I-90 eastbound ramps based on forecast 2028 total traffic volumes for meeting minimum traffic signal warrant criteria for Warrant #1: Eight Hour Vehicular Volume and Warrant #2: Four-Hour Vehicular Volume as delineated in the MUTCD. This evaluation utilized a procedure developed by the Oregon Department of Transportation for performing a preliminary signal warrant analysis based on estimated average daily traffic volumes. Based on this procedure, installation of a traffic signal was not found to be warranted at the intersection.

### Auxiliary Turn Lane Analyses

Auxiliary turn lane analyses were not performed as their installation would not mitigate traffic operations for the eastbound left-turn movement at the intersection of Demer Street (S-263) and the I-90 eastbound ramps.

### Roundabout Control Analyses

Traffic operations with installation of roundabout control for the projected 2028 total traffic volumes at the intersection of Demer Street (S-263) and the I-90 eastbound ramps are summarized in Table 15 below for the weekday, AM peak hour and in Table 16 and Table 17 for the weekday, school PM peak hour on the following page, respectively. The analyses are also included in Appendix I-3.

### Summary

The analysis summaries show that the intersection is anticipated to operate satisfactorily under roundabout control. A conceptual layout of the intersection with a roundabout is shown in Figure 33 on page 65.

**Table 15: Demer Street (S-263) & I-90 Eastbound Off-Ramp Weekday, AM Peak Hour Roundabout Traffic Operations Summary**

Analysis Scenario	Performance Measure	Intersection	Minor Approaches	I-90 Eastbound Off-Ramp	Demer Street (S-263)	Demer Street (S-263)
				EB LTR	NB TR	SB LT
Estimated 2028 Total Traffic  <i>Installation of Roundabout Control</i>	Level of Service (LOS)	B	B	B	C	A
	Delay (sec/veh)	14.1	12.8	12.8	20.6	9.6
	Adjusted Entry Volume (veh/hr)	1,637	241	241	600	796
	Ped + Bike Volume (ped+bike/hr)	0	0	0	0	0
	Volume-to-Capacity Ratio (v/c)	0.60	0.42	0.42	0.75	0.60
	HCM 95% Max Queue Length (veh)			2.1	7.1	4.2
	HCM 95% Max Queue Length (ft)			54.0	184.6	105.0
	Available Queue Storage (ft)			1,130	260	500

EB = Eastbound; NB = Northbound; and SB = Southbound | LTR = Left-Through-Right; TR = Through-Right; and LT = Left-Through

### **Demer Street (S-263) & the Interstate 90 (I-90) Westbound Ramps**

**Impact:** The I-90 westbound off-ramp approach at its intersection with Demer Street (S-263) is projected to decline to LOS F and significant vehicle queues are anticipated with the addition of site generated traffic from the proposed Town Pump development through the year 2028. The intersection is also projected to decline to LOS E during the weekday, school PM peak hour, and LOS D during the weekday, PM peak hour for estimated 2028 total traffic conditions.

**Mitigation:** Evaluate alternatives for improved operations.

**Table 16: Demer Street (S-263) & I-90 Eastbound Off-Ramp Weekday, School PM Peak Hour Roundabout Traffic Operations Summary**

Analysis Scenario	Performance Measure	Intersection	Minor Approaches	I-90 Eastbound Off-Ramp	Demer Street (S-263)	Demer Street (S-263)
				EB LTR	NB TR	SB LT
<b>Estimated 2028 Total Traffic</b>  <i>Installation of Roundabout Control</i>	Level of Service (LOS)	A	A	A	A	A
	Delay (sec/veh)	7.6	5.9	5.9	9.4	6.2
	Adjusted Entry Volume (veh/hr)	1,095	114	114	493	489
	Ped + Bike Volume (ped+bike/hr)	1	1	1	0	0
	Volume-to-Capacity Ratio (v/c)	0.35	0.14	0.14	0.49	0.37
	HCM 95% Max Queue Length (veh)			0.5	2.7	1.7
	HCM 95% Max Queue Length (ft)			12.7	69.4	42.5
	Available Queue Storage (ft)			1,130	260	500

EB = Eastbound; NB = Northbound; and SB = Southbound | LTR = Left-Through-Right; TR = Through-Right; and LT = Left-Through

**Table 17: Demer Street (S-263) & I-90 Eastbound Off-Ramp Weekday, PM Peak Hour Roundabout Traffic Operations Summary**

Analysis Scenario	Performance Measure	Intersection	Minor Approaches	I-90 Eastbound Off-Ramp	Demer Street (S-263)	Demer Street (S-263)
				EB LTR	NB TR	SB LT
<b>Estimated 2028 Total Traffic</b>  <i>Installation of Roundabout Control</i>	Level of Service (LOS)	A	A	A	A	A
	Delay (sec/veh)	5.9	5.8	5.8	6.4	5.6
	Adjusted Entry Volume (veh/hr)	914	127	127	346	442
	Ped + Bike Volume (ped+bike/hr)	0	0	0	0	0
	Volume-to-Capacity Ratio (v/c)	0.28	0.15	0.15	0.32	0.33
	HCM 95% Max Queue Length (veh)			0.5	1.4	1.4
	HCM 95% Max Queue Length (ft)			13.0	35.7	35.0
	Available Queue Storage (ft)			1,130	260	500

EB = Eastbound; NB = Northbound; and SB = Southbound | LTR = Left-Through-Right; TR = Through-Right; and LT = Left-Through

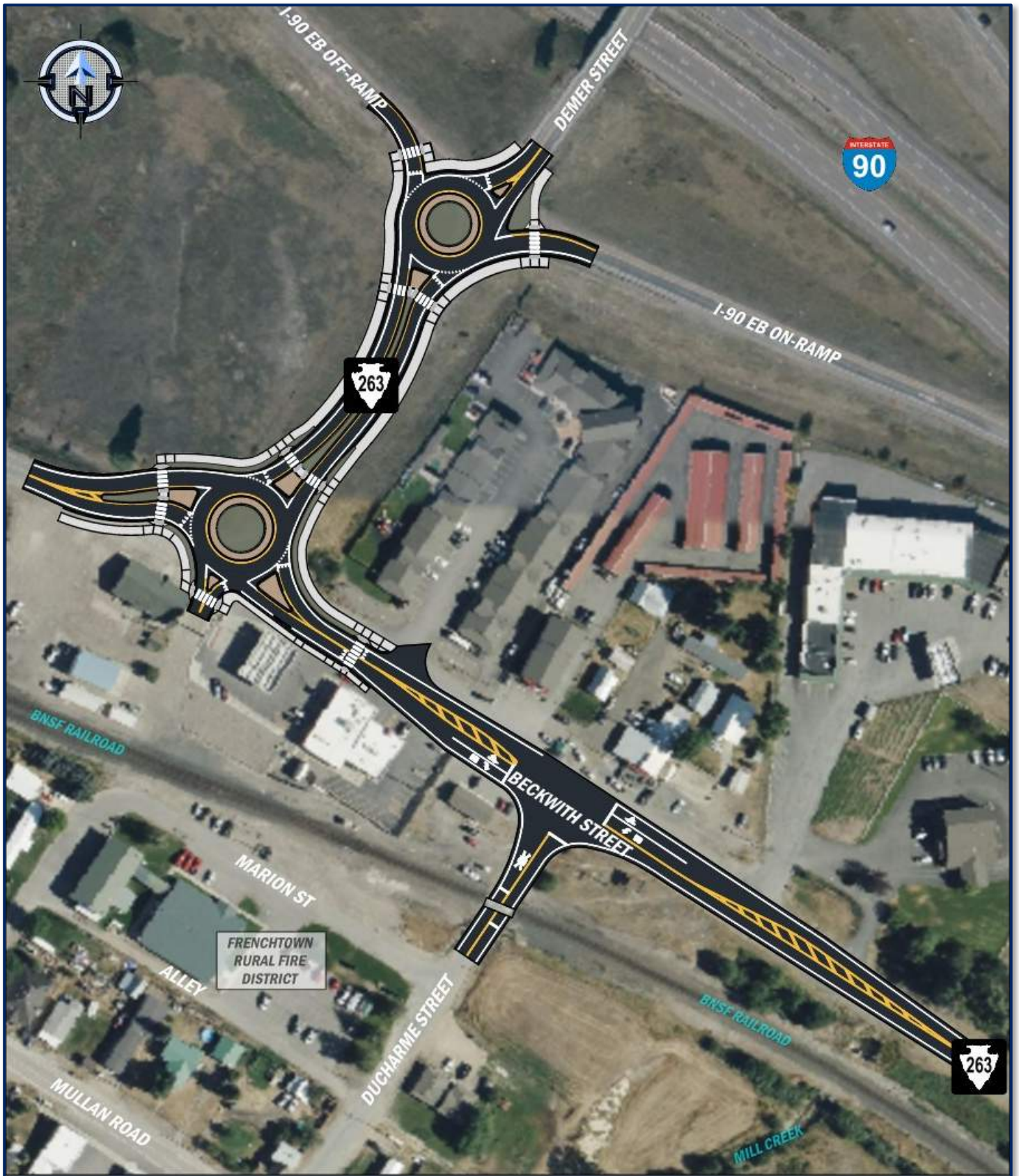


Figure 33: Mitigation Concepts – South of Interstate 90

### All-Way Stop Control (AWSC) Warrant Analyses

The intersection of Demer Street (S-263) and the I-90 westbound ramps was also evaluated against AWSC warrant criteria delineated in the MUTCD. The intersection was found to satisfy minimum warrant criteria based on estimated 2028 total traffic volumes for the eighth highest hourly volume; however, an operational analysis check noted adverse impacts to the southbound approach, particularly during the weekday, AM peak hour, that may result in vehicle queues extending through the Frenchtown Frontage Road (S-574) and Demer Street intersection.

### Signal Warrant Analysis

A preliminary signal warrant analysis was performed for the intersection of Demer Street (S-263) and the I-90 eastbound ramps based on forecast 2028 total traffic volumes for meeting minimum traffic signal warrant criteria for Warrant #1: Eight Hour Vehicular Volume and Warrant #2: Four-Hour Vehicular Volume as delineated in the MUTCD. This evaluation also utilized the Oregon Department of Transportation procedure. Based on this procedure, installation of a traffic signal was not found to be warranted at the intersection; however, the minimum warrant criteria for Warrant #2: Four-Hour Vehicular Volume are projected to nearly be met with estimated traffic contributions from the proposed Town Pump site development project.

### Auxiliary Turn Lane Analyses

Auxiliary turn lane analyses were not performed as their installation would not mitigate traffic operations for the westbound left-turn movement at the intersection of Demer Street and the I-90 westbound ramps.

### Roundabout Control Analyses

Traffic operations with installation of roundabout control for the projected 2028 total traffic volumes at the intersection of Demer Street and the I-90 westbound ramps are summarized on page 67 in Table 18 for the weekday, AM peak hour and in Table 19 for the weekday, school PM peak hour. Weekday, PM peak hour operations are summarized in Table 20 on page 68. The analyses are also included in Appendix I-4.

### Summary

The analysis summaries show that the intersection is anticipated to operate satisfactorily under roundabout control. A conceptual layout of the intersection with a roundabout is shown in Figure 37 on page 72.

### ***Frenchtown Frontage Road (S-574) Intersections***

**Impact:** During the weekday, AM peak period under 2026 existing conditions, the northbound, Demer Street approach operates at LOS D and is projected to decline to LOS E with continued background traffic growth through the year 2028 and LOS F with traffic contributions from the proposed Town Pump site development project. Operational delays and vehicle queuing under 2026 existing conditions can be seen in Figure 34 on page 68.

The proposed eastern site access location for the Town Pump site development project presents concerns in relation to the Frenchtown Frontage Road (S-574) intersections with Demer Street and Belker Lane. The access spacing does not allow for the development of auxiliary turn lanes to serve any of the intersections, including the proposed site access according to design criteria included in the MDT *Traffic Engineering Manual* without allowing for design exceptions.

**Mitigation:** Evaluate alternatives for improved operations including alternative traffic control. Revise the location of eastern proposed access for the Town Pump site development project to align with Demer Street.

**Table 18: Demer Street & I-90 Westbound Off-Ramp Weekday, AM Peak Hour Roundabout Traffic Operations Summary**

Analysis Scenario	Performance Measure	Intersection	Minor Approaches	I-90 Westbound Off-Ramp	Demer Street	Demer Street
				WB LTR	NB LT	SB TR
<b>Estimated 2028 Total Traffic</b>  <i>Installation of Roundabout Control</i>	Level of Service (LOS)	A	A	A	A	B
	Delay (sec/veh)	9.1	8.2	8.2	5.3	11.6
	Adjusted Entry Volume (veh/hr)	1,351	148	325	370	656
	Ped + Bike Volume (ped+bike/hr)	0	0	0	0	0
	Volume-to-Capacity Ratio (v/c)	0.42	0.17	0.37	0.28	0.61
	HCM 95% Max Queue Length (veh)			1.7	1.2	4.4
	HCM 95% Max Queue Length (ft)			44.0	30.0	113.3
	Available Queue Storage (ft)			1,255	520	90

WB = Westbound; NB = Northbound; and SB = Southbound | LTR = Left-Through-Right; LT = Left-Through; and TR = Through-Right

**Table 19: Demer Street & I-90 Westbound Off-Ramp Weekday, School PM Peak Hour Roundabout Traffic Operations Summary**

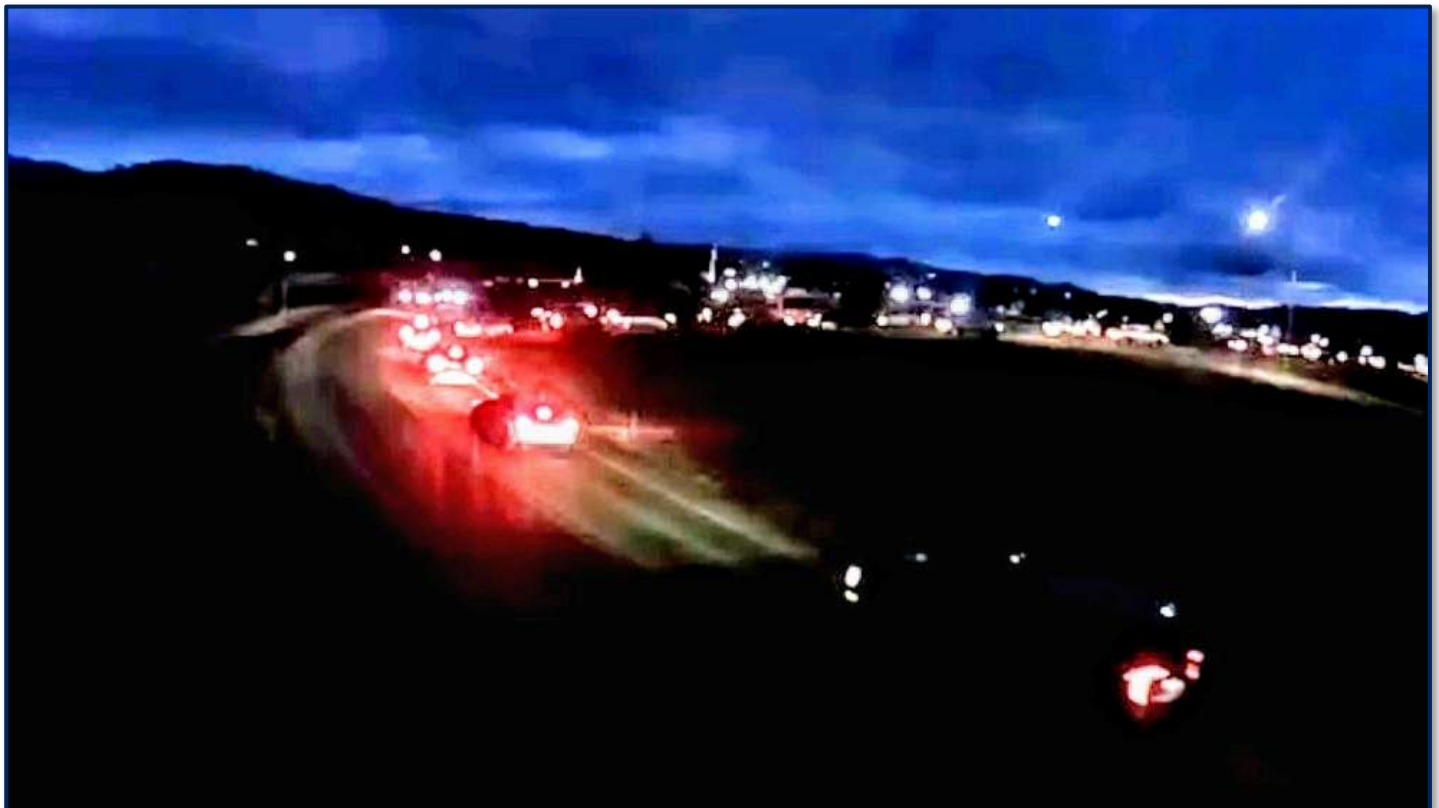
Analysis Scenario	Performance Measure	Intersection	Minor Approaches	I-90 Westbound Off-Ramp	Demer Street	Demer Street
				WB LTR	NB LT	SB TR
<b>Estimated 2028 Total Traffic</b>  <i>Installation of Roundabout Control</i>	Level of Service (LOS)	A	A	A	A	A
	Delay (sec/veh)	7.5	9.0	9.0	5.5	8.1
	Adjusted Entry Volume (veh/hr)	1,158	354	354	401	403
	Ped + Bike Volume (ped+bike/hr)	0	0	0	0	0
	Volume-to-Capacity Ratio (v/c)	0.37	0.41	0.41	0.31	0.41
	HCM 95% Max Queue Length (veh)			2.0	1.3	2.0
	HCM 95% Max Queue Length (ft)			51.1	32.5	51.7
	Available Queue Storage (ft)			1,255	520	90

WB = Westbound; NB = Northbound; and SB = Southbound | LTR = Left-Through-Right; LT = Left-Through; and TR = Through-Right

**Table 20: Demer Street & I-90 Westbound Off-Ramp Weekday, PM Peak Hour Roundabout Traffic Operations Summary**

Analysis Scenario	Performance Measure	Intersection	Minor Approaches	I-90 Westbound Off-Ramp	Demer Street	Demer Street
				WB LTR	NB LT	SB TR
<b>Estimated 2028 Total Traffic</b>  <i>Installation of Roundabout Control</i>	Level of Service (LOS)	<b>A</b>	<b>B</b>	B	A	A
	Delay (sec/veh)	7.7	10.1	10.1	4.8	6.9
	Adjusted Entry Volume (veh/hr)	1,144	494	494	335	315
	Ped + Bike Volume (ped+bike/hr)	0	0	0	0	0
	Volume-to-Capacity Ratio (v/c)	0.34	0.51	0.51	0.25	0.32
	HCM 95% Max Queue Length (veh)			3.0	1.0	1.4
	HCM 95% Max Queue Length (ft)			75.6	25.0	35.3
	Available Queue Storage (ft)			1,255	520	90

WB = Westbound; NB = Northbound; and SB = Southbound | LTR = Left-Through-Right; LT = Left-Through; and TR = Through-Right



**Figure 34: Frenchtown Frontage Road (S-574) & Demer Street | Weekday, AM Peak Period Vehicle Queuing**

### [Revision to Town Pump Site Access Location](#)

To maintain the long-term functionality of the Frenchtown Frontage Road (S-574) east of its intersection with Demer Street and limit the overlap of intersection functional areas, the eastern site access to and from the Frenchtown Frontage Road (S-574) for the proposed Town Pump site development project was evaluated with a relocation to align it with Demer Street. The relocation resulted in necessary revisions to site traffic assignment. The estimated redistribution of site traffic assignment at each of the accesses is shown in Figure 35 on the following page. Estimated 2028 total traffic with the revised access location is shown in Figure 36 on page 71.

### [Two-Way Stop Control \(TWSC\) Analyses](#)

As a check, two-way stop-controlled intersection analyses were performed for the intersection of the Frenchtown Frontage Road (S-574) with the revised access location. Options were evaluated for having either the east-west or north-south movements as the major street. Poor traffic operations were shown under both the alternatives; therefore, TWSC was not considered viable for the intersection.

### [AWSC Warrant Analyses](#)

AWSC warrant criteria were evaluated for the intersection of the Frenchtown Frontage Road (S-574) and Demer Street for 2026 existing conditions as well as estimated 2028 traffic volumes. The 2026 existing conditions analyses found that the intersection would satisfy minimum warrant criteria potentially based on 36-month crash experience as well as the eighth highest hourly volume. This was the same for estimated 2028 traffic volumes. The analyses are summarized in Appendix G.

### [AWSC Operational Analyses](#)

Traffic operations with installation of all-way stop control for 2026 existing and estimated 2028 background traffic conditions at the intersection of the Frenchtown Frontage Road (S-574) and Demer Street are summarized in Table 21 for the weekday, AM peak hour on page 73; in Table 22 on page 74 for the weekday, school PM peak hour; and in Table 23 on page 75 for the weekday, PM peak hour. The analyses are also included in Appendix I-5. An operational analysis check of the estimated 2028 total traffic volumes noted adverse impacts to the eastbound, westbound, and northbound approaches, particularly during the weekday, AM peak hour, which may result in vehicle queues extending through the Demer Street intersections to the south. Therefore, AWSC was not deemed a viable option for mitigating estimated 2028 total traffic conditions with the addition of traffic generated by the proposed Town Pump site development.

### [Signal Warrant Analysis](#)

A preliminary signal warrant analysis was performed for the intersection of the Frenchtown Frontage Road and Demer Street based on forecast 2028 total traffic volumes for meeting minimum traffic signal warrant criteria for Warrant #1: Eight Hour Vehicular Volume and Warrant #2: Four-Hour Vehicular Volume as delineated in the MUTCD. This evaluation again utilized the Oregon Department of Transportation procedure. Based on this procedure, installation of a traffic signal was not found to be warranted at the intersection.

### [Roundabout Control Analyses](#)

Traffic operations with installation of roundabout control for the projected 2028 total traffic volumes at the intersection of the Frenchtown Frontage Road (S-574) and Demer Street are summarized on page 76 in Table 24 for the weekday, AM peak hour and in Table 25 on page 76 for the weekday, school PM peak hour. Weekday, PM peak hour operations are summarized in Table 26 on page 77. The analyses are also included in Appendix I-5.



Figure 35: Relocated Driveway Estimated Site Traffic Assignment



Figure 36: Estimated 2028 Total Traffic with Relocated Driveway



Figure 37: Mitigation Concepts – North of Interstate 90

Table 21: Frenchtown Frontage Road (S-574) &amp; Demer Street Weekday, AM Peak Hour AWSC Traffic Operations Summary

Analysis Scenario	Performance Measure	Intersection	Minor Approaches	Frontage Road (S-574)	Frontage Road (S-574)	Demer Street
				EB TR	WB LT	NB LR
<b>2026 Existing Conditions</b>  <i>Installation of All-Way Stop Control (AWSC)</i>	Level of Service (LOS)	B	C	B	B	C
	Delay (sec/veh)	14.8	16.0	14.5	14.1	16.0
	Adjusted Entry Volume (veh/hr)	1,058	350	404	304	350
	Ped + Bike Volume (ped+bike/hr)	0	0	0	0	0
	Volume-to-Capacity Ratio (v/c)	0.54	0.56	0.57	0.49	0.56
	HCM 95% Max Queue Length (veh)			3.6	2.7	3.5
	HCM 95% Max Queue Length (ft)			92.2	69.1	89.6
	Available Queue Storage (ft)			1,370	430	140
<b>Estimated 2028 Background Traffic</b>  <i>Installation of All-Way Stop Control (AWSC)</i>	Level of Service (LOS)	C	C	C	C	C
	Delay (sec/veh)	17.4	18.7	17.1	16.2	18.7
	Adjusted Entry Volume (veh/hr)	1,149	379	436	334	379
	Ped + Bike Volume (ped+bike/hr)	0	0	0	0	0
	Volume-to-Capacity Ratio (v/c)	0.61	0.63	0.64	0.55	0.63
	HCM 95% Max Queue Length (veh)			4.6	3.4	4.4
	HCM 95% Max Queue Length (ft)			117.8	87.0	112.6
	Available Queue Storage (ft)			1,370	430	140

EB = Eastbound; WB = Westbound; and NB = Northbound | TR = Through-Right; LT = Left-Through; and LR = Left-Right

Table 22: Frenchtown Frontage Road (S-574) &amp; Demer Street Weekday, School PM Peak Hour AWSC Traffic Operations Summary

Analysis Scenario	Performance Measure	Intersection	Minor Approaches	Frontage Road (S-574)	Frontage Road (S-574)	Demer Street
				EB TR	WB LT	NB LR
<b>2026 Existing Conditions</b>  <i>Installation of All-Way Stop Control (AWSC)</i>	Level of Service (LOS)	B	B	B	A	B
	Delay (sec/veh)	11.8	13.0	11.1	9.7	13.0
	Adjusted Entry Volume (veh/hr)	803	370	320	113	370
	Ped + Bike Volume (ped+bike/hr)	0	0	0	0	0
	Volume-to-Capacity Ratio (v/c)	0.38	0.51	0.42	0.17	0.51
	HCM 95% Max Queue Length (veh)			2.1	0.6	2.9
	HCM 95% Max Queue Length (ft)			54.2	15.7	74.8
	Available Queue Storage (ft)			1,370	430	140
<b>Estimated 2028 Background Traffic</b>  <i>Installation of All-Way Stop Control (AWSC)</i>	Level of Service (LOS)	B	B	B	B	B
	Delay (sec/veh)	12.9	14.6	12.0	10.1	14.6
	Adjusted Entry Volume (veh/hr)	873	403	345	125	403
	Ped + Bike Volume (ped+bike/hr)	0	0	0	0	0
	Volume-to-Capacity Ratio (v/c)	0.42	0.57	0.47	0.20	0.57
	HCM 95% Max Queue Length (veh)			2.5	0.7	3.6
	HCM 95% Max Queue Length (ft)			64.5	18.3	92.9
	Available Queue Storage (ft)			1,370	430	140

EB = Eastbound; WB = Westbound; and NB = Northbound | TR = Through-Right; LT = Left-Through; and LR = Left-Right

Table 23: Frenchtown Frontage Road (S-574) &amp; Demer Street Weekday, PM Peak Hour AWSC Traffic Operations Summary

Analysis Scenario	Performance Measure	Intersection	Minor Approaches	Frontage Road (S-574)	Frontage Road (S-574)	Demer Street
				EB TR	WB LT	NB LR
<b>2026 Existing Conditions</b>  <i>Installation of All-Way Stop Control (AWSC)</i>	Level of Service (LOS)	B	B	A	A	B
	Delay (sec/veh)	10.5	11.7	8.7	9.3	11.7
	Adjusted Entry Volume (veh/hr)	650	377	154	119	377
	Ped + Bike Volume (ped+bike/hr)	0	0	0	0	0
	Volume-to-Capacity Ratio (v/c)	0.29	0.48	0.20	0.17	0.48
	HCM 95% Max Queue Length (veh)			0.7	0.6	2.6
	HCM 95% Max Queue Length (ft)			17.5	15.4	66.0
	Available Queue Storage (ft)			1,370	430	140
<b>Estimated 2028 Background Traffic</b>  <i>Installation of All-Way Stop Control (AWSC)</i>	Level of Service (LOS)	B	B	A	A	B
	Delay (sec/veh)	11.3	12.7	9.0	9.6	12.7
	Adjusted Entry Volume (veh/hr)	707	411	165	131	411
	Ped + Bike Volume (ped+bike/hr)	0	0	0	0	0
	Volume-to-Capacity Ratio (v/c)	0.32	0.53	0.22	0.19	0.53
	HCM 95% Max Queue Length (veh)			0.8	0.7	3.1
	HCM 95% Max Queue Length (ft)			20.0	17.9	78.7
	Available Queue Storage (ft)			1,370	430	140

EB = Eastbound; WB = Westbound; and NB = Northbound | TR = Through-Right; LT = Left-Through; and LR = Left-Right

**Table 24: Frenchtown Frontage Road (S-574) & Demer Street Weekday, AM Peak Hour Roundabout Traffic Operations Summary**

Analysis Scenario	Performance Measure	Intersection	Minor Approaches	Frontage Road	Frontage Road	Demer Street	Driveway
				EB LTR	WB LTR	NB LTR	SB LTR
<b>Estimated 2028 Total Traffic</b>  <i>Installation of Roundabout Control</i>	Level of Service (LOS)	<b>A</b>	<b>A</b>	A	A	A	A
	Delay (sec/veh)	<b>7.9</b>	<b>7.9</b>	8.9	8.6	6.9	7.0
	Adjusted Entry Volume (veh/hr)	<b>3,80</b>	<b>1,589</b>	437	338	500	129
	Ped + Bike Volume (ped+bike/hr)	<b>1</b>	<b>1</b>	0	0	0	1
	Volume-to-Capacity Ratio (v/c)	<b>0.37</b>	<b>0.19</b>	0.45	0.39	0.40	0.18
	HCM 95% Max Queue Length (veh)			2.4	1.8	2.0	0.7
	HCM 95% Max Queue Length (ft)			61.7	46.1	51.0	17.7
	Available Queue Storage (ft)			850	400	90	300

EB = Eastbound; WB = Westbound; NB = Northbound; and SB = Southbound | LTR = Left-Through-Right

**Table 25: Frenchtown Frontage Road (S-574) & Demer Street Weekday, School PM Peak Hour Roundabout Traffic Operations Summary**

Analysis Scenario	Performance Measure	Intersection	Minor Approaches	Frontage Road	Frontage Road	Demer Street	Driveway
				EB LTR	WB LTR	NB LTR	SB LTR
<b>Estimated 2028 Total Traffic</b>  <i>Installation of Roundabout Control</i>	Level of Service (LOS)	<b>A</b>	<b>A</b>	A	A	A	A
	Delay (sec/veh)	<b>6.6</b>	<b>5.3</b>	6.4	5.4	7.3	5.1
	Adjusted Entry Volume (veh/hr)	<b>1,084</b>	<b>1,801</b>	343	129	499	113
	Ped + Bike Volume (ped+bike/hr)	<b>3</b>	<b>3</b>	0	0	0	3
	Volume-to-Capacity Ratio (v/c)	<b>0.27</b>	<b>0.13</b>	0.31	0.14	0.42	0.12
	HCM 95% Max Queue Length (veh)			1.4	0.5	2.1	0.4
	HCM 95% Max Queue Length (ft)			6.4	5.4	7.3	5.1
	Available Queue Storage (ft)			850	400	90	300

EB = Eastbound; WB = Westbound; NB = Northbound; and SB = Southbound | LTR = Left-Through-Right

**Table 26: Frenchtown Frontage Road (S-574) & Demer Street Weekday, PM Peak Hour Roundabout Traffic Operations Summary**

Analysis Scenario	Performance Measure	Intersection	Minor Approaches	Beckwith Street	Beckwith Street	Private Driveway	Demer Street
				EB LTR	WB LTR	NB LTR	SB LTR
<b>Estimated 2028 Total Traffic</b> <i>Installation of Roundabout Control</i>	Level of Service (LOS)	<b>A</b>	<b>A</b>	A	A	A	A
	Delay (sec/veh)	<b>6.1</b>	<b>5.5</b>	4.6	5.6	6.8	5.4
	Adjusted Entry Volume (veh/hr)	<b>957</b>	<b>267</b>	168	136	523	131
	Ped + Bike Volume (ped+bike/hr)	<b>2</b>	<b>2</b>	0	0	0	2
	Volume-to-Capacity Ratio (v/c)	<b>0.23</b>	<b>0.15</b>	0.15	0.15	0.41	0.15
	HCM 95% Max Queue Length (veh)			0.5	0.5	2.0	0.5
	HCM 95% Max Queue Length (ft)			12.6	12.8	50.6	12.6
	Available Queue Storage (ft)			850	400	90	300

EB = Eastbound; WB = Westbound; NB = Northbound; and SB = Southbound | LTR = Left-Through-Right

### Summary

The analysis summaries show that the intersection is anticipated to operate satisfactorily under roundabout control. A conceptual layout of the intersection with a roundabout is shown in Figure 37 on page 72.

### Auxiliary Turn Lane Analyses

Auxiliary turn lane analyses were performed for the intersection of the Frenchtown Frontage Road (S-574) and the western access for the proposed Town Pump site development project using guidelines delineated in the MDT Traffic Engineering Manual. Under the revised site assignment volumes shown in Figure 36 on page 71, the intersection did not warrant the installation of auxiliary left- or right-turn lanes. Those analyses are included in Appendix H.

### **Safety**

A significant crash experience trend was not identified at any of the study area intersections. Although the annual crash rate at the intersection of Demer Street and the Interstate 90 (I-90) westbound off-ramp is greater than what might be expected based on Highway Safety Manual (HSM) analysis methodology the crash experience rate based on entering traffic volumes is less than the HSM expected crash rate. Monitoring the intersection for crash experience in the future may be beneficial.

## Alternative Modes of Transportation

### Existing Conditions

As noted in previous sections, sidewalks and pathways are generally not available for pedestrians and cyclists within the study area nor are there any additional dedicated bicycle facilities outside of the A.J. Hoyt Memorial Trail. The A.J. Hoyt Memorial Trail is located adjacent to the proposed Town Pump site development project on the north side of the Frenchtown Frontage Road (S-574). There is not currently a public bus system within the community of Frenchtown.

### Proposed Development

No off-site facilities for pedestrians and bicyclists were shown in the figures included as part of the Sanbell traffic analysis and site accessibility study for the proposed Town Pump site development project. Limited sidewalks are anticipated to be included within the site around the perimeter of the building. No specific transit-oriented improvements are known to be included with the proposed development.

## Compliance with Applicable Local Codes

The proposed Town Pump site development project development improvements should be installed in accordance with Missoula County and Montana Department of Transportation requirements, as applicable.

## Conclusions & Recommendations

### 2026 Existing Conditions

The following recommendations are based on the analyses of 2026 existing conditions included herein, excluding the addition of background traffic growth or the proposed Town Pump site development generated traffic. The following are recommended as appropriate:

#### Beckwith Street (S-263) & Ducharme Street

Citizens in Frenchtown as well as the local fire department noted concerns with vehicle queuing on Ducharme Street during the weekday, AM peak period and blockage of its intersection with Marion Street as well as the alley to the south. Marion Street and the alley are primary means of access for the fire department and excessive queues impact its ability to respond to emergencies. Substandard operations at the Beckwith Street (S-263) and Ducharme Street intersection as well as train activity at the Ducharme Street at-grade rail crossing are causes of longer vehicle queues. The intersection was evaluated for alternative traffic control, the addition of auxiliary turn lanes, and/or redirection of school related traffic to improve traffic operations during peak periods. The analyses found that the addition of auxiliary turn lanes in combination with the conversion to all-way stop control or redirection of an estimated seventy percent (70%) of school related traffic would be viable options for traffic operations mitigation.

### **Option 1 | Redirection of School Related Traffic**

Redirection of school related traffic involves focusing student drop-off and pick-up to the east side of the Frenchtown Elementary and Intermediate School. Each approach at the intersection of Beckwith Street (S-263) and Ducharme Street is forecast to operate at LOS C or better with redirected traffic. Key points for consideration include the following:

- Student bussing would remain unchanged with the proposed redirection.
- Communication with parents or guardians and adherence to student drop-off and pick-up procedures by school officials would be required to ensure proper functioning.
- Site modifications to accommodate the revised drop-off and pick-up location and procedures and adequate on-site queue storage of vehicles may require expenditures for implementation but the overall cost may be less than that for turn lane and traffic control modifications at the intersection of Beckwith Street (S-263) and Ducharme Street.

### **Option 2 | Installation of Auxiliary Turn Lanes and All-Way Stop Control (AWSC)**

The intersection of Beckwith Street (S-263) and Ducharme Street does not satisfy MUTCD minimum warrant criteria for installation of AWSC based on crash experience, sight distance, future traffic signal installation, or traffic volumes. Utilizing the fire department concern for emergency responsiveness, there may be a case for satisfaction of Warrant E: Other Factors. Auxiliary left-turn lane criteria suggested in the AASHTO publication *A Policy on Geometric Design of Highways and Streets, 2018 – 7th Edition, 2nd Printing* showed that the Beckwith Street (S-263) approaches at its intersection with Ducharme Street would meet minimum criteria for consideration of both a left- and right-turn lane based on existing volumes. Each approach at the intersection is forecast to operate at LOS C or better with installation of auxiliary turn lanes and AWSC.

A conceptual layout of the intersection with auxiliary turn lanes and AWSC is shown in Figure 33 on page 65. Key points for consideration with the installation of auxiliary turn lanes and AWSC at the intersection of Beckwith Street (S-263) and Ducharme Street include:

- Installation of all-way stop control with the eastbound, left-turn lane as well as the westbound, right-turn lane may present challenges with the location of the existing coffee kiosk on the northwest corner of the intersection that includes drive-through windows on both its north and south sides.
- Impacts to parking areas in the vicinity of the intersection could pose concern for businesses.

### **Beckwith Street (S-263) & Demer Street (S-263)**

The southbound approach at the intersection of Beckwith Street (S-263) and Demer Street currently operates at LOS F during the weekday, AM peak hour and queues from the excessive delays impact operations at upstream intersections. The intersection was evaluated for alternatives to improve traffic operations.

#### **Intersection Traffic Control Alternatives Evaluation**

Analyses of MUTCD warrants for AWSC or signalized control found that the intersection does not currently meet the minimum criteria for installation of either of those traffic control alternatives. Auxiliary turn lane analyses were not performed as their installation would not mitigate traffic operations for the southbound left-turn movement at the intersection of Beckwith Street (S-263) and Demer Street (S-263).

The introduction of a curved roadway to align the centerlines of the westbound segment of Beckwith Street (S-263) and the southbound, Demer Street (S-263) approach to convert the major traffic flows to through movements at the intersection was considered. The proximity of existing businesses adjacent to the roadways as well as adjacent intersections limit the ability to perform the realignment. Additionally, the introduction of turn lanes to promote improved operations and safety is restricted due to available space for queue storage and transition tapers. This was not evaluated any further.

### ***Roundabout Control Alternative***

Installation of roundabout control was evaluated for the intersection of Beckwith Street (S-263) and Demer Street (S-263) to improve traffic operations. The analyses found that installation of roundabout control would improve traffic operations at the intersection. This mitigation would also provide a significant benefit to overall operations and queue reduction on Demer Street (S-263) during the weekday, AM peak period that is currently experienced. A conceptual layout of the intersection with a roundabout is shown in Figure 33 on page 65. Key points for consideration include the following:

- Installation of roundabout control may potentially provide additional safety benefits through the reduction of the crash experience rate at the intersection.
- Installation of roundabout control would require right-of-way acquisition and construction would need to be coordinated to allow for continued traffic flow while also limiting school and business operations.

### **Frenchtown Frontage Road (S-574) & Demer Street**

During the weekday, AM peak period under 2026 existing conditions, the northbound, Demer Street approach operates at LOS D. The operational delays contribute to vehicle queues extending southerly along Demer Street during this time, impacting upstream intersections. Alternatives for improved traffic operations were evaluated. AWSC warrant criteria analyses for the intersection of the Frenchtown Frontage Road (S-574) and Demer Street under 2026 existing conditions found that it would satisfy minimum warrant criteria potentially based on 36-month crash experience as well as the eighth highest hourly volume. Analyses of traffic operations under all-way stop control revealed that the intersection would operate satisfactorily (LOS C or better) during each of the analysis periods. Installation of all-way stop control to mitigate 2026 existing conditions at the intersection of the Frenchtown Frontage Road (S-574) and Demer Street is recommended. As this is a traffic control revision, the following are recommended with the installation:

- Install all-way stop control (AWSC) utilizing light-emitting diode (LED) blinker stop signs that include solar power to draw attention to the signage for drivers. An available power source may also be utilized with the installation of conduit runs, pull boxes, and service assembly. Radar detection may also be incorporated so that the blinking light elements of the signage are only activated when vehicles are approaching, saving on battery life if solar power is utilized and potentially limiting driver ignorance.
- In conjunction with AWSC installation, temporary installation of “NEW TRAFFIC PATTERN AHEAD” signage (MUTCD W23-2) on each approach to the intersection is recommended in accordance with MUTCD requirements for a minimum 14-day notification period.

## Demer Street & the Interstate 90 (I-90) Westbound Ramps

The annual crash rate at the intersection of Demer Street and the Interstate 90 (I-90) westbound off-ramp is greater than what might be expected based on Highway Safety Manual (HSM) analysis methodology, but the crash experience rate based on entering traffic volumes is less than the HSM expected crash rate. Monitoring the intersection for crash experience in the future may be beneficial.

## No Build Scenario – Estimated 2028 Background Traffic Volumes

With estimated background traffic growth through the year 2028, declines in operations to substandard conditions (LOS D or lower) are projected for the Interstate 90 (I-90) eastbound and westbound off-ramps at their intersection with Demer Street during the weekday, AM peak hour. No additional substandard operations beyond those identified for 2026 existing conditions were noted through the analyses.

A preliminary analysis of operations with the installation of AWSC at the I-90 eastbound and westbound off-ramp intersections with Demer Street found adverse impacts to southbound traffic operations during the weekday, AM peak hour. Therefore, this was discounted as a viable means of mitigation. Noting that estimated queue lengths on each of the I-90 off-ramps during the weekday, AM peak hour were reasonable and are not anticipated to impact Interstate 90 traffic plus operations during the weekday, school PM peak period as well as the weekday, PM peak period are acceptable, no additional mitigation for estimated 2028 background traffic is recommended.

## Full Utilization Scenario – Estimated 2028 Total Traffic Volumes

The addition of traffic generated from the proposed Town Pump site development project is not expected to significantly impact traffic operations for the Ducharme Street and Beckwith Street (S-263) intersections. It does, however, have significant impact on traffic operations at the Demer Street (S-263) intersections with the I-90 eastbound and westbound ramps plus the Frenchtown Frontage Road (S-574) during the weekday, AM peak hour. Additionally, declines in level of service (LOS) to substandard conditions are envisaged for the weekday, school PM peak hour on the I-90 eastbound and westbound off-ramps. A decline in LOS is anticipated on the I-90 westbound off-ramp during the weekday, PM peak hour as well.

## Demer Street (S-263) & the Interstate 90 (I-90) Eastbound Ramps

The I-90 eastbound off-ramp approach at its intersection with Demer Street (S-263) is projected to decline to LOS F and significant vehicle queues are anticipated with the addition of site generated traffic from the proposed Town Pump development through the year 2028. The intersection is also projected to decline to LOS D during the weekday, school PM peak hour for estimated 2028 total traffic conditions. The intersection was evaluated for alternatives to improve traffic operations.

### *All-Way Stop Control (AWSC) Warrant Analyses*

AWSC warrants were evaluated for the intersection of Demer Street (S-263) and the I-90 eastbound ramps. The intersection was found to satisfy minimum warrant criteria based on 2026 existing conditions for the eighth highest hourly volume; however, an operational analysis check noted adverse impacts to the northbound and southbound approaches. With the installation of all-way stop control, excessive average vehicle delays as well as long queue lengths were found with the conversion to AWSC for the intersection.

### ***Signal Warrant Analysis***

A preliminary signal warrant analysis was performed for the intersection of Demer Street (S-263) and the I-90 eastbound ramps based on forecast 2028 total traffic volumes for meeting minimum traffic signal warrant criteria for Warrant #1: Eight Hour Vehicular Volume and Warrant #2: Four-Hour Vehicular Volume as delineated in the MUTCD. This evaluation utilized a procedure developed by the Oregon Department of Transportation for performing a preliminary signal warrant analysis based on estimated average daily traffic volumes. Based on this procedure, installation of a traffic signal was not found to be warranted at the intersection.

### ***Auxiliary Turn Lane Analyses***

Auxiliary turn lane analyses were not performed as their installation would not mitigate traffic operations for the eastbound left-turn movement at the intersection of Demer Street (S-263) and the I-90 eastbound ramps.

### ***Roundabout Control Alternative***

Installation of roundabout control at the intersection of Demer Street (S-263) and the I-90 eastbound ramps was evaluated and found to operate satisfactorily, having LOS C or better projected for each of the approaches at the intersection during each of the weekday peak analysis periods evaluated with this study. The analyses were based on installation of a single-lane roundabout, which is conceptually shown in Figure 33 on page 65. Key aspects for consideration include the following:

- Installation of roundabout control may potentially provide additional safety benefits through the reduction of the crash experience rate at the intersection.
- Installation of roundabout control may require right-of-way acquisition and additional design considerations for embankment fills plus construction would need to be coordinated to allow for continued traffic flow while also limiting school and business operations.

### **Demer Street & the Interstate 90 (I-90) Westbound Ramps**

The I-90 westbound off-ramp approach at its intersection with Demer Street (S-263) is projected to decline to LOS F and significant vehicle queues are anticipated with the addition of site generated traffic from the proposed Town Pump development through the year 2028. The intersection is also projected to decline to LOS E during the weekday, school PM peak hour, and LOS D for the weekday, PM peak hour for estimated 2028 total traffic conditions. Alternatives for improved traffic operations were evaluated for consideration at the intersection.

### ***All-Way Stop Control (AWSC) Warrant Analyses***

The intersection of Demer Street (S-263) and the I-90 westbound ramps was also evaluated against AWSC warrant criteria delineated in the MUTCD. The intersection was found to satisfy minimum warrant criteria based on estimated 2028 total traffic volumes for the eighth highest hourly volume; however, an operational analysis check noted adverse impacts to the southbound approach, particularly during the weekday, AM peak hour, that may result in vehicle queues extending through the Frenchtown Frontage Road (S-574) and Demer Street intersection.

### ***Signal Warrant Analysis***

A preliminary signal warrant analysis was also performed for the intersection of Demer Street (S-263) and the I-90 eastbound ramps based on forecast 2028 total traffic volumes for meeting minimum traffic signal warrant criteria for Warrant #1: Eight Hour Vehicular Volume and Warrant #2: Four-Hour Vehicular Volume utilizing the Oregon Department of Transportation procedure. Based on this procedure, installation of a traffic signal was not found to be warranted at the intersection.

### ***Auxiliary Turn Lane Analyses***

Auxiliary turn lane analyses were not performed as their installation would not mitigate traffic operations for the westbound left-turn movement at the intersection of Demer Street and the I-90 westbound ramps.

### ***Roundabout Control Alternative***

Installation of roundabout control at the intersection of Demer Street (S-263) and the I-90 westbound ramps was evaluated and found to operate satisfactorily with LOS B or better projected for each of the approaches at the intersection during each of the weekday peak analysis periods evaluated with this study. The analyses were based on installation of a single-lane roundabout, which is conceptually shown in Figure 37 on page 72. Key elements for consideration include the following:

- Installation of roundabout control may potentially provide additional safety benefits through the reduction of the crash experience rate at the intersection.
- Installation of roundabout control will require additional design considerations for coordination with the intersection of the Frenchtown Frontage Road (S-574) and Demer Street as well as embankment fills.
- Construction would need to be coordinated to allow for continued traffic flow while also limiting school and business operations.

### ***Frenchtown Frontage Road (S-574) Intersections***

During the weekday, AM peak period the northbound, Demer Street approach is projected to decline to LOS F with traffic contributions from the proposed Town Pump site development project.

#### ***Town Pump Proposed Eastern Site Access***

The proposed eastern site access location for the Town Pump site development project presents concerns in relation to the Frenchtown Frontage Road (S-574) intersections with Demer Street and Belker Lane. The access spacing does not allow for the development of auxiliary turn lanes to serve any of the intersections, including the proposed site access according to design criteria included in the MDT *Traffic Engineering Manual* without allowing for design exceptions. It is recommended that the eastern site access for the proposed Town Pump site development project be relocated to align with Demer Street.

#### ***Frenchtown Frontage Road (S-574) & Demer Street Intersection***

##### Two-Way Stop Control (TWSC) Analyses

As a check, two-way stop-controlled intersection analyses were performed for the intersection of the Frenchtown Frontage Road (S-574) with the revised access location. Options were evaluated for having either the east-west or north-south movements as the major street. Poor traffic operations were shown under both the alternatives; therefore, TWSC was not considered viable for the intersection.

##### AWSC Warrant & Operational Analyses

AWSC warrant criteria were evaluated for the intersection of the Frenchtown Frontage Road (S-574) and Demer Street for estimated 2028 traffic volumes with the revised access location, finding that minimum warrant criteria may potentially be satisfied based the eighth highest hourly volume. An operational analysis check noted adverse impacts that may result in vehicle queues extending through the Demer Street intersections to the south. Therefore, AWSC was not deemed a viable option for mitigating estimated 2028 total traffic conditions with the addition of traffic generated by the proposed Town Pump site development.

### Signal Warrant Analysis

A preliminary signal warrant analysis was performed for the intersection of the Frenchtown Frontage Road (S-574) and Demer Street based on forecast 2028 total traffic volumes for meeting minimum traffic signal warrant criteria for Warrant #1: Eight Hour Vehicular Volume and Warrant #2: Four-Hour Vehicular Volume using the Oregon Department of Transportation procedure based on delineations in the MUTCD. This evaluation found that installation of a traffic signal at the intersection is not projected to be warranted.

### Roundabout Control Alternative

Installation of roundabout control at the intersection of the Frenchtown Frontage Road (S-574) and Demer Street plus the relocated site access for the proposed Town Pump site development project was evaluated and found to operate satisfactorily with LOS A or better projected for each of the approaches at the intersection during each of the weekday peak analysis periods evaluated with this study. The analyses were based on installation of a single-lane roundabout, which is conceptually shown in Figure 37 on page 72. Key features for consideration include the following:

- Installation of roundabout control may potentially provide additional safety benefits through the reduction of the crash experience rate at the intersection.
- Consideration of pedestrian and bicyclist accommodations must be incorporated with the installation of roundabout control, particularly with respect to the A.J. Hoyt Memorial Trail. Existing topography at the intersection may suggest consideration for installation of a pedestrian / bicyclist underpass for the A.J. Hoyt Memorial Trail, depending on intersection layout and grading.
- Installation of roundabout control will require additional design considerations for coordination with the intersection of Demer Street and the Interstate 90 (I-90) westbound ramps, the Frenchtown Frontage Road (S-574) and Belker Lane intersection, and embankment fills.
- Construction would need to be coordinated to allow for continued traffic flow while also limiting school and business operations.

### Town Pump Proposed Western Site Access

Auxiliary turn lane analyses were performed for the intersection of the Frenchtown Frontage Road (S-574) and the western access for the proposed Town Pump site development project with redistributed traffic volumes resulting from relocating the eastern proposed site access to align with Demer Street. Using guidelines delineated in the MDT *Traffic Engineering Manual*, the intersection did not warrant the installation of auxiliary left- or right-turn lanes.

The western proposed site access to the Town Pump site development project should be designed to accommodate the appropriate design vehicles, include considerations of the needs for non-motorized users, and provide adequate intersection sight distance in accordance with MDT and AASHTO standards.

## **Alternative Modes of Transportation**

### **Pedestrians & Bicyclists**

Future connectivity to the existing A.J. Hoyt Memorial Trail network is recommended to be installed with the proposed Town Pump site development project to accommodate non-motorized users for the site. Sidewalks, bicycle facilities, and other non-motorized user elements should be installed per MDT and Missoula County standards.

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## Transit Service

No specific transit-oriented improvements are included with the proposed Town Pump site development project.

## Improvements & Traffic Control Guidance

Included recommendations for the proposed Town Pump site development project should be installed according to Missoula County requirements (as applicable), the most current editions of the *Montana Public Works Standard Specifications*, MDT requirements, and the *Manual on Uniform Traffic Control Devices*.

## References

1. American Association of State Highway and Transportation Officials. (2018). A Policy on Geometric Design of Highways and Streets, 2018 7th Edition – 2nd Printing. Washington, DC.
2. American Association of State Highway and Transportation Officials. (2014). Highway Safety Manual, First Edition, with 2014 Supplement. Washington, DC.
3. Institute of Transportation Engineers. (2005). Transportation Impact Analyses for Site Development: An ITE Proposed Recommended Practice. Washington, DC.
4. Institute of Transportation Engineers. (September 2017). Trip Generation Handbook, 3rd Edition. Washington, DC.
5. Institute of Transportation Engineers. (August 2025). Trip Generation Manual, 12th Edition. Washington, DC.
6. Carranza, Cynthia of KPAX. (June 20, 2025). Potential Town Pump store in Frenchtown raises concerns among residents. <https://www.kpax.com/news/missoula-county/potential-town-pump-store-in-frenchtown-raises-concerns-among-residents>.
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9. Montana Department of Transportation. (August 2009). Traffic Engineering Manual. Helena, MT.
10. Staszczuk, Joey – PE, PTOE, RSP1 of Sanbell. (October 20, 2025). Frenchtown Traffic Analysis & Site Accessibility Study (Project No. 24584.01). Helena, MT: Montana Department of Transportation.
11. Transportation Research Board. (2022). Highway Capacity Manual, 7th Edition | A Guide for Multimodal Mobility Analysis. Washington, DC: The National Academies of Sciences · Engineering · Medicine.
12. United States Department of Justice – Civil Rights Division. (September 15, 2010). 2010 ADA Standards for Accessible Design. Washington, DC.
13. United States Department of Transportation - Federal Highway Administration. (December 2023). Manual on Uniform Traffic Control Devices, 11th Edition. Washington, DC.



# Appendix A



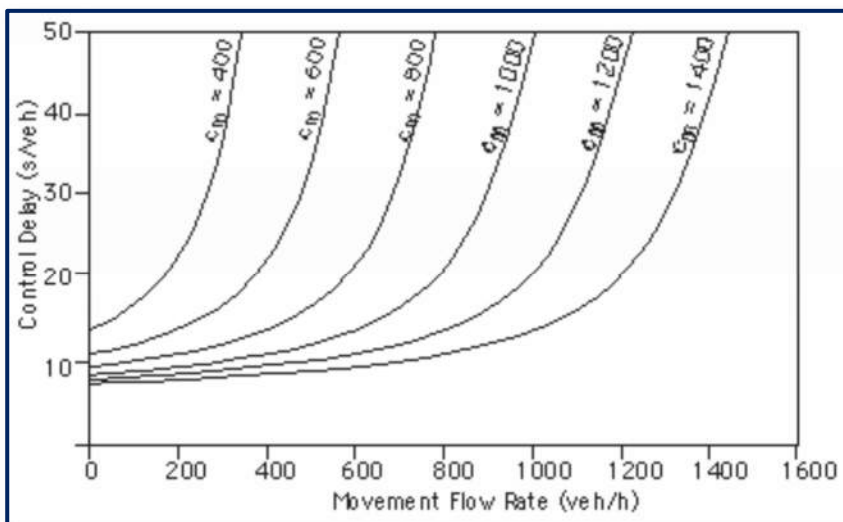
## Unsignalized Intersection Level of Service

The method presented in the *Highway Capacity Manual, 7<sup>th</sup> Edition | A Guide for Multimodal Mobility Analysis* (HCM) published by the Transportation Research Board (TRB) for evaluating unsignalized, stop-controlled intersections is based on the average total delay for each impeded movement. As used here, total delay is defined as the total elapsed time from when a vehicle stops at the end of a queue until the vehicle departs from the stop line. This time includes the time required for the vehicle to travel from the last-in-queue to the first-in-queue position. The average total delay for any minor movement is a function of the service rate or capacity of the approach and the degree of saturation. The resulting delay is used to determine the level of service as shown in Table A-1 below.

**Table A-1: Level of Service Criteria for Stop-Controlled Intersections**

Average Control Delay	Level of Service (LOS)	Characteristics
≤ 10 seconds	A	Little or no delay
10.0 – 15.0 seconds	B	Short traffic delay
15.0 – 25.0 seconds	C	Average traffic delay
25.0 – 35.0 seconds	D	Long traffic delays
35.0 – 50.0 seconds	E	Very long traffic delays
> 50.0 seconds	F	When the demand exceeds the capacity of the lane, extreme delays will be encountered, and queuing may cause severe congestion to the intersection.

Source: *Highway Capacity Manual, 7<sup>th</sup> Edition | A Guide for Multimodal Mobility Analysis* (Transportation Research Board, 2022)



Source: *Highway Capacity Manual 2000*,  
Page 17-24  
(Transportation Research Board, 2000)

**Figure A-1: Control Delay and Flow Rate**





# Appendix B





## Intersection Turning Movement Count Summary

### Duscharme Street & Marlon Street

Frenchtown, Missoula County, Montana

**Date Count Performed:** January 7 & 8, 2026  
**Data Collection Method:** Video Traffic Recorder | Unit E5-05

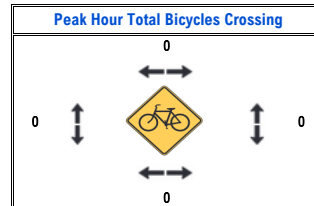
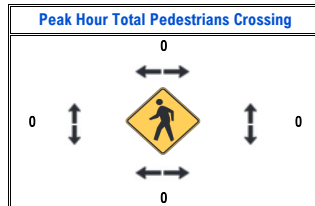
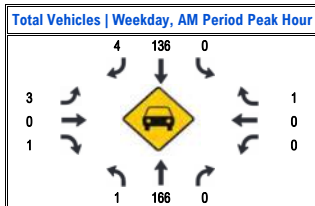
**Count Time Periods:** Weekday, 14-Hour Count  
 (6:00 a.m. - 8:00 p.m.)  
**Setup Location:** Latitude: 47°00'51.88" N | Longitude: 114°13'50.02" W

#### Weekday, AM Period

SEASONAL/ DAILY ADJ. FACTOR	MARION STREET							PRIVATE DRIVEWAY							DUSCHARME STREET							DUSCHARME STREET							INTERSECTION	HOURLY VOLUME
	Eastbound (From the West)							Westbound (From the East)							Northbound (From the South)							Southbound (From the North)								
	1,000	1,000	1,000	1,000	1,000	1,000	VEHICLE TOTALS	1,000	1,000	1,000	1,000	1,000	1,000	VEHICLE TOTALS	1,000	1,000	1,000	1,000	1,000	1,000	VEHICLE TOTALS	1,000	1,000	1,000	1,000	1,000	1,000	VEHICLE TOTALS		
START TIME	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS	VOLUME
6:00 AM	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0	1	0	0	0	1	5	
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	0	10	0	0	0	0	10	14
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	9	0	6	0	0	0	0	6	15	
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	0	0	18	0	10	0	0	0	0	10	28	62
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	7	0	4	0	0	0	0	4	11	68
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	8	1	16	2	0	0	0	19	27	81
7:30 AM	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	29	0	0	0	0	30	0	40	1	0	0	0	41	72	138
7:45 AM	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	74	0	0	0	0	74	0	66	1	0	0	0	67	142	252
8:00 AM	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	52	0	0	0	0	52	0	24	1	0	0	0	25	79	320
8:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	11	0	0	0	0	11	0	6	1	0	0	0	7	19	312
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	0	6	0	0	0	0	6	11	251
8:45 AM	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	7	0	0	0	0	7	0	4	1	0	0	0	5	14	123
9:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	6	0	0	0	0	6	1	5	0	0	0	0	6	13	57
9:15 AM	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	6	0	0	0	0	6	0	2	1	0	0	0	3	11	49
9:30 AM	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	5	0	0	0	0	5	0	6	3	0	0	0	9	16	54
9:45 AM	1	0	0	0	6	0	1	0	0	1	0	0	0	0	1	4	0	0	0	0	4	0	6	2	0	0	0	8	14	54
10:00 AM	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	7	0	0	0	0	8	0	6	3	0	0	0	9	18	59
10:15 AM	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	8	0	0	0	0	8	0	8	0	0	0	0	8	18	66
10:30 AM	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	9	0	0	0	0	9	0	5	2	0	0	0	7	17	67
10:45 AM	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	4	0	0	0	0	4	0	4	6	0	0	0	10	15	68
11:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	7	0	0	0	0	8	0	8	8	0	0	0	16	24	74
11:15 AM	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	7	0	0	0	0	8	0	6	5	0	0	0	11	20	76
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	0	8	3	0	0	0	11	16	75
11:45 AM	1	0	0	0	0	0	1	0	0	1	0	0	0	0	1	10	0	0	0	0	10	1	4	0	0	0	0	5	17	77
<b>TOTALS</b>	<b>16</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>4</b>	<b>305</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>309</b>	<b>3</b>	<b>261</b>	<b>40</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>304</b>	<b>636</b>	

#### Weekday, AM Period - Peak Hour Summary

SEASONAL/ DAILY ADJ. FACTOR	MARION STREET							PRIVATE DRIVEWAY							DUSCHARME STREET							DUSCHARME STREET							INTERSECTION
	Eastbound (From the West)							Westbound (From the East)							Northbound (From the South)							Southbound (From the North)							
	1,000	1,000	1,000	1,000	1,000	1,000	VEHICLE TOTALS	1,000	1,000	1,000	1,000	1,000	1,000	VEHICLE TOTALS	1,000	1,000	1,000	1,000	1,000	1,000	VEHICLE TOTALS	1,000	1,000	1,000	1,000	1,000	1,000	VEHICLE TOTALS	
START TIME	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS
7:15 AM	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	29	0	0	0	0	30	0	40	1	0	0	0	41	72
7:30 AM	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	74	0	0	0	0	74	0	66	1	0	0	0	67	142
7:45 AM	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	52	0	0	0	0	52	0	24	1	0	0	0	25	79
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	11	0	0	0	0	11	0	6	1	0	0	0	7	19
<b>TOTALS</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>166</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>167</b>	<b>0</b>	<b>136</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>140</b>	<b>312</b>
<b>PEAK HOUR FACTOR</b>	<b>0.75</b>	<b>0.00</b>	<b>0.25</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.50</b>	<b>0.00</b>	<b>0.00</b>	<b>0.25</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.25</b>	<b>0.25</b>	<b>0.56</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.56</b>	<b>0.00</b>	<b>0.52</b>	<b>1.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.52</b>	<b>0.55</b>
<b>% HEAVY VEHICLES</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>3.61%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>3.59%</b>	<b>0.00%</b>	<b>4.41%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>4.29%</b>	<b>3.85%</b>	
<b>% BUSES &amp; RVs</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>3.61%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>3.59%</b>	<b>0.00%</b>	<b>4.41%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>4.29%</b>	<b>3.85%</b>	





## Intersection Turning Movement Count Summary

### Duscharme Street & Marlon Street

Frenchtown, Missoula County, Montana

**Date Count Performed:** January 7 & 8, 2026  
**Data Collection Method:** Video Traffic Recorder | Unit E5-05

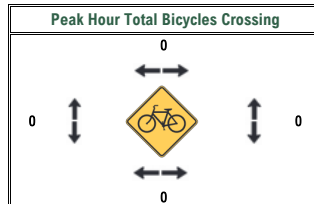
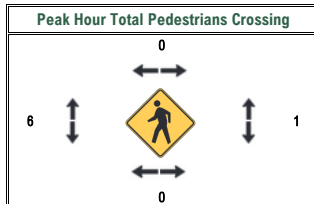
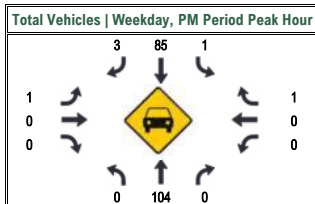
**Count Time Periods:** Weekday, 14-Hour Count  
 (6:00 a.m. - 8:00 p.m.)  
**Setup Location:** Latitude: 47°00'51.88" N | Longitude: 114°13'50.02" W

#### Weekday, PM Period

SEASONAL/ DAILY ADJ. FACTOR	MARION STREET							PRIVATE DRIVEWAY							DUSCHARME STREET							DUSCHARME STREET							INTERSECTION	HOURLY VOLUME		
	Eastbound (From the West)							Westbound (From the East)							Northbound (From the South)							Southbound (From the North)										
	1,000	1,000	1,000	1,000	1,000	1,000	VEHICLE TOTALS	1,000	1,000	1,000	1,000	1,000	1,000	VEHICLE TOTALS	1,000	1,000	1,000	1,000	1,000	1,000	VEHICLE TOTALS	1,000	1,000	1,000	1,000	1,000	1,000	VEHICLE TOTALS				
START TIME	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS	VOLUME		
12:00 PM	2	0	0	0	0	1	0	2	0	0	0	0	0	0	0	1	5	0	0	0	0	0	6	1	11	2	0	0	0	14	22	75
12:15 PM	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	8	0	0	0	0	0	8	1	5	1	0	0	0	7	17	72
12:30 PM	6	0	0	0	0	1	0	6	0	0	1	0	0	0	1	0	11	0	0	0	0	0	11	1	4	2	0	0	0	7	25	81
12:45 PM	3	0	0	0	0	0	0	3	0	0	1	0	0	0	1	0	10	0	0	0	0	0	10	0	8	2	0	0	0	10	24	88
1:00 PM	1	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	12	0	0	0	0	0	12	1	8	2	0	0	0	11	24	90
1:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	9	0	7	1	0	0	0	8	17	90
1:30 PM	2	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	7	0	0	0	0	0	7	0	4	0	0	0	0	4	13	78
1:45 PM	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5	1	6	1	0	0	0	8	14	68
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	0	7	2	0	0	0	9	13	57
2:15 PM	1	0	0	0	0	1	0	1	0	0	1	0	0	0	1	0	8	0	0	0	0	0	8	0	10	0	0	0	0	10	20	60
2:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	11	0	0	0	0	0	11	0	22	1	0	0	0	23	35	82
2:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	15	0	31	1	0	0	0	32	47	115
3:00 PM	1	0	0	0	0	4	0	1	0	0	0	0	0	0	0	0	21	0	0	0	0	0	21	0	19	1	0	0	0	20	42	144
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	57	0	0	0	0	0	57	1	13	0	0	0	0	14	71	195
3:30 PM	1	0	0	0	0	0	0	1	0	0	1	0	0	0	1	1	18	0	0	0	0	0	19	0	8	0	0	0	0	8	29	189
3:45 PM	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	13	0	0	0	0	0	13	0	9	1	0	0	0	10	24	166
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	9	0	0	0	0	0	9	0	11	1	0	0	0	12	22	146
4:15 PM	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	9	0	0	0	0	0	9	0	17	1	0	0	0	18	28	103
4:30 PM	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	12	0	0	0	0	0	12	0	11	0	0	0	0	11	24	98
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	12	0	20	2	0	0	0	22	34	108
5:00 PM	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	12	0	0	0	0	0	12	0	13	0	0	0	0	13	27	113
5:15 PM	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	8	0	0	0	0	0	8	0	18	1	1	0	0	20	30	115
5:30 PM	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	22	0	0	0	0	0	22	0	13	2	0	0	0	15	39	130
5:45 PM	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	6	0	0	0	0	0	7	1	8	4	0	0	0	13	22	118
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	0	7	2	0	0	0	9	13	104
6:15 PM	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5	1	8	1	0	0	0	10	16	90
6:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	5	0	0	0	0	0	5	1	4	1	0	0	0	6	12	63
6:45 PM	1	0	0	0	0	0	0	1	0	0	1	0	0	1	1	0	4	0	0	0	0	0	4	0	7	3	0	0	0	10	16	57
7:00 PM	1	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	9	1	0	0	0	0	10	0	2	2	0	0	0	4	16	60
7:15 PM	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	6	0	0	0	0	0	6	0	5	1	0	0	0	6	14	58
7:30 PM	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	4	0	0	0	0	5	8	54
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	4	0	0	0	0	4	6	44
<b>TOTALS</b>	<b>37</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>38</b>	<b>1</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>9</b>	<b>3</b>	<b>340</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>344</b>	<b>10</b>	<b>324</b>	<b>38</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>373</b>	<b>764</b>		

#### Weekday, PM Period - Peak Hour Summary

SEASONAL/ DAILY ADJ. FACTOR	MARION STREET							PRIVATE DRIVEWAY							DUSCHARME STREET							DUSCHARME STREET							INTERSECTION	
	Eastbound (From the West)							Westbound (From the East)							Northbound (From the South)							Southbound (From the North)								
	1,000	1,000	1,000	1,000	1,000	1,000	VEHICLE TOTALS	1,000	1,000	1,000	1,000	1,000	1,000	VEHICLE TOTALS	1,000	1,000	1,000	1,000	1,000	1,000	VEHICLE TOTALS	1,000	1,000	1,000	1,000	1,000	1,000	VEHICLE TOTALS		
START TIME	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS	
2:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	11	0	0	0	0	0	11	0	22	1	0	0	0	23	35
2:45 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	15	0	31	1	0	0	0	32	47
3:00 PM	1	0	0	0	4	0	1	0	0	0	0	0	0	0	0	21	0	0	0	0	0	21	0	19	1	0	0	0	20	42
3:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	57	0	0	0	0	0	57	1	13	0	0	0	0	14	71
<b>TOTALS</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>104</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>104</b>	<b>1</b>	<b>85</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>89</b>	<b>195</b>
<b>PEAK HOUR FACTOR</b>	<b>0.25</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.38</b>	<b>0.00</b>	<b>0.25</b>	<b>0.00</b>	<b>0.00</b>	<b>0.25</b>	<b>0.00</b>	<b>0.25</b>	<b>0.00</b>	<b>0.25</b>	<b>0.00</b>	<b>0.46</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.46</b>	<b>0.25</b>	<b>0.69</b>	<b>0.75</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.70</b>	<b>0.69</b>	
<b>% HEAVY VEHICLES</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>		<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>		<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>17.31%</b>	<b>0.00%</b>	<b>0.00%</b>		<b>0.00%</b>	<b>17.31%</b>	<b>0.00%</b>	<b>2.35%</b>	<b>0.00%</b>	<b>0.00%</b>		<b>2.25%</b>	<b>10.26%</b>		
<b>% BUSES &amp; RVs</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>		<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>		<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>16.35%</b>	<b>0.00%</b>	<b>0.00%</b>		<b>0.00%</b>	<b>16.35%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>		<b>0.00%</b>	<b>8.72%</b>		





## Intersection Turning Movement Count Summary

### Beckwith Street (S-263) & Duscharme Street

Frenchtown, Missoula County, Montana

**Date Count Performed:** January 7 & 8, 2026  
(Average of Wednesday & Thursday)

**Count Time Periods:** Weekday, 14-Hour Count  
(6:00 a.m. - 8:00 p.m.)

**Data Collection Method:** Video Traffic Recorder | Unit E5-10

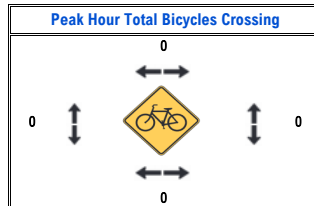
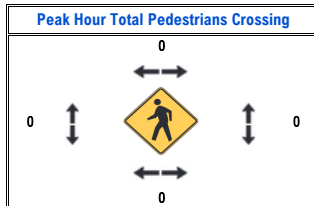
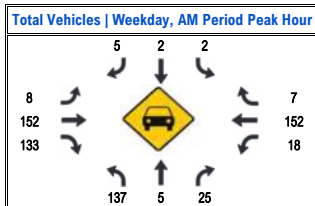
**Setup Location:** Latitude: 47°00'52.70" N | Longitude: 114°13'48.72" W

#### Weekday, AM Period

SEASONAL/ DAILY ADJ. FACTOR	BECKWITH STREET							BECKWITH STREET (S-263)							DUSCHARME STREET							PRIVATE DRIVEWAY							INTERSECTION	HOURLY	
	Eastbound (From the West)							Westbound (From the East)							Northbound (From the South)							Southbound (From the North)									
	1.000	1.018	1.000	1.000	1.000	1.000	VEHICLE TOTALS	1.000	1.018	1.000	1.000	1.000	1.000	VEHICLE TOTALS	1.000	1.000	1.000	1.000	1.000	1.000	VEHICLE TOTALS	1.000	1.000	1.000	1.000	1.000	1.000	VEHICLE TOTALS			
START TIME	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS	VOLUME	
6:00 AM	1	7	1	0	0	0	9	0	3	0	0	0	0	3	3	0	0	0	0	0	3	1	0	1	0	0	0	2	17		
6:15 AM	2	8	9	0	0	0	19	0	8	1	0	0	0	9	2	0	2	0	0	0	4	1	1	1	0	0	0	3	35		
6:30 AM	2	13	5	0	0	0	20	1	7	1	0	0	0	9	6	0	3	0	0	0	9	1	0	1	0	0	0	2	40		
6:45 AM	2	11	8	0	0	0	21	2	7	1	0	0	0	10	13	1	5	0	0	0	19	1	1	0	0	0	0	2	52	144	
7:00 AM	2	14	1	0	0	0	17	2	10	2	0	0	0	14	5	1	1	0	0	0	7	1	1	4	0	0	0	6	44	171	
7:15 AM	4	28	13	0	0	0	45	6	15	1	0	0	0	22	6	0	2	0	0	0	8	0	1	2	0	0	0	3	78	214	
7:30 AM	3	41	35	0	0	0	79	6	32	2	0	0	0	40	25	1	5	0	0	0	31	0	0	2	0	0	0	2	152	326	
7:45 AM	0	53	61	0	0	0	114	6	63	1	0	0	0	70	60	3	12	0	0	0	75	1	0	0	0	0	0	1	260	534	
8:00 AM	1	30	24	0	0	0	55	0	42	3	0	0	0	45	46	1	6	0	0	0	53	1	1	1	0	0	0	3	156	646	
8:15 AM	2	14	6	0	0	0	22	1	25	2	0	0	0	28	7	1	4	0	0	0	12	1	1	1	0	0	0	3	65	633	
8:30 AM	3	17	5	0	0	0	25	2	16	0	0	0	0	18	5	0	0	0	0	0	5	0	0	1	0	0	0	1	49	530	
8:45 AM	2	10	3	0	0	0	15	2	11	1	0	0	0	14	8	0	1	0	0	0	9	1	0	2	0	0	0	3	41	311	
9:00 AM	3	12	4	0	0	0	19	2	9	1	0	0	0	12	4	1	2	0	0	0	7	1	0	2	0	0	0	3	41	196	
9:15 AM	1	16	2	0	0	0	19	1	14	2	0	0	0	17	4	1	3	0	0	0	8	1	0	3	0	0	0	4	48	179	
9:30 AM	1	23	4	0	0	0	28	4	17	2	0	0	0	23	4	0	1	0	0	0	5	0	0	2	0	1	0	2	58	188	
9:45 AM	1	18	7	0	6	0	26	2	16	2	0	0	0	20	4	0	1	0	0	0	5	0	0	0	0	1	0	0	51	198	
10:00 AM	0	19	6	0	0	0	25	3	15	2	0	0	0	20	5	1	3	0	0	0	9	1	1	0	0	0	1	0	2	56	213
10:15 AM	1	20	5	0	0	0	26	3	27	1	0	0	0	31	3	1	5	0	0	0	9	1	0	2	0	0	0	3	69	234	
10:30 AM	2	30	4	0	0	0	36	3	24	0	0	0	0	27	6	1	3	0	0	0	10	1	1	2	0	0	0	4	77	253	
10:45 AM	0	19	4	0	0	0	23	5	19	0	0	0	0	24	3	0	2	0	0	0	5	0	0	0	0	0	0	0	5	254	
11:00 AM	3	21	9	0	0	0	33	7	30	1	0	0	1	38	4	0	3	0	0	1	7	0	0	2	0	0	0	2	80	278	
11:15 AM	1	24	8	0	0	0	33	3	16	3	0	0	0	22	6	0	2	0	0	0	8	1	0	1	0	0	0	2	65	274	
11:30 AM	4	37	10	0	0	0	51	2	40	2	0	0	0	44	3	0	2	0	0	0	5	2	0	1	0	0	0	3	103	300	
11:45 AM	1	32	4	0	1	0	37	1	36	1	0	0	0	38	8	0	3	0	0	0	11	2	0	2	0	0	0	4	90	338	
<b>TOTALS</b>	<b>42</b>	<b>517</b>	<b>238</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>797</b>	<b>64</b>	<b>502</b>	<b>32</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>598</b>	<b>240</b>	<b>13</b>	<b>71</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>324</b>	<b>19</b>	<b>8</b>	<b>33</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>60</b>	<b>1,779</b>		

#### Weekday, AM Period - Peak Hour Summary

SEASONAL/ DAILY ADJ. FACTOR	BECKWITH STREET							BECKWITH STREET (S-263)							DUSCHARME STREET							PRIVATE DRIVEWAY							INTERSECTION
	Eastbound (From the West)							Westbound (From the East)							Northbound (From the South)							Southbound (From the North)							
	1.000	1.018	1.000	1.000	1.000	1.000	VEHICLE TOTALS	1.000	1.018	1.000	1.000	1.000	1.000	VEHICLE TOTALS	1.000	1.000	1.000	1.000	1.000	1.000	VEHICLE TOTALS	1.000	1.000	1.000	1.000	1.000	1.000	VEHICLE TOTALS	
START TIME	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS
7:15 AM	4	28	13	0	0	0	45	6	15	1	0	0	0	22	6	0	2	0	0	0	8	0	1	2	0	0	0	3	78
7:30 AM	3	41	35	0	0	0	79	6	32	2	0	0	0	40	25	1	5	0	0	0	31	0	0	2	0	0	0	2	152
7:45 AM	0	53	61	0	0	0	114	6	63	1	0	0	0	70	60	3	12	0	0	0	75	1	0	0	0	0	0	1	260
8:00 AM	1	30	24	0	0	0	55	0	42	3	0	0	0	45	46	1	6	0	0	0	53	1	1	1	0	0	0	3	156
<b>TOTALS</b>	<b>8</b>	<b>152</b>	<b>133</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>293</b>	<b>18</b>	<b>152</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>177</b>	<b>137</b>	<b>5</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>167</b>	<b>2</b>	<b>2</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>646</b>
<b>PEAK HOUR FACTOR</b>	<b>0.50</b>	<b>0.72</b>	<b>0.55</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.64</b>	<b>0.75</b>	<b>0.60</b>	<b>0.58</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.63</b>	<b>0.57</b>	<b>0.42</b>	<b>0.52</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.56</b>	<b>0.50</b>	<b>0.50</b>	<b>0.63</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.75</b>	<b>0.62</b>
<b>% HEAVY VEHICLES</b>	<b>0.00%</b>	<b>8.55%</b>	<b>3.76%</b>	<b>0.00%</b>			<b>6.14%</b>	<b>0.00%</b>	<b>3.95%</b>	<b>0.00%</b>	<b>0.00%</b>			<b>3.39%</b>	<b>4.38%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>		<b>3.59%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>		<b>0.00%</b>	<b>4.64%</b>		
<b>% BUSES &amp; RVs</b>	<b>0.00%</b>	<b>4.61%</b>	<b>3.76%</b>	<b>0.00%</b>			<b>4.10%</b>	<b>0.00%</b>	<b>0.66%</b>	<b>0.00%</b>	<b>0.00%</b>			<b>0.56%</b>	<b>4.38%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>		<b>3.59%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>		<b>0.00%</b>	<b>2.94%</b>		





### Intersection Turning Movement Count Summary Beckwith Street (S-263) & Duscharme Street Frenchtown, Missoula County, Montana

**Date Count Performed:** January 7 & 8, 2026  
**Data Collection Method:** Video Traffic Recorder | Unit E5-10

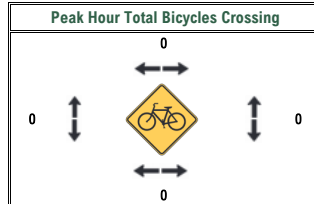
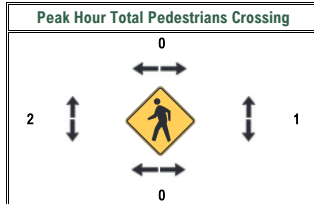
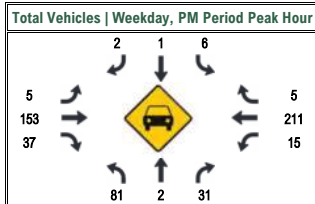
**Count Time Periods:** Weekday, 14-Hour Count  
(6:00 a.m. - 8:00 p.m.)  
**Setup Location:** Latitude: 47°00'52.70" N | Longitude: 114°13'48.72" W

#### Weekday, PM Period

SEASONAL/ DAILY ADJ. FACTOR	BECKWITH STREET							BECKWITH STREET (S-263)							DUSCHARME STREET							PRIVATE DRIVEWAY							INTERSECTION	HOURLY VOLUME
	Eastbound (From the West)							Westbound (From the East)							Northbound (From the South)							Southbound (From the North)								
	1.000	1.018	1.000	1.000	1.000	1.000	VEHICLE TOTALS	1.000	1.018	1.000	1.000	1.000	1.000	VEHICLE TOTALS	1.000	1.000	1.000	1.000	1.000	1.000	VEHICLE TOTALS	1.000	1.000	1.000	1.000	1.000	1.000	VEHICLE TOTALS		
START TIME	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS	VOLUME
12:00 PM	1	25	9	0	0	0	35	5	33	2	0	0	0	40	4	0	3	0	0	0	7	3	0	1	0	0	4	86	344	
12:15 PM	2	19	4	0	0	0	25	2	24	1	0	0	0	27	7	0	3	0	0	0	10	2	0	0	0	0	2	64	343	
12:30 PM	0	29	5	0	1	0	34	1	24	3	0	0	0	28	10	0	7	0	0	0	17	1	0	1	0	0	2	81	321	
12:45 PM	1	25	6	0	0	0	32	3	25	2	0	0	0	30	8	0	6	0	0	0	14	2	0	1	0	0	3	79	310	
1:00 PM	2	22	6	0	0	0	30	4	26	1	0	0	0	31	9	0	4	1	1	0	14	1	0	0	0	0	1	76	300	
1:15 PM	0	26	5	0	0	0	31	2	34	1	0	1	0	37	4	0	5	0	0	0	9	1	0	1	0	1	2	79	315	
1:30 PM	1	19	3	0	1	0	23	2	32	0	0	0	0	34	7	0	2	0	0	0	9	1	0	1	0	1	2	68	302	
1:45 PM	0	27	3	0	0	0	30	5	22	1	0	0	0	28	2	0	3	0	0	0	5	1	0	0	0	0	1	64	287	
2:00 PM	1	23	6	0	0	0	30	2	30	1	0	0	0	33	1	0	3	0	0	0	4	1	1	1	0	0	3	70	281	
2:15 PM	1	25	7	0	0	0	33	4	21	1	0	0	0	26	5	0	5	0	1	0	10	1	1	1	0	0	3	72	274	
2:30 PM	2	38	16	0	0	0	56	6	29	1	0	0	0	36	8	0	4	0	0	0	12	0	0	2	0	0	2	106	312	
2:45 PM	1	41	26	0	2	0	68	6	30	0	0	0	0	36	5	0	10	0	0	0	15	1	1	1	0	0	3	122	370	
3:00 PM	1	34	16	0	2	0	51	3	48	1	0	0	0	52	13	0	10	0	0	0	23	1	1	1	0	0	3	129	429	
3:15 PM	0	40	8	0	0	0	48	6	66	2	0	1	0	74	48	1	9	0	0	0	58	3	0	0	0	0	3	183	540	
3:30 PM	3	42	6	0	0	0	51	3	53	1	0	0	0	57	13	0	6	0	0	0	19	1	0	1	0	0	2	129	563	
3:45 PM	1	37	7	0	0	0	45	3	44	1	0	0	0	48	7	1	6	0	0	0	14	1	0	0	0	0	1	108	549	
4:00 PM	2	37	9	0	0	0	48	5	38	1	0	0	0	44	5	0	5	0	0	0	10	0	0	0	0	0	0	102	522	
4:15 PM	2	32	13	0	0	0	47	5	40	1	0	0	0	46	8	0	2	0	1	0	10	0	1	1	0	1	2	105	444	
4:30 PM	1	36	6	0	0	0	43	5	40	1	0	0	0	46	9	0	4	0	0	0	13	1	0	0	0	0	1	103	418	
4:45 PM	2	42	14	0	0	0	58	8	33	2	0	0	0	43	9	1	3	0	0	0	13	1	0	0	0	1	1	115	425	
5:00 PM	1	38	10	0	0	0	49	4	46	1	0	0	0	51	12	0	2	0	0	0	14	0	0	1	0	1	0	115	438	
5:15 PM	0	30	18	1	0	0	49	2	34	0	0	0	0	36	7	0	4	0	0	0	11	0	0	0	0	1	0	96	429	
5:30 PM	0	29	11	0	0	0	40	4	35	0	0	0	0	39	15	0	9	0	0	0	24	0	0	2	0	1	0	105	431	
5:45 PM	1	34	8	0	0	0	43	4	30	0	0	0	0	34	4	0	3	0	0	0	7	0	0	0	0	0	0	84	400	
6:00 PM	1	19	6	0	0	0	26	2	22	1	0	0	0	25	2	0	2	0	0	0	4	0	0	1	0	0	0	56	341	
6:15 PM	1	16	7	0	0	0	24	3	20	1	0	0	0	24	4	0	1	0	0	0	5	0	0	1	0	1	0	54	299	
6:30 PM	2	15	4	0	0	0	21	1	23	1	0	0	0	25	5	0	1	0	0	0	6	1	0	0	0	1	0	53	247	
6:45 PM	0	7	5	0	0	0	12	3	14	1	0	0	1	18	2	0	4	0	0	0	6	0	0	1	0	0	1	37	200	
7:00 PM	0	13	3	0	0	0	16	2	20	0	0	0	0	22	8	0	2	0	0	0	10	0	0	0	0	0	0	48	192	
7:15 PM	0	16	3	0	0	0	19	2	14	1	0	0	0	17	4	1	3	0	0	0	8	0	0	0	0	1	0	44	182	
7:30 PM	1	11	4	0	0	0	16	1	11	1	0	0	0	13	2	0	1	0	0	0	3	0	0	1	0	0	0	33	162	
7:45 PM	0	7	3	0	0	0	10	1	7	0	0	0	0	8	1	0	1	0	0	0	2	0	0	1	0	0	0	21	146	
<b>TOTALS</b>	<b>31</b>	<b>854</b>	<b>257</b>	<b>1</b>	<b>6</b>	<b>0</b>	<b>1,143</b>	<b>109</b>	<b>968</b>	<b>31</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>1,108</b>	<b>248</b>	<b>4</b>	<b>133</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>386</b>	<b>24</b>	<b>5</b>	<b>21</b>	<b>0</b>	<b>10</b>	<b>1</b>	<b>50</b>	<b>2,687</b>	

#### Weekday, PM Period - Peak Hour Summary

SEASONAL/ DAILY ADJ. FACTOR	BECKWITH STREET							BECKWITH STREET (S-263)							DUSCHARME STREET							PRIVATE DRIVEWAY							INTERSECTION
	Eastbound (From the West)							Westbound (From the East)							Northbound (From the South)							Southbound (From the North)							
	1.000	1.018	1.000	1.000	1.000	1.000	VEHICLE TOTALS	1.000	1.018	1.000	1.000	1.000	1.000	VEHICLE TOTALS	1.000	1.000	1.000	1.000	1.000	1.000	VEHICLE TOTALS	1.000	1.000	1.000	1.000	1.000	1.000	VEHICLE TOTALS	
START TIME	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS
2:45 PM	1	34	16	0	2	0	51	3	48	1	0	0	0	52	13	0	10	0	0	0	23	1	1	1	0	0	0	3	129
3:00 PM	0	40	8	0	0	0	48	6	66	2	0	1	0	74	48	1	9	0	0	0	58	3	0	0	0	0	0	3	183
3:15 PM	3	42	6	0	0	0	51	3	53	1	0	0	0	57	13	0	6	0	0	0	19	1	0	1	0	0	0	2	129
3:30 PM	1	37	7	0	0	0	45	3	44	1	0	0	0	48	7	1	6	0	0	0	14	1	0	0	0	0	0	1	108
<b>TOTALS</b>	<b>5</b>	<b>153</b>	<b>37</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>195</b>	<b>15</b>	<b>211</b>	<b>5</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>231</b>	<b>81</b>	<b>2</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>114</b>	<b>6</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>549</b>
<b>PEAK HOUR FACTOR</b>	<b>0.42</b>	<b>0.91</b>	<b>0.58</b>	<b>0.00</b>	<b>0.25</b>	<b>0.00</b>	<b>0.96</b>	<b>0.63</b>	<b>0.80</b>	<b>0.63</b>	<b>0.00</b>	<b>0.25</b>	<b>0.00</b>	<b>0.78</b>	<b>0.42</b>	<b>0.50</b>	<b>0.78</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.49</b>	<b>0.50</b>	<b>0.25</b>	<b>0.50</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.75</b>	<b>0.75</b>
<b>% HEAVY VEHICLES</b>	<b>0.00%</b>	<b>3.92%</b>	<b>10.81%</b>	<b>0.00%</b>			<b>5.13%</b>	<b>0.00%</b>	<b>1.42%</b>	<b>0.00%</b>	<b>0.00%</b>			<b>1.30%</b>	<b>13.58%</b>	<b>0.00%</b>	<b>12.90%</b>	<b>0.00%</b>		<b>13.16%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>		<b>0.00%</b>	<b>5.10%</b>		
<b>% BUSES &amp; RVs</b>	<b>0.00%</b>	<b>1.31%</b>	<b>5.41%</b>	<b>0.00%</b>			<b>2.05%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>			<b>0.00%</b>	<b>12.35%</b>	<b>0.00%</b>	<b>9.68%</b>	<b>0.00%</b>		<b>11.40%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>		<b>0.00%</b>	<b>3.10%</b>		





## Intersection Turning Movement Count Summary

### Beckwith Street (S-263) & Demer Street (S-263)

Frenchtown, Missoula County, Montana

**Date Count Performed:** January 7 & 8, 2026  
(Average of Wednesday & Thursday)

**Data Collection Method:** Video Traffic Recorder | Unit E5-07

**Count Time Periods:** Weekday, 14-Hour Count  
(6:00 a.m. - 8:00 p.m.)

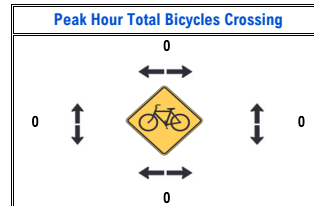
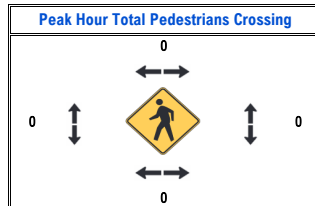
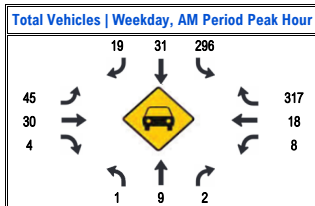
**Setup Location:** Latitude: 47°00'56.38" N | Longitude: 114°13'54.98" W

#### Weekday, AM Period

SEASONAL/ DAILY ADJ. FACTOR	BECKWITH STREET							BECKWITH STREET (S-263)							PRIVATE DRIVEWAY							DEMER STREET (S-263)							INTERSECTION	HOURLY VOLUME
	Eastbound (From the West)							Westbound (From the East)							Northbound (From the South)							Southbound (From the North)								
	1,000	1,000	1,000	1,000	1,000	1,000	VEHICLE TOTALS	1,000	1,000	1,018	1,000	1,000	1,000	VEHICLE TOTALS	1,000	1,000	1,000	1,000	1,000	1,000	VEHICLE TOTALS	1,017	1,000	1,000	1,000	1,000	1,000	VEHICLE TOTALS		
START TIME	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS	VOLUME
6:00 AM	3	2	0	0	0	0	5	1	1	13	0	0	0	15	0	1	0	0	0	0	1	7	3	2	0	0	0	12	33	
6:15 AM	2	3	0	0	0	0	5	3	2	10	0	0	0	15	0	3	0	0	0	0	3	19	5	4	0	0	0	28	51	
6:30 AM	7	3	1	0	0	0	11	1	5	19	0	0	0	25	0	2	2	0	0	0	4	23	7	10	0	0	0	40	80	
6:45 AM	11	5	1	0	0	0	17	1	8	25	0	0	0	34	0	1	1	0	0	0	2	25	5	13	0	0	0	43	96	
7:00 AM	10	4	2	0	0	0	16	0	2	26	0	0	0	28	0	1	1	0	1	0	2	22	6	4	0	0	0	32	78	
7:15 AM	12	5	1	0	0	0	18	1	2	33	0	0	0	36	0	2	0	0	0	0	2	54	9	4	0	0	0	67	123	
7:30 AM	15	8	1	0	0	0	24	2	3	65	0	0	0	70	0	2	1	0	0	0	3	75	6	4	0	0	0	85	182	
7:45 AM	10	10	1	0	0	0	21	3	6	124	0	0	0	133	0	1	0	0	0	0	1	108	7	7	0	0	0	122	277	
8:00 AM	8	7	1	0	0	0	16	2	7	95	0	0	0	104	1	4	1	0	0	0	6	59	9	4	0	0	0	72	198	
8:15 AM	9	6	1	0	0	0	16	0	5	43	0	0	0	48	0	1	1	0	0	0	2	31	6	3	0	0	0	40	106	
8:30 AM	5	4	1	0	0	0	10	2	3	24	0	0	0	29	0	1	1	0	0	0	2	24	2	3	0	0	0	29	70	
8:45 AM	4	3	0	0	0	0	7	2	3	21	0	0	0	26	0	1	0	0	0	0	1	19	2	3	0	0	0	24	58	
9:00 AM	4	2	0	0	0	0	6	2	0	16	0	0	0	18	0	0	1	0	0	0	1	19	4	3	0	0	0	26	51	
9:15 AM	4	1	0	0	0	0	5	2	3	20	0	0	0	25	0	1	0	0	0	0	1	21	3	1	0	0	0	25	56	
9:30 AM	4	4	1	0	0	0	9	3	4	27	0	0	0	34	0	1	1	0	0	0	2	26	3	3	0	0	0	32	77	
9:45 AM	5	4	1	0	0	1	10	2	4	22	0	0	0	28	0	2	1	0	0	0	3	26	8	3	1	0	0	38	79	
10:00 AM	3	1	1	0	0	0	5	1	1	21	0	0	0	23	0	1	0	0	0	0	1	20	3	3	0	0	0	26	55	
10:15 AM	6	5	1	0	0	0	12	0	4	35	0	0	0	39	1	2	0	0	0	0	3	23	5	2	0	0	0	30	84	
10:30 AM	4	4	1	0	0	0	9	1	3	35	0	0	0	39	0	0	0	0	0	0	0	34	4	5	0	0	0	43	91	
10:45 AM	4	4	1	0	0	0	9	3	2	29	1	0	0	35	0	0	0	0	0	0	0	28	2	2	0	0	0	32	76	
11:00 AM	6	7	1	0	0	0	14	3	8	37	0	0	0	48	0	3	0	0	0	0	3	34	5	4	0	0	0	43	108	
11:15 AM	6	5	2	0	0	0	13	1	4	30	0	0	0	35	0	1	0	0	0	0	1	35	4	3	0	0	0	42	91	
11:30 AM	6	3	1	0	0	0	10	2	8	47	0	1	0	57	0	2	1	0	0	0	3	57	11	6	0	0	0	74	144	
11:45 AM	6	4	1	0	0	0	11	2	10	50	0	0	0	62	0	2	0	0	0	0	2	34	3	5	0	0	0	42	117	
<b>TOTALS</b>	<b>154</b>	<b>104</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>279</b>	<b>40</b>	<b>98</b>	<b>867</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1,006</b>	<b>2</b>	<b>35</b>	<b>12</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>49</b>	<b>823</b>	<b>122</b>	<b>101</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1,047</b>	<b>2,381</b>	

#### Weekday, AM Period - Peak Hour Summary

SEASONAL/ DAILY ADJ. FACTOR	BECKWITH STREET							BECKWITH STREET (S-263)							PRIVATE DRIVEWAY							DEMER STREET (S-263)							INTERSECTION
	Eastbound (From the West)							Westbound (From the East)							Northbound (From the South)							Southbound (From the North)							
	1,000	1,000	1,000	1,000	1,000	1,000	VEHICLE TOTALS	1,000	1,000	1,018	1,000	1,000	1,000	VEHICLE TOTALS	1,000	1,000	1,000	1,000	1,000	1,000	VEHICLE TOTALS	1,017	1,000	1,000	1,000	1,000	1,000	VEHICLE TOTALS	
START TIME	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS
7:15 AM	12	5	1	0	0	0	18	1	2	33	0	0	0	36	0	2	0	0	0	0	2	54	9	4	0	0	0	67	123
7:30 AM	15	8	1	0	0	0	24	2	3	65	0	0	0	70	0	2	1	0	0	0	3	75	6	4	0	0	0	85	182
7:45 AM	10	10	1	0	0	0	21	3	6	124	0	0	0	133	0	1	0	0	0	0	1	108	7	7	0	0	0	122	277
8:00 AM	8	7	1	0	0	0	16	2	7	95	0	0	0	104	1	4	1	0	0	0	6	59	9	4	0	0	0	72	198
<b>TOTALS</b>	<b>45</b>	<b>30</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>79</b>	<b>8</b>	<b>18</b>	<b>317</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>343</b>	<b>1</b>	<b>9</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>296</b>	<b>31</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>346</b>	<b>780</b>
<b>PEAK HOUR FACTOR</b>	<b>0.75</b>	<b>0.75</b>	<b>1.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.82</b>	<b>0.67</b>	<b>0.64</b>	<b>0.64</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.64</b>	<b>0.25</b>	<b>0.56</b>	<b>0.50</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.50</b>	<b>0.69</b>	<b>0.86</b>	<b>0.68</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.71</b>	<b>0.70</b>
<b>% HEAVY VEHICLES</b>	<b>4.44%</b>	<b>3.33%</b>	<b>0.00%</b>	<b>0.00%</b>			<b>3.80%</b>	<b>0.00%</b>	<b>5.56%</b>	<b>5.05%</b>	<b>0.00%</b>			<b>4.96%</b>	<b>0.00%</b>	<b>22.22%</b>	<b>50.00%</b>	<b>0.00%</b>			<b>25.00%</b>	<b>6.06%</b>	<b>9.88%</b>	<b>0.00%</b>	<b>0.00%</b>		<b>6.07%</b>	<b>5.64%</b>	
<b>% BUSES &amp; RVs</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>			<b>1.27%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>2.21%</b>	<b>0.00%</b>			<b>2.04%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>			<b>0.00%</b>	<b>3.72%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>		<b>3.18%</b>	<b>2.44%</b>	





## Intersection Turning Movement Count Summary Beckwith Street (S-263) & Demer Street (S-263) Frenchtown, Missoula County, Montana

**Date Count Performed:** January 7 & 8, 2026  
(Average of Wednesday & Thursday)

**Count Time Periods:** Weekday, 14-Hour Count  
(6:00 a.m. - 8:00 p.m.)

**Setup Location:** Latitude: 47°00'56.38" N | Longitude: 114°13'54.98" W

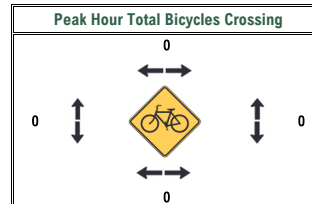
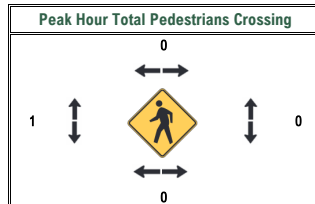
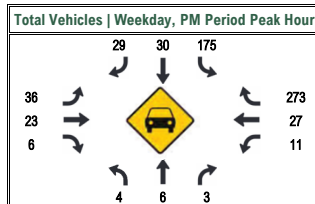
**Data Collection Method:** Video Traffic Recorder | Unit E5-07

### Weekday, PM Period

SEASONAL/ DAILY ADJ. FACTOR	BECKWITH STREET							BECKWITH STREET (S-263)							PRIVATE DRIVEWAY							DEMER STREET (S-263)							INTERSECTION	HOURLY VOLUME
	Eastbound (From the West)							Westbound (From the East)							Northbound (From the South)							Southbound (From the North)								
	1.000	1.000	1.000	1.000	1.000	1.000	VEHICLE TOTALS	1.000	1.000	1.018	1.000	1.000	1.000	VEHICLE TOTALS	1.000	1.000	1.000	1.000	1.000	1.000	VEHICLE TOTALS	1.017	1.000	1.000	1.000	1.000	1.000	VEHICLE TOTALS		
START TIME	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS	VOLUME
12:00 PM	5	4	2	0	0	0	11	2	5	43	0	0	0	50	0	3	1	0	0	0	4	34	5	4	0	0	43	108	460	
12:15 PM	7	5	2	0	0	0	14	1	6	32	0	0	0	39	0	0	1	0	1	0	1	23	6	5	0	0	34	88	457	
12:30 PM	3	4	2	0	0	0	9	1	5	33	0	0	0	39	0	0	1	0	0	0	1	33	5	2	0	0	40	89	402	
12:45 PM	2	4	1	0	0	0	7	1	8	39	0	0	0	48	0	1	1	0	0	0	2	29	6	4	1	0	40	97	382	
1:00 PM	3	2	2	0	0	0	7	1	6	37	0	0	0	44	0	3	1	0	1	0	4	27	4	3	0	0	34	89	363	
1:15 PM	3	4	1	0	0	0	8	2	5	36	1	0	0	44	1	3	0	0	0	0	4	33	6	3	0	0	42	98	373	
1:30 PM	4	3	1	0	0	0	8	1	4	43	0	0	0	48	0	2	0	0	1	0	2	19	5	4	0	0	28	86	370	
1:45 PM	3	4	2	0	0	0	9	3	5	30	0	0	0	38	2	2	0	0	0	0	4	29	5	8	0	0	42	93	366	
2:00 PM	3	7	2	0	0	0	12	1	5	34	0	0	0	40	1	2	0	0	0	0	3	22	7	3	0	0	32	87	364	
2:15 PM	3	4	1	0	0	0	8	1	7	26	0	0	0	34	1	1	1	0	0	0	3	36	5	7	0	0	48	93	359	
2:30 PM	6	5	0	0	0	0	11	5	5	39	0	0	0	49	0	0	1	0	0	0	1	53	5	4	0	0	62	123	396	
2:45 PM	5	4	0	0	0	0	9	1	3	34	0	0	0	38	0	2	1	0	0	0	3	63	6	3	0	0	72	122	425	
3:00 PM	7	4	0	0	0	0	11	1	8	57	0	0	0	66	0	1	0	0	1	0	1	50	4	4	0	0	58	136	474	
3:15 PM	5	5	1	0	0	0	11	3	8	111	0	0	0	122	1	1	2	0	0	0	4	48	8	5	0	0	61	198	579	
3:30 PM	12	6	1	0	0	0	19	2	7	69	0	0	0	78	1	1	0	0	0	0	2	49	10	11	0	0	70	169	625	
3:45 PM	12	4	2	0	1	0	18	4	8	47	0	0	0	59	1	3	0	0	0	0	4	42	5	7	0	0	54	135	638	
4:00 PM	7	8	2	0	0	0	17	2	4	46	0	0	0	52	1	1	1	0	0	0	3	36	7	6	0	0	49	121	623	
4:15 PM	11	4	1	0	0	0	16	2	10	53	0	0	0	65	1	2	1	0	0	0	4	47	11	10	0	0	68	153	578	
4:30 PM	7	4	1	0	0	0	12	2	9	49	0	1	0	60	1	3	1	0	0	0	5	49	4	9	0	0	62	139	548	
4:45 PM	9	2	1	0	0	0	12	4	5	46	0	0	0	55	1	1	0	0	0	0	2	53	9	10	0	0	72	141	554	
5:00 PM	11	4	1	0	0	0	16	2	8	64	0	0	0	74	2	2	1	0	0	0	5	45	7	16	0	0	68	163	596	
5:15 PM	8	5	2	0	0	0	15	2	7	49	0	0	0	58	1	3	1	0	0	0	5	46	11	14	0	0	71	149	592	
5:30 PM	6	3	1	0	0	0	10	3	5	58	0	1	0	66	1	3	2	0	0	0	6	37	9	5	0	0	51	133	586	
5:45 PM	7	1	1	0	0	0	9	1	4	43	0	0	0	48	1	1	1	0	0	0	3	41	8	8	0	0	57	117	562	
6:00 PM	3	1	0	0	0	0	4	2	4	31	0	0	0	37	0	1	1	0	0	0	2	22	6	8	0	0	36	79	478	
6:15 PM	6	2	1	0	0	0	9	0	5	23	0	0	0	28	0	0	1	0	1	0	1	23	2	11	0	0	36	74	403	
6:30 PM	7	1	1	0	0	0	9	1	3	34	0	0	0	38	0	1	0	0	1	0	1	20	3	12	0	0	35	83	353	
6:45 PM	2	0	1	0	0	0	3	1	4	18	0	0	0	23	0	1	0	0	1	0	1	14	5	7	0	0	26	53	289	
7:00 PM	4	1	0	0	0	0	5	2	2	31	0	0	0	35	1	1	1	0	0	0	3	14	4	4	0	0	22	65	275	
7:15 PM	3	3	1	0	0	0	7	0	5	17	0	0	0	22	0	1	1	0	0	0	2	17	5	6	0	0	28	59	260	
7:30 PM	1	1	1	0	0	0	3	1	2	18	0	0	0	21	0	1	0	0	0	0	1	13	3	9	0	0	25	50	227	
7:45 PM	2	1	0	0	0	0	3	1	3	8	0	0	0	12	0	0	0	0	0	0	0	7	3	3	0	0	13	28	202	
<b>TOTALS</b>	<b>177</b>	<b>110</b>	<b>35</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>322</b>	<b>56</b>	<b>175</b>	<b>1,298</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>1,530</b>	<b>18</b>	<b>47</b>	<b>22</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>87</b>	<b>1,074</b>	<b>189</b>	<b>215</b>	<b>1</b>	<b>0</b>	<b>1,479</b>	<b>3,418</b>		

### Weekday, PM Period - Peak Hour Summary

SEASONAL/ DAILY ADJ. FACTOR	BECKWITH STREET							BECKWITH STREET (S-263)							PRIVATE DRIVEWAY							DEMER STREET (S-263)							INTERSECTION
	Eastbound (From the West)							Westbound (From the East)							Northbound (From the South)							Southbound (From the North)							
	1.000	1.000	1.000	1.000	1.000	1.000	VEHICLE TOTALS	1.000	1.000	1.018	1.000	1.000	1.000	VEHICLE TOTALS	1.000	1.000	1.000	1.000	1.000	1.000	VEHICLE TOTALS	1.017	1.000	1.000	1.000	1.000	1.000	VEHICLE TOTALS	
START TIME	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS
3:00 PM	5	5	1	0	0	0	11	3	8	111	0	0	0	122	1	1	2	0	0	0	4	48	8	5	0	0	61	198	
3:15 PM	12	6	1	0	0	0	19	2	7	69	0	0	0	78	1	1	0	0	0	0	2	49	10	11	0	0	70	169	
3:30 PM	12	4	2	0	1	0	18	4	8	47	0	0	0	59	1	3	0	0	0	0	4	42	5	7	0	0	54	135	
3:45 PM	7	8	2	0	0	0	17	2	4	46	0	0	0	52	1	1	1	0	0	0	3	36	7	6	0	0	49	121	
<b>TOTALS</b>	<b>36</b>	<b>23</b>	<b>6</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>65</b>	<b>11</b>	<b>27</b>	<b>273</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>311</b>	<b>4</b>	<b>6</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>175</b>	<b>30</b>	<b>29</b>	<b>0</b>	<b>0</b>	<b>234</b>	<b>623</b>	
<b>PEAK HOUR FACTOR</b>	<b>0.75</b>	<b>0.72</b>	<b>0.75</b>	<b>0.00</b>	<b>0.25</b>	<b>0.00</b>	<b>0.86</b>	<b>0.69</b>	<b>0.84</b>	<b>0.61</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.64</b>	<b>1.00</b>	<b>0.50</b>	<b>0.38</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.81</b>	<b>0.89</b>	<b>0.75</b>	<b>0.66</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.84</b>	<b>0.79</b>
<b>% HEAVY VEHICLES</b>	<b>0.00%</b>	<b>8.70%</b>	<b>0.00%</b>	<b>0.00%</b>			<b>3.08%</b>	<b>9.09%</b>	<b>3.70%</b>	<b>3.86%</b>	<b>0.00%</b>			<b>3.86%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>			<b>0.00%</b>	<b>5.71%</b>	<b>3.33%</b>	<b>6.90%</b>	<b>0.00%</b>		<b>5.66%</b>	<b>4.33%</b>	
<b>% BUSES &amp; RVs</b>	<b>0.00%</b>	<b>4.35%</b>	<b>0.00%</b>	<b>0.00%</b>			<b>1.54%</b>	<b>9.09%</b>	<b>3.70%</b>	<b>2.56%</b>	<b>0.00%</b>			<b>2.89%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>			<b>0.00%</b>	<b>2.29%</b>	<b>0.00%</b>	<b>3.45%</b>	<b>0.00%</b>		<b>2.14%</b>	<b>2.41%</b>	





## Intersection Turning Movement Count Summary

### Demer Street (Montana State Secondary Highway S-263) & Interstate 90 (I-90) Eastbound Ramps

Frenchtown, Missoula County, Montana

**Date Count Performed:** January 7 & 8, 2026  
**Data Collection Method:** Video Traffic Recorder | Unit E5-08

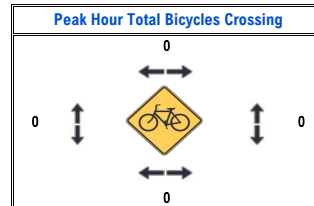
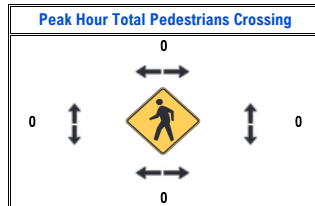
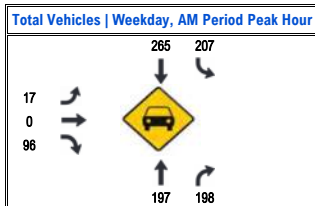
**Count Time Periods:** Weekday, 14-Hour Count  
 (6:00 a.m. - 8:00 p.m.)  
**Setup Location:** Latitude: 47°00'58.07" N | Longitude: 114°13'52.25" W

#### Weekday, AM Period

SEASONAL/ DAILY ADJ. FACTOR	INTERSTATE 90 (I-90) EASTBOUND OFF-RAMP						INTERSTATE 90 (I-90) EASTBOUND ON-RAMP				DEMER STREET (S-263)					DEMER STREET (S-263)					INTERSECTION	HOURLY VOLUME				
	Eastbound (From the West)						Westbound (From the East)				Northbound (From the South)					Southbound (From the North)										
	1.172	1.176	1.173	1.000	1.000	1.000			1.000	1.000		1.018	1.174	1.000	1.000	1.000		1.174	1.018				1.000	1.000	1.000	VEHICLE TOTALS
START TIME	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES			PEDS	BIKES	VEHICLE TOTALS	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	U-TURN	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS		
6:00 AM	1	0	5	0	0	0	6			0	0	0	6	11	0	0	0	17	12	8	0	0	0	20	43	
6:15 AM	1	0	8	0	0	0	9			0	0	0	5	12	0	0	0	17	22	20	0	0	0	42	68	
6:30 AM	1	1	15	0	0	0	17			0	0	0	5	25	0	0	0	30	41	29	1	0	0	71	118	
6:45 AM	0	1	9	0	0	0	10			0	0	0	14	31	0	0	0	45	34	34	0	0	0	68	123	352
7:00 AM	1	0	8	0	0	0	9			0	0	0	8	32	0	0	0	40	42	25	0	0	0	67	116	425
7:15 AM	6	0	15	0	0	0	21			0	0	0	19	29	0	0	0	48	45	56	0	0	0	101	170	527
7:30 AM	5	0	27	0	0	0	32			0	0	0	35	54	0	0	0	89	66	65	0	0	0	131	252	661
7:45 AM	4	0	45	0	0	0	49			0	0	0	70	69	0	0	0	139	47	99	0	0	0	146	334	872
8:00 AM	2	0	9	0	0	0	11			0	0	0	73	46	0	0	0	119	49	45	0	0	0	94	224	980
8:15 AM	5	0	7	0	0	0	12			0	0	0	27	29	0	0	0	56	35	33	0	0	0	68	136	946
8:30 AM	4	0	5	0	0	0	9			0	0	0	14	19	0	0	0	33	29	24	0	0	0	53	95	789
8:45 AM	2	0	9	0	0	0	11			0	0	0	13	15	0	0	0	28	20	15	0	0	0	35	74	529
9:00 AM	2	0	8	0	0	0	10			0	0	0	9	13	0	0	0	22	18	20	0	0	0	38	70	375
9:15 AM	1	1	7	0	0	0	9			0	0	0	14	13	0	0	0	27	21	20	0	0	0	41	77	316
9:30 AM	4	1	7	0	0	0	12			0	0	0	15	18	0	0	0	33	27	24	0	0	0	51	96	317
9:45 AM	2	0	12	0	0	1	14			0	0	0	18	16	0	0	0	34	19	27	0	0	0	46	94	337
10:00 AM	1	0	6	0	0	0	7			0	0	0	15	12	0	0	0	27	15	22	0	0	0	37	71	338
10:15 AM	1	0	14	0	0	0	15			0	0	0	21	22	0	0	0	43	12	18	0	0	0	30	88	349
10:30 AM	4	0	13	0	0	0	17			0	0	0	16	26	0	0	0	42	15	30	0	0	0	45	104	357
10:45 AM	2	0	11	0	0	0	13			0	0	0	18	15	0	0	0	33	14	25	0	0	0	39	85	348
11:00 AM	1	1	14	0	0	0	16			0	0	0	29	21	0	0	0	50	15	30	0	0	0	45	111	388
11:15 AM	1	0	12	0	0	0	13			0	0	0	19	18	0	0	0	37	14	36	0	0	0	50	100	400
11:30 AM	1	0	8	0	0	0	9			0	0	0	42	18	0	0	0	60	23	66	0	0	0	89	158	454
11:45 AM	1	0	11	0	0	0	12			0	0	0	47	12	1	0	0	60	14	32	0	0	0	46	118	487
<b>TOTALS</b>	<b>53</b>	<b>5</b>	<b>285</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>343</b>			<b>0</b>	<b>0</b>	<b>0</b>	<b>552</b>	<b>576</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1,129</b>	<b>649</b>	<b>803</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1,453</b>	<b>2,925</b>	

#### Weekday, AM Period - Peak Hour Summary

SEASONAL/ DAILY ADJ. FACTOR	INTERSTATE 90 (I-90) EASTBOUND OFF-RAMP						INTERSTATE 90 (I-90) EASTBOUND ON-RAMP				DEMER STREET (S-263)					DEMER STREET (S-263)					INTERSECTION				
	Eastbound (From the West)						Westbound (From the East)				Northbound (From the South)					Southbound (From the North)									
	1.172	1.176	1.173	1.000	1.000	1.000			1.000	1.000		1.018	1.174	1.000	1.000	1.000		1.174	1.018			1.000	1.000	1.000	VEHICLE TOTALS
START TIME	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES			PEDS	BIKES	VEHICLE TOTALS	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	U-TURN	PEDS	BIKES	VEHICLE TOTALS		
7:15 AM	6	0	15	0	0	0	21			0	0	0	19	29	0	0	0	48	45	56	0	0	0	101	170
7:30 AM	5	0	27	0	0	0	32			0	0	0	35	54	0	0	0	89	66	65	0	0	0	131	252
7:45 AM	4	0	45	0	0	0	49			0	0	0	70	69	0	0	0	139	47	99	0	0	0	146	334
8:00 AM	2	0	9	0	0	0	11			0	0	0	73	46	0	0	0	119	49	45	0	0	0	94	224
<b>TOTALS</b>	<b>17</b>	<b>0</b>	<b>96</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>113</b>			<b>0</b>	<b>0</b>	<b>0</b>	<b>197</b>	<b>198</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>395</b>	<b>207</b>	<b>265</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>472</b>	<b>980</b>
<b>PEAK HOUR FACTOR</b>	<b>0.71</b>	<b>0.00</b>	<b>0.53</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.58</b>			<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.67</b>	<b>0.72</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.71</b>	<b>0.78</b>	<b>0.67</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.81</b>	<b>0.73</b>
<b>% HEAVY VEHICLES</b>	<b>5.88%</b>	<b>0.00%</b>	<b>2.08%</b>	<b>0.00%</b>			<b>2.65%</b>				<b>0.00%</b>	<b>7.61%</b>	<b>2.53%</b>	<b>0.00%</b>			<b>5.06%</b>	<b>0.97%</b>	<b>6.42%</b>	<b>0.00%</b>			<b>4.03%</b>	<b>4.29%</b>	
<b>% BUSES &amp; RVs</b>	<b>0.00%</b>	<b>0.00%</b>	<b>1.04%</b>	<b>0.00%</b>			<b>0.88%</b>				<b>0.00%</b>	<b>3.55%</b>	<b>0.51%</b>	<b>0.00%</b>			<b>2.03%</b>	<b>0.00%</b>	<b>3.77%</b>	<b>0.00%</b>			<b>2.12%</b>	<b>1.94%</b>	





## Intersection Turning Movement Count Summary

### Demer Street (Montana State Secondary Highway S-263) & Interstate 90 (I-90) Eastbound Ramps

Frenchtown, Missoula County, Montana

**Date Count Performed:** January 7 & 8, 2026  
(Average of Wednesday & Thursday)

**Data Collection Method:** Video Traffic Recorder | Unit E5-08

**Count Time Periods:** Weekday, 14-Hour Count  
(6:00 a.m. - 8:00 p.m.)

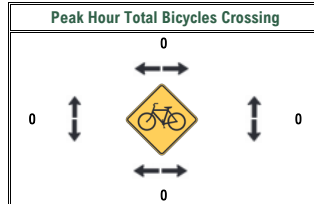
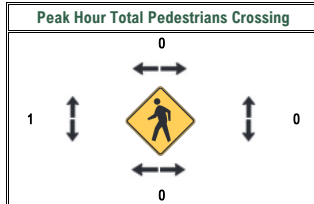
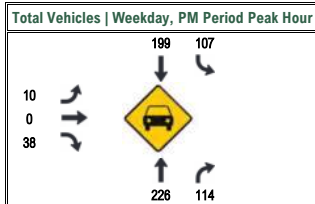
**Setup Location:** Latitude: 47°00'58.07" N | Longitude: 114°13'52.25" W

#### Weekday, PM Period

SEASONAL/ DAILY ADJ. FACTOR	INTERSTATE 90 (I-90) EASTBOUND OFF-RAMP						INTERSTATE 90 (I-90) EASTBOUND ON-RAMP						DEMER STREET (S-263)						DEMER STREET (S-263)						INTERSECTION	HOURLY VOLUME
	Eastbound (From the West)						Westbound (From the East)						Northbound (From the South)						Southbound (From the North)							
	1.172	1.176	1.173	1.000	1.000	1.000	1.000	1.000					1.018	1.174	1.000	1.000	1.000	1.174	1.018		1.000	1.000	1.000	VEHICLE TOTALS		
START TIME	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	PEDS	BIKES	VEHICLE TOTALS	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	U-TURN	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS	VEHICLE TOTALS	VEHICLE TOTALS	VEHICLE TOTALS	
12:00 PM	0	0	7	0	0	0	0	0	0	0	0	0	0	0	48	16	39	0	0	0	55	110	486			
12:15 PM	1	0	8	0	0	0	0	0	0	0	0	0	0	0	41	19	25	0	0	0	44	94	480			
12:30 PM	1	0	11	0	0	0	0	0	0	0	0	0	0	0	39	14	30	0	0	0	44	95	417			
12:45 PM	1	0	15	0	0	0	0	0	0	0	0	0	0	0	42	14	27	0	0	0	41	99	398			
1:00 PM	1	0	11	0	0	0	0	0	0	0	0	0	0	0	45	13	24	0	0	0	37	94	382			
1:15 PM	2	1	15	0	0	0	0	0	0	0	0	0	0	0	43	15	27	0	0	0	42	103	391			
1:30 PM	1	0	6	0	0	0	0	0	0	0	0	0	0	0	52	13	24	0	0	0	37	96	392			
1:45 PM	1	0	9	0	0	0	0	0	0	0	0	0	0	0	34	18	33	0	0	0	51	95	388			
2:00 PM	1	0	8	0	0	0	0	0	0	0	0	0	0	0	41	15	25	0	0	0	40	90	384			
2:15 PM	1	0	12	0	0	1	13	0	0	0	0	0	0	0	33	11	38	0	0	0	49	95	376			
2:30 PM	2	0	15	0	0	0	17	0	0	0	0	0	0	0	48	15	49	0	0	0	64	129	409			
2:45 PM	2	0	19	0	0	0	21	0	0	0	0	0	0	0	41	13	57	0	0	0	70	132	446			
3:00 PM	2	0	12	0	0	0	14	0	0	0	0	0	0	0	61	15	47	0	0	0	82	137	493			
3:15 PM	4	0	13	0	0	0	17	0	0	0	0	0	0	0	129	23	50	0	0	0	73	219	617			
3:30 PM	2	0	4	0	1	0	6	0	0	0	0	0	0	0	86	38	67	0	0	0	105	197	685			
3:45 PM	2	0	12	0	0	0	14	0	0	0	0	0	0	0	69	23	40	0	0	0	83	146	699			
4:00 PM	2	0	9	0	0	0	11	0	0	0	0	0	0	0	56	23	42	0	0	0	85	132	694			
4:15 PM	1	1	14	0	0	0	16	0	0	0	0	0	0	0	67	13	57	0	0	0	70	153	628			
4:30 PM	1	0	9	0	0	0	10	0	0	0	0	0	0	0	64	21	52	0	0	0	73	147	578			
4:45 PM	4	0	13	0	0	0	17	0	0	0	0	0	0	0	57	15	59	0	0	0	74	148	580			
5:00 PM	2	0	16	0	0	0	18	0	0	0	0	0	0	0	82	15	54	0	0	0	89	169	617			
5:15 PM	2	0	11	0	0	0	13	0	0	0	0	0	0	0	61	13	62	0	0	0	75	149	613			
5:30 PM	1	0	9	0	0	0	10	0	0	0	0	0	0	0	69	20	43	0	0	0	83	142	608			
5:45 PM	2	0	12	0	0	0	14	0	0	0	0	0	0	0	53	18	46	0	0	0	64	131	591			
6:00 PM	1	0	5	0	0	0	6	0	0	0	0	0	0	0	38	19	32	0	0	0	51	95	517			
6:15 PM	1	1	4	0	0	0	6	0	0	0	0	0	0	0	31	12	34	0	0	0	46	83	451			
6:30 PM	4	0	9	0	0	0	13	0	0	0	0	0	0	0	44	11	27	0	0	0	38	95	404			
6:45 PM	1	0	2	0	0	0	3	0	1	0	0	0	0	0	21	7	24	0	0	0	31	55	328			
7:00 PM	1	0	4	0	0	0	5	0	0	0	0	0	0	0	37	5	17	0	0	0	22	64	297			
7:15 PM	0	0	4	0	0	0	4	0	0	0	0	0	0	0	23	12	24	0	0	0	36	63	277			
7:30 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	20	4	23	0	0	0	27	48	230			
7:45 PM	1	0	4	0	0	0	5	0	0	0	0	0	0	0	12	6	10	0	0	0	16	33	208			
<b>TOTALS</b>	<b>48</b>	<b>3</b>	<b>303</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>354</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1,088</b>	<b>499</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,587</b>	<b>489</b>	<b>1,208</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,697</b>	<b>3,638</b>			

#### Weekday, PM Period - Peak Hour Summary

SEASONAL/ DAILY ADJ. FACTOR	INTERSTATE 90 (I-90) EASTBOUND OFF-RAMP						INTERSTATE 90 (I-90) EASTBOUND ON-RAMP						DEMER STREET (S-263)						DEMER STREET (S-263)						INTERSECTION	
	Eastbound (From the West)						Westbound (From the East)						Northbound (From the South)						Southbound (From the North)							
	1.172	1.176	1.173	1.000	1.000	1.000	1.000	1.000					1.018	1.174	1.000	1.000	1.000	1.174	1.018		1.000	1.000	1.000	VEHICLE TOTALS		VEHICLE TOTALS
START TIME	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	PEDS	BIKES	VEHICLE TOTALS	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	U-TURN	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS	VEHICLE TOTALS	VEHICLE TOTALS	VEHICLE TOTALS	
3:00 PM	4	0	13	0	0	0	17	0	0	0	102	27	0	0	129	23	50	0	0	0	73	219				
3:15 PM	2	0	4	0	1	0	6	0	0	0	55	31	0	0	86	38	67	0	0	0	105	197				
3:30 PM	2	0	12	0	0	0	14	0	0	0	36	33	0	0	69	23	40	0	0	0	83	146				
3:45 PM	2	0	9	0	0	0	11	0	0	0	33	23	0	0	56	23	42	0	0	0	85	132				
<b>TOTALS</b>	<b>10</b>	<b>0</b>	<b>38</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>48</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>226</b>	<b>114</b>	<b>0</b>	<b>0</b>	<b>340</b>	<b>107</b>	<b>199</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>306</b>	<b>694</b>				
<b>PEAK HOUR FACTOR</b>	<b>0.63</b>	<b>0.00</b>	<b>0.73</b>	<b>0.00</b>	<b>0.25</b>	<b>0.00</b>	<b>0.71</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.55</b>	<b>0.86</b>	<b>0.00</b>	<b>0.00</b>	<b>0.66</b>	<b>0.70</b>	<b>0.74</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.73</b>	<b>0.79</b>				
<b>% HEAVY VEHICLES</b>	<b>0.00%</b>	<b>0.00%</b>	<b>2.63%</b>	<b>0.00%</b>			<b>2.08%</b>				<b>0.00%</b>	<b>4.42%</b>	<b>0.00%</b>	<b>0.00%</b>		<b>2.94%</b>	<b>3.74%</b>	<b>6.03%</b>		<b>0.00%</b>		<b>5.23%</b>	<b>3.89%</b>			
<b>% BUSES &amp; RVs</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>			<b>0.00%</b>				<b>0.00%</b>	<b>3.10%</b>	<b>0.00%</b>	<b>0.00%</b>		<b>2.08%</b>	<b>1.87%</b>	<b>3.02%</b>		<b>0.00%</b>		<b>2.81%</b>	<b>2.16%</b>			





## Intersection Turning Movement Count Summary Demer Street & Interstate 90 (I-90) Westbound Ramps Frenchtown, Missoula County, Montana

**Date Count Performed:** January 7 & 8, 2026  
**Data Collection Method:** Video Traffic Recorder | Unit E5-06

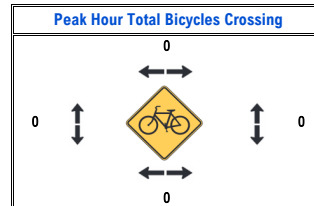
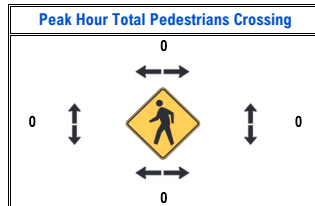
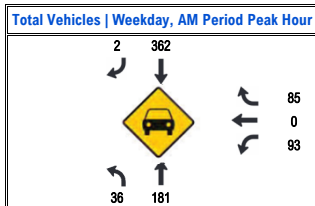
**Count Time Periods:** Weekday, 14-Hour Count  
(6:00 a.m. - 8:00 p.m.)  
**Setup Location:** Latitude: 47°01'04.33" N | Longitude: 114°13'46.60" W

### Weekday, AM Period

SEASONAL/ DAILY ADJ. FACTOR	INTERSTATE 90 (I-90) WB ON-RAMP						INTERSTATE 90 (I-90) WB OFF-RAMP						DEMER STREET						DEMER STREET						INTERSECTION	HOURLY
	Eastbound (From the West)			Westbound (From the East)			Northbound (From the South)			Southbound (From the North)			Northbound (From the South)			Southbound (From the North)										
	1,000	1,000	VEHICLE TOTALS	1,174	1,186	1,174	1,000	1,000	1,000	1,174	1,018	1,000	1,000	1,000	1,018	1,175	1,000	1,000	1,000							
START TIME	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	U-TURN	PEDS	BIKES	VEHICLE TOTALS	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS	VOLUME		
6:00 AM	0	0	0	4	0	2	0	0	0	6	4	4	0	0	0	8	14	1	0	0	0	15	29			
6:15 AM	0	0	0	6	0	4	0	0	0	10	1	5	0	0	0	6	35	1	0	0	0	36	52			
6:30 AM	0	0	0	16	0	4	0	0	0	20	2	5	0	0	0	7	51	1	0	0	0	52	79			
6:45 AM	0	0	0	22	1	5	0	0	0	28	6	9	0	0	0	15	44	1	0	0	0	45	88			
7:00 AM	0	0	0	18	0	7	0	0	0	25	4	6	0	0	0	10	48	2	0	0	0	50	85			
7:15 AM	0	0	0	36	0	18	0	0	0	54	12	15	0	0	0	27	62	0	0	0	0	62	143			
7:30 AM	0	0	0	19	0	18	0	0	0	37	6	34	0	0	0	40	105	1	0	0	0	106	183			
7:45 AM	0	0	0	27	0	28	0	0	0	55	9	65	0	0	0	74	117	0	0	0	0	117	246			
8:00 AM	0	0	0	11	0	21	0	0	0	32	9	67	0	0	0	76	78	1	0	0	0	79	187			
8:15 AM	0	0	0	9	0	13	0	0	0	22	11	22	0	0	0	33	56	1	0	0	0	57	112			
8:30 AM	0	0	0	13	0	8	0	0	0	21	5	14	0	0	0	19	39	2	0	0	0	41	81			
8:45 AM	0	0	0	12	0	11	0	0	0	23	5	12	0	0	0	17	22	1	0	0	0	23	63			
9:00 AM	0	0	0	13	0	12	0	0	0	25	6	6	0	0	0	12	25	1	0	0	0	26	63			
9:15 AM	0	0	0	14	0	9	0	0	0	23	8	9	0	0	0	17	27	2	0	0	0	29	69			
9:30 AM	1	0	0	7	0	11	0	0	0	18	2	16	0	0	0	18	42	1	0	0	0	43	79			
9:45 AM	0	1	0	13	0	8	0	0	0	21	6	14	0	0	0	20	33	2	0	0	0	35	76			
10:00 AM	0	0	0	13	0	9	0	0	0	22	11	7	0	0	0	18	24	0	0	0	0	24	64			
10:15 AM	0	0	0	7	0	9	0	0	0	16	11	13	0	0	0	24	21	1	0	0	0	22	62			
10:30 AM	0	0	0	16	0	9	0	0	0	25	8	13	0	0	0	21	29	2	0	0	0	31	77			
10:45 AM	0	0	0	11	0	7	0	0	0	18	7	14	0	0	0	21	29	1	0	0	0	30	69			
11:00 AM	0	0	0	14	0	14	0	0	0	28	13	19	0	0	0	32	31	1	0	0	0	32	92			
11:15 AM	0	0	0	13	0	16	0	0	0	29	7	14	0	0	0	21	37	2	0	0	0	39	89			
11:30 AM	0	0	0	18	0	13	0	0	0	31	9	35	0	0	0	44	72	2	0	0	0	74	149			
11:45 AM	0	0	0	13	0	16	0	0	0	29	8	40	0	0	0	48	33	0	0	0	0	33	110			
<b>TOTALS</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>345</b>	<b>1</b>	<b>272</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>618</b>	<b>170</b>	<b>458</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>628</b>	<b>1,074</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,101</b>	<b>2,347</b>			

### Weekday, AM Period - Peak Hour Summary

SEASONAL/ DAILY ADJ. FACTOR	INTERSTATE 90 (I-90) WB ON-RAMP						INTERSTATE 90 (I-90) WB OFF-RAMP						DEMER STREET						DEMER STREET						INTERSECTION
	Eastbound (From the West)			Westbound (From the East)			Northbound (From the South)			Southbound (From the North)			Northbound (From the South)			Southbound (From the North)									
	1,000	1,000	VEHICLE TOTALS	1,174	1,186	1,174	1,000	1,000	1,000	1,174	1,018	1,000	1,000	1,000	1,018	1,175	1,000	1,000	1,000						
START TIME	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	U-TURN	PEDS	BIKES	VEHICLE TOTALS	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS		
7:15 AM	0	0	0	36	0	18	0	0	0	54	12	15	0	0	0	27	62	0	0	0	0	62	143		
7:30 AM	0	0	0	19	0	18	0	0	0	37	6	34	0	0	0	40	105	1	0	0	0	106	183		
7:45 AM	0	0	0	27	0	28	0	0	0	55	9	65	0	0	0	74	117	0	0	0	0	117	246		
8:00 AM	0	0	0	11	0	21	0	0	0	32	9	67	0	0	0	76	78	1	0	0	0	79	187		
<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>93</b>	<b>0</b>	<b>85</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>178</b>	<b>36</b>	<b>181</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>217</b>	<b>362</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>364</b>	<b>759</b>		
<b>PEAK HOUR FACTOR</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.65</b>	<b>0.00</b>	<b>0.76</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.81</b>	<b>0.75</b>	<b>0.68</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.71</b>	<b>0.77</b>	<b>0.50</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.78</b>	<b>0.77</b>		
<b>% HEAVY VEHICLES</b>			<b>0.00%</b>	<b>6.45%</b>	<b>0.00%</b>	<b>2.35%</b>	<b>0.00%</b>			<b>4.49%</b>	<b>22.22%</b>	<b>4.42%</b>	<b>0.00%</b>			<b>7.37%</b>	<b>3.59%</b>	<b>0.00%</b>	<b>0.00%</b>			<b>3.57%</b>	<b>4.87%</b>		
<b>% BUSES &amp; RVs</b>			<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>			<b>0.00%</b>	<b>0.00%</b>	<b>3.87%</b>	<b>0.00%</b>			<b>3.23%</b>	<b>2.78%</b>	<b>0.00%</b>	<b>0.00%</b>			<b>2.75%</b>	<b>2.24%</b>		





## Intersection Turning Movement Count Summary Demer Street & Interstate 90 (I-90) Westbound Ramps Frenchtown, Missoula County, Montana

**Date Count Performed:** January 7 & 8, 2026  
(Average of Wednesday & Thursday)

**Count Time Periods:** Weekday, 14-Hour Count  
(6:00 a.m. - 8:00 p.m.)

**Setup Location:** Latitude: 47°01'04.33" N | Longitude: 114°13'46.60" W

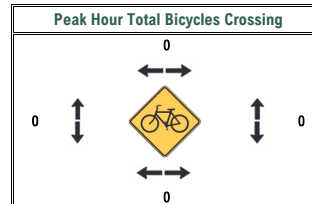
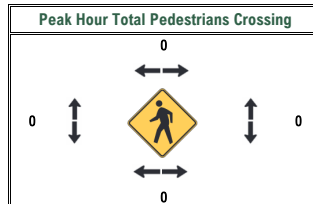
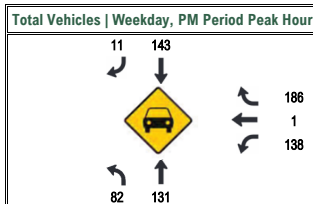
**Data Collection Method:** Video Traffic Recorder | Unit E5-06

### Weekday, PM Period

SEASONAL/ DAILY ADJ. FACTOR	INTERSTATE 90 (I-90) WB ON-RAMP						INTERSTATE 90 (I-90) WB OFF-RAMP						DEMER STREET						DEMER STREET						INTERSECTION	HOURLY VOLUME
	Eastbound (From the West)			Westbound (From the East)			Northbound (From the South)			Southbound (From the North)			Northbound (From the South)			Southbound (From the North)										
	1.000	1.000	VEHICLE TOTALS	1.174	1.186	1.174	1.000	1.000	1.000	1.174	1.018	1.000	1.000	1.000	1.018	1.175	1.000	1.000	1.000							
START TIME	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	U-TURN	PEDS	BIKES	VEHICLE TOTALS	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS	VOLUME		
12:00 PM	0	0	0	11	0	13	0	0	0	24	6	20	0	0	0	26	43	2	0	0	0	45	95	443		
12:15 PM	0	0	0	16	0	13	0	0	0	29	11	17	0	0	0	28	27	1	0	0	0	28	85	439		
12:30 PM	0	0	0	14	1	12	0	0	0	27	12	19	0	0	0	31	30	1	0	0	0	31	89	379		
12:45 PM	0	0	0	19	0	8	0	0	0	27	11	20	0	0	0	31	23	1	0	0	0	24	82	351		
1:00 PM	0	0	0	16	0	14	0	0	0	30	14	20	0	0	0	34	22	2	0	0	0	24	88	344		
1:15 PM	0	0	0	14	0	20	0	0	0	34	11	20	0	0	0	31	29	0	0	0	0	29	94	353		
1:30 PM	0	0	0	13	0	16	0	0	0	29	14	23	0	0	0	37	24	1	0	0	0	25	91	355		
1:45 PM	0	0	0	18	1	14	0	0	0	33	12	16	1	0	0	29	33	2	0	0	0	35	97	370		
2:00 PM	0	0	0	15	0	20	0	0	0	35	16	15	0	0	0	31	25	1	0	0	0	26	92	374		
2:15 PM	0	1	0	22	0	22	0	0	0	44	8	8	0	0	0	16	27	1	0	0	0	28	88	368		
2:30 PM	0	0	0	32	0	16	0	0	0	48	13	19	0	0	0	32	35	2	0	0	0	37	117	394		
2:45 PM	0	0	0	34	0	21	0	0	0	55	11	19	0	0	0	30	38	1	0	0	0	39	124	421		
3:00 PM	0	0	0	28	0	25	0	0	0	53	18	35	0	0	0	53	36	1	0	0	0	37	143	472		
3:15 PM	0	0	0	28	0	31	0	0	0	59	27	81	0	0	0	108	48	1	0	0	0	49	216	600		
3:30 PM	1	0	0	25	0	25	0	0	0	50	20	41	0	0	0	61	78	5	0	0	0	83	194	677		
3:45 PM	0	0	0	25	0	23	0	0	0	48	21	20	0	0	0	41	40	4	0	0	0	44	133	686		
4:00 PM	0	0	0	26	0	31	0	0	0	57	16	20	0	0	0	36	39	2	0	0	0	41	134	677		
4:15 PM	0	0	0	39	0	33	0	0	0	72	21	32	0	0	0	53	36	2	0	0	0	38	163	624		
4:30 PM	0	0	0	32	0	35	0	0	0	67	18	29	0	0	0	47	43	2	0	0	0	45	159	589		
4:45 PM	0	0	0	40	1	28	0	0	0	69	13	29	0	0	0	42	39	1	0	0	0	40	151	607		
5:00 PM	0	0	0	40	0	33	0	0	0	73	27	39	0	0	0	66	33	4	0	0	0	37	176	649		
5:15 PM	0	0	0	40	1	72	0	0	0	113	18	29	0	0	0	47	38	4	0	0	0	42	202	688		
5:30 PM	0	0	0	26	0	39	0	0	0	65	19	40	0	0	0	59	38	2	0	0	0	40	164	693		
5:45 PM	0	0	0	32	0	42	0	0	0	74	18	23	0	0	0	41	34	1	0	0	0	35	150	692		
6:00 PM	0	0	0	23	0	31	0	0	0	54	13	16	0	0	0	29	27	1	0	0	0	28	111	627		
6:15 PM	0	0	0	26	0	29	0	0	0	55	8	17	0	0	0	25	21	1	0	0	0	22	102	527		
6:30 PM	0	0	0	21	0	25	0	0	0	46	13	24	0	0	0	37	18	1	0	0	0	19	102	465		
6:45 PM	0	0	0	22	0	18	0	0	1	40	7	12	0	0	0	19	11	0	0	0	0	11	70	385		
7:00 PM	0	0	0	12	1	18	0	0	0	31	11	18	0	0	0	29	11	1	0	0	0	12	72	346		
7:15 PM	0	0	0	13	0	16	0	0	0	29	8	12	0	0	0	20	24	1	0	0	0	25	74	318		
7:30 PM	0	0	0	16	0	13	0	0	0	29	8	9	0	0	0	17	12	4	0	0	0	16	62	278		
7:45 PM	0	0	0	8	0	14	0	0	0	22	4	5	0	0	0	9	8	1	0	0	0	9	40	248		
<b>TOTALS</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>746</b>	<b>5</b>	<b>770</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1,521</b>	<b>447</b>	<b>747</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1,195</b>	<b>990</b>	<b>54</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,044</b>	<b>3,760</b>			

### Weekday, PM Period - Peak Hour Summary

SEASONAL/ DAILY ADJ. FACTOR	INTERSTATE 90 (I-90) WB ON-RAMP						INTERSTATE 90 (I-90) WB OFF-RAMP						DEMER STREET						DEMER STREET						INTERSECTION
	Eastbound (From the West)			Westbound (From the East)			Northbound (From the South)			Southbound (From the North)			Northbound (From the South)			Southbound (From the North)									
	1.000	1.000	VEHICLE TOTALS	1.174	1.186	1.174	1.000	1.000	1.000	1.174	1.018	1.000	1.000	1.000	1.018	1.175	1.000	1.000	1.000						
START TIME	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	U-TURN	PEDS	BIKES	VEHICLE TOTALS	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS		
4:45 PM	0	0	0	40	0	33	0	0	0	73	27	39	0	0	0	66	33	4	0	0	0	37	176		
5:00 PM	0	0	0	40	1	72	0	0	0	113	18	29	0	0	0	47	38	4	0	0	0	42	202		
5:15 PM	0	0	0	26	0	39	0	0	0	65	19	40	0	0	0	59	38	2	0	0	0	40	164		
5:30 PM	0	0	0	32	0	42	0	0	0	74	18	23	0	0	0	41	34	1	0	0	0	35	150		
<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>138</b>	<b>1</b>	<b>186</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>325</b>	<b>82</b>	<b>131</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>213</b>	<b>143</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>154</b>	<b>692</b>		
<b>PEAK HOUR FACTOR</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.86</b>	<b>0.25</b>	<b>0.65</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.72</b>	<b>0.76</b>	<b>0.82</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.81</b>	<b>0.94</b>	<b>0.69</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.92</b>	<b>0.86</b>		
<b>% HEAVY VEHICLES</b>				<b>0.00%</b>	<b>1.45%</b>	<b>0.00%</b>	<b>1.81%</b>	<b>0.00%</b>		<b>1.54%</b>	<b>1.22%</b>	<b>1.53%</b>	<b>0.00%</b>			<b>1.41%</b>	<b>1.40%</b>	<b>0.00%</b>	<b>0.00%</b>			<b>1.30%</b>	<b>1.45%</b>		
<b>% BUSES &amp; RVs</b>				<b>0.00%</b>	<b>0.72%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>		<b>0.31%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>			<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>			<b>0.00%</b>	<b>0.14%</b>		





## Intersection Turning Movement Count Summary

### Frenchtown Frontage Road (S-574) & Demer Street (I-90 Overpass)

Frenchtown, Missoula County, Montana

**Date Count Performed:** January 7 & 8, 2026  
(Average of Wednesday & Thursday)

**Count Time Periods:** Weekday, 14-Hour Count  
(6:00 a.m. - 8:00 p.m.)

**Data Collection Method:** Video Traffic Recorder | Unit E5-09

**Setup Location:** Latitude: 47°01'07.46" N | Longitude: 114°13'47.57" W

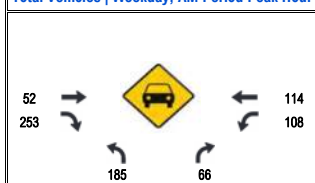
#### Weekday, AM Period

SEASONAL/ DAILY ADJ. FACTOR	FRENCHTOWN FRONTAGE ROAD (S-574)						FRENCHTOWN FRONTAGE ROAD (S-574)						DEMER STREET (I-90 OVERPASS)						North Side of the			INTERSECTION	HOURLY VOLUME
	Eastbound (From the West)						Westbound (From the East)						Northbound (From the South)						Frenchtown Frontage Road (S-574)				
	1.018	1.018	1.000	1.000	1.000	VEHICLE TOTALS	1.018	1.017	1.000	1.000	1.000	VEHICLE TOTALS	1.018	1.017	1.000	1.000	1.000	VEHICLE TOTALS	1.000	1.000	VEHICLE TOTALS		
START TIME	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS	VOLUME
6:00 AM	2	10	0	0	0	12	5	1	0	0	0	6	5	1	0	0	0	6	0	0	0	24	
6:15 AM	1	25	0	0	0	26	11	4	0	0	0	15	7	2	0	0	0	9	0	0	0	50	
6:30 AM	3	35	0	0	0	38	17	3	0	0	0	20	4	3	0	0	0	7	0	0	0	65	
6:45 AM	6	32	0	0	0	38	14	2	0	0	0	16	5	8	0	0	0	13	0	0	0	67	206
7:00 AM	5	35	0	0	0	40	13	3	0	0	0	16	10	2	0	0	0	12	0	0	0	68	250
7:15 AM	4	44	0	0	0	48	21	8	0	0	0	29	19	10	0	0	0	29	0	0	0	106	306
7:30 AM	8	71	0	0	0	79	36	18	0	0	0	54	40	8	0	0	0	48	0	0	0	181	422
7:45 AM	13	75	0	0	0	88	43	42	0	0	0	85	60	23	0	0	0	83	0	1	0	256	611
8:00 AM	23	62	0	0	0	85	16	44	0	0	0	60	67	21	0	0	0	88	0	0	0	233	776
8:15 AM	8	45	0	0	0	53	13	10	0	0	0	23	18	14	0	0	0	32	0	0	0	108	778
8:30 AM	5	26	0	0	0	31	15	6	0	0	0	21	11	11	0	0	0	22	0	1	0	74	671
8:45 AM	5	18	0	0	0	23	4	3	0	0	0	7	13	9	0	0	0	22	0	0	0	52	467
9:00 AM	3	14	0	0	0	17	12	1	0	0	0	13	10	6	0	0	0	16	0	0	0	46	280
9:15 AM	4	20	0	0	0	24	9	2	0	0	0	11	12	5	0	0	0	17	0	0	0	52	224
9:30 AM	3	29	0	0	0	32	13	6	0	0	0	19	15	9	0	0	0	24	0	0	0	75	225
9:45 AM	6	25	0	0	1	31	9	8	0	0	0	17	15	6	0	0	0	21	0	0	0	69	242
10:00 AM	2	19	0	0	0	21	5	2	0	0	0	7	10	4	0	0	0	14	0	0	0	42	238
10:15 AM	4	13	0	0	0	17	10	1	0	0	0	11	13	8	0	0	0	21	0	1	0	49	235
10:30 AM	3	17	0	0	0	20	14	1	0	0	0	15	13	8	0	0	0	21	0	0	0	56	216
10:45 AM	3	20	0	0	0	23	8	4	0	0	0	12	11	9	0	0	0	20	0	0	0	55	202
11:00 AM	4	16	0	0	0	20	15	2	0	0	0	17	19	11	0	0	0	30	0	0	0	67	227
11:15 AM	9	23	0	0	0	32	15	2	0	0	0	17	16	11	0	0	0	27	0	0	0	76	254
11:30 AM	19	58	0	0	0	77	15	5	0	0	0	20	35	11	0	0	0	46	0	0	0	143	341
11:45 AM	5	18	0	0	0	23	14	10	0	0	0	24	38	16	0	0	0	54	0	0	0	101	387
<b>TOTALS</b>	<b>148</b>	<b>750</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>898</b>	<b>347</b>	<b>188</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>535</b>	<b>466</b>	<b>216</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>682</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>2,115</b>	

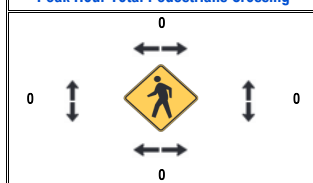
#### Weekday, AM Period - Peak Hour Summary

SEASONAL/ DAILY ADJ. FACTOR	FRENCHTOWN FRONTAGE ROAD (S-574)						FRENCHTOWN FRONTAGE ROAD (S-574)						DEMER STREET (I-90 OVERPASS)						North Side of the			INTERSECTION	
	Eastbound (From the West)						Westbound (From the East)						Northbound (From the South)						Frenchtown Frontage Road (S-574)				
	1.018	1.018	1.000	1.000	1.000	VEHICLE TOTALS	1.018	1.017	1.000	1.000	1.000	VEHICLE TOTALS	1.018	1.017	1.000	1.000	1.000	VEHICLE TOTALS	1.000	1.000	VEHICLE TOTALS		
START TIME	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS	
7:30 AM	8	71	0	0	0	79	36	18	0	0	0	54	40	8	0	0	0	48	0	0	0	181	
7:45 AM	13	75	0	0	0	88	43	42	0	0	0	85	60	23	0	0	0	83	0	1	0	256	
8:00 AM	23	62	0	0	0	85	16	44	0	0	0	60	67	21	0	0	0	88	0	0	0	233	
8:15 AM	8	45	0	0	0	53	13	10	0	0	0	23	18	14	0	0	0	32	0	0	0	108	
<b>TOTALS</b>	<b>52</b>	<b>253</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>305</b>	<b>108</b>	<b>114</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>222</b>	<b>185</b>	<b>66</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>251</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>778</b>	
PEAK HOUR FACTOR	0.57	0.84	0.00	0.00	0.00	0.87	0.63	0.65	0.00	0.00	0.00	0.65	0.69	0.72	0.00	0.00	0.00	0.71	0.00	0.25	0.00	0.76	
% HEAVY VEHICLES	1.92%	4.36%	0.00%			3.93%	2.78%	2.63%	0.00%			2.70%	2.70%	3.03%	0.00%			2.79%				0.00%	3.21%
% BUSES & RVs	0.00%	2.77%	0.00%			2.30%	2.78%	0.88%	0.00%			1.80%	2.70%	1.52%	0.00%			2.39%				0.00%	2.19%

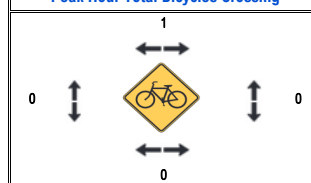
Total Vehicles | Weekday, AM Period Peak Hour



Peak Hour Total Pedestrians Crossing



Peak Hour Total Bicycles Crossing





## Intersection Turning Movement Count Summary

### Frenchtown Frontage Road (S-574) & Demer Street (I-90 Overpass)

Frenchtown, Missoula County, Montana

**Date Count Performed:** January 7 & 8, 2026  
(Average of Wednesday & Thursday)

**Data Collection Method:** Video Traffic Recorder | Unit E5-09

**Count Time Periods:** Weekday, 14-Hour Count  
(6:00 a.m. - 8:00 p.m.)

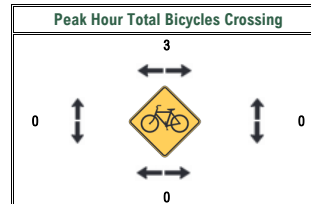
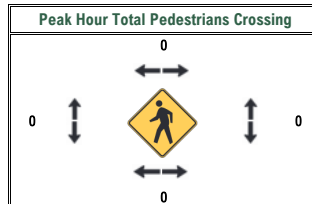
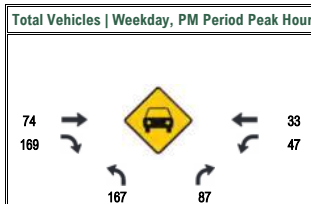
**Setup Location:** Latitude: 47°01'07.46" N | Longitude: 114°13'47.57" W

#### Weekday, PM Period

SEASONAL/ DAILY ADJ. FACTOR	FRENCHTOWN FRONTAGE ROAD (S-574)						FRENCHTOWN FRONTAGE ROAD (S-574)						DEMER STREET (I-90 OVERPASS)						North Side of the Frenchtown Frontage Road (S-574)						INTERSECTION	HOURLY VOLUME
	Eastbound (From the West)						Westbound (From the East)						Northbound (From the South)						Frenchtown Frontage Road (S-574)							
	1.018	1.018	1.000	1.000	1.000	VEHICLE TOTALS	1.018	1.017	1.000	1.000	1.000	VEHICLE TOTALS	1.018	1.017	1.000	1.000	1.000	VEHICLE TOTALS	1.000	1.000	1.000	1.000	VEHICLE TOTALS			
START TIME	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS	VOLUME			
12:00 PM	6	25	0	0	0	31	18	8	0	0	0	26	26	6	0	0	0	32	0	0	0	89	409			
12:15 PM	6	19	0	0	0	25	10	3	0	0	0	13	19	7	0	0	0	26	0	0	0	64	397			
12:30 PM	4	19	0	0	0	23	12	8	0	0	0	20	16	12	0	0	0	28	0	0	0	71	325			
12:45 PM	3	14	0	0	0	17	8	4	0	0	0	12	19	10	1	0	0	30	0	0	0	59	283			
1:00 PM	2	18	0	0	0	20	6	6	0	0	0	12	21	10	0	0	0	31	5	0	0	63	257			
1:15 PM	3	20	0	0	0	23	7	7	0	0	0	14	24	11	1	0	0	36	1	0	0	73	266			
1:30 PM	7	15	0	0	0	22	10	8	0	0	0	18	27	11	0	0	0	38	0	0	0	78	273			
1:45 PM	11	26	0	0	0	37	8	5	0	0	0	13	18	11	0	0	0	29	1	0	0	79	293			
2:00 PM	2	15	0	0	0	17	11	5	0	0	0	16	23	8	0	0	0	31	0	0	0	64	294			
2:15 PM	4	19	0	0	1	23	10	3	0	0	0	13	19	8	0	0	0	27	0	0	0	63	284			
2:30 PM	2	21	0	0	0	23	14	4	0	0	0	18	20	12	1	0	0	33	0	0	0	74	280			
2:45 PM	5	19	0	0	0	24	20	6	0	0	0	26	26	9	1	0	0	36	0	0	0	86	287			
3:00 PM	4	20	0	0	0	24	16	10	0	0	0	26	38	17	0	0	0	55	0	0	0	105	328			
3:15 PM	21	42	0	0	0	63	8	17	0	0	0	25	73	34	0	0	0	107	0	0	0	195	460			
3:30 PM	40	70	0	0	0	110	13	10	0	0	0	23	43	18	0	0	0	61	0	2	0	194	580			
3:45 PM	9	33	0	0	0	42	11	3	0	0	0	14	24	16	0	0	0	40	0	1	0	96	590			
4:00 PM	4	24	0	0	0	28	15	3	0	0	0	18	27	19	0	0	0	46	0	0	0	92	577			
4:15 PM	4	20	0	0	0	24	18	7	0	0	0	25	39	19	0	0	0	58	0	0	0	107	489			
4:30 PM	6	29	0	0	0	35	16	5	0	0	0	21	37	23	0	0	0	60	1	0	0	116	411			
4:45 PM	8	19	0	0	0	27	19	8	0	0	0	27	31	22	0	0	0	53	0	0	0	107	422			
5:00 PM	9	21	0	0	0	30	14	10	0	0	0	24	47	19	0	0	0	68	1	0	0	120	450			
5:15 PM	10	26	0	0	0	36	14	10	0	0	0	24	70	22	0	0	0	92	0	0	0	152	495			
5:30 PM	11	24	0	0	0	35	16	9	0	0	0	25	47	26	0	0	0	73	1	0	0	133	512			
5:45 PM	8	24	0	0	0	32	11	7	0	0	0	18	46	17	0	0	0	63	0	0	0	113	518			
6:00 PM	5	18	0	0	0	23	9	3	0	0	0	12	32	13	0	0	0	45	0	0	0	80	478			
6:15 PM	10	15	0	0	0	25	7	7	0	0	0	14	32	10	0	0	0	42	0	0	0	81	407			
6:30 PM	5	12	0	0	0	17	8	6	0	0	0	14	32	14	0	0	0	46	0	0	0	77	351			
6:45 PM	9	10	0	0	0	19	1	7	0	0	0	8	15	13	0	0	0	28	0	0	0	55	293			
7:00 PM	1	8	0	0	0	9	5	2	0	0	0	7	24	10	0	0	0	34	0	0	0	50	263			
7:15 PM	11	21	0	0	0	32	3	3	0	0	0	6	16	9	0	0	0	25	0	0	0	63	245			
7:30 PM	2	10	0	0	0	12	4	1	0	0	0	5	12	8	1	0	0	21	0	0	0	38	206			
7:45 PM	1	6	0	0	0	7	3	2	0	0	0	5	15	3	0	0	0	18	0	0	0	30	181			
<b>TOTALS</b>	<b>233</b>	<b>682</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>915</b>	<b>345</b>	<b>197</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>542</b>	<b>958</b>	<b>447</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>1,410</b>	<b>10</b>	<b>3</b>	<b>0</b>	<b>2,867</b>				

#### Weekday, PM Period - Peak Hour Summary

SEASONAL/ DAILY ADJ. FACTOR	FRENCHTOWN FRONTAGE ROAD (S-574)						FRENCHTOWN FRONTAGE ROAD (S-574)						DEMER STREET (I-90 OVERPASS)						North Side of the Frenchtown Frontage Road (S-574)						INTERSECTION
	Eastbound (From the West)						Westbound (From the East)						Northbound (From the South)						Frenchtown Frontage Road (S-574)						
	1.018	1.018	1.000	1.000	1.000	VEHICLE TOTALS	1.018	1.017	1.000	1.000	1.000	VEHICLE TOTALS	1.018	1.017	1.000	1.000	1.000	VEHICLE TOTALS	1.000	1.000	1.000	1.000	VEHICLE TOTALS		
START TIME	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	THRU	U-TURN	PEDS	BIKES	VEHICLE TOTALS	LEFT	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS			
3:00 PM	21	42	0	0	0	63	8	17	0	0	0	25	73	34	0	0	0	107	0	0	0	195			
3:15 PM	40	70	0	0	0	110	13	10	0	0	0	23	43	18	0	0	0	61	0	2	0	194			
3:30 PM	9	33	0	0	0	42	11	3	0	0	0	14	24	16	0	0	0	40	0	1	0	96			
3:45 PM	4	24	0	0	0	28	15	3	0	0	0	18	27	19	0	0	0	46	0	0	0	92			
<b>TOTALS</b>	<b>74</b>	<b>169</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>243</b>	<b>47</b>	<b>33</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>80</b>	<b>167</b>	<b>87</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>254</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>577</b>			
<b>PEAK HOUR FACTOR</b>	<b>0.46</b>	<b>0.60</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.55</b>	<b>0.78</b>	<b>0.49</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.80</b>	<b>0.57</b>	<b>0.64</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.59</b>	<b>0.00</b>	<b>0.38</b>	<b>0.00</b>	<b>0.74</b>			
<b>% HEAVY VEHICLES</b>	<b>2.70%</b>	<b>4.14%</b>	<b>0.00%</b>			<b>3.70%</b>	<b>12.77%</b>	<b>6.06%</b>	<b>0.00%</b>			<b>10.00%</b>	<b>3.59%</b>	<b>4.60%</b>	<b>0.00%</b>			<b>3.94%</b>			<b>0.00%</b>	<b>4.68%</b>			
<b>% BUSES &amp; RVs</b>	<b>1.35%</b>	<b>2.37%</b>	<b>0.00%</b>			<b>2.06%</b>	<b>6.38%</b>	<b>6.06%</b>	<b>0.00%</b>			<b>6.25%</b>	<b>2.89%</b>	<b>2.30%</b>	<b>0.00%</b>			<b>2.76%</b>			<b>0.00%</b>	<b>2.95%</b>			





## Intersection Turning Movement Count Summary

### Frenchtown Frontage Road (S-574) & Belker Lane

Frenchtown, Missoula County, Montana

**Date Count Performed:** January 7 & 8, 2026  
(Average of Wednesday & Thursday)

**Count Time Periods:** Weekday, AM (7:00 - 9:00 a.m.) & PM (4:00 - 6:00 p.m.) Peak Periods

**Data Collection Method:** Video Traffic Recorder | Unit E5-09

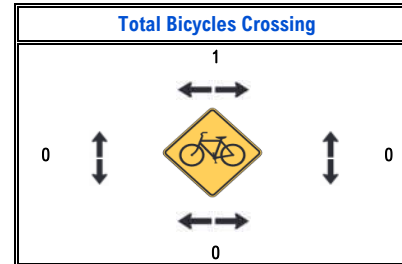
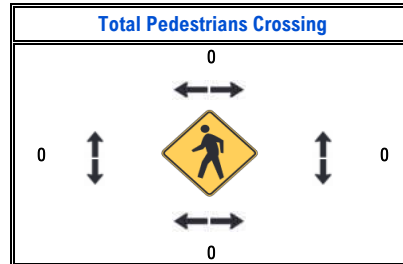
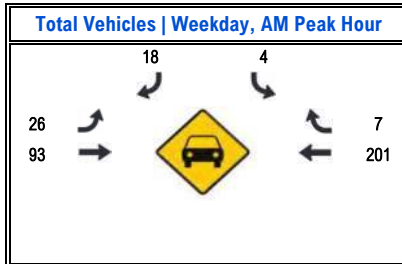
**Setup Location:** Latitude: 47°01'07.46" N | Longitude: 114°13'47.57" W

#### WEEKDAY, AM PEAK PERIOD

SEASONAL/ DAILY ADJ. FACTOR	FRENCHTOWN FRONTAGE ROAD (S-574)							FRENCHTOWN FRONTAGE ROAD (S-574)							South Side of the Frenchtown Frontage Road (S-574)			BELKER LANE						INTERSECTION	HOURLY			
	Eastbound (From the West)				Westbound (From the East)				Frenchtown Frontage Road (S-574)			Southbound (From the North)																
	1.017	1.017		1.000	1.000	1.000			1.018	1.017	1.000	1.000	1.000					1.000	1.000		1.020		1.017			1.000	1.000	1.000
START TIME	LEFT	THRU		U-TURN	PEDS	BIKES	VEHICLE TOTALS	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS				PEDS	BIKES	VEHICLE TOTALS	LEFT		RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS	VOLUME
7:00 AM	0	7		0	0	0	7	14	1	0	0	0	15				0	0	0	1		2	0	0	0	3	25	
7:15 AM	3	10		0	0	0	13	26	1	0	0	0	27				0	0	0	1		3	0	0	0	4	44	
7:30 AM	4	12		0	0	0	16	47	1	0	0	0	48				0	0	0	2		6	0	0	0	8	72	
7:45 AM	6	29		0	0	0	35	78	3	0	0	0	81				0	0	0	1		5	0	0	1	6	122	263
8:00 AM	10	35		0	0	0	45	55	2	0	0	0	57				0	0	0	1		5	0	0	0	6	108	346
8:15 AM	6	17		0	0	0	23	21	1	0	0	0	22				0	0	0	0		2	0	0	0	2	47	349
8:30 AM	2	14		0	0	0	16	21	2	0	0	0	23				0	0	0	0		0	0	0	1	0	39	316
8:45 AM	3	10		0	0	0	13	6	1	0	0	0	7				0	0	0	1		2	0	0	0	3	23	217
<b>TOTALS</b>	<b>34</b>	<b>134</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>168</b>	<b>268</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>280</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>		<b>25</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>32</b>	<b>480</b>	

#### WEEKDAY, AM PEAK HOUR SUMMARY

SEASONAL/ DAILY ADJ. FACTOR	FRENCHTOWN FRONTAGE ROAD (S-574)							FRENCHTOWN FRONTAGE ROAD (S-574)							Frenchtown Frontage Road (S-574)			BELKER LANE						INTERSECTION			
	Eastbound (From the West)				Westbound (From the East)				Frenchtown Frontage Road (S-574)			Southbound (From the North)															
	1.017	1.017		1.000	1.000	1.000			1.018	1.017	1.000	1.000	1.000					1.000	1.000		1.020		1.017		1.000	1.000	1.000
START TIME	LEFT	THRU		U-TURN	PEDS	BIKES	VEHICLE TOTALS	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS				PEDS	BIKES	VEHICLE TOTALS	LEFT		RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS
7:30 AM	4	12		0	0	0	16	47	1	0	0	0	48				0	0	0	2		6	0	0	0	8	72
7:45 AM	6	29		0	0	0	35	78	3	0	0	0	81				0	0	0	1		5	0	0	1	6	122
8:00 AM	10	35		0	0	0	45	55	2	0	0	0	57				0	0	0	1		5	0	0	0	6	108
8:15 AM	6	17		0	0	0	23	21	1	0	0	0	22				0	0	0	0		2	0	0	0	2	47
<b>TOTALS</b>	<b>26</b>	<b>93</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>119</b>	<b>201</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>208</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>		<b>18</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>22</b>	<b>349</b>
PEAK HOUR FACTOR	0.65	0.66		0.00	0.00	0.00	0.66	0.64	0.58	0.00	0.00	0.00	0.64				0.00	0.00	0.00	0.50		0.75	0.00	0.00	0.25	0.69	0.72
% HEAVY VEHICLES	8.82%	2.24%		0.00%			3.57%	3.38%	0.00%	0.00%			3.21%						0.00%	14.29%		4.00%	0.00%			6.25%	3.54%
% BUSES & RVs	0.00%	0.75%		0.00%			0.60%	2.24%	0.00%	0.00%			2.14%						0.00%	0.00%		0.00%	0.00%			0.00%	1.46%





## Intersection Turning Movement Count Summary

### Frenchtown Frontage Road (S-574) & Belker Lane

Frenchtown, Missoula County, Montana

**Date Count Performed:** January 7 & 8, 2026  
(Average of Wednesday & Thursday)

**Count Time Periods:** Weekday, AM (7:00 - 9:00 a.m.) & PM (4:00 - 6:00 p.m.) Peak Periods

**Data Collection Method:** Video Traffic Recorder | Unit E5-09

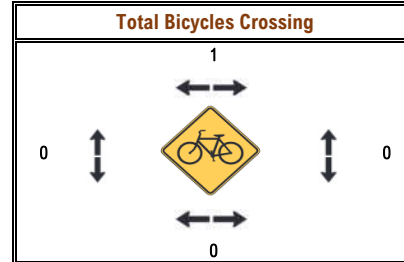
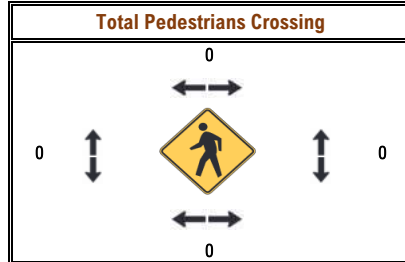
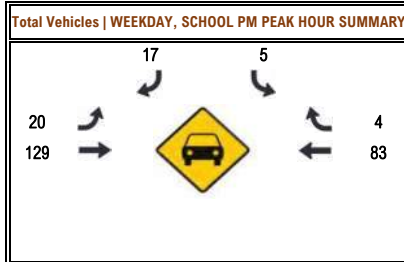
**Setup Location:** Latitude: 47°01'07.46" N | Longitude: 114°13'47.57" W

#### WEEKDAY, SCHOOL PM PEAK PERIOD

SEASONAL/ DAILY ADJ. FACTOR	FRENCHTOWN FRONTAGE ROAD (S-574)							FRENCHTOWN FRONTAGE ROAD (S-574)							South Side of the Frenchtown Frontage Road (S-574)						BELKER LANE						INTERSECTION	HOURLY
	Eastbound (From the West)							Westbound (From the East)							Frenchtown Frontage Road (S-574)						Southbound (From the North)							
	1.017	1.018		1.000	1.000	1.000		1.018	1.024	1.000	1.000	1.000					1.000	1.000				1.021		1.019	1.000	1.000		
START TIME	LEFT	THRU		U-TURN	PEDS	BIKES	VEHICLE TOTALS	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS				PEDS	BIKES	VEHICLE TOTALS	LEFT		RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS	VOLUME
2:00 PM	2	9		0	0	0	11		15	0	0	0	0	15				0	0	0	1		3	0	0	0	4	30
2:15 PM	1	10		0	0	0	11		10	1	0	0	0	11				0	0	0	0		3	0	0	0	3	25
2:30 PM	4	10		0	0	0	14		15	1	0	0	0	16				0	0	0	0		3	0	0	0	3	33
2:45 PM	5	10		0	0	0	15		23	1	0	0	0	24				0	0	0	1		4	0	0	0	5	44
3:00 PM	2	19		0	0	0	21		24	1	0	0	0	25				0	0	0	1		2	0	0	0	3	49
3:15 PM	5	50		0	0	0	55		19	1	0	0	0	20				0	0	0	1		6	0	0	0	7	82
3:30 PM	8	50		0	0	0	58		17	1	0	0	0	18				0	0	0	2		5	0	0	1	7	83
3:45 PM	5	21		0	0	0	26		7	2	0	0	0	9				0	0	0	2		6	0	0	1	8	43
<b>TOTALS</b>	<b>32</b>	<b>179</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>211</b>		<b>130</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>138</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>		<b>32</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>40</b>	<b>389</b>

#### WEEKDAY, SCHOOL PM PEAK HOUR SUMMARY

SEASONAL/ DAILY ADJ. FACTOR	FRENCHTOWN FRONTAGE ROAD (S-574)							FRENCHTOWN FRONTAGE ROAD (S-574)							Frenchtown Frontage Road (S-574)						BELKER LANE						INTERSECTION	
	Eastbound (From the West)							Westbound (From the East)							Frenchtown Frontage Road (S-574)						Southbound (From the North)							
	1.017	1.018		1.000	1.000	1.000		1.018	1.024	1.000	1.000	1.000					1.000	1.000				1.021		1.019	1.000	1.000		1.000
START TIME	LEFT	THRU		U-TURN	PEDS	BIKES	VEHICLE TOTALS	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS				PEDS	BIKES	VEHICLE TOTALS	LEFT		RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS	
2:45 PM	5	10		0	0	0	15		23	1	0	0	0	24				0	0	0	1		4	0	0	0	5	44
3:00 PM	2	19		0	0	0	21		24	1	0	0	0	25				0	0	0	1		2	0	0	0	3	49
3:15 PM	5	50		0	0	0	55		19	1	0	0	0	20				0	0	0	1		6	0	0	0	7	82
3:30 PM	8	50		0	0	0	58		17	1	0	0	0	18				0	0	0	2		5	0	0	1	7	83
<b>TOTALS</b>	<b>20</b>	<b>129</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>149</b>		<b>83</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>87</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>		<b>17</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>22</b>	<b>258</b>
PEAK HOUR FACTOR	0.63	0.65		0.00	0.00	0.00	0.64		0.86	1.00	0.00	0.00	0.00	0.87				0.00	0.00	0.00	0.63		0.71	0.00	0.00	0.25	0.79	0.78
% HEAVY VEHICLES	6.25%	3.91%		0.00%			4.27%		6.15%	0.00%	0.00%		5.80%						0.00%	12.50%		3.13%	0.00%			5.00%	4.88%	
% BUSES & RVs	0.00%	1.68%		0.00%			1.42%		2.31%	0.00%	0.00%		2.17%						0.00%	12.50%		0.00%	0.00%			2.50%	1.80%	





## Intersection Turning Movement Count Summary

### Frenchtown Frontage Road (S-574) & Belker Lane

Frenchtown, Missoula County, Montana

**Date Count Performed:** January 7 & 8, 2026  
(Average of Wednesday & Thursday)

**Count Time Periods:** Weekday, AM (7:00 - 9:00 a.m.) & PM (4:00 - 6:00 p.m.) Peak Periods

**Data Collection Method:** Video Traffic Recorder | Unit E5-09

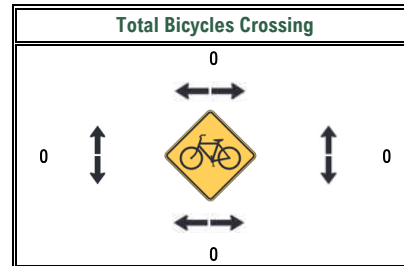
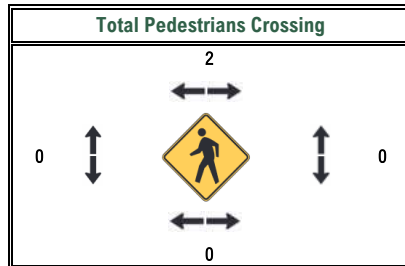
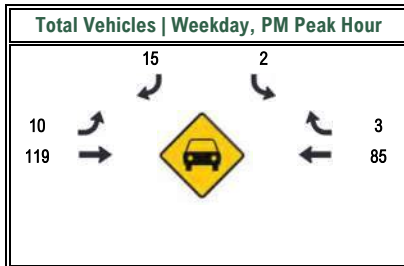
**Setup Location:** Latitude: 47°01'07.46" N | Longitude: 114°13'47.57" W

#### WEEKDAY, PM PEAK PERIOD

SEASONAL/ DAILY ADJ. FACTOR	FRENCHTOWN FRONTAGE ROAD (S-574)							FRENCHTOWN FRONTAGE ROAD (S-574)							BELKER LANE							INTERSECTION	HOURLY					
	Eastbound (From the West)				Westbound (From the East)				Frenchtown Frontage Road (S-574)				Southbound (From the North)															
	1.017	1.017		1.000	1.000	1.000		1.018	1.017	1.000	1.000	1.000					1.000	1.000		1.020				1.017	1.000	1.000	1.000	
START TIME	LEFT	THRU		U-TURN	PEDS	BIKES	VEHICLE TOTALS	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS				PEDS	BIKES	VEHICLE TOTALS	LEFT		RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS	VOLUME
4:00 PM	1	23		0	0	0	24	13	1	0	0	0	14				0	0	0	1	14	6	0	0	0	7	45	
4:15 PM	5	18		0	0	0	23	19	2	0	0	0	21				0	0	0	2	21	6	0	0	0	8	52	
4:30 PM	3	26		0	0	0	29	16	1	0	0	0	17				0	0	0	1	17	5	0	1	0	6	52	
4:45 PM	3	27		0	0	0	30	22	1	0	0	0	23				0	0	0	1	23	6	0	0	0	7	60	209
5:00 PM	2	26		0	0	0	28	20	1	0	0	0	21				0	0	0	1	21	4	0	1	0	5	54	218
5:15 PM	2	31		0	0	0	33	21	1	0	0	0	22				0	0	0	0	22	3	0	0	0	3	58	224
5:30 PM	3	35		0	0	0	38	22	0	0	0	0	22				0	0	0	0	22	2	0	1	0	2	62	234
5:45 PM	2	23		0	0	0	25	16	0	0	0	0	16				0	0	0	0	16	2	0	0	0	2	43	217
<b>TOTALS</b>	<b>21</b>	<b>209</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>230</b>	<b>149</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>156</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>156</b>	<b>34</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>40</b>	<b>426</b>	

#### WEEKDAY, PM PEAK PERIOD

SEASONAL/ DAILY ADJ. FACTOR	FRENCHTOWN FRONTAGE ROAD (S-574)							FRENCHTOWN FRONTAGE ROAD (S-574)							BELKER LANE							INTERSECTION					
	Eastbound (From the West)				Westbound (From the East)				Frenchtown Frontage Road (S-574)				Southbound (From the North)														
	1.017	1.017		1.000	1.000	1.000		1.018	1.017	1.000	1.000	1.000					1.000	1.000		1.020			1.017	1.000	1.000	1.000	
START TIME	LEFT	THRU		U-TURN	PEDS	BIKES	VEHICLE TOTALS	THRU	RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS				PEDS	BIKES	VEHICLE TOTALS	LEFT		RIGHT	U-TURN	PEDS	BIKES	VEHICLE TOTALS	VEHICLE TOTALS
4:45 PM	3	27		0	0	0	30	22	1	0	0	0	23				0	0	0	1	23	6	0	0	0	7	60
5:00 PM	2	26		0	0	0	28	20	1	0	0	0	21				0	0	0	1	21	4	0	1	0	5	54
5:15 PM	2	31		0	0	0	33	21	1	0	0	0	22				0	0	0	0	22	3	0	0	0	3	58
5:30 PM	3	35		0	0	0	38	22	0	0	0	0	22				0	0	0	0	22	2	0	1	0	2	62
<b>TOTALS</b>	<b>10</b>	<b>119</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>129</b>	<b>85</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>88</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>88</b>	<b>15</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>17</b>	<b>234</b>
<b>PEAK HOUR FACTOR</b>	<b>0.83</b>	<b>0.85</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.85</b>	<b>0.97</b>	<b>0.75</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.96</b>				<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.50</b>	<b>0.96</b>	<b>0.63</b>	<b>0.00</b>	<b>0.50</b>	<b>0.00</b>	<b>0.61</b>	<b>0.94</b>
<b>% HEAVY VEHICLES</b>	<b>0.00%</b>	<b>3.35%</b>		<b>0.00%</b>			<b>3.04%</b>	<b>6.71%</b>	<b>14.29%</b>	<b>0.00%</b>			<b>7.05%</b>				<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.50%</b>	<b>7.05%</b>	<b>2.94%</b>	<b>0.00%</b>			<b>2.50%</b>	<b>4.46%</b>
<b>% BUSES &amp; RVs</b>	<b>0.00%</b>	<b>0.00%</b>		<b>0.00%</b>			<b>0.00%</b>	<b>3.36%</b>	<b>0.00%</b>	<b>0.00%</b>			<b>3.21%</b>				<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.50%</b>	<b>3.21%</b>	<b>0.00%</b>	<b>0.00%</b>			<b>0.00%</b>	<b>1.17%</b>







# Appendix C





# Estimated Trip Generation Summary

## Proposed Town Pump Site - Frenchtown, Missoula County, Montana

Land Use	ITE Code	Quantity	Units <sup>2</sup>	Estimated Weekday Trip Ends			Estimated Weekday, AM Peak Hour Trip Ends			Estimated Weekday, School PM Peak Trip Ends			Estimated Weekday, PM Peak Hour Trip Ends		
				Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
<b>Base Scenario   Town Pump Convenience Store / Gas Station with Casino<sup>1</sup> - 21 Vehicle Fueling Positions Per October 2025 Sanbell Study</b>															
Convenience Store / Gas Station	945	21	VFP												
Total Estimated Vehicle Trip Ends				1,545	1,545	3,090	120	116	236	99	99	198	128	128	256
Total Estimated Pass-By Trip Ends				820	820	1,640	92	88	180	74	74	148	96	96	192
<b>Total Estimated Net New Trip Ends</b>				<b>725</b>	<b>725</b>	<b>1,450</b>	<b>28</b>	<b>28</b>	<b>56</b>	<b>25</b>	<b>25</b>	<b>50</b>	<b>32</b>	<b>32</b>	<b>64</b>
<b>Median Size Site Scenario   Town Pump Convenience Store / Gas Station with Casino<sup>1</sup></b>															
Convenience Store / Gas Station	945	28	VFP												
Total Estimated Vehicle Trip Ends				2,060	2,060	4,120	161	154	315	132	132	264	171	170	341
Total Estimated Pass-By Trip Ends				1,095	1,095	2,190	122	118	240	99	99	198	128	128	256
<b>Total Estimated Net New Trip Ends</b>				<b>965</b>	<b>965</b>	<b>1,930</b>	<b>39</b>	<b>36</b>	<b>75</b>	<b>33</b>	<b>33</b>	<b>66</b>	<b>43</b>	<b>42</b>	<b>85</b>
<b>Large Size Site Scenario   Town Pump Convenience Store / Gas Station with Casino<sup>1</sup></b>															
Convenience Store / Gas Station	945	46	VFP												
Total Estimated Vehicle Trip Ends				3,384	3,384	6,768	264	254	518	217	216	433	280	280	560
Total Estimated Pass-By Trip Ends				1,800	1,800	3,600	201	193	394	162	162	324	210	210	420
<b>Total Estimated Net New Trip Ends</b>				<b>1,584</b>	<b>1,584</b>	<b>3,168</b>	<b>63</b>	<b>61</b>	<b>124</b>	<b>55</b>	<b>54</b>	<b>109</b>	<b>70</b>	<b>70</b>	<b>140</b>

<sup>1</sup>The casino use is considered to be ancillary to the convenience store / gas station use for this study based on general observations of similar sites throughout Montana. The Institute of Transportation Engineers (ITE) *Trip Generation Manual, 12th Edition* (August 2025) notes that for Land Use Code: 473 - Casino, "All study sites are isolated from other complementary or competitive development. Most of the casinos in the land use are physically connected to a hotel."

<sup>2</sup>Units: VFP = Vehicle Fueling Positions

ITE Land Use Code 945: Convenience Store / Gas Station   Setting/Location = General Urban/Suburban   Gross Floor Area >10k				
Trip Ends Analysis Case	Estimated Trip Ends Analysis Equation	Directional Distribution		R <sup>2</sup> Value
Estimated Vehicle Trip Ends On a Weekday	$T = 147.13(X)$ <i>T = Estimated Vehicle Trip Ends</i> <i>X = Vehicle Fueling Positions</i>	50% Entering	50% Exiting	N/A Average Rate Utilized
Estimated Vehicle Trip Ends On a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7:00 and 9:00 a.m.	$T = 11.25(X)$ <i>T = Estimated Vehicle Trip Ends</i> <i>X = Vehicle Fueling Positions</i>	51% Entering	49% Exiting	N/A Average Rate Utilized
Estimated Vehicle Trip Ends On a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 2:00 and 4:00 p.m.	$T = 6.4\% [ 147.13(X) ]$ <i>T = Estimated Vehicle Trip Ends</i> <i>X = Vehicle Fueling Positions</i>	50% Entering	50% Exiting	N/A Average Rate Utilized
Estimated Vehicle Trip Ends On a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4:00 and 6:00 p.m.	$T = 12.17(X)$ <i>T = Estimated Vehicle Trip Ends</i> <i>X = Vehicle Fueling Positions</i>	50% Entering	50% Exiting	N/A Average Rate Utilized
Estimated Pass-By Trip Ends On a Weekday	$PB = 75\% [ 147.13(X) ]$ <i>PB = Estimated Pass-By Trip Ends</i> <i>X = Vehicle Fueling Positions</i>	50% Entering	50% Exiting	N/A Average Rate Utilized
Estimated Pass-By Trip Ends On a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7:00 and 9:00 a.m.	$PB = 76\% [ 11.25(X) ]$ <i>PB = Estimated Pass-By Trip Ends</i> <i>X = Vehicle Fueling Positions</i>	51% Entering	49% Exiting	N/A Average Rate Utilized
Estimated Pass-By Trip Ends On a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 2:00 and 4:00 P.m.	$PB = 75\% \{ 6.4\% [ 147.13(X) ] \}$ <i>PB = Estimated Pass-By Trip Ends</i> <i>X = Vehicle Fueling Positions</i>	50% Entering	50% Exiting	N/A Average Rate Utilized
Estimated Pass-By Trip Ends On a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4:00 and 6:00 p.m.	$PB = 75\% [ 12.17(X) ]$ <i>PB = Estimated Pass-By Trip Ends</i> <i>X = Vehicle Fueling Positions</i>	50% Entering	50% Exiting	N/A Average Rate Utilized

Source: Institute of Transportation Engineers - *Trip Generation Manual, 12th Edition* (August 2025).





# Appendix D



# Highway Safety Software Rural Two Lane Intersection Report

## Project Information

Analyst	T. Eastwood	Date	2/11/2026
Jurisdiction	Missoula County	Analysis Year	2026
Project Description	Ducharme Street & Marion Street		

## Input Data

Intersection Type	Four-leg, Minor-Stop (4ST)		
AADT <sub>maj</sub> (veh/day)	1450	AADT <sub>min</sub> (veh/day)	160
Intersection Skew Angle	0	Lighting	No
Approaches with Left-Turn Lanes	0	Approaches with Right-Turn Lanes	0
Calibration Factor	1.00		

## Crash Modification Factors

Intersection Skew - CMF1	1.000	Right Turn Lanes - CMF3	1.000
Left Turn Lanes - CMF2	1.000	Lighting - CMF4	1.000
Combined CMF	1.000		

## Predicted Intersection Crashes

Crash Severity	N <sub>spf,rs</sub> by Severity	Predicted Crash Rate (crashes/year)	Predicted Crash Rate (crashes/million entering veh)
Fatal and Injury (FI)	0.144	0.144	0.245
Property Damage Only (PDO)	0.190	0.190	0.323
Total	0.334	0.334	0.568

## Expected Roadway Section Crashes

Crash Severity	Average Observed Crashes (crashes/year)	Weight	Expected Crash Rate (crashes/year)	Expected Crash Rate (crashes/million entering veh)
Fatal and Injury (FI)	-	-	0.140	0.238
Property Damage Only (PDO)	-	-	0.184	0.314
Total	0.200	0.926	0.324	0.551

# Highway Safety Software Rural Two Lane Intersection Report

## Project Information

Analyst	T. Eastwood	Date	2/11/2026
Jurisdiction	MDT / Missoula County	Analysis Year	2026
Project Description	Beckwith Street (S-263) & Ducharme Street		

## Input Data

Intersection Type	Four-leg, Minor-Stop (4ST)		
AADT <sub>maj</sub> (veh/day)	4000	AADT <sub>min</sub> (veh/day)	1530
Intersection Skew Angle	0	Lighting	No
Approaches with Left-Turn Lanes	0	Approaches with Right-Turn Lanes	0
Calibration Factor	1.00		

## Crash Modification Factors

Intersection Skew - CMF1	1.000	Right Turn Lanes - CMF3	1.000
Left Turn Lanes - CMF2	1.000	Lighting - CMF4	1.000
Combined CMF	1.000		

## Predicted Intersection Crashes

Crash Severity	N <sub>spf,rs</sub> by Severity	Predicted Crash Rate (crashes/year)	Predicted Crash Rate (crashes/million entering veh)
Fatal and Injury (FI)	1.049	1.049	0.520
Property Damage Only (PDO)	1.385	1.385	0.686
Total	2.434	2.434	1.206

## Expected Roadway Section Crashes

Crash Severity	Average Observed Crashes (crashes/year)	Weight	Expected Crash Rate (crashes/year)	Expected Crash Rate (crashes/million entering veh)
Fatal and Injury (FI)	-	-	0.662	0.328
Property Damage Only (PDO)	-	-	0.874	0.433
Total	0.000	0.631	1.536	0.761

# Highway Safety Software Rural Two Lane Intersection Report

## Project Information

Analyst	T. Eastwood	Date	2/11/2026
Jurisdiction	MDT / Missoula County	Analysis Year	2026
Project Description	Beckwith Street (S-263) & Demer Street (S-263)		

## Input Data

Intersection Type	Four-leg, Minor-Stop (4ST)		
AADT <sub>maj</sub> (veh/day)	5120	AADT <sub>min</sub> (veh/day)	5580
Intersection Skew Angle	0	Lighting	No
Approaches with Left-Turn Lanes	0	Approaches with Right-Turn Lanes	0
Calibration Factor	1.00		

## Crash Modification Factors

Intersection Skew - CMF1	1.000	Right Turn Lanes - CMF3	1.000
Left Turn Lanes - CMF2	1.000	Lighting - CMF4	1.000
Combined CMF	1.000		

## Predicted Intersection Crashes

Crash Severity	N <sub>spf,rs</sub> by Severity	Predicted Crash Rate (crashes/year)	Predicted Crash Rate (crashes/million entering veh)
Fatal and Injury (FI)	2.679	2.679	0.686
Property Damage Only (PDO)	3.536	3.536	0.905
Total	6.215	6.215	1.591

## Expected Roadway Section Crashes

Crash Severity	Average Observed Crashes (crashes/year)	Weight	Expected Crash Rate (crashes/year)	Expected Crash Rate (crashes/million entering veh)
Fatal and Injury (FI)	-	-	1.436	0.368
Property Damage Only (PDO)	-	-	1.895	0.485
Total	1.400	0.401	3.331	0.853

# Highway Safety Software Ramp Terminal Report

## Project Information

Analyst	T. Eastwood	Date	2/11/2026
Jurisdiction	MDT / Missoula County	Analysis Year	2026
Project Description	Demer Street (S-263) & I-90 Eastbound Ramps		

## Input Data

Type of Control at Crossroad Terminal	One-Way Stop-Controlled		
Ramp Terminal Configuration	D4	Presence of Non-ramp Public Street Leg	No
Distance to Next Outside Public Intersection (mi)	0.094	Distance to Adjacent Ramp Terminal (mi)	0.110
# Driveways (Outside Crossroad Leg)	0	# Public Street Approaches (Outside Crossroad Leg)	0
Crossroad Median Width (ft)	0	Exit Ramp Skew Angle	79.9
	Inside Approach	Outside Approach	Exit Ramp Approach
Number of Lanes	1	1	1
Left Turn Lane/Bay	No	No	-
Right Turn Lane/Bay	No	No	-
AADT (veh/day)	5385	5855	2490
AADT of Entrance Ramp Approach (veh/day)	780	-	-

## Crash Modification Factors

	Combined CMF		Calibration Factor	
	Fatal and Injury	Property Damage Only	Fatal and Injury	Property Damage Only
Total	1.004	1.000	1.00	1.00

## Predicted Intersection Crashes

Crash Severity	N <sub>spf,int</sub> by Severity	Predicted Crash Rate (crashes/year)	Predicted Crash Rate (crashes/million entering veh)
Fatal and Injury (FI)	0.454	0.456	0.625
Property Damage Only (PDO)	0.664	0.664	0.910
Total	-	1.120	1.534

## Expected Roadway Section Crashes

Crash Severity	Average Observed Crashes (crashes/year)	Weight	Expected Crash Rate (crashes/year)	Expected Crash Rate (crashes/million entering veh)
Fatal and Injury (FI)	0.000	0.531	0.242	0.332
Property Damage Only (PDO)	0.200	0.563	0.461	0.632
Total	0.200	-	0.703	0.963

# Highway Safety Software Ramp Terminal Report

## Project Information

Analyst	T. Eastwood	Date	2/11/2026
Jurisdiction	MDT / Missoula County	Analysis Year	2026
Project Description	Demer Street & I-90 Westbound Ramps		

## Input Data

Type of Control at Crossroad Terminal	One-Way Stop-Controlled		
Ramp Terminal Configuration	D4	Presence of Non-ramp Public Street Leg	No
Distance to Next Outside Public Intersection (mi)	0.036	Distance to Adjacent Ramp Terminal (mi)	0.110
# Driveways (Outside Crossroad Leg)	0	# Public Street Approaches (Outside Crossroad Leg)	1
Crossroad Median Width (ft)	0	Exit Ramp Skew Angle	85.2
	Inside Approach	Outside Approach	Exit Ramp Approach
Number of Lanes	1	1	1
Left Turn Lane/Bay	No	No	-
Right Turn Lane/Bay	No	No	-
AADT (veh/day)	5385	4845	800
AADT of Entrance Ramp Approach (veh/day)	2410	-	-

## Crash Modification Factors

	Combined CMF		Calibration Factor	
	Fatal and Injury	Property Damage Only	Fatal and Injury	Property Damage Only
Total	0.765	1.000	1.00	1.00

## Predicted Intersection Crashes

Crash Severity	Nspf,int by Severity	Predicted Crash Rate (crashes/year)	Predicted Crash Rate (crashes/million entering veh)
Fatal and Injury (FI)	0.411	0.314	0.430
Property Damage Only (PDO)	0.608	0.608	0.833
Total	-	0.922	1.263

## Expected Roadway Section Crashes

Crash Severity	Average Observed Crashes (crashes/year)	Weight	Expected Crash Rate (crashes/year)	Expected Crash Rate (crashes/million entering veh)
Fatal and Injury (FI)	0.200	0.622	0.271	0.371
Property Damage Only (PDO)	1.200	0.584	0.854	1.170
Total	1.400	-	1.125	1.541

# Highway Safety Software Rural Two Lane Intersection Report

## Project Information

Analyst	T. Eastwood	Date	2/11/2026
Jurisdiction	MDT / Missoula County	Analysis Year	2026
Project Description	Frenchtown Frontage Road (S-574) & Demer Street		

## Input Data

Intersection Type	Three-leg, Minor-Stop (3ST)		
AADT <sub>maj</sub> (veh/day)	3060	AADT <sub>min</sub> (veh/day)	4480
Intersection Skew Angle	87	Lighting	No
Approaches with Left-Turn Lanes	0	Approaches with Right-Turn Lanes	0
Calibration Factor	1.00		

## Crash Modification Factors

Intersection Skew - CMF1	1.416	Right Turn Lanes - CMF3	1.000
Left Turn Lanes - CMF2	1.000	Lighting - CMF4	1.000
Combined CMF	1.416		

## Predicted Intersection Crashes

Crash Severity	N <sub>spf,rs</sub> by Severity	Predicted Crash Rate (crashes/year)	Predicted Crash Rate (crashes/million entering veh)
Fatal and Injury (FI)	0.756	1.071	0.389
Property Damage Only (PDO)	1.067	1.510	0.549
Total	1.823	2.581	0.938

## Expected Roadway Section Crashes

Crash Severity	Average Observed Crashes (crashes/year)	Weight	Expected Crash Rate (crashes/year)	Expected Crash Rate (crashes/million entering veh)
Fatal and Injury (FI)	-	-	0.786	0.286
Property Damage Only (PDO)	-	-	1.108	0.403
Total	1.400	0.418	1.894	0.688

# Highway Safety Software Rural Two Lane Intersection Report

## Project Information

Analyst	T. Eastwood	Date	2/11/2026
Jurisdiction	MDT / Missoula County	Analysis Year	2026
Project Description	Frenchtown Frontage Road (S-574) & Belker Lane		

## Input Data

Intersection Type	Three-leg, Minor-Stop (3ST)		
AADT <sub>maj</sub> (veh/day)	2430	AADT <sub>min</sub> (veh/day)	430
Intersection Skew Angle	73	Lighting	No
Approaches with Left-Turn Lanes	0	Approaches with Right-Turn Lanes	0
Calibration Factor	1.00		

## Crash Modification Factors

Intersection Skew - CMF1	1.339	Right Turn Lanes - CMF3	1.000
Left Turn Lanes - CMF2	1.000	Lighting - CMF4	1.000
Combined CMF	1.339		

## Predicted Intersection Crashes

Crash Severity	N <sub>spf,rs</sub> by Severity	Predicted Crash Rate (crashes/year)	Predicted Crash Rate (crashes/million entering veh)
Fatal and Injury (FI)	0.200	0.268	0.257
Property Damage Only (PDO)	0.282	0.377	0.362
Total	0.482	0.645	0.618

## Expected Roadway Section Crashes

Crash Severity	Average Observed Crashes (crashes/year)	Weight	Expected Crash Rate (crashes/year)	Expected Crash Rate (crashes/million entering veh)
Fatal and Injury (FI)	-	-	0.199	0.190
Property Damage Only (PDO)	-	-	0.280	0.268
Total	0.000	0.742	0.479	0.459

# Highway Safety Software Rural Two Lane Intersection Report

## Project Information

Analyst	T. Eastwood	Date	2/11/2026
Jurisdiction	MDT / Missoula County	Analysis Year	2026
Project Description	Beckwith Street (S-263) & Demer Street (S-263)		

## Input Data

Intersection Type	Roundabout (R)			
Total Entering AADT, veh/day	6335	Number of Legs	4 Leg	
Max. Number of Circulating Lanes	1	Inscribed Circle Diameter, ICD (ft)	120	
	Leg 1	Leg 2	Leg 3	Leg 4
Number of Entering Lanes	1	1	1	1
Number of Circulating Lanes	1	1	1	1
Number of Exiting Lanes	1	1	1	1
Outbound Leg associated with a Ramp Terminal	No	No	No	No
Presence of Right-Turn Bypass Lane	No	No	No	No
Number of Driveways/Access Points	0	0	0	0
Entry Width (ft)	25	20	14	20
Circulating Width (ft)	24	26	25	25
Posted Speed (mi/h)	25	30	30	30
Number of Luminaires	0	0	0	0
Entering AADT, veh/day	655	2775	145	2760
Exiting AADT, veh/day	665	2345	505	2820
Circulating AADT, veh/day	2520	470	2670	425
Approach AADT, veh/day	1320	5120	650	5580

## Crash Modification Factors

CMFICD (Inscribed Circle Diameter, FI)	1.000			
CMFoutbd (Outbound-Only Leg, FI)	1.000			
	Leg 1	Leg 2	Leg 3	Leg 4
CMFbypass (Right-Turn Bypass Lane, FI)	1.000	1.000	1.000	1.000
CMFap (Access Point Frequency, FI)	1.000	1.000	1.000	1.000
CMFap (Access Point Frequency, PDO)	1.000	1.000	1.000	1.000
CMFew (Entry Width, FI)	0.861	1.000	1.197	1.000
CMFew (Entry Width, PDO)	0.823	1.000	1.264	1.000
CMFcl (Circulating Lane, FI)	1.000	1.000	1.000	1.000
CMFcl (Circulating Lane, PDO)	0.823	1.000	1.264	1.000
Weighted CMF (FI)	0.089	0.438	0.027	0.436
Weighted CMF (PDO)	0.085	0.438	0.029	0.436

## Predicted Roadway Section Crashes

Crash Severity	Safety Performance Function	Predicted Crash Rate (crashes/year)	Predicted Crash Rate (crashes/ million entering veh)
Fatal and Injury (FI)	0.200	0.198	0.086
Property Damage Only (PDO)	0.989	0.977	0.422
<b>Total</b>	<b>1.189</b>	<b>1.175</b>	<b>0.508</b>





# Appendix E





# Traffic Growth Rate Analyses

## Study Area

		MDT Count Location 091410X				
		Ducharme Street South of Beckwith Street				
		Year	Reported AADT	1-Year AAGR	3-Year AAGR	5-Year AAGR
Average Annual Daily Traffic (AADT) & Traffic Growth Projections	2015	1,155	-	-	-	-
	2016	1,150	-0.43%	-	-	-
	2017	1,157	0.61%	-	-	-
	2018	1,680	45.20%	13.30%	-	-
	2019	1,707	1.61%	14.07%	-	-
	2020	1,731	1.41%	14.37%	8.43%	-
	2021	2,031	17.33%	6.53%	12.05%	-
	2022	1,966	-3.20%	4.82%	11.19%	-
	2023	2,003	1.88%	4.99%	3.58%	-
	2024	2,055	2.60%	0.39%	3.78%	-
<b>AVERAGES =</b>		<b>1,664</b>	<b>7.44%</b>	<b>8.35%</b>	<b>7.80%</b>	<b>-</b>

AADT = Average Annual Daily Traffic

AAGR = Average Annual Growth Rate

AADT data obtained from the Montana Department of Transportation (MDT)



# Traffic Growth Rate Analyses

## Study Area

Average Annual Daily Traffic (AADT) & Traffic Growth Projections	MDT Count Location 091412L					
	Beckwith Street   Railroad Crossing North of Mullan Road					
	Year	Reported AADT	1-Year AAGR	3-Year AAGR	5-Year AAGR	10-Year AAGR
	2015	616	-	-	-	-
	2016	614	-0.32%	-	-	-
	2017	618	0.65%	-	-	-
	2018	878	42.07%	12.54%	-	-
	2019	892	1.59%	13.26%	-	-
	2020	904	1.35%	13.52%	7.97%	-
	2021	630	-30.31%	-10.47%	0.52%	-
2022	610	-3.17%	-11.90%	-0.26%	-	
2023	622	1.97%	-11.72%	-6.66%	-	
2024	714	0.01%	4.26%	-4.35%	-	
AVERAGES =		710	1.54%	1.35%	-0.56%	-

AADT = Average Annual Daily Traffic

AAGR = Average Annual Growth Rate

AADT data obtained from the Montana Department of Transportation (MDT)



# Traffic Growth Rate Analyses

## Study Area

MDT Count Location 32-3-001						
Interstate 90   One Mile West of Frenchtown Interchange						
Year	Reported AADT	1-Year AAGR	3-Year AAGR	5-Year AAGR	10-Year AAGR	
2005	9,760	-	-	-	-	
2006	9,970	2.15%	-	-	-	
2007	9,820	-1.50%	-	-	-	
2008	7,870	-19.86%	-6.92%	-	-	
2009	8,780	11.56%	-4.15%	-	-	
2010	7,910	-9.91%	-6.96%	-4.12%	-	
2011	8,690	9.86%	3.36%	-2.71%	-	
2012	8,160	-6.10%	-2.41%	-3.64%	-	
2013	8,590	5.27%	2.79%	1.77%	-	
2014	8,930	3.96%	0.91%	0.34%	-	
2015	9,110	2.02%	3.74%	2.87%	-0.69%	
2016	9,116	0.07%	2.00%	0.96%	-0.89%	
2017	9,235	1.31%	1.13%	2.51%	-0.61%	
2018	10,582	14.59%	5.12%	4.26%	3.01%	
2019	10,614	0.30%	5.20%	3.52%	1.92%	
2020	9,138	-13.91%	-0.35%	0.06%	1.45%	
2021	11,169	22.23%	1.82%	4.15%	2.54%	
2022	10,856	-2.80%	0.75%	3.29%	2.90%	
2023	10,997	1.30%	6.37%	0.77%	2.50%	
2024	10,904	-0.85%	-0.80%	0.54%	2.02%	
<b>AVERAGES =</b>		<b>9,510</b>	<b>1.04%</b>	<b>0.68%</b>	<b>0.97%</b>	<b>1.41%</b>

Average Annual Daily Traffic (AADT) & Traffic Growth Projections

AADT = Average Annual Daily Traffic

AAGR = Average Annual Growth Rate

AADT data obtained from the Montana Department of Transportation (MDT)



# Traffic Growth Rate Analyses

## Study Area

MDT Count Location 32-3-002					
Interstate 90   3.5 Miles Northwest of Desmet Interchange					
Year	Reported AADT	1-Year AAGR	3-Year AAGR	5-Year AAGR	10-Year AAGR
2005	12,250	-	-	-	-
2006	11,320	-7.59%	-	-	-
2007	11,110	-1.86%	-	-	-
2008	9,120	-17.91%	-9.37%	-	-
2009	10,600	16.23%	-2.17%	-	-
2010	9,720	-8.30%	-4.36%	-4.52%	-
2011	9,040	-7.00%	-0.29%	-4.40%	-
2012	8,910	-1.44%	-5.62%	-4.32%	-
2013	9,290	4.26%	-1.50%	0.37%	-
2014	10,970	18.08%	6.66%	0.69%	-
2015	9,220	-15.95%	1.15%	-1.05%	-2.80%
2016	10,604	15.01%	4.51%	3.24%	-0.65%
2017	11,522	8.66%	1.65%	5.28%	0.36%
2018	12,252	6.34%	9.94%	5.69%	3.00%
2019	12,289	0.30%	5.04%	2.30%	1.49%
2020	9,985	-18.75%	-4.66%	1.61%	0.27%
2021	12,334	23.53%	0.22%	3.07%	3.16%
2022	11,989	-2.80%	-0.82%	0.80%	3.01%
2023	12,145	1.30%	6.75%	-0.18%	2.72%
2024	12,084	-0.50%	-0.68%	-0.34%	0.97%
2025	12,830	6.17%	2.29%	5.14%	3.36%
<b>AVERAGES =</b>	<b>10,933</b>	<b>0.89%</b>	<b>0.49%</b>	<b>0.84%</b>	<b>1.35%</b>

AADT = Average Annual Daily Traffic

AAGR = Average Annual Growth Rate

AADT data obtained from the Montana Department of Transportation (MDT)



# Traffic Growth Rate Analyses

## Study Area

MDT Count Location 32-3-017					
Mullan Road (S-263)   Railroad Crossing South of Beckwith Street					
Year	Reported AADT	1-Year AAGR	3-Year AAGR	5-Year AAGR	10-Year AAGR
2005	1,970	-	-	-	-
2006	1,870	-5.08%	-	-	-
2007	1,700	-9.09%	-	-	-
2008	1,620	-4.71%	-6.31%	-	-
2009	1,590	-1.85%	-5.26%	-	-
2010	1,880	18.24%	3.41%	-0.93%	-
2011	1,570	-16.49%	-1.04%	-3.44%	-
2012	1,550	-1.27%	-0.85%	-1.83%	-
2013	1,800	16.13%	-1.44%	2.13%	-
2014	1,740	-3.33%	3.49%	1.82%	-
2015	1,480	-14.94%	-1.53%	-4.67%	-2.82%
2016	1,202	-18.78%	-12.59%	-5.20%	-4.32%
2017	1,961	63.14%	4.07%	4.82%	1.44%
2018	1,634	-16.68%	3.35%	-1.92%	0.09%
2019	1,660	1.59%	11.36%	-0.94%	0.43%
2020	1,683	1.39%	-4.97%	2.60%	-1.10%
2021	2,067	22.82%	8.15%	11.45%	2.79%
2022	2,001	-3.19%	6.43%	0.40%	2.59%
2023	2,039	1.90%	6.61%	4.53%	1.25%
2024	2,040	0.05%	-0.44%	4.21%	1.60%
2025	1,620	-20.59%	-6.80%	-0.76%	0.91%
<b>AVERAGES =</b>	<b>1,747</b>	<b>0.46%</b>	<b>0.31%</b>	<b>0.77%</b>	<b>0.26%</b>

Average Annual Daily Traffic (AADT) & Traffic Growth Projections

AADT = Average Annual Daily Traffic

AAGR = Average Annual Growth Rate

AADT data obtained from the Montana Department of Transportation (MDT)



# Traffic Growth Rate Analyses

## Study Area

MDT Count Location 32-3-018					
Demer Street (S-263)   Between Beckwith Street / Mullan Road & I-90 Eastbound Ramps					
Year	Reported AADT	1-Year AAGR	3-Year AAGR	5-Year AAGR	10-Year AAGR
2005	4,410	-	-	-	-
2006	4,400	-0.23%	-	-	-
2007	4,340	-1.36%	-	-	-
2008	4,130	-4.84%	-2.16%	-	-
2009	4,050	-1.94%	-2.73%	-	-
2010	4,580	13.09%	1.81%	0.76%	-
2011	3,750	-18.12%	-3.17%	-3.15%	-
2012	3,690	-1.60%	-3.06%	-3.19%	-
2013	4,250	15.18%	-2.46%	0.57%	-
2014	4,260	0.24%	4.34%	1.02%	-
2015	3,610	-15.26%	-0.73%	-4.65%	-1.98%
2016	2,915	-19.25%	-11.81%	-4.91%	-4.03%
2017	3,791	30.05%	-3.81%	0.54%	-1.34%
2018	3,149	-16.93%	-4.45%	-5.82%	-2.68%
2019	3,199	1.59%	3.15%	-5.57%	-2.33%
2020	3,244	1.41%	-5.06%	-2.12%	-3.39%
2021	3,585	10.51%	4.42%	4.22%	-0.45%
2022	5,576	55.54%	20.35%	8.02%	4.21%
2023	5,682	1.90%	20.54%	12.53%	2.95%
2024	5,408	-4.82%	14.69%	11.07%	2.41%
2025	3,956	-26.85%	-10.81%	4.05%	0.92%
<b>AVERAGES =</b>					
	<b>4,094</b>	<b>0.91%</b>	<b>1.06%</b>	<b>0.84%</b>	<b>-0.52%</b>

Average Annual Daily Traffic (AADT) & Traffic Growth Projections

AADT = Average Annual Daily Traffic

AAGR = Average Annual Growth Rate

AADT data obtained from the Montana Department of Transportation (MDT)



# Traffic Growth Rate Analyses

## Study Area

MDT Count Location 32-3-026						
Frenchtown Frontage Road (S-574)   West of Demer Street						
Year	Reported AADT	1-Year AAGR	3-Year AAGR	5-Year AAGR	10-Year AAGR	
2005	3,080	-	-	-	-	
2006	3,080	0.00%	-	-	-	
2007	3,130	1.62%	-	-	-	
2008	2,980	-4.79%	-1.09%	-	-	
2009	3,270	9.73%	2.02%	-	-	
2010	3,260	-0.31%	1.37%	1.14%	-	
2011	2,310	-29.14%	-8.14%	-5.59%	-	
2012	2,280	-1.30%	-11.33%	-6.14%	-	
2013	2,840	24.56%	-4.49%	-0.96%	-	
2014	3,020	6.34%	9.34%	-1.58%	-	
2015	2,240	-25.83%	-0.59%	-7.23%	-3.13%	
2016	1,808	-19.29%	-13.97%	-4.78%	-5.19%	
2017	3,021	67.09%	0.01%	5.79%	-0.35%	
2018	2,988	-1.09%	10.08%	1.02%	0.03%	
2019	1,901	-36.38%	1.69%	-8.84%	-5.28%	
2020	1,928	1.42%	-13.90%	-2.96%	-5.12%	
2021	2,130	10.48%	-10.67%	3.33%	-0.81%	
2022	4,023	88.87%	28.39%	5.90%	5.84%	
2023	3,921	-2.54%	26.70%	5.59%	3.28%	
2024	4,023	2.60%	23.61%	16.18%	2.91%	
2025	4,563	13.42%	4.29%	18.80%	7.37%	
<b>AVERAGES =</b>		<b>2,943</b>	<b>5.27%</b>	<b>2.41%</b>	<b>1.23%</b>	<b>-0.04%</b>

AADT = Average Annual Daily Traffic

AAGR = Average Annual Growth Rate

AADT data obtained from the Montana Department of Transportation (MDT)



# Traffic Growth Rate Analyses

## Study Area

MDT Count Location 32-3-027						
Frenchtown Frontage Road (S-574)   East of Demer Street						
Year	Reported AADT	1-Year AAGR	3-Year AAGR	5-Year AAGR	10-Year AAGR	
2005	1,190	-	-	-	-	
2006	1,190	0.00%	-	-	-	
2007	1,210	1.68%	-	-	-	
2008	1,150	-4.96%	-1.13%	-	-	
2009	1,510	31.30%	8.26%	-	-	
2010	1,510	0.00%	7.66%	4.88%	-	
2011	900	-40.40%	-7.85%	-5.43%	-	
2012	890	-1.11%	-16.16%	-5.96%	-	
2013	1,210	35.96%	-7.12%	1.02%	-	
2014	1,240	2.48%	11.27%	-3.86%	-	
2015	1,010	-18.55%	4.31%	-7.73%	-1.63%	
2016	809	-19.90%	-12.56%	-2.11%	-3.79%	
2017	1,239	53.15%	-0.03%	6.84%	0.24%	
2018	1,225	-1.13%	6.64%	0.25%	0.63%	
2019	1,035	-15.51%	8.56%	-3.55%	-3.71%	
2020	1,049	1.35%	-5.40%	0.76%	-3.58%	
2021	1,159	10.49%	-1.83%	7.46%	2.56%	
2022	1,881	62.30%	22.03%	8.71%	7.77%	
2023	2,159	14.78%	27.20%	12.00%	5.96%	
2024	2,215	2.59%	24.10%	16.44%	5.97%	
2025	2,219	0.18%	5.66%	16.17%	8.19%	
<b>AVERAGES =</b>		<b>1,333</b>	<b>5.74%</b>	<b>4.09%</b>	<b>2.87%</b>	<b>1.69%</b>

AADT = Average Annual Daily Traffic

AAGR = Average Annual Growth Rate

AADT data obtained from the Montana Department of Transportation (MDT)



# Traffic Growth Rate Analyses

## Study Area

Average Annual Daily Traffic (AADT) & Traffic Growth Projections	MDT Count Location 32-3-048					
	I-90 Eastbound Off-Ramp   Frenchtown Interchange (R090E0890FA)					
	Year	Reported AADT	1-Year AAGR	3-Year AAGR	5-Year AAGR	10-Year AAGR
	2015	420	-	-	-	-
	2016	418	-0.48%	-	-	-
	2017	421	0.72%	-	-	-
	2018	713	69.36%	19.29%	-	-
	2019	724	1.54%	20.09%	-	-
	2020	734	1.38%	20.36%	11.81%	-
	2021	811	10.49%	4.39%	14.17%	-
2022	785	-3.21%	2.73%	13.27%	-	
2023	674	-14.14%	-2.80%	-1.12%	-	
2024	692	2.67%	-5.15%	-0.90%	-	
AVERAGES =		639	7.59%	8.42%	7.45%	-

AADT = Average Annual Daily Traffic

AAGR = Average Annual Growth Rate

AADT data obtained from the Montana Department of Transportation (MDT)



# Traffic Growth Rate Analyses

## Study Area

Average Annual Daily Traffic (AADT) & Traffic Growth Projections	MDT Count Location 32-3-049					
	I-90 Westbound On-Ramp   Frenchtown Interchange (R090W0890NA)					
	Year	Reported AADT	1-Year AAGR	3-Year AAGR	5-Year AAGR	10-Year AAGR
	2015	409	-	-	-	-
	2016	407	-0.49%	-	-	-
	2017	409	0.49%	-	-	-
	2018	583	42.54%	12.54%	-	-
	2019	592	1.54%	13.30%	-	-
	2020	600	1.35%	13.63%	7.97%	-
	2021	663	10.50%	4.38%	10.25%	-
2022	642	-3.17%	2.74%	9.44%	-	
2023	642	0.00%	2.28%	1.95%	-	
2024	659	2.65%	-0.20%	2.17%	-	
<b>AVERAGES =</b>		561	6.16%	6.95%	6.35%	-

AADT = Average Annual Daily Traffic

AAGR = Average Annual Growth Rate

AADT data obtained from the Montana Department of Transportation (MDT)



# Traffic Growth Rate Analyses

## Study Area

Average Annual Daily Traffic (AADT) & Traffic Growth Projections	MDT Count Location 32-3-050					
	I-90 Eastbound On-Ramp   Frenchtown Interchange (R090E0890NA)					
	Year	Reported AADT	1-Year AAGR	3-Year AAGR	5-Year AAGR	10-Year AAGR
	2015	1,046	-	-	-	-
	2016	1,042	-0.38%	-	-	-
	2017	1,048	0.58%	-	-	-
	2018	1,036	-1.15%	-0.32%	-	-
	2019	1,053	1.64%	0.35%	-	-
	2020	1,265	20.13%	6.47%	3.88%	-
	2021	1,398	10.51%	10.51%	6.05%	-
2022	1,353	-3.22%	8.72%	5.24%	-	
2023	1,795	32.67%	12.37%	11.62%	-	
2024	1,842	2.62%	9.63%	11.83%	-	
<b>AVERAGES =</b>		1,288	7.04%	6.82%	7.72%	-

AADT = Average Annual Daily Traffic

AAGR = Average Annual Growth Rate

AADT data obtained from the Montana Department of Transportation (MDT)



# Traffic Growth Rate Analyses

## Study Area

Average Annual Daily Traffic (AADT) & Traffic Growth Projections	MDT Count Location 32-3-051					
	I-90 Westbound Off-Ramp   Frenchtown Interchange (R090W0890FA)					
	Year	Reported AADT	1-Year AAGR	3-Year AAGR	5-Year AAGR	10-Year AAGR
	2015	990	-	-	-	-
	2016	986	-0.40%	-	-	-
	2017	992	0.61%	-	-	-
	2018	1,152	16.13%	5.18%	-	-
	2019	1,170	1.56%	5.87%	-	-
	2020	1,186	1.37%	6.13%	3.68%	-
	2021	1,311	10.54%	4.40%	5.86%	-
2022	1,269	-3.20%	2.74%	5.05%	-	
2023	2,011	58.47%	19.25%	11.79%	-	
2024	2,063	2.59%	16.31%	12.01%	-	
<b>AVERAGES =</b>		<b>1,313</b>	<b>9.74%</b>	<b>8.56%</b>	<b>7.68%</b>	<b>-</b>

AADT = Average Annual Daily Traffic

AAGR = Average Annual Growth Rate

AADT data obtained from the Montana Department of Transportation (MDT)



# Appendix F



# Appendix F

F-1

## IN THIS SECTION:

*Intersection Operations  
Summaries*





**Traffic Operations Summary**  
Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

Intersection:

Duscharme Street &  
Marion Street

**WEEKDAY, AM PEAK HOUR**

Analysis Scenario	Analysis Data	MARION STREET				PRIVATE DRIVEWAY				DUSCHARME STREET				DUSCHARME STREET				Minor Approach Totals	Intersection Totals
		From the West (Eastbound)				From the East (Westbound)				From the South (Northbound)				From the North (Southbound)					
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
2026 EXISTING CONDITIONS	Traffic Control	Stop Controlled				Stop Controlled				Uncontrolled				Uncontrolled					
	Minor or Major Approach?	Minor				Minor				Major				Major					
	Entry Volume, V (veh/hr)	0	3	0	1	0	0	0	1	0	1	166	0	0	0	149	4		
	Peak Hour Factor (PHF)	0.56				0.56				0.56				0.56					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	5	0	2	0	0	0	2	0	2	296	0	0	0	266	7		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				0				0	0
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	7				2				298				273				5	580
	Capacity, c (veh/hr)	530				847				1,302				1,276				1,377	3,955
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.01				0.00				0.23				0.21				0.00	0.15
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.0				0.0				0.0					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				0.0				0.0				0.0					
	Available Queue Storage, S <sub>Q</sub> (ft)	130				20				100				60					
	Average Control Delay (sec/veh)	11.9				9.3				0.1				0.0				11.9	0.2
	Level of Service, LOS	B				A				A				A				B	A
Approach Delay (sec/veh)	11.9				9.3				0.1				0.0						
Approach Level of Service, LOS	B				A				A				A						
ESTIMATED 2028 BACKGROUND TRAFFIC	Traffic Control	Stop Controlled				Stop Controlled				Uncontrolled				Uncontrolled					
	Minor or Major Approach?	Minor				Minor				Major				Major					
	Entry Volume, V (veh/hr)	0	3	0	1	0	0	0	1	0	1	171	0	0	0	153	4		
	Peak Hour Factor (PHF)	0.56				0.56				0.56				0.56					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	5	0	2	0	0	0	2	0	2	305	0	0	0	273	7		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				0				0	0
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	7				2				307				280				5	596
	Capacity, c (veh/hr)	516				836				1,294				1,267				1,352	3,913
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.01				0.00				0.24				0.22				0.00	0.15
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.0				0.0				0.0					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				0.0				0.0				0.0					
	Available Queue Storage, S <sub>Q</sub> (ft)	130				20				100				60					
	Average Control Delay (sec/veh)	12.1				9.3				0.1				0.0				12.1	0.2
	Level of Service, LOS	B				A				A				A				B	A
Approach Delay (sec/veh)	12.1				9.3				0.1				0.0						
Approach Level of Service, LOS	B				A				A				A						
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Stop Controlled				Stop Controlled				Uncontrolled				Uncontrolled					
	Minor or Major Approach?	Minor				Minor				Major				Major					
	Entry Volume, V (veh/hr)	0	3	0	1	0	0	0	1	0	1	173	0	0	0	155	4		
	Peak Hour Factor (PHF)	0.56				0.56				0.56				0.56					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	5	0	2	0	0	0	2	0	2	309	0	0	0	277	7		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				0				0	0
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	7				2				311				284				5	604
	Capacity, c (veh/hr)	510				831				1,290				1,263				1,341	3,894
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.01				0.00				0.24				0.22				0.00	0.16
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.0				0.0				0.0					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				0.0				0.0				0.0					
	Available Queue Storage, S <sub>Q</sub> (ft)	130				20				100				60					
	Average Control Delay (sec/veh)	12.2				9.3				0.1				0.0				12.2	0.2
	Level of Service, LOS	B				A				A				A				B	A
Approach Delay (sec/veh)	12.2				9.3				0.1				0.0						
Approach Level of Service, LOS	B				A				A				A						

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LTR = Left-Through-Right

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.



**Traffic Operations Summary**  
Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

Intersection:

Duscharme Street & Marion Street

WEEKDAY, SCHOOL PM PEAK HOUR																			
Analysis Scenario	Analysis Data	MARION STREET				PRIVATE DRIVEWAY				DUSCHARME STREET				Minor Approach Totals	Intersection Totals				
		From the West (Eastbound)				From the East (Westbound)				From the South (Northbound)						From the North (Southbound)			
		U	L	T	R	U	L	T	R	U	L	T	R			U	L	T	R
2026 EXISTING CONDITIONS	Traffic Control	Stop Controlled				Stop Controlled				Uncontrolled				Uncontrolled					
	Minor or Major Approach?	Minor				Minor				Major				Major					
	Entry Volume, V (veh/hr)	0	3	0	0	0	0	0	1	0	1	110	0	0	1	50	2		
	Peak Hour Factor (PHF)	0.58				0.58				0.58				0.58					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	5	0	0	0	0	0	2	0	2	190	0	0	2	86	3		
	Ped + Bike Volume, PBV (ped+bike/hr)	4				1				0				0				5	5
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	5				2				191				91				7	290
	Capacity, c (veh/hr)	796				908				1,508				1,394				1,704	4,606
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.01				0.00				0.13				0.07				0.00	0.06
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.0				0.0				0.0					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				0.0				0.0				0.0					
	Available Queue Storage, S <sub>Q</sub> (ft)	130				20				100				60					
	Average Control Delay (sec/veh)	9.6				9.0				0.1				0.2				9.5	0.4
	Level of Service, LOS	A				A				A				A				A	A
	Approach Delay (sec/veh)	9.6				9.0				0.1				0.2				A	A
Approach Level of Service, LOS	A				A				A				A						
ESTIMATED 2028 BACKGROUND TRAFFIC	Traffic Control	Stop Controlled				Stop Controlled				Uncontrolled				Uncontrolled					
	Minor or Major Approach?	Minor				Minor				Major				Major					
	Entry Volume, V (veh/hr)	0	3	0	0	0	0	0	1	0	1	112	0	0	1	50	2		
	Peak Hour Factor (PHF)	0.58				0.58				0.58				0.58					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	5	0	0	0	0	0	2	0	2	193	0	0	2	86	3		
	Ped + Bike Volume, PBV (ped+bike/hr)	4				1				0				0				5	5
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	5				2				195				91				7	293
	Capacity, c (veh/hr)	791				908				1,508				1,390				1,699	4,597
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.01				0.00				0.13				0.07				0.00	0.06
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.0				0.0				0.0					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				0.0				0.0				0.0					
	Available Queue Storage, S <sub>Q</sub> (ft)	130				20				100				60					
	Average Control Delay (sec/veh)	9.6				9.0				0.1				0.2				9.5	0.4
	Level of Service, LOS	A				A				A				A				A	A
	Approach Delay (sec/veh)	9.6				9.0				0.1				0.2				A	A
Approach Level of Service, LOS	A				A				A				A						
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Stop Controlled				Stop Controlled				Uncontrolled				Uncontrolled					
	Minor or Major Approach?	Minor				Minor				Major				Major					
	Entry Volume, V (veh/hr)	0	3	0	0	0	0	0	1	0	1	114	0	0	1	52	2		
	Peak Hour Factor (PHF)	0.59				0.59				0.59				0.59					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	5	0	0	0	0	0	2	0	2	193	0	0	2	88	3		
	Ped + Bike Volume, PBV (ped+bike/hr)	4				1				0				0				5	5
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	5				2				195				93				7	295
	Capacity, c (veh/hr)	788				908				1,505				1,390				1,696	4,591
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.01				0.00				0.13				0.07				0.00	0.06
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.0				0.0				0.0					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				0.0				0.0				0.0					
	Available Queue Storage, S <sub>Q</sub> (ft)	130				20				100				60					
	Average Control Delay (sec/veh)	9.6				9.0				0.1				0.1				9.5	0.3
	Level of Service, LOS	A				A				A				A				A	A
	Approach Delay (sec/veh)	9.6				9.0				0.1				0.1				A	A
Approach Level of Service, LOS	A				A				A				A						

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LTR = Left-Through-Right

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.



**Traffic Operations Summary**  
Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

Intersection:

Duscharme Street & Marion Street

WEEKDAY, PM PEAK HOUR																			
Analysis Scenario	Analysis Data	MARION STREET				PRIVATE DRIVEWAY				DUSCHARME STREET				Minor Approach Totals	Intersection Totals				
		From the West (Eastbound)				From the East (Westbound)				From the South (Northbound)						From the North (Southbound)			
		U	L	T	R	U	L	T	R	U	L	T	R			U	L	T	R
2026 EXISTING CONDITIONS	Traffic Control	Stop Controlled				Stop Controlled				Uncontrolled				Uncontrolled					
	Minor or Major Approach?	Minor				Minor				Major				Major					
	Entry Volume, V (veh/hr)	0	6	0	0	0	0	0	0	0	0	55	0	1	0	65	5		
	Peak Hour Factor (PHF)	0.83				0.83				0.83				0.83					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	7	0	0	0	0	0	0	0	0	66	0	1	0	78	6		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				0				0	0
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	7				0				66				86				7	159
	Capacity, c (veh/hr)	820				0				1,525				1,548				820	3,893
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.01				0.00				0.04				0.06				0.01	0.04
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.0				0.0				0.0					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				0.0				0.0				0.0					
	Available Queue Storage, S <sub>Q</sub> (ft)	130				20				100				60					
	Average Control Delay (sec/veh)	9.4				0.0				0.0				0.1				9.4	0.5
	Level of Service, LOS	A				A				A				A				A	A
	Approach Delay (sec/veh)	9.4				0.0				0.0				0.1				A	A
Approach Level of Service, LOS	A				A				A				A						
ESTIMATED 2028 BACKGROUND TRAFFIC	Traffic Control	Stop Controlled				Stop Controlled				Uncontrolled				Uncontrolled					
	Minor or Major Approach?	Minor				Minor				Major				Major					
	Entry Volume, V (veh/hr)	0	6	0	0	0	0	0	0	0	0	55	0	1	0	66	5		
	Peak Hour Factor (PHF)	0.83				0.83				0.83				0.83					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	7	0	0	0	0	0	0	0	0	66	0	1	0	80	6		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				0				0	0
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	7				0				66				87				7	160
	Capacity, c (veh/hr)	820				0				1,524				1,548				820	3,892
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.01				0.00				0.04				0.06				0.01	0.04
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.0				0.0				0.0					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				0.0				0.0				0.0					
	Available Queue Storage, S <sub>Q</sub> (ft)	130				20				100				60					
	Average Control Delay (sec/veh)	9.4				0.0				0.0				0.1				9.4	0.5
	Level of Service, LOS	A				A				A				A				A	A
	Approach Delay (sec/veh)	9.4				0.0				0.0				0.1				A	A
Approach Level of Service, LOS	A				A				A				A						
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Stop Controlled				Stop Controlled				Uncontrolled				Uncontrolled					
	Minor or Major Approach?	Minor				Minor				Major				Major					
	Entry Volume, V (veh/hr)	0	6	0	0	0	0	0	0	0	0	57	0	1	0	68	5		
	Peak Hour Factor (PHF)	0.83				0.83				0.83				0.83					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	7	0	0	0	0	0	0	0	0	69	0	1	0	82	6		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				0				0	0
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	7				0				69				89				7	165
	Capacity, c (veh/hr)	820				0				1,521				1,545				820	3,886
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.01				0.00				0.05				0.06				0.01	0.04
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.0				0.0				0.0					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				0.0				0.0				0.0					
	Available Queue Storage, S <sub>Q</sub> (ft)	130				20				100				60					
	Average Control Delay (sec/veh)	9.4				0.0				0.0				0.1				9.4	0.5
	Level of Service, LOS	A				A				A				A				A	A
	Approach Delay (sec/veh)	9.4				0.0				0.0				0.1				A	A
Approach Level of Service, LOS	A				A				A				A						

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LTR = Left-Through-Right

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.



**Traffic Operations Summary**  
Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

Intersection:

Beckwith Street (S-263) &  
Duscharme Street

**WEEKDAY, AM PEAK HOUR**

Analysis Scenario	Analysis Data	BECKWITH STREET (S-263) From the West (Eastbound)				BECKWITH STREET (S-263) From the East (Westbound)				DUSCHARME STREET From the South (Northbound)				PRIVATE DRIVEWAY From the North (Southbound)				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
		2026 EXISTING CONDITIONS	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled			
Minor or Major Approach?	Major				Major				Minor				Minor						
Entry Volume, V (veh/hr)	0		8	152	133	0	18	152	7	0	139	5	26	0	2	2	5		
Peak Hour Factor (PHF)	0.62				0.62				0.62				0.62						
Adjusted Volume, V <sub>A</sub> (veh/hr)	0		13	245	215	0	29	245	11	0	224	8	42	0	3	3	8		
Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				0				0	0	
Lane Group	LTR				LTR				LTR				LTR						
Lane Group Volume, V <sub>LG</sub> (veh/hr)	473				285				274				15				289	1,047	
Capacity, c (veh/hr)	1,320				1,112				392				467				859	3,291	
Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.36				0.26				0.70				0.03				0.34	0.32	
HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.1				5.2				0.1						
HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				2.5				133.4				2.5						
Available Queue Storage, S <sub>Q</sub> (ft)	130				160				100				70						
Average Control Delay (sec/veh)	0.3				1.1				32.9				13.0				31.9	9.2	
Level of Service, LOS	A				A				D				B				D	A	
Approach Delay (sec/veh)	0.3				1.1				32.9				13.0						
Approach Level of Service, LOS	A				A				D				B						
ESTIMATED 2028 BACKGROUND TRAFFIC	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	8	153	137	0	18	153	7	0	144	5	26	0	2	2	5		
	Peak Hour Factor (PHF)	0.62				0.62				0.62				0.62					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	13	247	221	0	29	247	11	0	232	8	42	0	3	3	8		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				0				0	0
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	481				287				282				15				297	1,065
	Capacity, c (veh/hr)	1,318				1,104				386				463				849	3,271
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.36				0.26				0.73				0.03				0.35	0.33
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.1				5.7				0.1					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				2.5				146.3				2.5					
	Available Queue Storage, S <sub>Q</sub> (ft)	130				160				100				70					
	Average Control Delay (sec/veh)	0.3				1.1				35.8				13.0				34.7	10.1
	Level of Service, LOS	A				A				E				B				D	B
Approach Delay (sec/veh)	0.3				1.1				35.8				13.0						
Approach Level of Service, LOS	A				A				E				B						
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	8	156	139	0	18	156	7	0	146	5	26	0	2	2	5		
	Peak Hour Factor (PHF)	0.62				0.62				0.62				0.62					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	13	252	224	0	29	252	11	0	235	8	42	0	3	3	8		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				0				0	0
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	489				292				285				15				300	1,081
	Capacity, c (veh/hr)	1,313				1,097				379				456				835	3,245
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.37				0.27				0.75				0.03				0.36	0.33
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.1				6.0				0.1					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				2.5				154.0				2.5					
	Available Queue Storage, S <sub>Q</sub> (ft)	130				160				100				70					
	Average Control Delay (sec/veh)	0.3				1.1				38.4				13.2				37.2	10.8
	Level of Service, LOS	A				A				E				B				E	B
Approach Delay (sec/veh)	0.3				1.1				38.4				13.2						
Approach Level of Service, LOS	A				A				E				B						

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LTR = Left-Through-Right

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.



**Traffic Operations Summary**  
 Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

Intersection:

Beckwith Street (S-263) &  
 Duscharme Street

WEEKDAY, SCHOOL PM PEAK HOUR																			
Analysis Scenario	Analysis Data	BECKWITH STREET (S-263) From the West (Eastbound)				BECKWITH STREET (S-263) From the East (Westbound)				DUSCHARME STREET From the South (Northbound)				PRIVATE DRIVEWAY From the North (Southbound)				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
2026 EXISTING CONDITIONS	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	5	153	37	0	15	211	5	0	81	2	31	0	6	1	2		
	Peak Hour Factor (PHF)	0.75				0.75				0.75				0.75					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	7	204	49	0	20	281	7	0	108	3	41	0	8	1	3		
	Ped + Bike Volume, PBV (ped+bike/hr)	2				1				0				0				0	3
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	260				308				152				12				164	732
	Capacity, c (veh/hr)	1,286				1,324				542				438				980	3,590
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.20				0.23				0.28				0.03				0.17	0.20
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.0				1.1				0.1					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				0.0				30.5				2.5					
	Available Queue Storage, S <sub>q</sub> (ft)	130				160				100				70					
	Average Control Delay (sec/veh)	0.2				0.6				14.2				13.4				14.1	3.5
	Level of Service, LOS	A				A				B				B					
Approach Delay (sec/veh)	0.2				0.6				14.2				13.4				B	A	
Approach Level of Service, LOS	A				A				B				B						
ESTIMATED 2028 BACKGROUND TRAFFIC	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	5	155	37	0	15	213	5	0	83	2	31	0	6	1	2		
	Peak Hour Factor (PHF)	0.75				0.75				0.75				0.75					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	7	207	49	0	20	284	7	0	111	3	41	0	8	1	3		
	Ped + Bike Volume, PBV (ped+bike/hr)	2				1				0				0				0	3
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	263				311				155				12				167	740
	Capacity, c (veh/hr)	1,283				1,321				535				435				970	3,574
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.20				0.24				0.29				0.03				0.17	0.21
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.0				1.2				0.1					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				0.0				33.2				2.5					
	Available Queue Storage, S <sub>q</sub> (ft)	130				160				100				70					
	Average Control Delay (sec/veh)	0.2				0.6				14.4				13.5				14.3	3.6
	Level of Service, LOS	A				A				B				B					
Approach Delay (sec/veh)	0.2				0.6				14.4				13.5				B	A	
Approach Level of Service, LOS	A				A				B				B						
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	5	158	39	0	15	216	5	0	85	2	31	0	6	1	2		
	Peak Hour Factor (PHF)	0.75				0.75				0.75				0.75					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	7	211	52	0	20	288	7	0	113	3	41	0	8	1	3		
	Ped + Bike Volume, PBV (ped+bike/hr)	2				1				0				0				0	3
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	269				315				157				12				169	753
	Capacity, c (veh/hr)	1,278				1,313				526				429				955	3,546
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.21				0.24				0.30				0.03				0.18	0.21
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.0				1.2				0.1					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				0.0				33.1				2.5					
	Available Queue Storage, S <sub>q</sub> (ft)	130				160				100				70					
	Average Control Delay (sec/veh)	0.2				0.6				14.7				13.6				14.6	3.6
	Level of Service, LOS	A				A				B				B					
Approach Delay (sec/veh)	0.2				0.6				14.7				13.6				B	A	
Approach Level of Service, LOS	A				A				B				B						

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LTR = Left-Through-Right

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.



**Traffic Operations Summary**  
Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

Intersection:

Beckwith Street (S-263) &  
Duscharme Street

WEEKDAY, PM PEAK HOUR																			
Analysis Scenario	Analysis Data	BECKWITH STREET (S-263) From the West (Eastbound)				BECKWITH STREET (S-263) From the East (Westbound)				DUSCHARME STREET From the South (Northbound)				PRIVATE DRIVEWAY From the North (Southbound)				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
2026 EXISTING CONDITIONS	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	1	3	139	53	0	18	148	3	0	43	1	18	0	1	0	3		
	Peak Hour Factor (PHF)	0.94				0.94				0.94				0.94					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	1	3	148	56	0	19	157	3	0	46	1	19	0	1	0	3		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				4				4	4
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	209				180				66				4				70	459
	Capacity, c (veh/hr)	1,281				1,344				756				764				1,520	4,145
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.16				0.13				0.09				0.01				0.05	0.11
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.0				0.3				0.0					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				0.0				7.9				0.0					
	Available Queue Storage, S <sub>Q</sub> (ft)	130				160				100				70					
	Average Control Delay (sec/veh)	0.2				0.9				10.2				9.7				10.2	2.0
	Level of Service, LOS	A				A				B				A					
Approach Delay (sec/veh)	0.2				0.9				10.2				9.7				B	A	
Approach Level of Service, LOS	A				A				B				A						
ESTIMATED 2028 BACKGROUND TRAFFIC	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	1	3	140	54	0	18	149	3	0	43	1	18	0	1	0	3		
	Peak Hour Factor (PHF)	0.94				0.94				0.94				0.94					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	1	3	149	57	0	19	159	3	0	46	1	19	0	1	0	3		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				4				4	4
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	211				181				66				4				70	462
	Capacity, c (veh/hr)	1,279				1,341				753				762				1,515	4,135
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.16				0.13				0.09				0.01				0.05	0.11
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.0				0.3				0.0					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				0.0				7.9				0.0					
	Available Queue Storage, S <sub>Q</sub> (ft)	130				160				100				70					
	Average Control Delay (sec/veh)	0.2				0.9				10.2				9.8				10.2	2.0
	Level of Service, LOS	A				A				B				A					
Approach Delay (sec/veh)	0.2				0.9				10.2				9.8				B	A	
Approach Level of Service, LOS	A				A				B				A						
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	1	3	144	56	0	18	153	3	0	45	1	18	0	1	0	3		
	Peak Hour Factor (PHF)	0.94				0.94				0.94				0.94					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	1	3	153	60	0	19	163	3	0	48	1	19	0	1	0	3		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				4				4	4
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	217				185				68				4				72	474
	Capacity, c (veh/hr)	1,275				1,334				735				755				1,490	4,099
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.17				0.14				0.09				0.01				0.05	0.12
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.0				0.3				0.0					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				0.0				7.9				0.0					
	Available Queue Storage, S <sub>Q</sub> (ft)	130				160				100				70					
	Average Control Delay (sec/veh)	0.2				0.9				10.4				9.8				10.4	2.0
	Level of Service, LOS	A				A				B				A					
Approach Delay (sec/veh)	0.2				0.9				10.4				9.8				B	A	
Approach Level of Service, LOS	A				A				B				A						

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LTR = Left-Through-Right

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.



**Traffic Operations Summary**  
Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

Intersection:

Beckwith Street (S-263) &  
Demer Street (S-263)

**WEEKDAY, AM PEAK HOUR**

Analysis Scenario	Analysis Data	BECKWITH STREET From the West (Eastbound)				BECKWITH STREET (S-263) From the East (Westbound)				PRIVATE DRIVEWAY From the South (Northbound)				DEMER STREET (S-263) From the North (Southbound)				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
		Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
2026 EXISTING CONDITIONS	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	48	30	4	0	8	18	340	0	1	10	2	0	309	32	20		
	Peak Hour Factor (PHF)	0.70				0.70				0.70				0.70					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	69	43	6	0	11	26	486	0	1	14	3	0	441	46	29		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				0				0	0
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	117				523				19				516				534	1,174
	Capacity, c (veh/hr)	1,044				1,571				324				466				790	3,405
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.11				0.33				0.06				1.11				0.68	0.34
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.2				0.0				0.2				17.4					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	5.0				0.0				5.9				455.6					
	Available Queue Storage, S <sub>Q</sub> (ft)	175				120				60				400					
	Average Control Delay (sec/veh)	5.3				0.2				16.8				103.6				100.6	46.4
	Level of Service, LOS	A				A				C				F					
Approach Delay (sec/veh)	5.3				0.2				16.8				103.6				F	E	
Approach Level of Service, LOS	A				A				C				F						
ESTIMATED 2028 BACKGROUND TRAFFIC	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	49	31	4	0	8	18	367	0	1	10	2	0	341	32	21		
	Peak Hour Factor (PHF)	0.70				0.70				0.70				0.70					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	70	44	6	0	11	26	524	0	1	14	3	0	487	46	30		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				0				0	0
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	120				561				19				563				581	1,263
	Capacity, c (veh/hr)	1,010				1,570				304				445				749	3,329
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.12				0.36				0.06				1.26				0.78	0.38
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.2				0.0				0.2				23.6					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	5.0				0.0				5.9				618.0					
	Available Queue Storage, S <sub>Q</sub> (ft)	175				120				60				400					
	Average Control Delay (sec/veh)	5.4				0.2				17.6				162.5				157.9	73.3
	Level of Service, LOS	A				A				C				F					
Approach Delay (sec/veh)	5.4				0.2				17.6				162.5				F	F	
Approach Level of Service, LOS	A				A				C				F						
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	51	31	4	0	8	18	372	0	1	10	2	0	346	32	23		
	Peak Hour Factor (PHF)	0.70				0.70				0.70				0.70					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	73	44	6	0	11	26	531	0	1	14	3	0	494	46	33		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				0				0	0
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	123				569				19				573				591	1,283
	Capacity, c (veh/hr)	1,004				1,570				298				439				737	3,311
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.12				0.36				0.06				1.30				0.80	0.39
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.2				0.0				0.2				25.2					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	5.0				0.0				5.9				659.7					
	Available Queue Storage, S <sub>Q</sub> (ft)	175				120				60				400					
	Average Control Delay (sec/veh)	5.5				0.2				17.9				179.2				174.1	80.9
	Level of Service, LOS	A				A				C				F					
Approach Delay (sec/veh)	5.5				0.2				17.9				179.2				F	F	
Approach Level of Service, LOS	A				A				C				F						

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LTR = Left-Through-Right

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.



**Traffic Operations Summary**  
 Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

Intersection:

Beckwith Street (S-263) &  
 Demer Street (S-263)

**WEEKDAY, SCHOOL PM PEAK HOUR**

Analysis Scenario	Analysis Data	BECKWITH STREET From the West (Eastbound)				BECKWITH STREET (S-263) From the East (Westbound)				PRIVATE DRIVEWAY From the South (Northbound)				DEMER STREET (S-263) From the North (Southbound)				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
		Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
2026 EXISTING CONDITIONS	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	42	23	6	0	11	27	317	0	4	7	3	0	178	31	29		
	Peak Hour Factor (PHF)	0.81				0.81				0.81				0.81					
	Adjusted Volume, V <sub>a</sub> (veh/hr)	0	52	28	7	0	14	33	391	0	5	9	4	0	220	38	36		
	Ped + Bike Volume, PBV (ped+bike/hr)	1				0				1				0				1	2
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	88				438				17				294				311	837
	Capacity, c (veh/hr)	1,145				1,528				453				592				1,045	3,718
	Volume-to-Capacity Ratio, V <sub>a</sub> /c	0.08				0.29				0.04				0.50				0.30	0.23
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.1				0.0				0.1				2.8					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	2.5				0.0				2.5				72.5					
	Available Queue Storage, S <sub>q</sub> (ft)	175				120				60				400					
	Average Control Delay (sec/veh)	5.1				0.3				13.3				16.9				16.7	6.9
	Level of Service, LOS	A				A				B				C					
Approach Delay (sec/veh)	5.1				0.3				13.3				16.9				C	A	
Approach Level of Service, LOS	A				A				B				C						
ESTIMATED 2028 BACKGROUND TRAFFIC	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	43	24	6	0	11	28	334	0	4	7	3	0	200	31	30		
	Peak Hour Factor (PHF)	0.81				0.81				0.81				0.81					
	Adjusted Volume, V <sub>a</sub> (veh/hr)	0	53	30	7	0	14	35	412	0	5	9	4	0	247	38	37		
	Ped + Bike Volume, PBV (ped+bike/hr)	1				0				1				0				1	2
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	90				460				17				322				340	890
	Capacity, c (veh/hr)	1,124				1,527				438				573				1,011	3,662
	Volume-to-Capacity Ratio, V <sub>a</sub> /c	0.08				0.30				0.04				0.56				0.34	0.24
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.1				0.0				0.1				3.5					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	2.5				0.0				2.5				90.7					
	Available Queue Storage, S <sub>q</sub> (ft)	175				120				60				400					
	Average Control Delay (sec/veh)	5.1				0.3				13.6				19.0				18.7	7.8
	Level of Service, LOS	A				A				B				C					
Approach Delay (sec/veh)	5.1				0.3				13.6				19.0				C	A	
Approach Level of Service, LOS	A				A				B				C						
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	43	24	6	0	11	28	339	0	4	7	3	0	205	31	30		
	Peak Hour Factor (PHF)	0.81				0.81				0.81				0.81					
	Adjusted Volume, V <sub>a</sub> (veh/hr)	0	53	30	7	0	14	35	419	0	5	9	4	0	253	38	37		
	Ped + Bike Volume, PBV (ped+bike/hr)	1				0				1				0				1	2
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	90				467				17				328				346	902
	Capacity, c (veh/hr)	1,118				1,527				434				569				1,003	3,648
	Volume-to-Capacity Ratio, V <sub>a</sub> /c	0.08				0.31				0.04				0.58				0.34	0.25
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.1				0.0				0.1				3.7					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	2.5				0.0				2.5				95.9					
	Available Queue Storage, S <sub>q</sub> (ft)	175				120				60				400					
	Average Control Delay (sec/veh)	5.1				0.3				13.6				19.6				19.3	8.1
	Level of Service, LOS	A				A				B				C					
Approach Delay (sec/veh)	5.1				0.3				13.6				19.6				C	A	
Approach Level of Service, LOS	A				A				B				C						

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LTR = Left-Through-Right

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.



**Traffic Operations Summary**  
Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

Intersection:

Beckwith Street (S-263) &  
Demer Street (S-263)

WEEKDAY, PM PEAK HOUR																			
Analysis Scenario	Analysis Data	BECKWITH STREET From the West (Eastbound)				BECKWITH STREET (S-263) From the East (Westbound)				PRIVATE DRIVEWAY From the South (Northbound)				DEMER STREET (S-263) From the North (Southbound)				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
		2026 EXISTING CONDITIONS	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled			
Minor or Major Approach?	Major				Major				Minor				Minor						
Entry Volume, V (veh/hr)	0		36	14	5	0	11	25	233	0	5	10	4	0	184	37	46		
Peak Hour Factor (PHF)	0.90				0.90				0.90				0.90						
Adjusted Volume, V <sub>a</sub> (veh/hr)	0		40	16	6	0	12	28	259	0	6	11	4	0	204	41	51		
Ped + Bike Volume, PBV (ped+bike/hr)	0				1				0				0				0	1	
Lane Group	LTR				LTR				LTR				LTR						
Lane Group Volume, V <sub>LG</sub> (veh/hr)	61				299				21				297				318	678	
Capacity, c (veh/hr)	1,270				1,608				551				747				1,298	4,176	
Volume-to-Capacity Ratio, V <sub>a</sub> /c	0.05				0.19				0.04				0.40				0.24	0.16	
HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.1				0.0				0.1				1.9						
HCM 95% Queue Length, Q <sub>95</sub> (ft)	2.5				0.0				2.6				48.6						
Available Queue Storage, S <sub>q</sub> (ft)	175				120				60				400						
Average Control Delay (sec/veh)	5.3				0.4				11.8				13.0				12.9	6.7	
Level of Service, LOS	A				A				B				B						
Approach Delay (sec/veh)	5.3				0.4				11.8				13.0				B	A	
Approach Level of Service, LOS	A				A				B				B						
ESTIMATED 2028 BACKGROUND TRAFFIC	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	36	15	5	0	11	26	238	0	5	10	4	0	216	37	46		
	Peak Hour Factor (PHF)	0.90				0.90				0.90				0.90					
	Adjusted Volume, V <sub>a</sub> (veh/hr)	0	40	17	6	0	12	29	264	0	6	11	4	0	240	41	51		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				1				0				0				0	1
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	62				306				21				332				353	721
	Capacity, c (veh/hr)	1,263				1,606				546				727				1,273	4,142
	Volume-to-Capacity Ratio, V <sub>a</sub> /c	0.05				0.19				0.04				0.46				0.28	0.17
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.1				0.0				0.1				2.4					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	2.5				0.0				2.6				61.4					
	Available Queue Storage, S <sub>q</sub> (ft)	175				120				60				400					
	Average Control Delay (sec/veh)	5.2				0.4				11.9				14.0				13.9	7.4
	Level of Service, LOS	A				A				B				B					
Approach Delay (sec/veh)	5.2				0.4				11.9				14.0				B	A	
Approach Level of Service, LOS	A				A				B				B						
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	37	15	5	0	11	26	244	0	5	10	4	0	222	37	47		
	Peak Hour Factor (PHF)	0.90				0.90				0.90				0.90					
	Adjusted Volume, V <sub>a</sub> (veh/hr)	0	41	17	6	0	12	29	271	0	6	11	4	0	247	41	52		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				1				0				0				0	1
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	63				312				21				340				361	737
	Capacity, c (veh/hr)	1,255				1,606				539				720				1,259	4,120
	Volume-to-Capacity Ratio, V <sub>a</sub> /c	0.05				0.19				0.04				0.47				0.29	0.18
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.1				0.0				0.1				2.5					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	2.5				0.0				2.6				63.9					
	Available Queue Storage, S <sub>q</sub> (ft)	175				120				60				400					
	Average Control Delay (sec/veh)	5.3				0.4				12.0				14.4				14.3	7.6
	Level of Service, LOS	A				A				B				B					
Approach Delay (sec/veh)	5.3				0.4				12.0				14.4				B	A	
Approach Level of Service, LOS	A				A				B				B						

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LTR = Left-Through-Right

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.



**Traffic Operations Summary**  
Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

**Intersection:** Demer Street (S-263) & Interstate 90 (I-90) Eastbound (EB) Ramps

**WEEKDAY, AM PEAK HOUR**

Analysis Scenario	Analysis Data	I-90 EB OFF-RAMP				I-90 EB ON-RAMP				DEMER STREET (S-263)				Minor Approach Totals	Intersection Totals				
		From the West (Eastbound)				From the East (Westbound)				From the South (Northbound)						From the North (Southbound)			
		U	L	T	R	U	L	T	R	U	L	T	R			U	L	T	R
2026 EXISTING CONDITIONS	Traffic Control	Stop Controlled				Uncontrolled				Uncontrolled				Uncontrolled					
	Minor or Major Approach?	Minor				Minor				Major				Major					
	Entry Volume, V (veh/hr)	17	0	96					0		200	198	0	207	265				
	Peak Hour Factor (PHF)	0.73				0.73				0.73									
	Adjusted Volume, V <sub>A</sub> (veh/hr)	23	0	132					0		274	271	0	284	363				
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				0	0				
	Lane Group	LTR								TR				LT					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	155								545				647				23	1,347
	Capacity, c (veh/hr)	376								1,651				1,008				376	3,035
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.41								0.33				0.64				0.06	0.44
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	2.0								0.0				1.2					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	51.0								0.0				30.2					
	Available Queue Storage, S <sub>Q</sub> (ft)	1,185								400				500					
	Average Control Delay (sec/veh)	21.1								2.5				6.3				21.1	6.5
	Level of Service, LOS	C								A				A				C	A
Approach Delay (sec/veh)	21.1								2.5				6.3						
Approach Level of Service, LOS	C								A				A						
ESTIMATED 2028 BACKGROUND TRAFFIC	Traffic Control	Stop Controlled				Uncontrolled				Uncontrolled				Uncontrolled					
	Minor or Major Approach?	Minor				Minor				Major				Major					
	Entry Volume, V (veh/hr)	20	0	112					0		205	226	0	237	287				
	Peak Hour Factor (PHF)	0.73				0.73				0.73									
	Adjusted Volume, V <sub>A</sub> (veh/hr)	27	0	153					0		281	310	0	325	393				
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				0	0				
	Lane Group	LTR								TR				LT					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	181								590				718				27	1,489
	Capacity, c (veh/hr)	259								1,643				963				259	2,865
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.70								0.36				0.75				0.11	0.52
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	4.7								0.0				1.5					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	119.9								0.0				37.8					
	Available Queue Storage, S <sub>Q</sub> (ft)	1,185								400				500					
	Average Control Delay (sec/veh)	45.7								2.6				7.3				45.7	10.1
	Level of Service, LOS	E								A				A				E	B
Approach Delay (sec/veh)	45.7								2.6				7.3						
Approach Level of Service, LOS	E								A				A						
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Stop Controlled				Uncontrolled				Uncontrolled				Uncontrolled					
	Minor or Major Approach?	Minor				Minor				Major				Major					
	Entry Volume, V (veh/hr)	64	0	112					0		221	217	0	288	294				
	Peak Hour Factor (PHF)	0.73				0.73				0.73									
	Adjusted Volume, V <sub>A</sub> (veh/hr)	88	0	153					0		303	297	0	395	403				
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				0	0				
	Lane Group	LTR								TR				LT					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	241								600				797				88	1,638
	Capacity, c (veh/hr)	66								1,651				954				66	2,671
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	3.65								0.36				0.84				1.33	0.61
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	25.4								0.0				2.1					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	652.5								52.9				659.7					
	Available Queue Storage, S <sub>Q</sub> (ft)	1,185								400				500					
	Average Control Delay (sec/veh)	1323.9								2.5				8.7				1323.9	200.0
	Level of Service, LOS	F								A				A				F	F
Approach Delay (sec/veh)	1323.9								2.5				8.7						
Approach Level of Service, LOS	F								A				A						

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LTR = Left-Through-Right; TR = Through-Right; and LT = Left-Through

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.



**Traffic Operations Summary**  
Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

**Intersection:** Demer Street (S-263) & Interstate 90 (I-90) Eastbound (EB) Ramps

WEEKDAY, SCHOOL PM PEAK HOUR																	
Analysis Scenario	Analysis Data	I-90 EB OFF-RAMP				I-90 EB ON-RAMP				DEMER STREET (S-263)			DEMER STREET (S-263)			Minor Approach Totals	Intersection Totals
		From the West (Eastbound)				From the East (Westbound)				From the South (Northbound)			From the North (Southbound)				
		U	L	T	R	U	L	T	R	U	L	T	R	U	L		
2026 EXISTING CONDITIONS	Traffic Control	Stop Controlled				Uncontrolled				Uncontrolled			Uncontrolled				
	Minor or Major Approach?	Minor				Minor				Major			Major				
	Entry Volume, V (veh/hr)	11	0	38					0	252	114	0	108	200			
	Peak Hour Factor (PHF)	0.80								0.80			0.80				
	Adjusted Volume, V <sub>A</sub> (veh/hr)	14	0	48					0	315	143	0	135	250			
	Ped + Bike Volume, PBV (ped+bike/hr)	1				0				0			0			1	1
	Lane Group	LTR								TR			LT				
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	61								458			385			61	904
	Capacity, c (veh/hr)	665								1,707			1,088			665	3,460
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.09								0.27			0.35			0.09	0.26
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.3								0.0			0.4				
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	7.6								0.0			10.4				
	Available Queue Storage, S <sub>Q</sub> (ft)	1,185								400			500				
	Average Control Delay (sec/veh)	11.0								1.6			3.9			11.0	3.2
	Level of Service, LOS	B								A			A				
Approach Delay (sec/veh)	11.0								1.6			3.9			B	A	
Approach Level of Service, LOS	B								A			A					
ESTIMATED 2028 BACKGROUND TRAFFIC	Traffic Control	Stop Controlled				Uncontrolled				Uncontrolled			Uncontrolled				
	Minor or Major Approach?	Minor				Minor				Major			Major				
	Entry Volume, V (veh/hr)	13	0	44					0	259	130	0	124	222			
	Peak Hour Factor (PHF)	0.80								0.80			0.80				
	Adjusted Volume, V <sub>A</sub> (veh/hr)	16	0	55					0	324	163	0	155	278			
	Ped + Bike Volume, PBV (ped+bike/hr)	1				0				0			0			1	1
	Lane Group	LTR								TR			LT				
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	71								486			433			71	990
	Capacity, c (veh/hr)	585								1,700			1,061			585	3,346
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.12								0.29			0.41			0.12	0.30
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.4								0.0			0.5				
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	10.2								0.0			13.0				
	Available Queue Storage, S <sub>Q</sub> (ft)	1,185								400			500				
	Average Control Delay (sec/veh)	12.0								1.7			4.2			12.0	3.5
	Level of Service, LOS	B								A			A				
Approach Delay (sec/veh)	12.0								1.7			4.2			B	A	
Approach Level of Service, LOS	B								A			A					
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Stop Controlled				Uncontrolled				Uncontrolled			Uncontrolled				
	Minor or Major Approach?	Minor				Minor				Major			Major				
	Entry Volume, V (veh/hr)	47	0	44					0	270	124	0	164	227			
	Peak Hour Factor (PHF)	0.80								0.80			0.80				
	Adjusted Volume, V <sub>A</sub> (veh/hr)	59	0	55					0	338	155	0	205	284			
	Ped + Bike Volume, PBV (ped+bike/hr)	1				0				0			0			1	1
	Lane Group	LTR								TR			LT				
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	114								493			489			114	1,095
	Capacity, c (veh/hr)	244								1,706			1,056			244	3,006
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.47								0.29			0.46			0.47	0.36
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	2.3								0.0			0.7				
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	58.4								0.0			18.2				
	Available Queue Storage, S <sub>Q</sub> (ft)	1,185								400			500				
	Average Control Delay (sec/veh)	32.0								1.6			5.1			32.0	6.3
	Level of Service, LOS	D								A			A				
Approach Delay (sec/veh)	32.0								1.6			5.1			D	A	
Approach Level of Service, LOS	D								A			A					

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LTR = Left-Through-Right; TR = Through-Right; and LT = Left-Through

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.



**Traffic Operations Summary**  
Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

**Intersection:** Demer Street (S-263) & Interstate 90 (I-90) Eastbound (EB) Ramps

**WEEKDAY, PM PEAK HOUR**

Analysis Scenario	Analysis Data	I-90 EB OFF-RAMP From the West (Eastbound)				I-90 EB ON-RAMP From the East (Westbound)				DEMER STREET (S-263) From the South (Northbound)				DEMER STREET (S-263) From the North (Southbound)				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
		STOP				Uncontrolled				Uncontrolled				Uncontrolled					
2026 EXISTING CONDITIONS	Traffic Control	STOP				Uncontrolled				Uncontrolled				Uncontrolled					
	Minor or Major Approach?	Minor				Minor				Major				Major					
	Entry Volume, V (veh/hr)	9	0	0	49					0	204	75		0	63	218			
	Peak Hour Factor (PHF)	0.90								0.90				0.90					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	10	0	0	54					0	227	83		0	70	242			
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				0				0	0
	Lane Group	LTR								TR				LT					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	64								310				312				64	687
	Capacity, c (veh/hr)	841								1,719				1,262				841	3,822
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.08								0.18				0.25				0.08	0.18
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.2								0.0				0.2					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	5.3								0.0				5.0					
	Available Queue Storage, S <sub>Q</sub> (ft)	1,185								400				500					
	Average Control Delay (sec/veh)	9.6								1.3				2.2				9.6	2.5
	Level of Service, LOS	A								A				A					
Approach Delay (sec/veh)	9.6								1.3				2.2				A	A	
Approach Level of Service, LOS	A								A				A						
ESTIMATED 2028 BACKGROUND TRAFFIC	Traffic Control	STOP				Uncontrolled				Uncontrolled				Uncontrolled					
	Minor or Major Approach?	Minor				Minor				Major				Major					
	Entry Volume, V (veh/hr)	11	0	0	57					0	218	86		0	72	268			
	Peak Hour Factor (PHF)	0.90								0.90				0.90					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	12	0	0	63					0	242	96		0	80	298			
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				0				0	0
	Lane Group	LTR								TR				LT					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	76								338				378				76	791
	Capacity, c (veh/hr)	766								1,715				1,233				766	3,714
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.10								0.20				0.31				0.10	0.21
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.3								0.0				0.2					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	7.9								0.0				5.0					
	Available Queue Storage, S <sub>Q</sub> (ft)	1,185								400				500					
	Average Control Delay (sec/veh)	10.2								1.4				2.2				10.2	2.6
	Level of Service, LOS	B								A				A					
Approach Delay (sec/veh)	10.2								1.4				2.2				B	A	
Approach Level of Service, LOS	B								A				A						
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	STOP				Uncontrolled				Uncontrolled				Uncontrolled					
	Minor or Major Approach?	Minor				Minor				Major				Major					
	Entry Volume, V (veh/hr)	57	0	0	57					0	231	80		0	124	275			
	Peak Hour Factor (PHF)	0.90								0.90				0.90					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	63	0	0	63					0	257	89		0	138	306			
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				0				0	0
	Lane Group	LTR								TR				LT					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	127								346				443				127	916
	Capacity, c (veh/hr)	402								1,723				1,219				402	3,344
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.32								0.20				0.36				0.32	0.27
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	1.3								0.0				0.4					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	33.7								0.0				10.1					
	Available Queue Storage, S <sub>Q</sub> (ft)	1,185								400				500					
	Average Control Delay (sec/veh)	18.0								1.3				3.4				18.0	4.6
	Level of Service, LOS	C								A				A					
Approach Delay (sec/veh)	18.0								1.3				3.4				C	A	
Approach Level of Service, LOS	C								A				A						

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LTR = Left-Through-Right; TR = Through-Right; and LT = Left-Through

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.



**Traffic Operations Summary**  
Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

**Intersection:** Demer Street (S-263) & Interstate 90 (I-90) Westbound (WB) Ramps

**WEEKDAY, AM PEAK HOUR**

Analysis Scenario	Analysis Data	I-90 WESTBOUND ON-RAMP From the West (Eastbound)		I-90 WESTBOUND OFF-RAMP From the East (Westbound)		DEMER STREET (S-263) From the South (Northbound)			DEMER STREET (S-263) From the North (Southbound)			Minor Approach Totals	Intersection Totals						
		U	L	T	R	U	L	T	R	U	L			T	R	U	L	T	R
		Uncontrolled		Uncontrolled		Stop Controlled			Stop Controlled										
2026 EXISTING CONDITIONS	Traffic Control	Uncontrolled		Uncontrolled		Stop Controlled			Stop Controlled										
	Minor or Major Approach?	Minor		Minor		Major			Major										
	Entry Volume, V (veh/hr)			96	0	85	0	36	181	0		376	2						
	Peak Hour Factor (PHF)			0.77		0.77			0.77										
	Adjusted Volume, V <sub>A</sub> (veh/hr)			125	0	110	0	47	235	0		488	3						
	Ped + Bike Volume, PBV (ped+bike/hr)	0		0		0			0			0	0						
	Lane Group			LTR		LT			TR										
	Lane Group Volume, V <sub>LG</sub> (veh/hr)			235		282			491			125	1,008						
	Capacity, c (veh/hr)			478		977			1,798			478	3,253						
	Volume-to-Capacity Ratio, V <sub>A</sub> /c			0.49		0.29			0.27			0.26	0.31						
	HCM 95% Queue Length, Q <sub>95</sub> (veh)			2.7		0.2			0.0										
	HCM 95% Queue Length, Q <sub>95</sub> (ft)			69.7		5.9			0.0										
	Available Queue Storage, S <sub>Q</sub> (ft)			1,285		500			140										
	Average Control Delay (sec/veh)			19.6		1.9			0.0			19.6	5.1						
	Level of Service, LOS			C		A			A			C	A						
	Approach Delay (sec/veh)			19.6		1.9			0.0										
Approach Level of Service, LOS			C		A			A											
ESTIMATED 2028 BACKGROUND TRAFFIC	Traffic Control	Uncontrolled		Uncontrolled		Stop Controlled			Stop Controlled										
	Minor or Major Approach?	Minor		Minor		Major			Major										
	Entry Volume, V (veh/hr)			114	0	101	0	38	187	0		410	2						
	Peak Hour Factor (PHF)			0.77		0.77			0.77										
	Adjusted Volume, V <sub>A</sub> (veh/hr)			148	0	131	0	49	243	0		532	3						
	Ped + Bike Volume, PBV (ped+bike/hr)	0		0		0			0			0	0						
	Lane Group			LTR		LT			TR										
	Lane Group Volume, V <sub>LG</sub> (veh/hr)			279		292			535			148	1,106						
	Capacity, c (veh/hr)			427		939			1,799			427	3,165						
	Volume-to-Capacity Ratio, V <sub>A</sub> /c			0.65		0.31			0.30			0.35	0.35						
	HCM 95% Queue Length, Q <sub>95</sub> (veh)			4.5		0.2			0.0										
	HCM 95% Queue Length, Q <sub>95</sub> (ft)			116.2		5.9			0.0										
	Available Queue Storage, S <sub>Q</sub> (ft)			1,285		500			140										
	Average Control Delay (sec/veh)			28.0		2.0			0.0			28.0	7.6						
	Level of Service, LOS			D		A			A			D	A						
	Approach Delay (sec/veh)			28.0		2.0			0.0										
Approach Level of Service, LOS			D		A			A											
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Uncontrolled		Uncontrolled		Stop Controlled			Stop Controlled										
	Minor or Major Approach?	Minor		Minor		Major			Major										
	Entry Volume, V (veh/hr)			114	0	136	0	36	249	0		468	37						
	Peak Hour Factor (PHF)			0.77		0.77			0.77										
	Adjusted Volume, V <sub>A</sub> (veh/hr)			148	0	177	0	47	323	0		608	48						
	Ped + Bike Volume, PBV (ped+bike/hr)	0		0		0			0			0	0						
	Lane Group			LTR		LT			TR										
	Lane Group Volume, V <sub>LG</sub> (veh/hr)			325		370			656			148	1,351						
	Capacity, c (veh/hr)			347		843			1,778			347	2,968						
	Volume-to-Capacity Ratio, V <sub>A</sub> /c			0.94		0.44			0.37			0.43	0.46						
	HCM 95% Queue Length, Q <sub>95</sub> (veh)			9.7		0.2			0.0										
	HCM 95% Queue Length, Q <sub>95</sub> (ft)			251.0		5.9			0.0										
	Available Queue Storage, S <sub>Q</sub> (ft)			1,285		500			140										
	Average Control Delay (sec/veh)			68.8		1.8			0.4			68.8	17.2						
	Level of Service, LOS			F		A			A			F	C						
	Approach Delay (sec/veh)			68.8		1.8			0.4										
Approach Level of Service, LOS			F		A			A											

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LTR = Left-Through-Right; LT = Left-Through; and TR = Through-Right

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.



**Traffic Operations Summary**  
 Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

**Intersection:** Demer Street (S-263) & Interstate 90 (I-90) Westbound (WB) Ramps

WEEKDAY, SCHOOL PM PEAK HOUR																			
Analysis Scenario	Analysis Data	I-90 WESTBOUND ON-RAMP From the West (Eastbound)				I-90 WESTBOUND OFF-RAMP From the East (Westbound)				DEMER STREET (S-263) From the South (Northbound)				DEMER STREET (S-263) From the North (Southbound)				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
2026 EXISTING CONDITIONS	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Minor				Minor				Major				Major					
	Entry Volume, V (veh/hr)					106 0 104				0 86 177				0 202 18					
	Peak Hour Factor (PHF)					0.79				0.79				0.79					
	Adjusted Volume, V <sub>A</sub> (veh/hr)					134 0 132				0 109 224				0 256 23					
	Ped + Bike Volume, PBV (ped+bike/hr)	1				0				0				0				1	1
	Lane Group					LTR				LT				TR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)					266				333				278				266	877
	Capacity, c (veh/hr)					538				1,267				1,775				538	3,580
	Volume-to-Capacity Ratio, V <sub>A</sub> /c					0.49				0.26				0.16				0.49	0.25
	HCM 95% Queue Length, Q <sub>95</sub> (veh)					2.7				0.3				0.0					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)					69.1				7.8				0.0					
	Available Queue Storage, S <sub>Q</sub> (ft)					1,285				500				140					
	Average Control Delay (sec/veh)					18.0				3.2				0.4				18.0	6.8
	Level of Service, LOS					C				A				A					
Approach Delay (sec/veh)					18.0				3.2				0.4				C	A	
Approach Level of Service, LOS					C				A				A						
ESTIMATED 2028 BACKGROUND TRAFFIC	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Minor				Minor				Major				Major					
	Entry Volume, V (veh/hr)					126 0 124				0 90 182				0 220 19					
	Peak Hour Factor (PHF)					0.79				0.79				0.79					
	Adjusted Volume, V <sub>A</sub> (veh/hr)					159 0 157				0 114 230				0 278 24					
	Ped + Bike Volume, PBV (ped+bike/hr)	1				0				0				0				1	1
	Lane Group					LTR				LT				TR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)					316				344				303				316	963
	Capacity, c (veh/hr)					504				1,242				1,776				504	3,522
	Volume-to-Capacity Ratio, V <sub>A</sub> /c					0.63				0.28				0.17				0.63	0.27
	HCM 95% Queue Length, Q <sub>95</sub> (veh)					4.3				0.3				0.0					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)					110.1				7.8				0.0					
	Available Queue Storage, S <sub>Q</sub> (ft)					1,285				500				140					
	Average Control Delay (sec/veh)					23.5				3.3				0.4				23.5	9.0
	Level of Service, LOS					C				A				A					
Approach Delay (sec/veh)					23.5				3.3				0.4				C	A	
Approach Level of Service, LOS					C				A				A						
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Minor				Minor				Major				Major					
	Entry Volume, V (veh/hr)					126 0 154				0 86 231				0 265 53					
	Peak Hour Factor (PHF)					0.79				0.79				0.79					
	Adjusted Volume, V <sub>A</sub> (veh/hr)					159 0 195				0 109 292				0 335 67					
	Ped + Bike Volume, PBV (ped+bike/hr)	1				0				0				0				1	1
	Lane Group					LTR				LT				TR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)					354				401				403				354	1,158
	Capacity, c (veh/hr)					446				1,140				1,750				446	3,336
	Volume-to-Capacity Ratio, V <sub>A</sub> /c					0.79				0.35				0.23				0.79	0.35
	HCM 95% Queue Length, Q <sub>95</sub> (veh)					7.2				0.3				0.0					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)					184.0				7.8				0.0					
	Available Queue Storage, S <sub>Q</sub> (ft)					1,285				500				140					
	Average Control Delay (sec/veh)					37.8				3.0				0.8				37.8	12.9
	Level of Service, LOS					E				A				A					
Approach Delay (sec/veh)					37.8				3.0				0.8				E	B	
Approach Level of Service, LOS					E				A				A						

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LTR = Left-Through-Right; LT = Left-Through; and TR = Through-Right

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.



**Traffic Operations Summary**  
Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

**Intersection:** Demer Street (S-263) & Interstate 90 (I-90) Westbound (WB) Ramps

WEEKDAY, PM PEAK HOUR																			
Analysis Scenario	Analysis Data	I-90 WESTBOUND ON-RAMP From the West (Eastbound)				I-90 WESTBOUND OFF-RAMP From the East (Westbound)				DEMER STREET (S-263) From the South (Northbound)				DEMER STREET (S-263) From the North (Southbound)				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
2026 EXISTING CONDITIONS	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Minor				Minor				Major				Major					
	Entry Volume, V (veh/hr)					138	1	186	0	82	131	0		143	11				
	Peak Hour Factor (PHF)					0.86				0.86				0.86					
	Adjusted Volume, V <sub>a</sub> (veh/hr)					160	1	216	0	95	152	0		166	13				
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				0				0	0
	Lane Group					LTR				LT				TR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)					378				248				179				378	805
	Capacity, c (veh/hr)					819				1,403				1,779				819	4,001
	Volume-to-Capacity Ratio, V <sub>a</sub> /c					0.46				0.18				0.10				0.46	0.20
	HCM 95% Queue Length, Q <sub>95</sub> (veh)					2.5				0.2				0.0					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)					63.0				5.0				0.0					
	Available Queue Storage, S <sub>q</sub> (ft)					1,285				500				140					
	Average Control Delay (sec/veh)					13.1				3.3				0.4				13.1	7.3
	Level of Service, LOS					B				A				A					
	Approach Delay (sec/veh)					13.1				3.3				0.4				B	A
Approach Level of Service, LOS					B				A				A						
ESTIMATED 2028 BACKGROUND TRAFFIC	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Minor				Minor				Major				Major					
	Entry Volume, V (veh/hr)					184	1	202	0	86	143	0		156	12				
	Peak Hour Factor (PHF)					0.86				0.86				0.86					
	Adjusted Volume, V <sub>a</sub> (veh/hr)					214	1	235	0	100	166	0		181	14				
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				0				0	0
	Lane Group					LTR				LT				TR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)					450				266				195				450	912
	Capacity, c (veh/hr)					724				1,384				1,779				724	3,887
	Volume-to-Capacity Ratio, V <sub>a</sub> /c					0.62				0.19				0.11				0.62	0.23
	HCM 95% Queue Length, Q <sub>95</sub> (veh)					4.4				0.2				0.0					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)					110.9				5.0				0.0					
	Available Queue Storage, S <sub>q</sub> (ft)					1,285				500				140					
	Average Control Delay (sec/veh)					17.8				3.3				0.4				17.8	9.8
	Level of Service, LOS					C				A				A					
	Approach Delay (sec/veh)					17.8				3.3				0.4				C	A
Approach Level of Service, LOS					C				A				A						
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Minor				Minor				Major				Major					
	Entry Volume, V (veh/hr)					184	1	240	0	80	208	0		215	56				
	Peak Hour Factor (PHF)					0.86				0.86				0.86					
	Adjusted Volume, V <sub>a</sub> (veh/hr)					214	1	279	0	93	242	0		250	65				
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				0				0	0
	Lane Group					LTR				LT				TR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)					494				335				315				494	1,144
	Capacity, c (veh/hr)					610				1,251				1,738				610	3,599
	Volume-to-Capacity Ratio, V <sub>a</sub> /c					0.81				0.27				0.18				0.81	0.32
	HCM 95% Queue Length, Q <sub>95</sub> (veh)					8.2				0.2				0.0					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)					206.6				5.0				0.0					
	Available Queue Storage, S <sub>q</sub> (ft)					1,285				500				140					
	Average Control Delay (sec/veh)					31.2				2.8				1.0				31.2	14.6
	Level of Service, LOS					D				A				A					
	Approach Delay (sec/veh)					31.2				2.8				1.0				D	B
Approach Level of Service, LOS					D				A				A						

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LTR = Left-Through-Right; LT = Left-Through; and TR = Through-Right

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.



**Traffic Operations Summary**  
Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

**Intersection:** Frenchtown Frontage Road (S-574) & Demer Street (S-263)

**WEEKDAY, AM PEAK HOUR**

Analysis Scenario	Analysis Data	FRENCHTOWN FRONTAGE ROAD From the West (Eastbound)				FRENCHTOWN FRONTAGE ROAD From the East (Westbound)				DEMER STREET (S-263) From the South (Northbound)				North Side of the Frenchtown Frontage Road				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
		Uncontrolled				Uncontrolled				Stop Controlled									
2026 EXISTING CONDITIONS	Traffic Control																		
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0		48	259	0	119	112		0	200		66						
	Peak Hour Factor (PHF)	0.76				0.76				0.76									
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0		63	341	0	157	147		0	263		87						
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				1				1	1
	Lane Group	TR				LT				LR									
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	404				304				350								350	1,058
	Capacity, c (veh/hr)	1,547				1,149				512								512	3,208
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.26				0.26				0.68								0.68	0.33
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.5				5.2									
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				12.8				133.1									
	Available Queue Storage, S <sub>Q</sub> (ft)	1,370				430				140									
	Average Control Delay (sec/veh)	4.2				5.1				25.9								25.9	11.6
	Level of Service, LOS	A				A				D								D	B
Approach Delay (sec/veh)	4.2				5.1				25.9										
Approach Level of Service, LOS	A				A				D										
ESTIMATED 2028 BACKGROUND TRAFFIC	Traffic Control																		
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0		52	279	0	133	121		0	215		73						
	Peak Hour Factor (PHF)	0.76				0.76				0.76									
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0		68	367	0	175	159		0	283		96						
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				1				1	1
	Lane Group	TR				LT				LR									
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	436				334				379								379	1,149
	Capacity, c (veh/hr)	1,547				1,119				463								463	3,129
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.28				0.30				0.82								0.82	0.37
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.6				7.8									
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				15.4				199.7									
	Available Queue Storage, S <sub>Q</sub> (ft)	1,370				430				140									
	Average Control Delay (sec/veh)	4.2				5.3				39.1								39.1	16.0
	Level of Service, LOS	A				A				E								E	C
Approach Delay (sec/veh)	4.2				5.3				39.1										
Approach Level of Service, LOS	A				A				E										
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control																		
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0		50	323	0	183	118		0	262		123						
	Peak Hour Factor (PHF)	0.76				0.76				0.76									
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0		66	425	0	241	155		0	345		162						
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				1				1	1
	Lane Group	TR				LT				LR									
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	491				396				507								507	1,393
	Capacity, c (veh/hr)	1,540				1,062				383								383	2,985
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.32				0.37				1.32								1.32	0.47
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.9				23.5									
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				23.2				601.6									
	Available Queue Storage, S <sub>Q</sub> (ft)	1,370				430				140									
	Average Control Delay (sec/veh)	4.3				6.6				191.0								191.0	72.8
	Level of Service, LOS	A				A				F								F	F
Approach Delay (sec/veh)	4.3				6.6				191.0										
Approach Level of Service, LOS	A				A				F										

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: TR = Through-Right; LT = Left-Through; and LR = Left-Right

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.



**Traffic Operations Summary**  
Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

**Intersection:** Frenchtown Frontage Road (S-574) & Demer Street (S-263)

WEEKDAY, SCHOOL PM PEAK HOUR																			
Analysis Scenario	Analysis Data	FRENCHTOWN FRONTAGE ROAD From the West (Eastbound)				FRENCHTOWN FRONTAGE ROAD From the East (Westbound)				DEMER STREET (S-263) From the South (Northbound)				North Side of the Frenchtown Frontage Road				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
2026 EXISTING CONDITIONS	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled									
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0		74	169	0	51	35		0	185		96						
	Peak Hour Factor (PHF)	0.76				0.76				0.76									
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0		97	222	0	67	46		0	243		126						
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				3				3	3
	Lane Group	TR				LT				LR									
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	320				113				370								370	803
	Capacity, c (veh/hr)	1,591				1,218				876								876	3,685
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.20				0.09				0.42								0.42	0.22
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.2				2.1									
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				5.2				53.9									
	Available Queue Storage, S <sub>Q</sub> (ft)	1,370				430				140									
	Average Control Delay (sec/veh)	3.5				5.0				12.1								12.1	7.7
	Level of Service, LOS	A				A				B									
Approach Delay (sec/veh)	3.5				5.0				12.1								B	A	
Approach Level of Service, LOS	A				A				B										
ESTIMATED 2028 BACKGROUND TRAFFIC	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled									
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0		80	182	0	57	38		0	199		107						
	Peak Hour Factor (PHF)	0.76				0.76				0.76									
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0		105	239	0	75	50		0	262		141						
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				3				3	3
	Lane Group	TR				LT				LR									
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	345				125				403								403	872
	Capacity, c (veh/hr)	1,592				1,192				842								842	3,626
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.22				0.10				0.48								0.48	0.24
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.2				2.6									
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				5.2				66.7									
	Available Queue Storage, S <sub>Q</sub> (ft)	1,370				430				140									
	Average Control Delay (sec/veh)	3.5				5.1				13.1								13.1	8.2
	Level of Service, LOS	A				A				B									
Approach Delay (sec/veh)	3.5				5.1				13.1								B	A	
Approach Level of Service, LOS	A				A				B										
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled									
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0		78	221	0	97	36		0	238		147						
	Peak Hour Factor (PHF)	0.76				0.76				0.76									
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0		103	291	0	128	47		0	313		193						
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				3				3	3
	Lane Group	TR				LT				LR									
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	393				175				507								507	1,075
	Capacity, c (veh/hr)	1,578				1,144				727								727	3,449
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.25				0.15				0.70								0.70	0.31
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.4				5.7									
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				10.5				146.4									
	Available Queue Storage, S <sub>Q</sub> (ft)	1,370				430				140									
	Average Control Delay (sec/veh)	3.7				6.5				20.5								20.5	12.1
	Level of Service, LOS	A				A				C									
Approach Delay (sec/veh)	3.7				6.5				20.5								C	B	
Approach Level of Service, LOS	A				A				C										

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: TR = Through-Right; LT = Left-Through; and LR = Left-Right

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.



**Traffic Operations Summary**  
**Proposed Town Pump - Frenchtown | Independent Traffic Impact Study**

**Intersection: Frenchtown Frontage Road (S-574) & Demer Street (S-263)**

WEEKDAY, PM PEAK HOUR																			
Analysis Scenario	Analysis Data	FRENCHTOWN FRONTAGE ROAD From the West (Eastbound)				FRENCHTOWN FRONTAGE ROAD From the East (Westbound)				DEMER STREET (S-263) From the South (Northbound)				North Side of the Frenchtown Frontage Road				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
2026 EXISTING CONDITIONS	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled									
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0		38	91	0	63	37		0	218		99						
	Peak Hour Factor (PHF)	0.84				0.84				0.84									
	Adjusted Volume, V <sub>a</sub> (veh/hr)	0		45	108	0	75	44		0	260		118						
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				2				2	2
	Lane Group	TR				LT				LR									
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	154				119				377								377	650
	Capacity, c (veh/hr)	1,588				1,427				960								960	3,975
	Volume-to-Capacity Ratio, V <sub>a</sub> /c	0.10				0.08				0.39								0.39	0.16
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.2				1.9									
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				5.1				48.1									
	Available Queue Storage, S <sub>q</sub> (ft)	1,370				430				140									
	Average Control Delay (sec/veh)	3.5				5.0				11.2								11.2	8.2
	Level of Service, LOS	A				A				B									
Approach Delay (sec/veh)	3.5				5.0				11.2								B	A	
Approach Level of Service, LOS	A				A				B										
ESTIMATED 2028 BACKGROUND TRAFFIC	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled									
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0		41	98	0	70	40		0	235		110						
	Peak Hour Factor (PHF)	0.84				0.84				0.84									
	Adjusted Volume, V <sub>a</sub> (veh/hr)	0		49	117	0	83	48		0	280		131						
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				2				2	2
	Lane Group	TR				LT				LR									
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	165				131				411								411	707
	Capacity, c (veh/hr)	1,588				1,413				932								932	3,933
	Volume-to-Capacity Ratio, V <sub>a</sub> /c	0.10				0.09				0.44								0.44	0.18
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.2				2.3									
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				5.1				58.3									
	Available Queue Storage, S <sub>q</sub> (ft)	1,370				430				140									
	Average Control Delay (sec/veh)	3.5				5.1				11.9								11.9	8.7
	Level of Service, LOS	A				A				B									
Approach Delay (sec/veh)	3.5				5.1				11.9								B	A	
Approach Level of Service, LOS	A				A				B										
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled									
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0		38	149	0	123	37		0	286		162						
	Peak Hour Factor (PHF)	0.84				0.84				0.84									
	Adjusted Volume, V <sub>a</sub> (veh/hr)	0		45	177	0	146	44		0	340		193						
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				2				2	2
	Lane Group	TR				LT				LR									
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	223				190				533								533	946
	Capacity, c (veh/hr)	1,561				1,346				792								792	3,699
	Volume-to-Capacity Ratio, V <sub>a</sub> /c	0.14				0.14				0.67								0.67	0.26
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.4				5.3									
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				10.2				134.3									
	Available Queue Storage, S <sub>q</sub> (ft)	1,370				430				140									
	Average Control Delay (sec/veh)	4.0				6.4				18.4								18.4	12.6
	Level of Service, LOS	A				A				C									
Approach Delay (sec/veh)	4.0				6.4				18.4								C	B	
Approach Level of Service, LOS	A				A				C										

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: TR = Through-Right; LT = Left-Through; and LR = Left-Right

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.



**Traffic Operations Summary**  
Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

**Intersection:** Frenchtown Frontage Road (S-574) & Belker Lane

WEEKDAY, AM PEAK HOUR																			
Analysis Scenario	Analysis Data	FRENCHTOWN FRONTAGE ROAD From the West (Eastbound)				FRENCHTOWN FRONTAGE ROAD From the East (Westbound)				South Side of the Frenchtown Frontage Road				BELKER LANE From the North (Southbound)				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
		Traffic Control		Uncontrolled				Uncontrolled								Stop Controlled			
2026 EXISTING CONDITIONS	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	24	90		0		211	7					0	5		20		
	Peak Hour Factor (PHF)	0.71				0.71								0.71					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	34	127		0		297	10					0	7		28		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				1				1	1
	Lane Group	LT				TR								LR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	161				307								35				35	503
	Capacity, c (veh/hr)	1,240				1,790								683				683	3,713
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.13				0.17								0.05				0.05	0.14
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.1				0.0								0.2					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	2.6				0.0								5.0					
	Available Queue Storage, S <sub>Q</sub> (ft)	450				200								85					
	Average Control Delay (sec/veh)	1.9				0.0								10.6				10.6	1.3
	Level of Service, LOS	A				A								B				B	A
	Approach Delay (sec/veh)	1.9				0.0								10.6					
Approach Level of Service, LOS	A				A								B				B	A	
ESTIMATED 2028 BACKGROUND TRAFFIC	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	26	99		0		232	8					0	5		22		
	Peak Hour Factor (PHF)	0.71				0.71								0.71					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	37	139		0		327	11					0	7		31		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				1				1	1
	Lane Group	LT				TR								LR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	176				338								38				38	552
	Capacity, c (veh/hr)	1,208				1,790								656				656	3,654
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.15				0.19								0.06				0.06	0.15
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.1				0.0								0.2					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	2.6				0.0								5.0					
	Available Queue Storage, S <sub>Q</sub> (ft)	450				200								85					
	Average Control Delay (sec/veh)	1.9				0.0								10.8				10.8	1.3
	Level of Service, LOS	A				A								B				B	A
	Approach Delay (sec/veh)	1.9				0.0								10.8					
Approach Level of Service, LOS	A				A								B				B	A	
ESTIMATED 2028 TOTAL TRAFFIC	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	27	101		0		235	8					0	5		22		
	Peak Hour Factor (PHF)	0.71				0.71								0.71					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	38	142		0		331	11					0	7		31		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				1				1	1
	Lane Group	LT				TR								LR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	180				342								38				38	561
	Capacity, c (veh/hr)	1,204				1,790								650				650	3,644
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.15				0.19								0.06				0.06	0.15
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.1				0.0								0.2					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	2.6				0.0								5.0					
	Available Queue Storage, S <sub>Q</sub> (ft)	450				200								85					
	Average Control Delay (sec/veh)	1.9				0.0								10.9				10.9	1.4
	Level of Service, LOS	A				A								B				B	A
	Approach Delay (sec/veh)	1.9				0.0								10.9					
Approach Level of Service, LOS	A				A								B				B	A	

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LT = Left-Through; TR = Through-Right; and LR = Left-Right

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.



**Traffic Operations Summary**  
Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

**Intersection:** Frenchtown Frontage Road (S-574) & Belker Lane

WEEKDAY, SCHOOL PM PEAK HOUR																			
Analysis Scenario	Analysis Data	FRENCHTOWN FRONTAGE ROAD From the West (Eastbound)				FRENCHTOWN FRONTAGE ROAD From the East (Westbound)				South Side of the Frenchtown Frontage Road				BELKER LANE From the North (Southbound)				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
		Traffic Control		Uncontrolled				Uncontrolled								Stop Controlled			
2026 EXISTING CONDITIONS	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	21	149		0		67	5					0	6		19		
	Peak Hour Factor (PHF)	0.77				0.77								0.77					
	Adjusted Volume, V <sub>a</sub> (veh/hr)	0	27	194		0		87	6					0	8		25		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				2				2	2
	Lane Group	LT				TR								LR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	221				94								32				32	347
	Capacity, c (veh/hr)	1,508				1,779								850				850	4,137
	Volume-to-Capacity Ratio, V <sub>a</sub> /c	0.15				0.05								0.04				0.04	0.08
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.1				0.0								0.1					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	2.5				0.0								2.6					
	Available Queue Storage, S <sub>q</sub> (ft)	450				200								85					
	Average Control Delay (sec/veh)	1.0				0.0								9.4				9.4	1.5
	Level of Service, LOS	A				A								A				A	A
	Approach Delay (sec/veh)	1.0				0.0								9.4				A	A
Approach Level of Service, LOS	A				A								A						
ESTIMATED 2028 BACKGROUND TRAFFIC	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	23	164		0		74	5					0	6		21		
	Peak Hour Factor (PHF)	0.77				0.77								0.77					
	Adjusted Volume, V <sub>a</sub> (veh/hr)	0	30	213		0		96	6					0	8		27		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				2				2	2
	Lane Group	LT				TR								LR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	243				103								35				35	381
	Capacity, c (veh/hr)	1,497				1,781								838				838	4,116
	Volume-to-Capacity Ratio, V <sub>a</sub> /c	0.16				0.06								0.04				0.04	0.09
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.1				0.0								0.1					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	2.5				0.0								2.6					
	Available Queue Storage, S <sub>q</sub> (ft)	450				200								85					
	Average Control Delay (sec/veh)	1.1				0.0								9.5				9.5	1.6
	Level of Service, LOS	A				A								A				A	A
	Approach Delay (sec/veh)	1.1				0.0								9.5				A	A
Approach Level of Service, LOS	A				A								A						
ESTIMATED 2028 TOTAL TRAFFIC	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	23	167		0		77	5					0	6		21		
	Peak Hour Factor (PHF)	0.77				0.77								0.77					
	Adjusted Volume, V <sub>a</sub> (veh/hr)	0	30	217		0		100	6					0	8		27		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				2				2	2
	Lane Group	LT				TR								LR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	247				106								35				35	388
	Capacity, c (veh/hr)	1,492				1,782								833				833	4,107
	Volume-to-Capacity Ratio, V <sub>a</sub> /c	0.17				0.06								0.04				0.04	0.09
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.1				0.0								0.1					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	2.5				0.0								2.6					
	Available Queue Storage, S <sub>q</sub> (ft)	450				200								85					
	Average Control Delay (sec/veh)	1.1				0.0								9.5				9.5	1.6
	Level of Service, LOS	A				A								A				A	A
	Approach Delay (sec/veh)	1.1				0.0								9.5				A	A
Approach Level of Service, LOS	A				A								A						

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LT = Left-Through; TR = Through-Right; and LR = Left-Right

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.



**Traffic Operations Summary**  
Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

**Intersection:** Frenchtown Frontage Road (S-574) & Belker Lane

WEEKDAY, PM PEAK HOUR																			
Analysis Scenario	Analysis Data	FRENCHTOWN FRONTAGE ROAD From the West (Eastbound)				FRENCHTOWN FRONTAGE ROAD From the East (Westbound)				South Side of the Frenchtown Frontage Road				BELKER LANE From the North (Southbound)				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
2026 EXISTING CONDITIONS	Traffic Control	Uncontrolled				Uncontrolled								Stop Controlled					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	11	126		0		85	3					0	2		15		
	Peak Hour Factor (PHF)	0.94				0.94								0.94					
	Adjusted Volume, V <sub>a</sub> (veh/hr)	0	12	134		0		90	3					0	2		16		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				2				2	2
	Lane Group	LT				TR								LR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	145				93								18				18	256
	Capacity, c (veh/hr)	1,508				1,790								925				925	4,223
	Volume-to-Capacity Ratio, V <sub>a</sub> /c	0.10				0.05								0.02				0.02	0.06
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.0								0.1					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				0.0								2.6					
	Available Queue Storage, S <sub>q</sub> (ft)	450				200								85					
	Average Control Delay (sec/veh)	0.7				0.0								9.0				9.0	1.0
	Level of Service, LOS	A				A								A				A	A
	Approach Delay (sec/veh)	0.7				0.0								9.0				A	A
Approach Level of Service, LOS	A				A								A				A	A	
ESTIMATED 2028 BACKGROUND TRAFFIC	Traffic Control	Uncontrolled				Uncontrolled								Stop Controlled					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	12	139		0		94	3					0	2		16		
	Peak Hour Factor (PHF)	0.94				0.94								0.94					
	Adjusted Volume, V <sub>a</sub> (veh/hr)	0	13	147		0		100	3					0	2		17		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				2				2	2
	Lane Group	LT				TR								LR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	160				103								19				19	282
	Capacity, c (veh/hr)	1,496				1,791								913				913	4,200
	Volume-to-Capacity Ratio, V <sub>a</sub> /c	0.11				0.06								0.02				0.02	0.07
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.0								0.1					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				0.0								2.6					
	Available Queue Storage, S <sub>q</sub> (ft)	450				200								85					
	Average Control Delay (sec/veh)	0.7				0.0								9.0				9.0	1.0
	Level of Service, LOS	A				A								A				A	A
	Approach Delay (sec/veh)	0.7				0.0								9.0				A	A
Approach Level of Service, LOS	A				A								A				A	A	
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Uncontrolled				Uncontrolled								Stop Controlled					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	12	143		0		98	3					0	2		16		
	Peak Hour Factor (PHF)	0.94				0.94								0.94					
	Adjusted Volume, V <sub>a</sub> (veh/hr)	0	13	152		0		104	3					0	2		17		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				2				2	2
	Lane Group	LT				TR								LR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	165				107								19				19	291
	Capacity, c (veh/hr)	1,491				1,791								907				907	4,189
	Volume-to-Capacity Ratio, V <sub>a</sub> /c	0.11				0.06								0.02				0.02	0.07
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.0								0.1					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				0.0								2.6					
	Available Queue Storage, S <sub>q</sub> (ft)	450				200								85					
	Average Control Delay (sec/veh)	0.6				0.0								9.1				9.1	0.9
	Level of Service, LOS	A				A								A				A	A
	Approach Delay (sec/veh)	0.6				0.0								9.1				A	A
Approach Level of Service, LOS	A				A								A				A	A	

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LT = Left-Through; TR = Through-Right; and LR = Left-Right

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.



**Traffic Operations Summary**  
Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

**Intersection:** Frenchtown Frontage Road (S-574) & Proposed Town Pump Site Western Access

**WEEKDAY, AM PEAK HOUR**

Analysis Scenario	Analysis Data	FRENCHTOWN FRONTAGE ROAD From the West (Eastbound)				FRENCHTOWN FRONTAGE ROAD From the East (Westbound)				South Side of the Frenchtown Frontage Road				WESTERN SITE ACCESS From the North (Southbound)				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
		<b>Traffic Control</b>	Uncontrolled		Uncontrolled				Stop Controlled						STOP				
<b>Minor or Major Approach?</b>	Major		Major		Minor		Minor												
<b>Entry Volume, V (veh/hr)</b>	0	14	322		0		333	47					0	50		8			
<b>Peak Hour Factor (PHF)</b>	0.76				0.76								0.76						
<b>Adjusted Volume, V<sub>A</sub> (veh/hr)</b>	0	18	424		0		438	62					0	66		11			
<b>Ped + Bike Volume, PBV (ped+bike/hr)</b>	0				0				0				1				<b>1</b>	<b>1</b>	
<b>Lane Group</b>	LT				TR								LR						
<b>Lane Group Volume, V<sub>LG</sub> (veh/hr)</b>	442				500								76				<b>76</b>	<b>1,018</b>	
<b>Capacity, c (veh/hr)</b>	1,062				1,763								270				<b>270</b>	<b>3,095</b>	
<b>Volume-to-Capacity Ratio, V<sub>A</sub>/c</b>	0.42				0.28								0.28				<b>0.28</b>	<b>0.33</b>	
<b>HCM 95% Queue Length, Q<sub>95</sub> (veh)</b>	0.1				0.0								1.1						
<b>HCM 95% Queue Length, Q<sub>95</sub> (ft)</b>	2.5				0.0								27.8						
<b>Available Queue Storage, S<sub>q</sub> (ft)</b>	360				880								300						
<b>Average Control Delay (sec/veh)</b>	0.5				1.0								23.5				<b>23.5</b>	<b>2.5</b>	
<b>Level of Service, LOS</b>	A				A								C						
<b>Approach Delay (sec/veh)</b>	0.5				1.0								23.5				<b>C</b>	<b>A</b>	
<b>Approach Level of Service, LOS</b>	A				A								C						

**WEEKDAY, SCHOOL PM PEAK HOUR**

Analysis Scenario	Analysis Data	FRENCHTOWN FRONTAGE ROAD From the West (Eastbound)				FRENCHTOWN FRONTAGE ROAD From the East (Westbound)				South Side of the Frenchtown Frontage Road				WESTERN SITE ACCESS From the North (Southbound)				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
		<b>Traffic Control</b>	Uncontrolled		Uncontrolled				Stop Controlled						STOP				
<b>Minor or Major Approach?</b>	Major		Major		Minor		Minor												
<b>Entry Volume, V (veh/hr)</b>	0	12	255		0		235	39					0	44		7			
<b>Peak Hour Factor (PHF)</b>	0.76				0.76								0.76						
<b>Adjusted Volume, V<sub>A</sub> (veh/hr)</b>	0	16	336		0		309	51					0	58		9			
<b>Ped + Bike Volume, PBV (ped+bike/hr)</b>	0				0				0				3				<b>3</b>	<b>3</b>	
<b>Lane Group</b>	LT				TR								LR						
<b>Lane Group Volume, V<sub>LG</sub> (veh/hr)</b>	351				361								67				<b>67</b>	<b>779</b>	
<b>Capacity, c (veh/hr)</b>	1,192				1,757								377				<b>377</b>	<b>3,326</b>	
<b>Volume-to-Capacity Ratio, V<sub>A</sub>/c</b>	0.29				0.21								0.18				<b>0.18</b>	<b>0.23</b>	
<b>HCM 95% Queue Length, Q<sub>95</sub> (veh)</b>	0.0				0.0								0.6						
<b>HCM 95% Queue Length, Q<sub>95</sub> (ft)</b>	0.0				0.0								15.2						
<b>Available Queue Storage, S<sub>q</sub> (ft)</b>	360				880								300						
<b>Average Control Delay (sec/veh)</b>	0.5				1.0								16.6				<b>16.6</b>	<b>2.1</b>	
<b>Level of Service, LOS</b>	A				A								C						
<b>Approach Delay (sec/veh)</b>	0.5				1.0								16.6				<b>A</b>	<b>A</b>	
<b>Approach Level of Service, LOS</b>	A				A								C						

**WEEKDAY, PM PEAK HOUR**

Analysis Scenario	Analysis Data	FRENCHTOWN FRONTAGE ROAD From the West (Eastbound)				FRENCHTOWN FRONTAGE ROAD From the East (Westbound)				South Side of the Frenchtown Frontage Road				WESTERN SITE ACCESS From the North (Southbound)				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
		<b>Traffic Control</b>	Uncontrolled		Uncontrolled				Stop Controlled						STOP				
<b>Minor or Major Approach?</b>	Major		Major		Minor		Minor												
<b>Entry Volume, V (veh/hr)</b>	0	14	131		0		272	51					0	55		9			
<b>Peak Hour Factor (PHF)</b>	0.84				0.84								0.84						
<b>Adjusted Volume, V<sub>A</sub> (veh/hr)</b>	0	17	156		0		324	61					0	65		11			
<b>Ped + Bike Volume, PBV (ped+bike/hr)</b>	0				0				0				2				<b>2</b>	<b>2</b>	
<b>Lane Group</b>	LT				TR								LR						
<b>Lane Group Volume, V<sub>LG</sub> (veh/hr)</b>	173				385								76				<b>76</b>	<b>633</b>	
<b>Capacity, c (veh/hr)</b>	1,170				1,753								471				<b>471</b>	<b>3,394</b>	
<b>Volume-to-Capacity Ratio, V<sub>A</sub>/c</b>	0.15				0.22								0.16				<b>0.16</b>	<b>0.19</b>	
<b>HCM 95% Queue Length, Q<sub>95</sub> (veh)</b>	0.0				0.0								0.6						
<b>HCM 95% Queue Length, Q<sub>95</sub> (ft)</b>	0.0				0.0								15.2						
<b>Available Queue Storage, S<sub>q</sub> (ft)</b>	360				880								300						
<b>Average Control Delay (sec/veh)</b>	0.9				1.0								14.1				<b>14.1</b>	<b>2.5</b>	
<b>Level of Service, LOS</b>	A				A								B						
<b>Approach Delay (sec/veh)</b>	0.9				1.0								14.1				<b>A</b>	<b>A</b>	
<b>Approach Level of Service, LOS</b>	A				A								B						

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LT = Left-Through; TR = Through-Right; and LR = Left-Right

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.



**Traffic Operations Summary**  
Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

**Intersection:** Frenchtown Frontage Road (S-574) & Proposed Town Pump Site Eastern Access

**WEEKDAY, AM PEAK HOUR**

Analysis Scenario	Analysis Data	FRENCHTOWN FRONTAGE ROAD From the West (Eastbound)				FRENCHTOWN FRONTAGE ROAD From the East (Westbound)				South Side of the Frenchtown Frontage Road				EASTERN SITE ACCESS From the North (Southbound)				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
		<b>Traffic Control</b>	Uncontrolled		Uncontrolled				Stop Controlled										
<b>Minor or Major Approach?</b>	Major		Major		Minor		Minor												
<b>Entry Volume, V (veh/hr)</b>	0	50	123		0		248	9					0	5		53			
<b>Peak Hour Factor (PHF)</b>	0.76				0.76								0.76						
<b>Adjusted Volume, V<sub>A</sub> (veh/hr)</b>	0	66	162		0		326	12					0	7		70			
<b>Ped + Bike Volume, PBV (ped+bike/hr)</b>	0				0				0				1				<b>1</b>	<b>1</b>	
<b>Lane Group</b>	LT				TR								LR						
<b>Lane Group Volume, V<sub>LG</sub> (veh/hr)</b>	228				338								76				<b>76</b>	<b>642</b>	
<b>Capacity, c (veh/hr)</b>	1,224				1,789								645				<b>645</b>	<b>3,658</b>	
<b>Volume-to-Capacity Ratio, V<sub>A</sub>/c</b>	0.19				0.19								0.12				<b>0.12</b>	<b>0.18</b>	
<b>HCM 95% Queue Length, Q<sub>95</sub> (veh)</b>	0.2				0.0								0.4						
<b>HCM 95% Queue Length, Q<sub>95</sub> (ft)</b>	5.0				0.0								10.1						
<b>Available Queue Storage, S<sub>q</sub> (ft)</b>	180				170								300						
<b>Average Control Delay (sec/veh)</b>	2.7				0.0								11.3				<b>11.3</b>	<b>2.3</b>	
<b>Level of Service, LOS</b>	A				A								B						
<b>Approach Delay (sec/veh)</b>	2.7				0.0								11.3				<b>B</b>	<b>A</b>	
<b>Approach Level of Service, LOS</b>	A				A								B						

**WEEKDAY, SCHOOL PM PEAK HOUR**

Analysis Scenario	Analysis Data	FRENCHTOWN FRONTAGE ROAD From the West (Eastbound)				FRENCHTOWN FRONTAGE ROAD From the East (Westbound)				South Side of the Frenchtown Frontage Road				EASTERN SITE ACCESS From the North (Southbound)				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
		<b>Traffic Control</b>	Uncontrolled		Uncontrolled				Stop Controlled										
<b>Minor or Major Approach?</b>	Major		Major		Minor		Minor												
<b>Entry Volume, V (veh/hr)</b>	0	40	185		0		90	8					0	5		43			
<b>Peak Hour Factor (PHF)</b>	0.76				0.76								0.76						
<b>Adjusted Volume, V<sub>A</sub> (veh/hr)</b>	0	53	243		0		118	11					0	7		57			
<b>Ped + Bike Volume, PBV (ped+bike/hr)</b>	0				0				0				3				<b>3</b>	<b>3</b>	
<b>Lane Group</b>	LT				TR								LR						
<b>Lane Group Volume, V<sub>LG</sub> (veh/hr)</b>	296				129								63				<b>63</b>	<b>488</b>	
<b>Capacity, c (veh/hr)</b>	1,455				1,776								836				<b>836</b>	<b>4,067</b>	
<b>Volume-to-Capacity Ratio, V<sub>A</sub>/c</b>	0.20				0.07								0.08				<b>0.08</b>	<b>0.12</b>	
<b>HCM 95% Queue Length, Q<sub>95</sub> (veh)</b>	0.1				0.0								0.2						
<b>HCM 95% Queue Length, Q<sub>95</sub> (ft)</b>	2.5				0.0								5.0						
<b>Available Queue Storage, S<sub>q</sub> (ft)</b>	180				170								300						
<b>Average Control Delay (sec/veh)</b>	1.6				0.0								9.7				<b>9.7</b>	<b>2.2</b>	
<b>Level of Service, LOS</b>	A				A								A						
<b>Approach Delay (sec/veh)</b>	1.6				0.0								9.7				<b>A</b>	<b>A</b>	
<b>Approach Level of Service, LOS</b>	A				A								A						

**WEEKDAY, PM PEAK HOUR**

Analysis Scenario	Analysis Data	FRENCHTOWN FRONTAGE ROAD From the West (Eastbound)				FRENCHTOWN FRONTAGE ROAD From the East (Westbound)				South Side of the Frenchtown Frontage Road				EASTERN SITE ACCESS From the North (Southbound)				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
		<b>Traffic Control</b>	Uncontrolled		Uncontrolled				Stop Controlled										
<b>Minor or Major Approach?</b>	Major		Major		Minor		Minor												
<b>Entry Volume, V (veh/hr)</b>	0	52	148		0		103	11					0	7		57			
<b>Peak Hour Factor (PHF)</b>	0.84				0.84								0.84						
<b>Adjusted Volume, V<sub>A</sub> (veh/hr)</b>	0	62	176		0		123	13					0	8		68			
<b>Ped + Bike Volume, PBV (ped+bike/hr)</b>	0				0				0				2				<b>2</b>	<b>2</b>	
<b>Lane Group</b>	LT				TR								LR						
<b>Lane Group Volume, V<sub>LG</sub> (veh/hr)</b>	238				136								76				<b>76</b>	<b>450</b>	
<b>Capacity, c (veh/hr)</b>	1,449				1,771								838				<b>838</b>	<b>4,058</b>	
<b>Volume-to-Capacity Ratio, V<sub>A</sub>/c</b>	0.16				0.08								0.09				<b>0.09</b>	<b>0.11</b>	
<b>HCM 95% Queue Length, Q<sub>95</sub> (veh)</b>	0.1				0.0								0.3						
<b>HCM 95% Queue Length, Q<sub>95</sub> (ft)</b>	2.5				0.0								7.6						
<b>Available Queue Storage, S<sub>q</sub> (ft)</b>	180				170								300						
<b>Average Control Delay (sec/veh)</b>	2.2				0.0								9.7				<b>9.7</b>	<b>2.8</b>	
<b>Level of Service, LOS</b>	A				A								A						
<b>Approach Delay (sec/veh)</b>	2.2				0.0								9.7				<b>A</b>	<b>A</b>	
<b>Approach Level of Service, LOS</b>	A				A								A						

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LT = Left-Through; TR = Through-Right; and LR = Left-Right

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.



# Appendix F

F-2

## IN THIS SECTION:

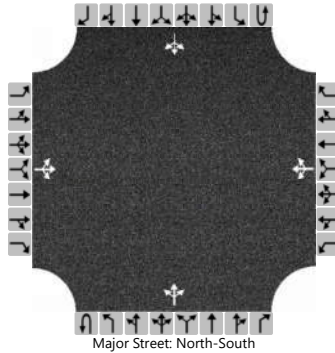
*2026 Existing Conditions*



# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Duscharme & Marion		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	Missoula County		
Date Performed	2/11/2026			East/West Street	Marion Street		
Analysis Year	2026			North/South Street	Duscharme Street		
Time Analyzed	Weekday, AM Peak Hour			Peak Hour Factor	0.56		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Existing Conditions						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		3	0	1		0	0	1		1	166	0		0	149	4	
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0			
Proportion Time Blocked		0.167	0.167	0.000			0.167	0.167		0.000							
Percent Grade (%)		0				0											
Right Turn Channelized																	
Median Type   Storage		Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		

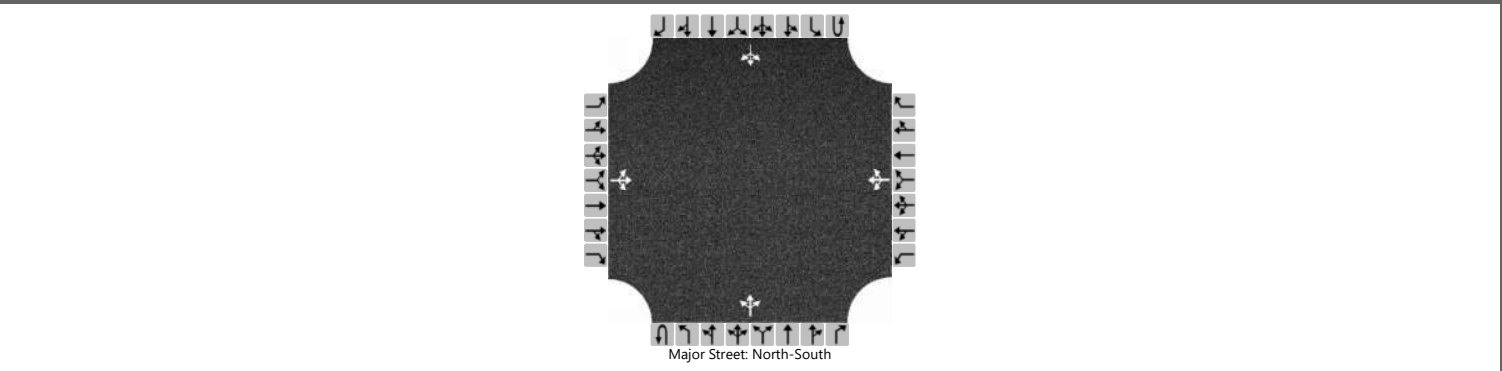
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			7				2			2				0			
Capacity, c (veh/h)			530				847			1302				1276			
v/c Ratio			0.01				0.00			0.00				0.00			
95% Queue Length, Q <sub>95</sub> (veh)			0.0				0.0			0.0				0.0			
95% Queue Length, Q <sub>95</sub> (ft)			0.0				0.0			0.0				0.0			
Control Delay (s/veh)			11.9				9.3			7.8	0.0	0.0		7.8	0.0	0.0	
Level of Service (LOS)			B				A			A	A	A		A	A	A	
Approach Delay (s/veh)		11.9				9.3				0.1				0.0			
Approach LOS		B				A				A				A			

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Duscharme & Marion		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	Missoula County		
Date Performed	2/11/2026			East/West Street	Marion Street		
Analysis Year	2026			North/South Street	Duscharme Street		
Time Analyzed	Weekday, School PM Peak			Peak Hour Factor	0.58		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Existing Conditions						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		3	0	0		0	0	1		1	110	0		1	50	2
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked		0.167	0.167	0.000			0.167	0.167		0.000				0.000		
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		

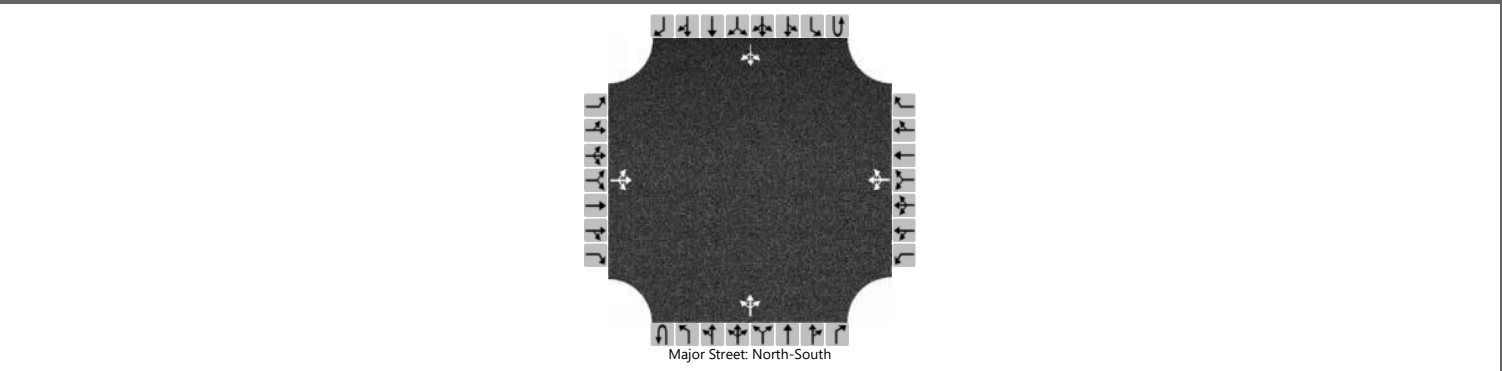
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			5				2			2				2		
Capacity, c (veh/h)			796				908			1508				1394		
v/c Ratio			0.01				0.00			0.00				0.00		
95% Queue Length, Q <sub>95</sub> (veh)			0.0				0.0			0.0				0.0		
95% Queue Length, Q <sub>95</sub> (ft)			0.0				0.0			0.0				0.0		
Control Delay (s/veh)			9.6				9.0			7.4	0.0	0.0		7.6	0.0	0.0
Level of Service (LOS)			A				A			A	A	A		A	A	A
Approach Delay (s/veh)	9.6				9.0				0.1				0.2			
Approach LOS	A				A				A				A			

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Duscharme & Marion		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	Missoula County		
Date Performed	2/11/2026			East/West Street	Marion Street		
Analysis Year	2026			North/South Street	Duscharme Street		
Time Analyzed	Weekday, PM Peak Hour			Peak Hour Factor	0.83		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Existing Conditions						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		6	0	0		0	0	0		0	55	0		1	65	5
Percent Heavy Vehicles (%)		17	0	0		0	0	0		0				0		
Proportion Time Blocked		0.167	0.167	0.000			0.167	0.167						0.000		
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.27	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.65	4.00	3.30		3.50	4.00	3.30		2.20				2.20		

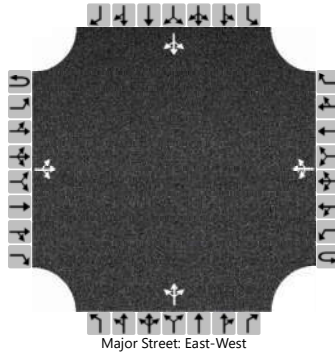
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			7				0			0				1		
Capacity, c (veh/h)			820				0			1525				1548		
v/c Ratio			0.01							0.00				0.00		
95% Queue Length, Q <sub>95</sub> (veh)			0.0							0.0				0.0		
95% Queue Length, Q <sub>95</sub> (ft)			0.0							0.0				0.0		
Control Delay (s/veh)			9.4							7.4	0.0	0.0		7.3	0.0	0.0
Level of Service (LOS)			A							A	A	A		A	A	A
Approach Delay (s/veh)	9.4								0.0				0.1			
Approach LOS	A								A				A			

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Beckwith & Duscharme		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Beckwith Street (S-263)		
Analysis Year	2026			North/South Street	Duscharme Street		
Time Analyzed	Weekday, AM Peak Hour			Peak Hour Factor	0.62		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Existing Conditions						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		8	152	133		18	152	7		139	5	26		2	2	5
Percent Heavy Vehicles (%)		0				0				4	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.14	6.50	6.20		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.54	4.00	3.30		3.50	4.00	3.30

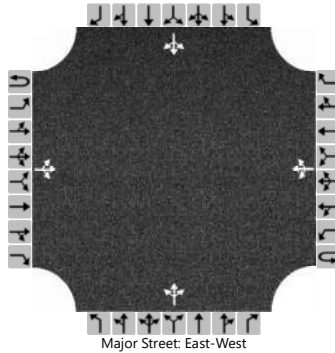
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		13				29					274					15
Capacity, c (veh/h)		1320				1112					392					467
v/c Ratio		0.01				0.03					0.70					0.03
95% Queue Length, Q <sub>95</sub> (veh)		0.0				0.1					5.2					0.1
95% Queue Length, Q <sub>95</sub> (ft)		0.0				2.5					133.4					2.5
Control Delay (s/veh)		7.8	0.1	0.1		8.3	0.3	0.3			32.9					13.0
Level of Service (LOS)		A	A	A		A	A	A			D					B
Approach Delay (s/veh)		0.3				1.1				32.9				13.0		
Approach LOS		A				A				D				B		

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Beckwith & Duscharme		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Beckwith Street (S-263)		
Analysis Year	2026			North/South Street	Duscharme Street		
Time Analyzed	Weekday, School PM Peak			Peak Hour Factor	0.75		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Existing Conditions						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Priority																	
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		5	153	37		15	211	5		81	2	31		6	1	2	
Percent Heavy Vehicles (%)		0				0				14	0	13		0	0	0	
Proportion Time Blocked																	
Percent Grade (%)										0				0			
Right Turn Channelized																	
Median Type   Storage	Undivided																

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.24	6.50	6.33		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.63	4.00	3.42		3.50	4.00	3.30

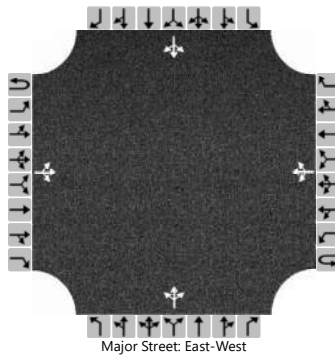
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		7				20					152					12
Capacity, c (veh/h)		1286				1324					542					438
v/c Ratio		0.01				0.02					0.28					0.03
95% Queue Length, Q <sub>95</sub> (veh)		0.0				0.0					1.1					0.1
95% Queue Length, Q <sub>95</sub> (ft)		0.0				0.0					30.5					2.5
Control Delay (s/veh)		7.8	0.0	0.0		7.8	0.1	0.1			14.2					13.4
Level of Service (LOS)		A	A	A		A	A	A			B					B
Approach Delay (s/veh)		0.2			0.6					14.2			13.4			
Approach LOS		A			A					B			B			

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Beckwith & Duscharme		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Beckwith Street (S-263)		
Analysis Year	2026			North/South Street	Duscharme Street		
Time Analyzed	Weekday, PM Peak Hour			Peak Hour Factor	0.94		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Existing Conditions						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		4	139	53		18	148	3		43	1	18		1	0	3
Percent Heavy Vehicles (%)		25				6				5	0	11		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

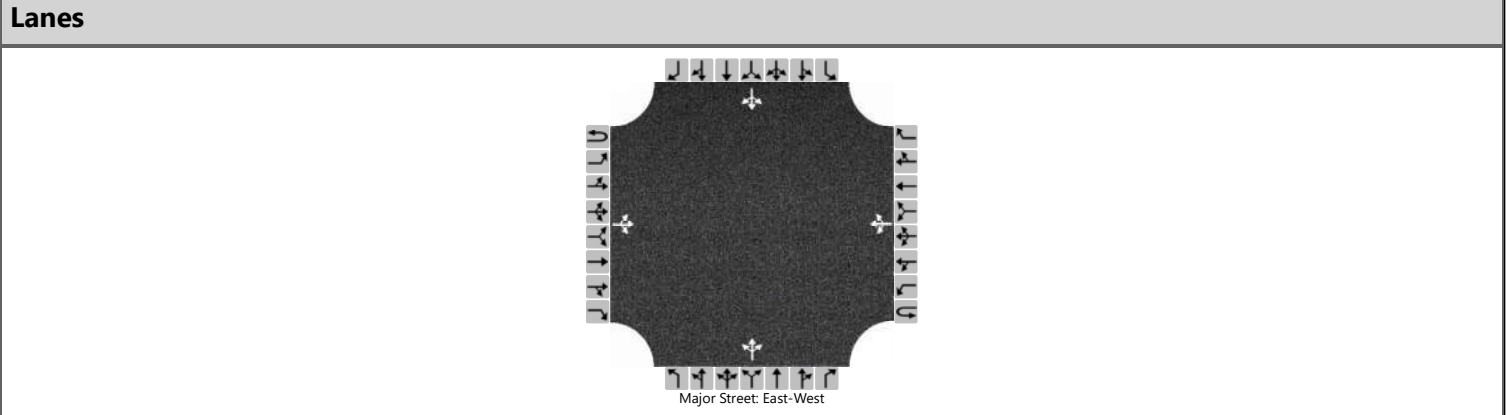
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.35				4.16				7.15	6.50	6.31		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.43				2.25				3.55	4.00	3.40		3.50	4.00	3.30

## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		4				19					66					4	
Capacity, c (veh/h)		1281				1344					756					764	
v/c Ratio		0.00				0.01					0.09					0.01	
95% Queue Length, Q <sub>95</sub> (veh)		0.0				0.0					0.3					0.0	
95% Queue Length, Q <sub>95</sub> (ft)		0.0				0.0					7.9					0.0	
Control Delay (s/veh)		7.8	0.0	0.0		7.7	0.1	0.1			10.2					9.7	
Level of Service (LOS)		A	A	A		A	A	A			B					A	
Approach Delay (s/veh)	0.2				0.9				10.2				9.7				
Approach LOS	A				A				B				A				

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Beckwith & Demer		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Beckwith Street (S-263)		
Analysis Year	2026			North/South Street	Demer Street (S-263)		
Time Analyzed	Weekday, AM Peak Hour			Peak Hour Factor	0.70		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Existing Conditions						



**Vehicle Volumes and Adjustments**

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Priority																	
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		48	30	4		8	18	340		1	10	2		309	32	20	
Percent Heavy Vehicles (%)		4				0				0	20	50		6	9	0	
Proportion Time Blocked																	
Percent Grade (%)										2				-1			
Right Turn Channelized																	
Median Type   Storage	Undivided																

**Critical and Follow-up Headways**

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.14				4.10				7.50	7.10	6.90		6.96	6.39	6.10
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.24				2.20				3.50	4.18	3.75		3.55	4.08	3.30

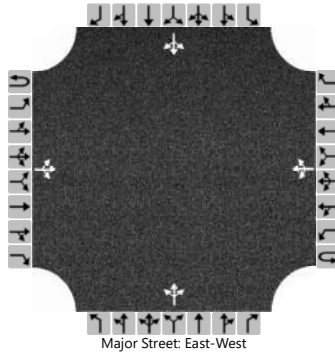
**Delay, Queue Length, and Level of Service**

Flow Rate, v (veh/h)		69				11					19					516
Capacity, c (veh/h)		1044				1571					324					466
v/c Ratio		0.07				0.01					0.06					1.11
95% Queue Length, Q <sub>95</sub> (veh)		0.2				0.0					0.2					17.4
95% Queue Length, Q <sub>95</sub> (ft)		5.0				0.0					5.9					455.6
Control Delay (s/veh)		8.7	0.6	0.6		7.3	0.1	0.1			16.8					103.6
Level of Service (LOS)		A	A	A		A	A	A			C					F
Approach Delay (s/veh)		5.3				0.2				16.8				103.6		
Approach LOS		A				A				C				F		

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Beckwith & Demer		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Beckwith Street (S-263)		
Analysis Year	2026			North/South Street	Demer Street (S-263)		
Time Analyzed	Weekday, School PM			Peak Hour Factor	0.81		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Existing Conditions						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Priority																	
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		42	23	6		11	27	317		4	7	3		178	31	29	
Percent Heavy Vehicles (%)		0				9				0	0	0		5	3	3	
Proportion Time Blocked																	
Percent Grade (%)										2				-1			
Right Turn Channelized																	
Median Type   Storage	Undivided																

## Critical and Follow-up Headways

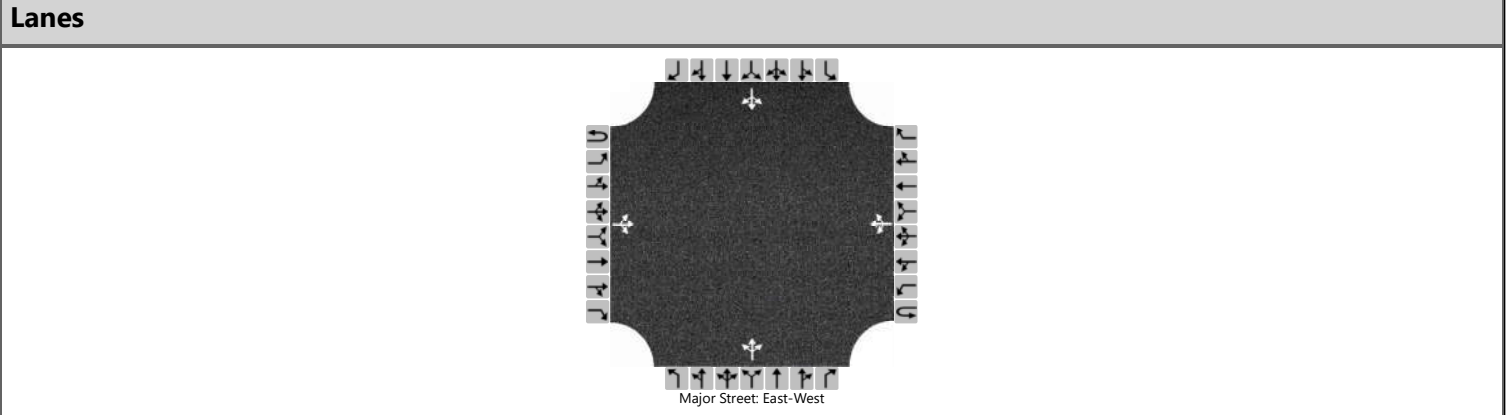
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.19				7.50	6.90	6.40		6.95	6.33	6.13
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.28				3.50	4.00	3.30		3.55	4.03	3.33

## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		52				14					17					294
Capacity, c (veh/h)		1145				1528					453					592
v/c Ratio		0.05				0.01					0.04					0.50
95% Queue Length, Q <sub>95</sub> (veh)		0.1				0.0					0.1					2.8
95% Queue Length, Q <sub>95</sub> (ft)		2.5				0.0					2.5					72.5
Control Delay (s/veh)		8.3	0.4	0.4		7.4	0.1	0.1			13.3					16.9
Level of Service (LOS)		A	A	A		A	A	A			B					C
Approach Delay (s/veh)		5.1			0.3					13.3			16.9			
Approach LOS		A			A					B			C			

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Beckwith & Demer		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Beckwith Street (S-263)		
Analysis Year	2026			North/South Street	Demer Street (S-263)		
Time Analyzed	Weekday, PM Peak Hour			Peak Hour Factor	0.90		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Existing Conditions						



**Vehicle Volumes and Adjustments**

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Priority																	
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		36	14	5		11	25	233		5	10	4		184	37	46	
Percent Heavy Vehicles (%)		3				0				20	0	0		3	3	2	
Proportion Time Blocked																	
Percent Grade (%)										2				-1			
Right Turn Channelized																	
Median Type   Storage	Undivided																

**Critical and Follow-up Headways**

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.10				7.70	6.90	6.40		6.93	6.33	6.12
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.20				3.68	4.00	3.30		3.53	4.03	3.32

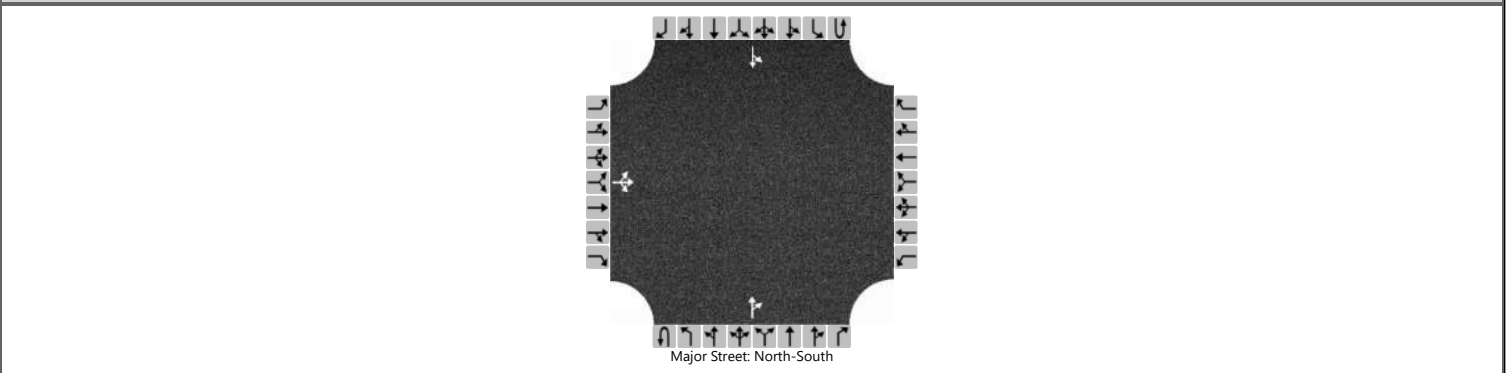
**Delay, Queue Length, and Level of Service**

Flow Rate, v (veh/h)		40				12					21					297
Capacity, c (veh/h)		1270				1608					551					747
v/c Ratio		0.03				0.01					0.04					0.40
95% Queue Length, Q <sub>95</sub> (veh)		0.1				0.0					0.1					1.9
95% Queue Length, Q <sub>95</sub> (ft)		2.5				0.0					2.6					48.6
Control Delay (s/veh)		7.9	0.3	0.3		7.3	0.1	0.1			11.8					13.0
Level of Service (LOS)		A	A	A		A	A	A			B					B
Approach Delay (s/veh)		5.3				0.4				11.8				13.0		
Approach LOS		A				A				B				B		

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Demer St & I-90 EB Ramps		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / FHWA		
Date Performed	2/11/2026			East/West Street	I-90 EB Off-Ramp		
Analysis Year	2026			North/South Street	Demer Street (S-263)		
Time Analyzed	Weekday, AM Peak Hour			Peak Hour Factor	0.73		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Existing Conditions						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration			LTR									TR		LT			
Volume (veh/h)		17	0	96							200	198		207	265		
Percent Heavy Vehicles (%)		6	0	2										1			
Proportion Time Blocked		0.167	0.167	0.167										0.167			
Percent Grade (%)		2															
Right Turn Channelized																	
Median Type   Storage		Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2										4.1		
Critical Headway (sec)		7.56	6.90	6.42										4.11		
Base Follow-Up Headway (sec)		3.5	4.0	3.3										2.2		
Follow-Up Headway (sec)		3.55	4.00	3.32										2.21		

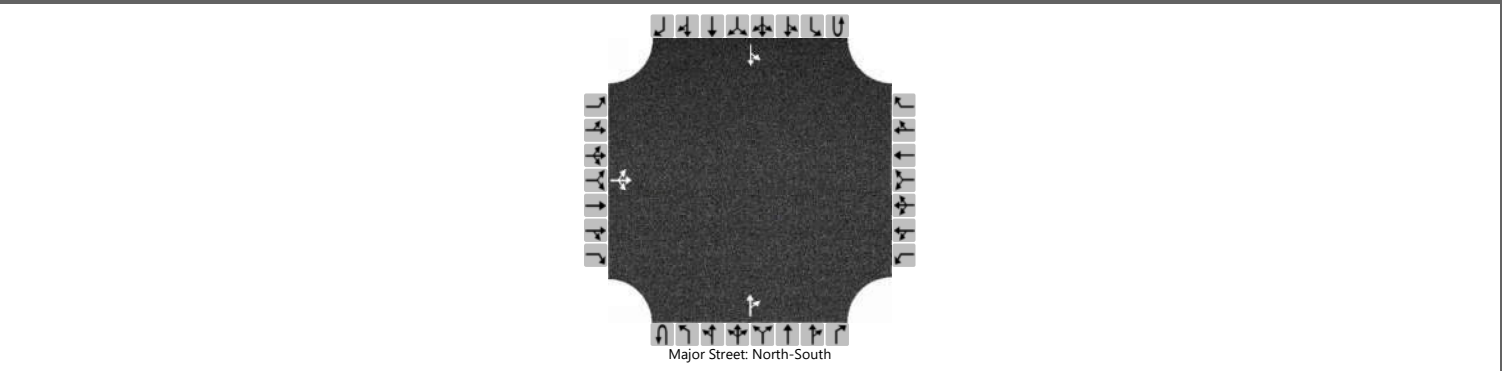
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			155											284			
Capacity, c (veh/h)			376											1008			
v/c Ratio			0.41											0.28			
95% Queue Length, Q <sub>95</sub> (veh)			2.0											1.2			
95% Queue Length, Q <sub>95</sub> (ft)			51.0											30.2			
Control Delay (s/veh)			21.1											10.0	3.5		
Level of Service (LOS)			C											A	A		
Approach Delay (s/veh)		21.1												6.3			
Approach LOS		C												A			

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood	Intersection	Demer St & I-90 EB Ramps				
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / FHWA				
Date Performed	2/11/2026	East/West Street	I-90 EB Off-Ramp				
Analysis Year	2026	North/South Street	Demer Street (S-263)				
Time Analyzed	Weekday, School PM Peak	Peak Hour Factor	0.80				
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25				
Project Description	Town Pump TIS   Existing Conditions						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LTR									TR		LT		
Volume (veh/h)		11	0	38							252	114		108	200	
Percent Heavy Vehicles (%)		0	0	3										5		
Proportion Time Blocked																
Percent Grade (%)		2														
Right Turn Channelized																
Median Type   Storage		Undivided														

## Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2										4.1		
Critical Headway (sec)		7.50	6.90	6.43										4.15		
Base Follow-Up Headway (sec)		3.5	4.0	3.3										2.2		
Follow-Up Headway (sec)		3.50	4.00	3.33										2.25		

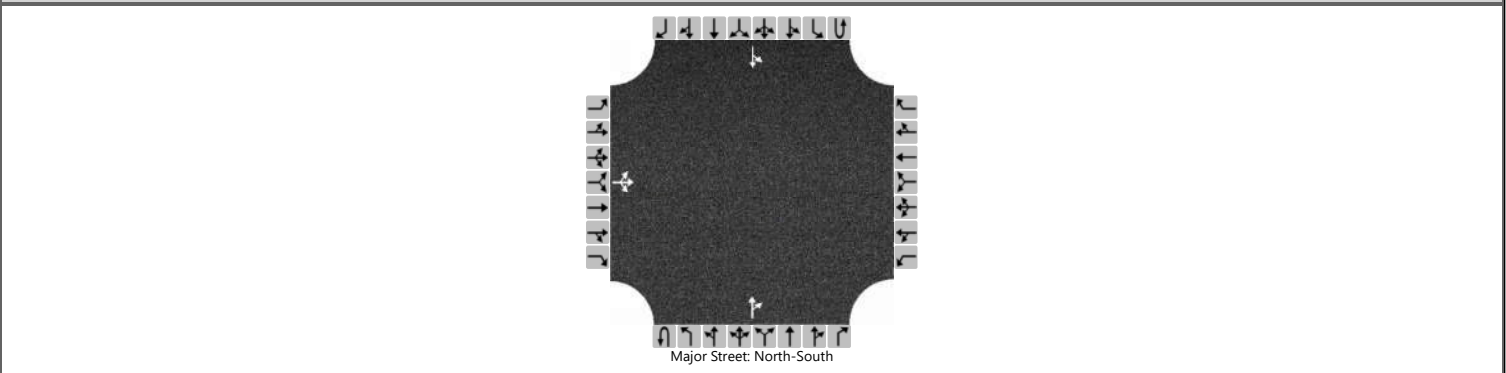
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			61											135		
Capacity, c (veh/h)			665											1088		
v/c Ratio			0.09											0.12		
95% Queue Length, Q <sub>95</sub> (veh)			0.3											0.4		
95% Queue Length, Q <sub>95</sub> (ft)			7.6											10.4		
Control Delay (s/veh)			11.0											8.8	1.3	
Level of Service (LOS)			B											A	A	
Approach Delay (s/veh)		11.0												3.9		
Approach LOS		B												A		

# HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	T. Eastwood	Intersection	Demer St & I-90 EB Ramps
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / FHWA
Date Performed	2/11/2026	East/West Street	I-90 EB Off-Ramp
Analysis Year	2026	North/South Street	Demer Street (S-263)
Time Analyzed	Weekday, PM Peak Hour	Peak Hour Factor	0.90
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Town Pump TIS   Existing Conditions		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0
Configuration			LTR								TR			LT		
Volume (veh/h)		9	0	49							204	75		63	218	
Percent Heavy Vehicles (%)		0	0	8										0		
Proportion Time Blocked																
Percent Grade (%)	2															
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2										4.1		
Critical Headway (sec)		7.50	6.90	6.48										4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3										2.2		
Follow-Up Headway (sec)		3.50	4.00	3.37										2.20		

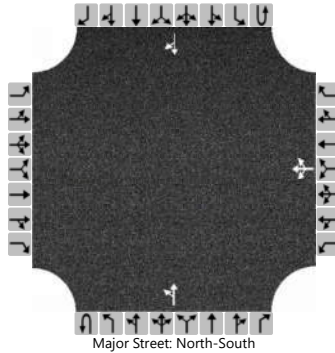
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			64											70		
Capacity, c (veh/h)			841											1262		
v/c Ratio			0.08											0.06		
95% Queue Length, Q <sub>95</sub> (veh)			0.2											0.2		
95% Queue Length, Q <sub>95</sub> (ft)			5.3											5.0		
Control Delay (s/veh)			9.6											8.0	0.5	
Level of Service (LOS)			A											A	A	
Approach Delay (s/veh)	9.6								9.6				2.2			
Approach LOS	A								A				A			

# HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	T. Eastwood	Intersection	Demer & I-90 WB Ramps
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / FHWA
Date Performed	2/11/2026	East/West Street	I-90 WB Off-Ramp
Analysis Year	2026	North/South Street	Demer Street (S-263)
Time Analyzed	Weekday, AM Peak Hour	Peak Hour Factor	0.77
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Town Pump TIS   Existing Conditions		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LTR			LT						TR
Volume (veh/h)						96	0	85		36	181				376	2
Percent Heavy Vehicles (%)						6	0	2		22						
Proportion Time Blocked						0.167	0.167	0.167		0.000						
Percent Grade (%)						2										
Right Turn Channelized																
Median Type   Storage					Undivided											

## Critical and Follow-up Headways

Base Critical Headway (sec)						7.1	6.5	6.2		4.1						
Critical Headway (sec)						7.56	6.90	6.42		4.32						
Base Follow-Up Headway (sec)						3.5	4.0	3.3		2.2						
Follow-Up Headway (sec)						3.55	4.00	3.32		2.40						

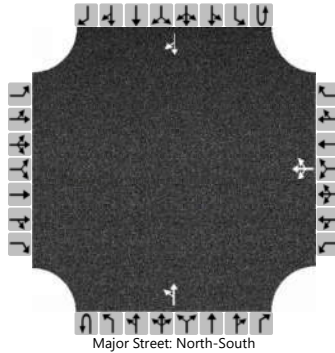
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						235				47						
Capacity, c (veh/h)						478				977						
v/c Ratio						0.49				0.05						
95% Queue Length, Q <sub>95</sub> (veh)						2.7				0.2						
95% Queue Length, Q <sub>95</sub> (ft)						69.7				5.9						
Control Delay (s/veh)						19.6				8.9	0.5					
Level of Service (LOS)						C				A	A					
Approach Delay (s/veh)					19.6				1.9							
Approach LOS					C				A							

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood	Intersection	Demer & I-90 WB Ramps				
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / FHWA				
Date Performed	2/11/2026	East/West Street	I-90 WB Off-Ramp				
Analysis Year	2026	North/South Street	Demer Street (S-263)				
Time Analyzed	Weekday, School PM Peak	Peak Hour Factor	0.79				
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25				
Project Description	Town Pump TIS   Existing Conditions						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes	0	0	0		0	1	0		0	0	1	0	0	0	1	0
Configuration							LTR			LT						TR
Volume (veh/h)						106	0	104		86	177				202	18
Percent Heavy Vehicles (%)						5	0	1		5						
Proportion Time Blocked																
Percent Grade (%)					2											
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)						7.1	6.5	6.2		4.1						
Critical Headway (sec)						7.55	6.90	6.41		4.15						
Base Follow-Up Headway (sec)						3.5	4.0	3.3		2.2						
Follow-Up Headway (sec)						3.55	4.00	3.31		2.25						

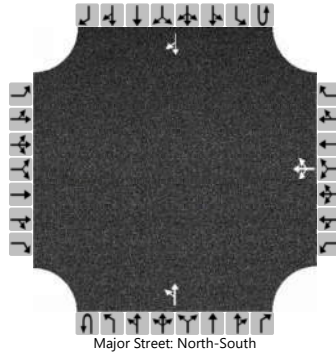
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						266				109						
Capacity, c (veh/h)						538				1267						
v/c Ratio						0.49				0.09						
95% Queue Length, Q <sub>95</sub> (veh)						2.7				0.3						
95% Queue Length, Q <sub>95</sub> (ft)						69.1				7.8						
Control Delay (s/veh)						18.0				8.1	0.8					
Level of Service (LOS)						C				A	A					
Approach Delay (s/veh)					18.0				3.2							
Approach LOS					C				A							

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Demer & I-90 WB Ramps		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / FHWA		
Date Performed	2/11/2026			East/West Street	I-90 WB Off-Ramp		
Analysis Year	2026			North/South Street	Demer Street (S-263)		
Time Analyzed	Weekday, PM Peak Hour			Peak Hour Factor	0.86		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Existing Conditions						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LTR			LT						TR
Volume (veh/h)						138	1	186		82	131				143	11
Percent Heavy Vehicles (%)						1	0	1		1						
Proportion Time Blocked																
Percent Grade (%)						2										
Right Turn Channelized																
Median Type   Storage					Undivided											

## Critical and Follow-up Headways

Base Critical Headway (sec)						7.1	6.5	6.2		4.1						
Critical Headway (sec)						7.51	6.90	6.41		4.11						
Base Follow-Up Headway (sec)						3.5	4.0	3.3		2.2						
Follow-Up Headway (sec)						3.51	4.00	3.31		2.21						

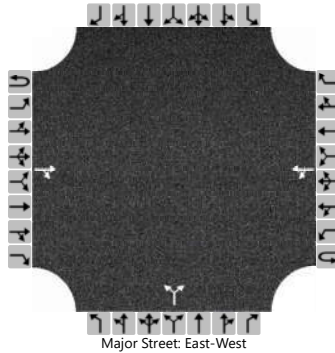
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						378				95						
Capacity, c (veh/h)						819				1403						
v/c Ratio						0.46				0.07						
95% Queue Length, Q <sub>95</sub> (veh)						2.5				0.2						
95% Queue Length, Q <sub>95</sub> (ft)						63.0				5.0						
Control Delay (s/veh)						13.1				7.8	0.6					
Level of Service (LOS)						B				A	A					
Approach Delay (s/veh)						13.1				3.3						
Approach LOS						B				A						

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Frontage Rd & Demer St		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Frenchtown Frontage Road (S-574)		
Analysis Year	2026			North/South Street	Demer Street (S-263)		
Time Analyzed	Weekday, AM Peak Hour			Peak Hour Factor	0.76		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Existing Conditions						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			48	259		119	112			200		66				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										-3						
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)						4.1					7.1		6.2			
Critical Headway (sec)						4.13					5.83		5.93			
Base Follow-Up Headway (sec)						2.2					3.5		3.3			
Follow-Up Headway (sec)						2.23					3.53		3.33			

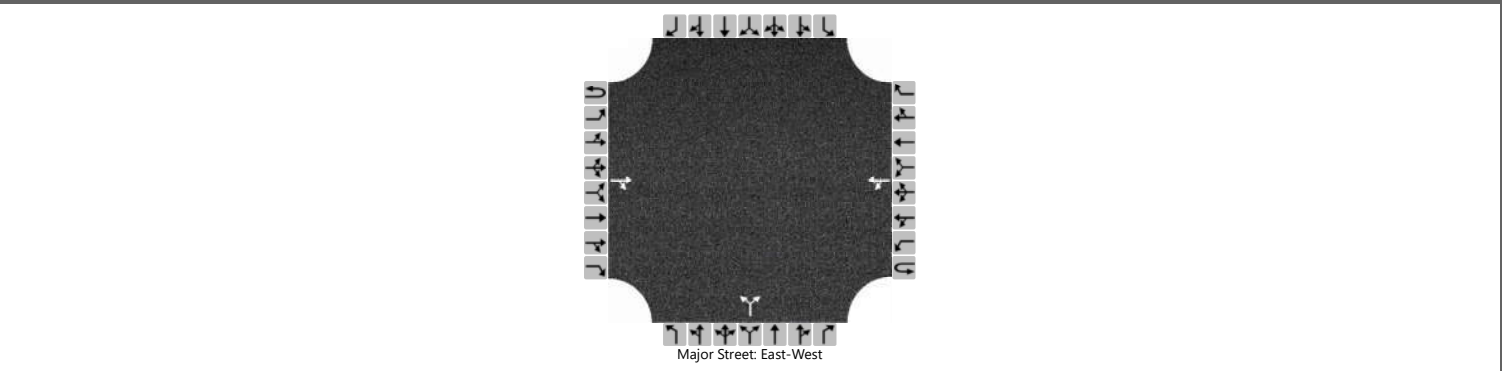
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						157						350				
Capacity, c (veh/h)						1149						512				
v/c Ratio						0.14						0.68				
95% Queue Length, Q <sub>95</sub> (veh)						0.5						5.2				
95% Queue Length, Q <sub>95</sub> (ft)						12.8						133.1				
Control Delay (s/veh)						8.6	1.3					25.9				
Level of Service (LOS)						A	A					D				
Approach Delay (s/veh)					5.1				25.9							
Approach LOS					A				D							

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Frontage Rd & Demer St		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Frenchtown Frontage Road (S-574)		
Analysis Year	2026			North/South Street	Demer Street (S-263)		
Time Analyzed	Weekday, School PM Peak			Peak Hour Factor	0.76		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Existing Conditions						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			74	169		51	35			185		96				
Percent Heavy Vehicles (%)						6				3		4				
Proportion Time Blocked																
Percent Grade (%)										-3						
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)						4.1					7.1		6.2			
Critical Headway (sec)						4.16					5.83		5.94			
Base Follow-Up Headway (sec)						2.2					3.5		3.3			
Follow-Up Headway (sec)						2.25					3.53		3.34			

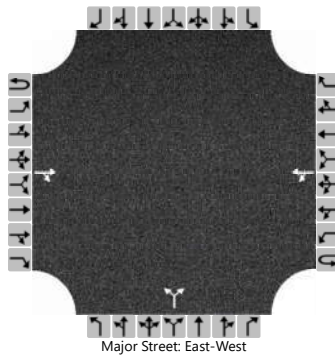
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)					67						370					
Capacity, c (veh/h)					1218						876					
v/c Ratio					0.06						0.42					
95% Queue Length, Q <sub>95</sub> (veh)					0.2						2.1					
95% Queue Length, Q <sub>95</sub> (ft)					5.2						53.9					
Control Delay (s/veh)					8.1	0.5					12.1					
Level of Service (LOS)					A	A					B					
Approach Delay (s/veh)					5.0				12.1							
Approach LOS					A				B							

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Frontage Rd & Demer St		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Frenchtown Frontage Road (S-574)		
Analysis Year	2026			North/South Street	Demer Street (S-263)		
Time Analyzed	Weekday, PM Peak Hour			Peak Hour Factor	0.84		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Existing Conditions						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			38	91		63	37			218		99				
Percent Heavy Vehicles (%)						2				1		3				
Proportion Time Blocked																
Percent Grade (%)										-3						
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				5.81		5.93				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.51		3.33				

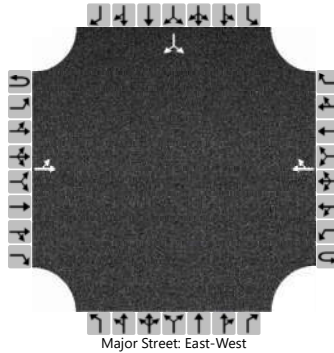
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						75						377				
Capacity, c (veh/h)						1427						960				
v/c Ratio						0.05						0.39				
95% Queue Length, Q <sub>95</sub> (veh)						0.2						1.9				
95% Queue Length, Q <sub>95</sub> (ft)						5.1						48.1				
Control Delay (s/veh)						7.7	0.4					11.2				
Level of Service (LOS)						A	A					B				
Approach Delay (s/veh)					5.0				11.2							
Approach LOS					A				B							

# HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	T. Eastwood	Intersection	Frontage Rd & Belker Ln
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / Missoula County
Date Performed	2/11/2026	East/West Street	Frenchtown Frontage Road (S-574)
Analysis Year	2026	North/South Street	Belker Lane
Time Analyzed	Weekday, AM Peak Hour	Peak Hour Factor	0.71
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Town Pump TIS   Existing Conditions		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		24	90				211	7						5		20
Percent Heavy Vehicles (%)		4												0		0
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.14												6.40		6.20
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.24												3.50		3.30

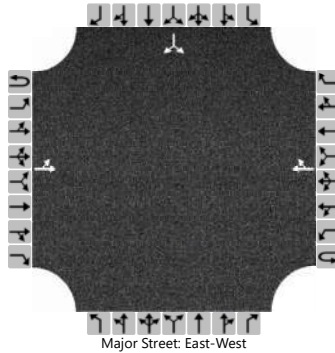
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		34														35
Capacity, c (veh/h)		1240														683
v/c Ratio		0.03														0.05
95% Queue Length, Q <sub>95</sub> (veh)		0.1														0.2
95% Queue Length, Q <sub>95</sub> (ft)		2.6														5.0
Control Delay (s/veh)		8.0	0.2													10.6
Level of Service (LOS)		A	A													B
Approach Delay (s/veh)		1.9												10.6		
Approach LOS		A												B		

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood	Intersection	Frontage Rd & Belker Ln				
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / Missoula County				
Date Performed	2/11/2026	East/West Street	Frenchtown Frontage Road (S-574)				
Analysis Year	2026	North/South Street	Belker Lane				
Time Analyzed	Weekday, School PM Peak	Peak Hour Factor	0.77				
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25				
Project Description	Town Pump TIS   Existing Conditions						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		21	149				67	5						6		19
Percent Heavy Vehicles (%)		0												17		0
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.10												6.57		6.20
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.65		3.30

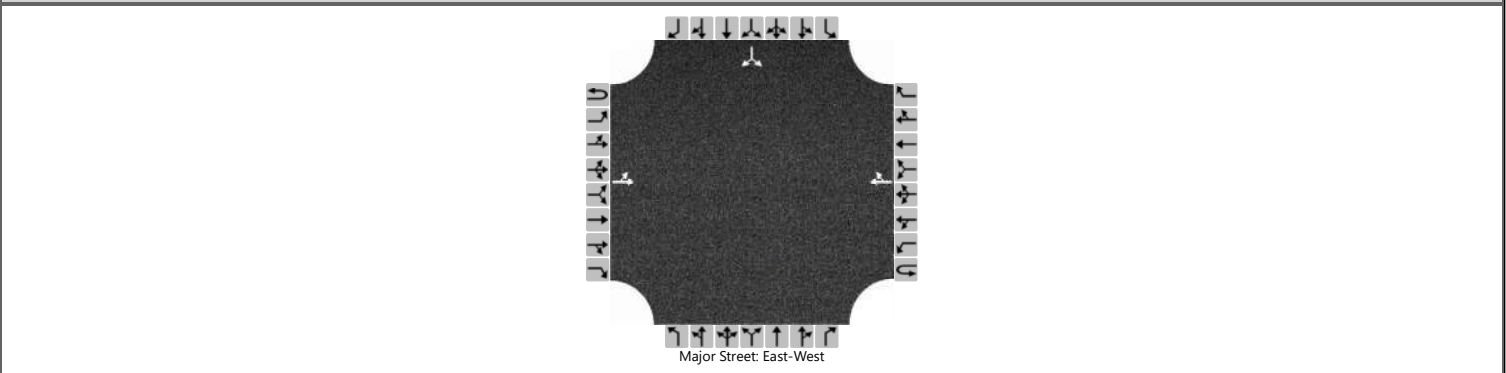
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		27													32	
Capacity, c (veh/h)		1508													850	
v/c Ratio		0.02													0.04	
95% Queue Length, Q <sub>95</sub> (veh)		0.1													0.1	
95% Queue Length, Q <sub>95</sub> (ft)		2.5													2.6	
Control Delay (s/veh)		7.4	0.2												9.4	
Level of Service (LOS)		A	A												A	
Approach Delay (s/veh)	1.0								1.0				9.4			
Approach LOS	A								A				A			

# HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	T. Eastwood	Intersection	Frontage Rd & Belker Ln
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / Missoula County
Date Performed	2/11/2026	East/West Street	Frenchtown Frontage Road (S-574)
Analysis Year	2026	North/South Street	Belker Lane
Time Analyzed	Weekday, PM Peak Hour	Peak Hour Factor	0.94
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Town Pump TIS   Existing Conditions		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		11	126				85	3						2		15
Percent Heavy Vehicles (%)		0												0		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.10												6.40		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.50		3.33

## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		12														18	
Capacity, c (veh/h)		1508														925	
v/c Ratio		0.01														0.02	
95% Queue Length, Q <sub>95</sub> (veh)		0.0														0.1	
95% Queue Length, Q <sub>95</sub> (ft)		0.0														2.6	
Control Delay (s/veh)		7.4	0.1													9.0	
Level of Service (LOS)		A	A													A	
Approach Delay (s/veh)		0.7												9.0			
Approach LOS		A												A			



# Appendix F

F-3

## IN THIS SECTION:

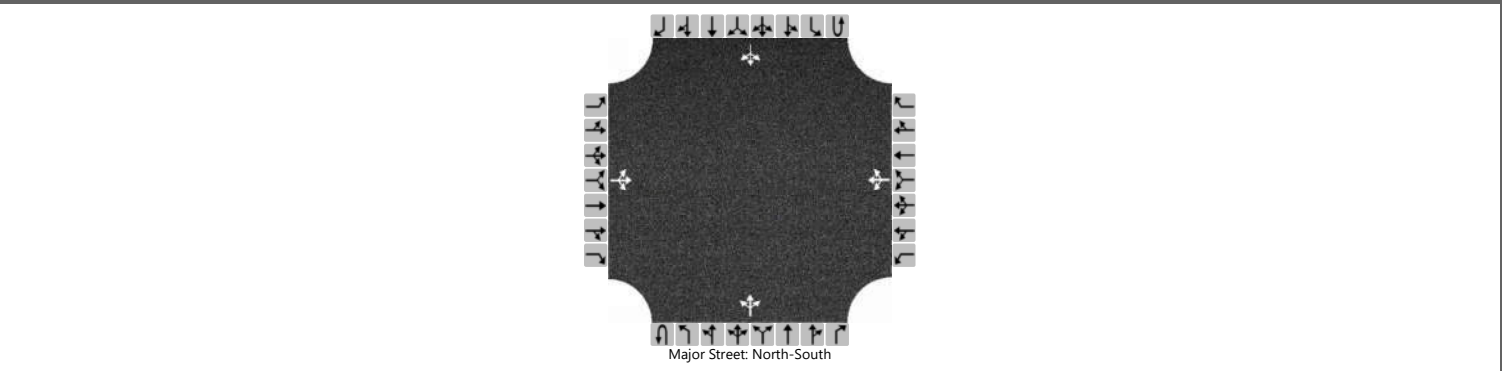
*Estimated 2028  
Background Traffic*



# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Duscharme & Marion		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	Missoula County		
Date Performed	2/11/2026			East/West Street	Marion Street		
Analysis Year	2028			North/South Street	Duscharme Street		
Time Analyzed	Weekday, AM Peak Hour			Peak Hour Factor	0.56		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Estimated Background Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		3	0	1		0	0	1		1	171	0		0	153	4
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked		0.167	0.167	0.000			0.167	0.167		0.000						
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		

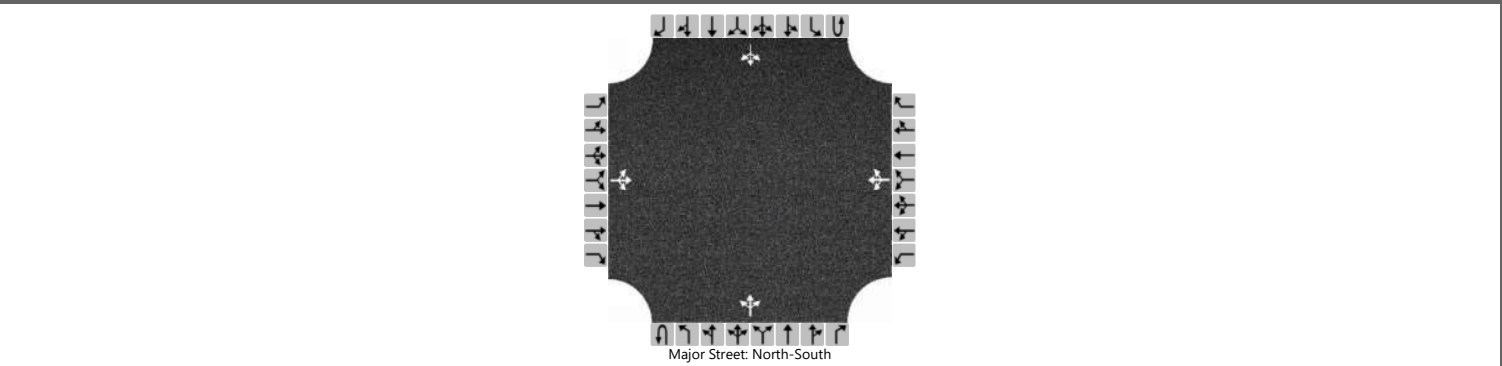
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			7				2			2				0		
Capacity, c (veh/h)			516				836			1294				1267		
v/c Ratio			0.01				0.00			0.00				0.00		
95% Queue Length, Q <sub>95</sub> (veh)			0.0				0.0			0.0				0.0		
95% Queue Length, Q <sub>95</sub> (ft)			0.0				0.0			0.0				0.0		
Control Delay (s/veh)			12.1				9.3			7.8	0.0	0.0		7.8	0.0	0.0
Level of Service (LOS)			B				A			A	A	A		A	A	A
Approach Delay (s/veh)	12.1				9.3				0.1				0.0			
Approach LOS	B				A				A				A			

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Duscharme & Marion		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	Missoula County		
Date Performed	2/11/2026			East/West Street	Marion Street		
Analysis Year	2028			North/South Street	Duscharme Street		
Time Analyzed	Weekday, School PM Peak			Peak Hour Factor	0.58		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Estimated Background Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		3	0	0		0	0	1		1	112	0		1	50	2
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked		0.167	0.167	0.000			0.167	0.167		0.000				0.000		
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		

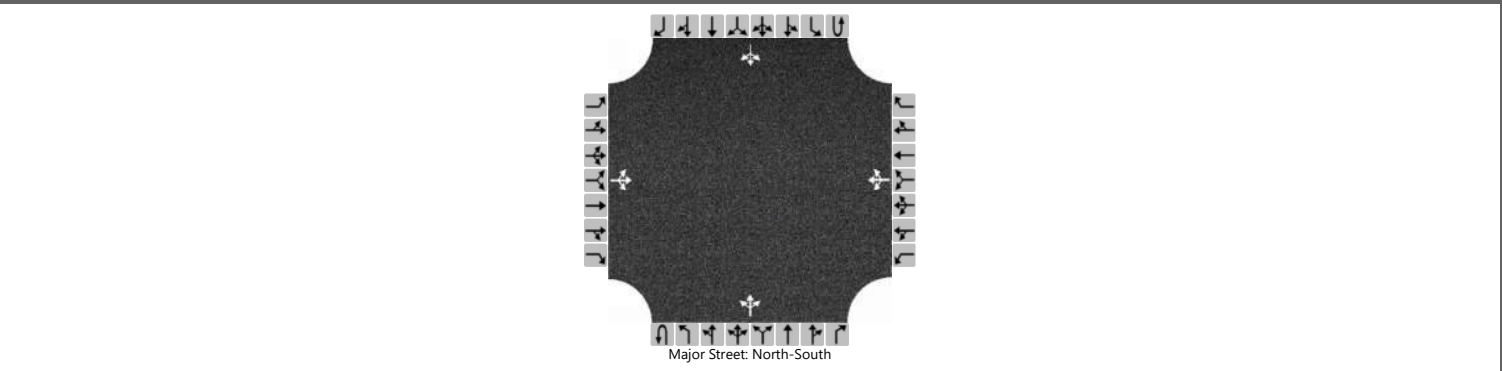
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			5				2			2				2		
Capacity, c (veh/h)			791				908			1508				1390		
v/c Ratio			0.01				0.00			0.00				0.00		
95% Queue Length, Q <sub>95</sub> (veh)			0.0				0.0			0.0				0.0		
95% Queue Length, Q <sub>95</sub> (ft)			0.0				0.0			0.0				0.0		
Control Delay (s/veh)			9.6				9.0			7.4	0.0	0.0		7.6	0.0	0.0
Level of Service (LOS)			A				A			A	A	A		A	A	A
Approach Delay (s/veh)	9.6				9.0				0.1				0.2			
Approach LOS	A				A				A				A			

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Duscharme & Marion		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	Missoula County		
Date Performed	2/11/2026			East/West Street	Marion Street		
Analysis Year	2028			North/South Street	Duscharme Street		
Time Analyzed	Weekday, PM Peak Hour			Peak Hour Factor	0.83		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Estimated Background Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		6	0	0		0	0	0		0	55	0		1	66	5
Percent Heavy Vehicles (%)		17	0	0		0	0	0		0				0		
Proportion Time Blocked		0.167	0.167	0.000			0.167	0.167						0.000		
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.27	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.65	4.00	3.30		3.50	4.00	3.30		2.20				2.20		

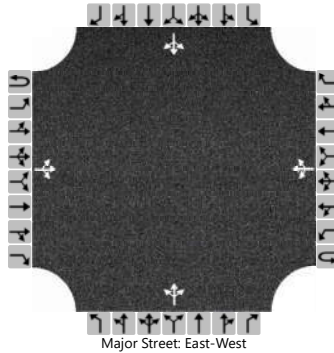
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			7				0			0				1		
Capacity, c (veh/h)			820				0			1524				1548		
v/c Ratio			0.01							0.00				0.00		
95% Queue Length, Q <sub>95</sub> (veh)			0.0							0.0				0.0		
95% Queue Length, Q <sub>95</sub> (ft)			0.0							0.0				0.0		
Control Delay (s/veh)			9.4							7.4	0.0	0.0		7.3	0.0	0.0
Level of Service (LOS)			A							A	A	A		A	A	A
Approach Delay (s/veh)	9.4								0.0				0.1			
Approach LOS	A								A				A			

# HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	T. Eastwood	Intersection	Beckwith & Duscharme
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / Missoula County
Date Performed	2/11/2026	East/West Street	Beckwith Street (S-263)
Analysis Year	2028	North/South Street	Duscharme Street
Time Analyzed	Weekday, AM Peak Hour	Peak Hour Factor	0.62
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Town Pump TIS   Estimated Background Traffic		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		8	153	137		18	153	7		144	5	26		2	2	5
Percent Heavy Vehicles (%)		0				0				4	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.14	6.50	6.20		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.54	4.00	3.30		3.50	4.00	3.30

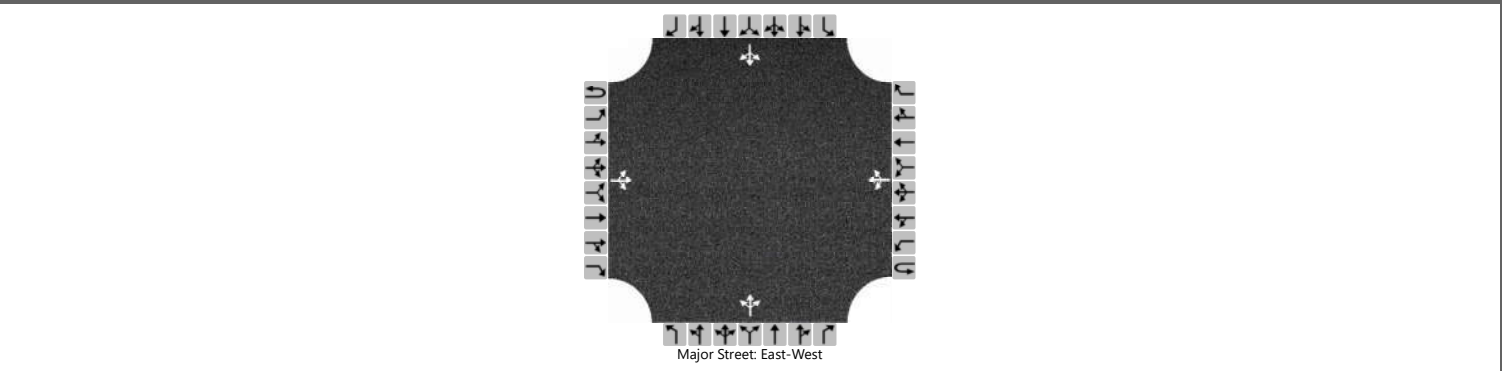
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		13				29					282				15	
Capacity, c (veh/h)		1318				1104					386				463	
v/c Ratio		0.01				0.03					0.73				0.03	
95% Queue Length, Q <sub>95</sub> (veh)		0.0				0.1					5.7				0.1	
95% Queue Length, Q <sub>95</sub> (ft)		0.0				2.5					146.3				2.5	
Control Delay (s/veh)		7.8	0.1	0.1		8.3	0.3	0.3			35.8				13.0	
Level of Service (LOS)		A	A	A		A	A	A			E				B	
Approach Delay (s/veh)		0.3			1.1					35.8				13.0		
Approach LOS		A			A					E				B		

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Beckwith & Duscharme		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Beckwith Street (S-263)		
Analysis Year	2028			North/South Street	Duscharme Street		
Time Analyzed	Weekday, School PM Peak			Peak Hour Factor	0.75		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Estimated Background Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Priority																	
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		5	155	37		15	213	5		83	2	31		6	1	2	
Percent Heavy Vehicles (%)		0				0				14	0	13		0	0	0	
Proportion Time Blocked																	
Percent Grade (%)										0				0			
Right Turn Channelized																	
Median Type   Storage	Undivided																

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.24	6.50	6.33		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.63	4.00	3.42		3.50	4.00	3.30

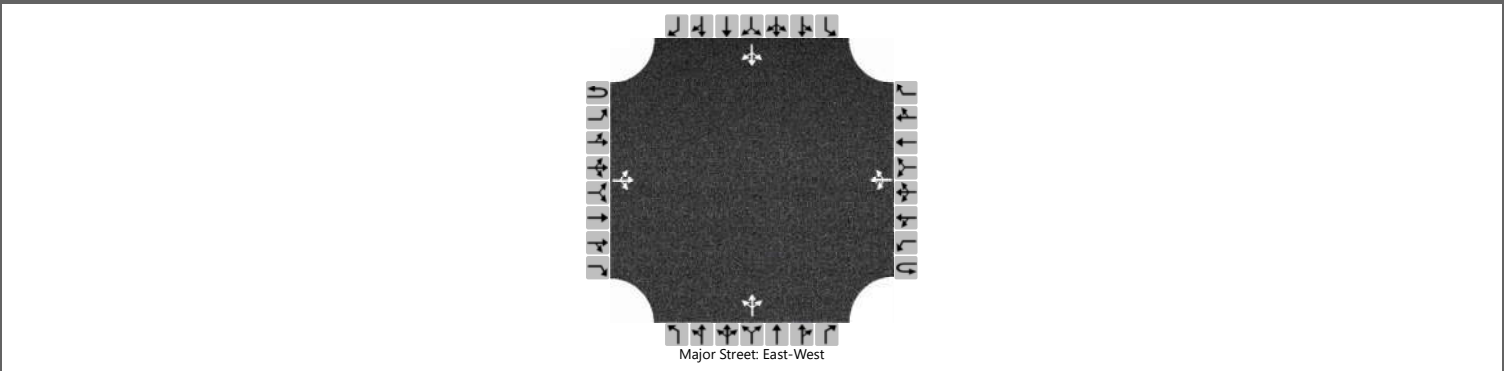
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		7				20					155					12
Capacity, c (veh/h)		1283				1321					535					435
v/c Ratio		0.01				0.02					0.29					0.03
95% Queue Length, Q <sub>95</sub> (veh)		0.0				0.0					1.2					0.1
95% Queue Length, Q <sub>95</sub> (ft)		0.0				0.0					33.2					2.5
Control Delay (s/veh)		7.8	0.0	0.0		7.8	0.1	0.1			14.4					13.5
Level of Service (LOS)		A	A	A		A	A	A			B					B
Approach Delay (s/veh)		0.2			0.6					14.4			13.5			
Approach LOS		A			A					B			B			

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Beckwith & Duscharme		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Beckwith Street (S-263)		
Analysis Year	2028			North/South Street	Duscharme Street		
Time Analyzed	Weekday, PM Peak Hour			Peak Hour Factor	0.94		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Estimated Background Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Priority																	
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		4	140	54		18	149	3		43	1	18		1	0	3	
Percent Heavy Vehicles (%)		25				6				5	0	11		0	0	0	
Proportion Time Blocked																	
Percent Grade (%)										0				0			
Right Turn Channelized																	
Median Type   Storage	Undivided																

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.35				4.16				7.15	6.50	6.31		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.43				2.25				3.55	4.00	3.40		3.50	4.00	3.30

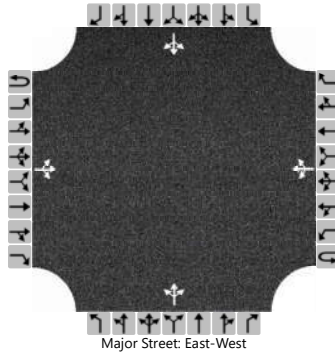
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		4				19					66				4	
Capacity, c (veh/h)		1279				1341					753				762	
v/c Ratio		0.00				0.01					0.09				0.01	
95% Queue Length, Q <sub>95</sub> (veh)		0.0				0.0					0.3				0.0	
95% Queue Length, Q <sub>95</sub> (ft)		0.0				0.0					7.9				0.0	
Control Delay (s/veh)		7.8	0.0	0.0		7.7	0.1	0.1			10.2				9.8	
Level of Service (LOS)		A	A	A		A	A	A			B				A	
Approach Delay (s/veh)		0.2			0.9			10.2				9.8				
Approach LOS		A			A			B				A				

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Beckwith & Demer		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Beckwith Street (S-263)		
Analysis Year	2028			North/South Street	Demer Street (S-263)		
Time Analyzed	Weekday, AM Peak Hour			Peak Hour Factor	0.70		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Estimated Background Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		49	31	4		8	18	367		1	10	2		341	32	21
Percent Heavy Vehicles (%)		4				0				0	20	50		6	9	0
Proportion Time Blocked																
Percent Grade (%)									2				-1			
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

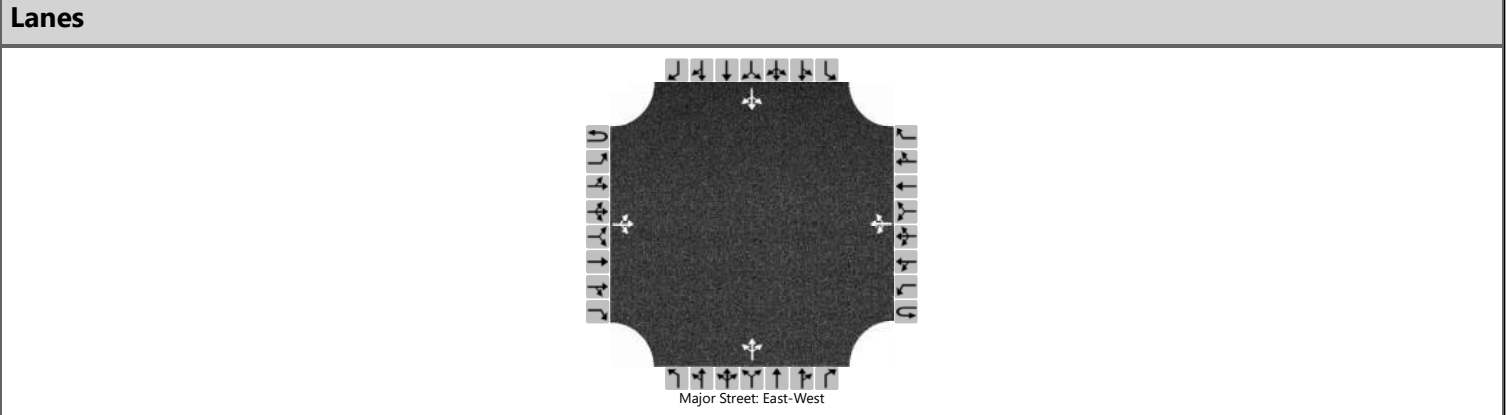
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.14				4.10				7.50	7.10	6.90		6.96	6.39	6.10
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.24				2.20				3.50	4.18	3.75		3.55	4.08	3.30

## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		70				11				19				563		
Capacity, c (veh/h)		1010				1570				304				445		
v/c Ratio		0.07				0.01				0.06				1.26		
95% Queue Length, Q <sub>95</sub> (veh)		0.2				0.0				0.2				23.6		
95% Queue Length, Q <sub>95</sub> (ft)		5.0				0.0				5.9				618.0		
Control Delay (s/veh)		8.8	0.6	0.6		7.3	0.1	0.1		17.6				162.5		
Level of Service (LOS)		A	A	A		A	A	A		C				F		
Approach Delay (s/veh)	5.4				0.2				17.6				162.5			
Approach LOS	A				A				C				F			

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Beckwith & Demer		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Beckwith Street (S-263)		
Analysis Year	2028			North/South Street	Demer Street (S-263)		
Time Analyzed	Weekday, School PM			Peak Hour Factor	0.81		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Estimated Background Traffic						



**Vehicle Volumes and Adjustments**

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Priority																	
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		43	24	6		11	28	334		4	7	3		200	31	30	
Percent Heavy Vehicles (%)		0				9				0	0	0		5	3	3	
Proportion Time Blocked																	
Percent Grade (%)										2				-1			
Right Turn Channelized																	
Median Type   Storage	Undivided																

**Critical and Follow-up Headways**

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.19				7.50	6.90	6.40		6.95	6.33	6.13
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.28				3.50	4.00	3.30		3.55	4.03	3.33

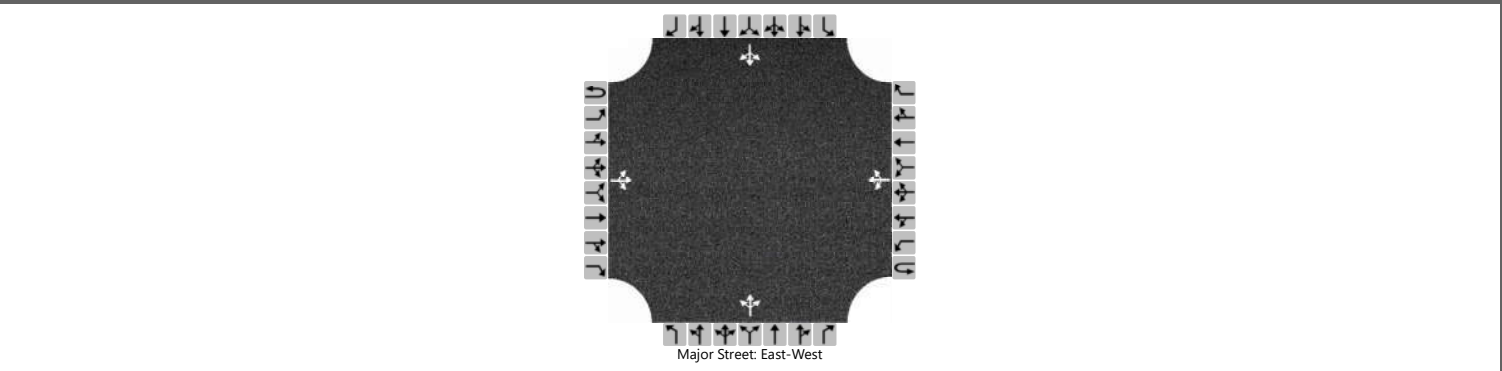
**Delay, Queue Length, and Level of Service**

Flow Rate, v (veh/h)		53				14					17					322
Capacity, c (veh/h)		1124				1527					438					573
v/c Ratio		0.05				0.01					0.04					0.56
95% Queue Length, Q <sub>95</sub> (veh)		0.1				0.0					0.1					3.5
95% Queue Length, Q <sub>95</sub> (ft)		2.5				0.0					2.5					90.7
Control Delay (s/veh)		8.4	0.4	0.4		7.4	0.1	0.1			13.6					19.0
Level of Service (LOS)		A	A	A		A	A	A			B					C
Approach Delay (s/veh)		5.1				0.3				13.6				19.0		
Approach LOS		A				A				B				C		

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Beckwith & Demer		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Beckwith Street (S-263)		
Analysis Year	2028			North/South Street	Demer Street (S-263)		
Time Analyzed	Weekday, PM Peak Hour			Peak Hour Factor	0.90		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Estimated Background Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Priority																	
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		36	15	5		11	26	238		5	10	4		216	37	46	
Percent Heavy Vehicles (%)		3				0				20	0	0		3	3	2	
Proportion Time Blocked																	
Percent Grade (%)										2				-1			
Right Turn Channelized																	
Median Type   Storage	Undivided																

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.10				7.70	6.90	6.40		6.93	6.33	6.12
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.20				3.68	4.00	3.30		3.53	4.03	3.32

## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		40				12					21					332
Capacity, c (veh/h)		1263				1606					546					727
v/c Ratio		0.03				0.01					0.04					0.46
95% Queue Length, Q <sub>95</sub> (veh)		0.1				0.0					0.1					2.4
95% Queue Length, Q <sub>95</sub> (ft)		2.5				0.0					2.6					61.4
Control Delay (s/veh)		7.9	0.3	0.3		7.3	0.1	0.1			11.9					14.0
Level of Service (LOS)		A	A	A		A	A	A			B					B
Approach Delay (s/veh)		5.2			0.4					11.9			14.0			
Approach LOS		A			A					B			B			

# HCS Two-Way Stop-Control Report

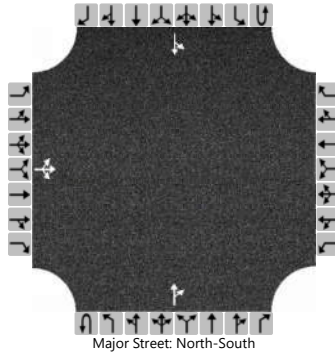
## General Information

Analyst	T. Eastwood
Agency/Co.	E5 Engineering, PLLC
Date Performed	2/11/2026
Analysis Year	2028
Time Analyzed	Weekday, AM Peak Hour
Intersection Orientation	North-South
Project Description	Town Pump TIS   Estimated Background Traffic

## Site Information

Intersection	Demer St & I-90 EB Ramps
Jurisdiction	MDT / FHWA
East/West Street	I-90 EB Off-Ramp
North/South Street	Demer Street (S-263)
Peak Hour Factor	0.73
Analysis Time Period (hrs)	0.25

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0
Configuration			LTR								TR			LT		
Volume (veh/h)		20	0	112							205	226		237	287	
Percent Heavy Vehicles (%)		6	0	2										1		
Proportion Time Blocked		0.167	0.167	0.167										0.167		
Percent Grade (%)	2															
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2										4.1		
Critical Headway (sec)		7.56	6.90	6.42										4.11		
Base Follow-Up Headway (sec)		3.5	4.0	3.3										2.2		
Follow-Up Headway (sec)		3.55	4.00	3.32										2.21		

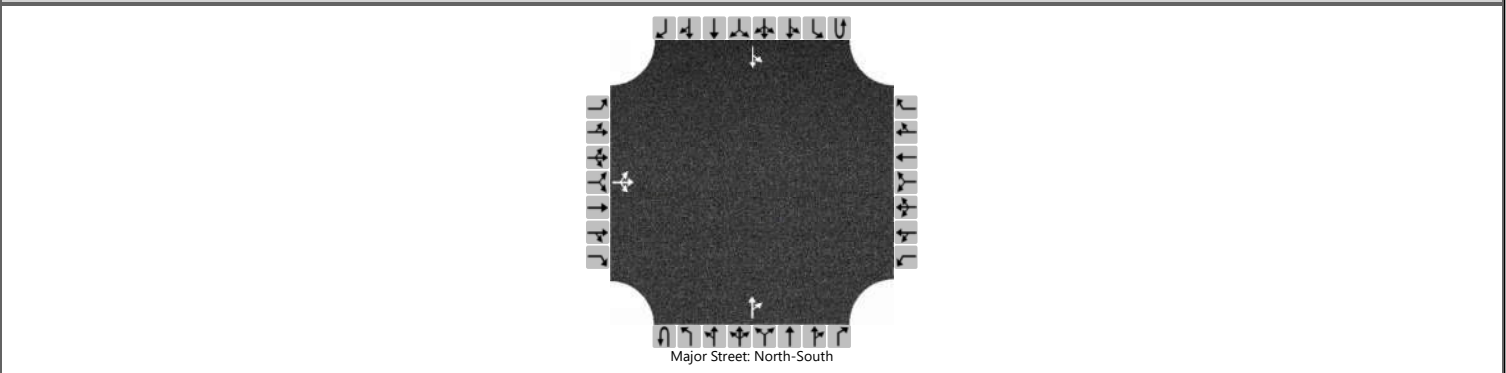
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			181										325			
Capacity, c (veh/h)			259										963			
v/c Ratio			0.70										0.34			
95% Queue Length, Q <sub>95</sub> (veh)			4.7										1.5			
95% Queue Length, Q <sub>95</sub> (ft)			119.9										37.8			
Control Delay (s/veh)			45.7										10.6	4.6		
Level of Service (LOS)			E										B	A		
Approach Delay (s/veh)	45.7												7.3			
Approach LOS	E												A			

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Demer St & I-90 EB Ramps		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / FHWA		
Date Performed	2/11/2026			East/West Street	I-90 EB Off-Ramp		
Analysis Year	2028			North/South Street	Demer Street (S-263)		
Time Analyzed	Weekday, School PM Peak			Peak Hour Factor	0.80		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Estimated Background Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration			LTR									TR		LT			
Volume (veh/h)		13	0	44							259	130		124	222		
Percent Heavy Vehicles (%)		0	0	3										5			
Proportion Time Blocked																	
Percent Grade (%)		2															
Right Turn Channelized																	
Median Type   Storage		Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2										4.1		
Critical Headway (sec)		7.50	6.90	6.43										4.15		
Base Follow-Up Headway (sec)		3.5	4.0	3.3										2.2		
Follow-Up Headway (sec)		3.50	4.00	3.33										2.25		

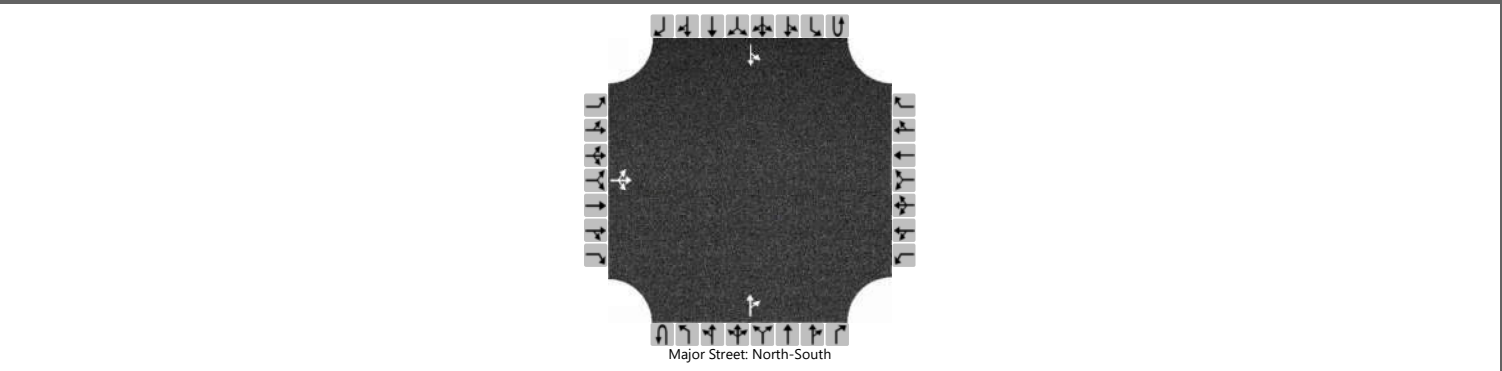
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			71											155			
Capacity, c (veh/h)			585											1061			
v/c Ratio			0.12											0.15			
95% Queue Length, Q <sub>95</sub> (veh)			0.4											0.5			
95% Queue Length, Q <sub>95</sub> (ft)			10.2											13.0			
Control Delay (s/veh)			12.0											9.0	1.5		
Level of Service (LOS)			B											A	A		
Approach Delay (s/veh)		12.0												4.2			
Approach LOS		B												A			

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Demer St & I-90 EB Ramps		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / FHWA		
Date Performed	2/11/2026			East/West Street	I-90 EB Off-Ramp		
Analysis Year	2028			North/South Street	Demer Street (S-263)		
Time Analyzed	Weekday, PM Peak Hour			Peak Hour Factor	0.90		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Estimated Background Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration			LTR									TR		LT			
Volume (veh/h)		11	0	57							218	86		72	268		
Percent Heavy Vehicles (%)		0	0	8										0			
Proportion Time Blocked																	
Percent Grade (%)		2															
Right Turn Channelized																	
Median Type   Storage		Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2										4.1		
Critical Headway (sec)		7.50	6.90	6.48										4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3										2.2		
Follow-Up Headway (sec)		3.50	4.00	3.37										2.20		

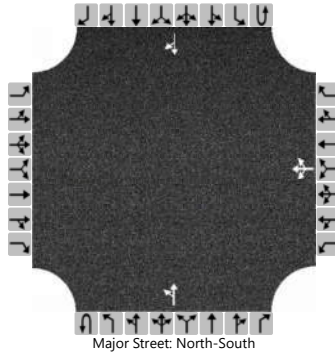
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			76											80		
Capacity, c (veh/h)			766											1233		
v/c Ratio			0.10											0.06		
95% Queue Length, Q <sub>95</sub> (veh)			0.3											0.2		
95% Queue Length, Q <sub>95</sub> (ft)			7.9											5.0		
Control Delay (s/veh)			10.2											8.1	0.6	
Level of Service (LOS)			B											A	A	
Approach Delay (s/veh)		10.2												2.2		
Approach LOS		B												A		

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood	Intersection	Demer & I-90 WB Ramps				
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / FHWA				
Date Performed	2/11/2026	East/West Street	I-90 WB Off-Ramp				
Analysis Year	2028	North/South Street	Demer Street (S-263)				
Time Analyzed	Weekday, AM Peak Hour	Peak Hour Factor	0.77				
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25				
Project Description	Town Pump TIS   Estimated Background Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LTR			LT						TR
Volume (veh/h)						114	0	101		38	187				410	2
Percent Heavy Vehicles (%)						6	0	2		22						
Proportion Time Blocked						0.167	0.167	0.167		0.000						
Percent Grade (%)						2										
Right Turn Channelized																
Median Type   Storage					Undivided											

## Critical and Follow-up Headways

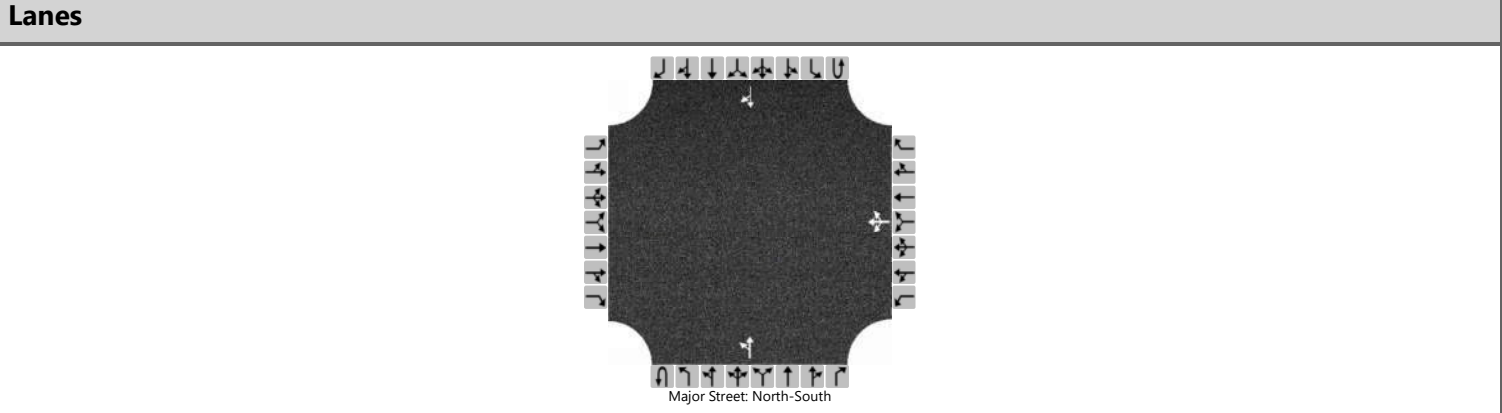
Base Critical Headway (sec)						7.1	6.5	6.2		4.1						
Critical Headway (sec)						7.56	6.90	6.42		4.32						
Base Follow-Up Headway (sec)						3.5	4.0	3.3		2.2						
Follow-Up Headway (sec)						3.55	4.00	3.32		2.40						

## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						279				49						
Capacity, c (veh/h)						427				939						
v/c Ratio						0.65				0.05						
95% Queue Length, Q <sub>95</sub> (veh)						4.5				0.2						
95% Queue Length, Q <sub>95</sub> (ft)						116.2				5.9						
Control Delay (s/veh)						28.0				9.0	0.5					
Level of Service (LOS)						D				A	A					
Approach Delay (s/veh)					28.0				2.0							
Approach LOS					D				A							

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Demer & I-90 WB Ramps		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / FHWA		
Date Performed	2/11/2026			East/West Street	I-90 WB Off-Ramp		
Analysis Year	2028			North/South Street	Demer Street (S-263)		
Time Analyzed	Weekday, School PM Peak			Peak Hour Factor	0.79		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Estimated Background Traffic						



**Vehicle Volumes and Adjustments**

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LTR			LT						TR
Volume (veh/h)						126	0	124		90	182				220	19
Percent Heavy Vehicles (%)						5	0	1		5						
Proportion Time Blocked																
Percent Grade (%)					2											
Right Turn Channelized																
Median Type   Storage	Undivided															

**Critical and Follow-up Headways**

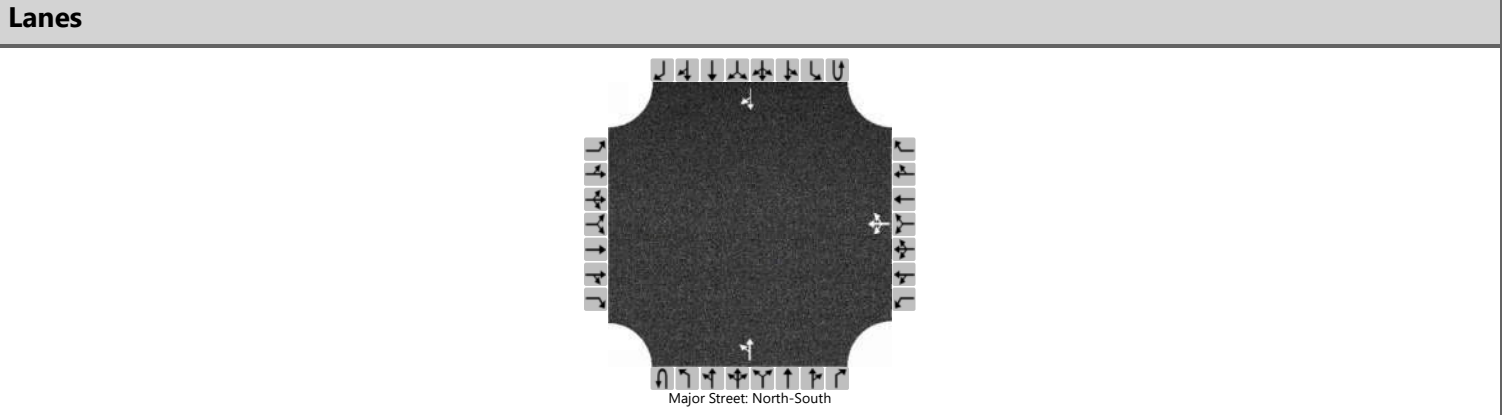
Base Critical Headway (sec)						7.1	6.5	6.2		4.1						
Critical Headway (sec)						7.55	6.90	6.41		4.15						
Base Follow-Up Headway (sec)						3.5	4.0	3.3		2.2						
Follow-Up Headway (sec)						3.55	4.00	3.31		2.25						

**Delay, Queue Length, and Level of Service**

Flow Rate, v (veh/h)						316				114						
Capacity, c (veh/h)						504				1242						
v/c Ratio						0.63				0.09						
95% Queue Length, Q <sub>95</sub> (veh)						4.3				0.3						
95% Queue Length, Q <sub>95</sub> (ft)						110.1				7.8						
Control Delay (s/veh)						23.5				8.2	0.9					
Level of Service (LOS)						C				A	A					
Approach Delay (s/veh)					23.5				3.3							
Approach LOS					C				A							

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood	Intersection	Demer & I-90 WB Ramps				
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / FHWA				
Date Performed	2/11/2026	East/West Street	I-90 WB Off-Ramp				
Analysis Year	2028	North/South Street	Demer Street (S-263)				
Time Analyzed	Weekday, PM Peak Hour	Peak Hour Factor	0.86				
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25				
Project Description	Town Pump TIS   Estimated Background Traffic						



**Vehicle Volumes and Adjustments**

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LTR			LT						TR
Volume (veh/h)						184	1	202		86	143				156	12
Percent Heavy Vehicles (%)						1	0	1		1						
Proportion Time Blocked																
Percent Grade (%)						2										
Right Turn Channelized																
Median Type   Storage					Undivided											

**Critical and Follow-up Headways**

Base Critical Headway (sec)						7.1	6.5	6.2		4.1						
Critical Headway (sec)						7.51	6.90	6.41		4.11						
Base Follow-Up Headway (sec)						3.5	4.0	3.3		2.2						
Follow-Up Headway (sec)						3.51	4.00	3.31		2.21						

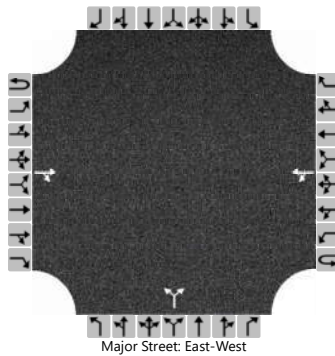
**Delay, Queue Length, and Level of Service**

Flow Rate, v (veh/h)						450				100						
Capacity, c (veh/h)						724				1384						
v/c Ratio						0.62				0.07						
95% Queue Length, Q <sub>95</sub> (veh)						4.4				0.2						
95% Queue Length, Q <sub>95</sub> (ft)						110.9				5.0						
Control Delay (s/veh)						17.8				7.8	0.6					
Level of Service (LOS)						C				A	A					
Approach Delay (s/veh)						17.8				3.3						
Approach LOS						C				A						

# HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	T. Eastwood	Intersection	Frontage Rd & Demer St
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / Missoula County
Date Performed	2/11/2026	East/West Street	Frenchtown Frontage Road (S-574)
Analysis Year	2028	North/South Street	Demer Street (S-263)
Time Analyzed	Weekday, AM Peak Hour	Peak Hour Factor	0.76
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Town Pump TIS   Estimated Background Traffic		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			52	279		133	121			215		73				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										-3						
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)						4.1					7.1		6.2			
Critical Headway (sec)						4.13					5.83		5.93			
Base Follow-Up Headway (sec)						2.2					3.5		3.3			
Follow-Up Headway (sec)						2.23					3.53		3.33			

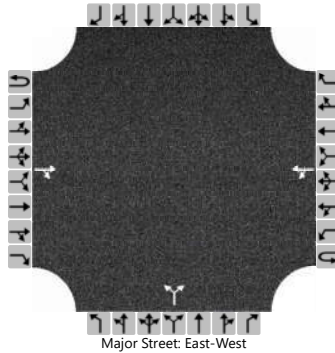
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						175						379				
Capacity, c (veh/h)						1119						463				
v/c Ratio						0.16						0.82				
95% Queue Length, Q <sub>95</sub> (veh)						0.6						7.8				
95% Queue Length, Q <sub>95</sub> (ft)						15.4						199.7				
Control Delay (s/veh)						8.8	1.5					39.1				
Level of Service (LOS)						A	A					E				
Approach Delay (s/veh)					5.3				39.1							
Approach LOS					A				E							

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Frontage Rd & Demer St		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Frenchtown Frontage Road (S-574)		
Analysis Year	2028			North/South Street	Demer Street (S-263)		
Time Analyzed	Weekday, School PM Peak			Peak Hour Factor	0.76		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Background Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			80	182		57	38			199		107				
Percent Heavy Vehicles (%)						6				3		4				
Proportion Time Blocked																
Percent Grade (%)										-3						
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)						4.1					7.1		6.2			
Critical Headway (sec)						4.16					5.83		5.94			
Base Follow-Up Headway (sec)						2.2					3.5		3.3			
Follow-Up Headway (sec)						2.25					3.53		3.34			

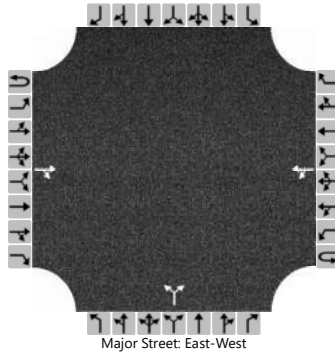
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)					75						403					
Capacity, c (veh/h)					1192						842					
v/c Ratio					0.06						0.48					
95% Queue Length, Q <sub>95</sub> (veh)					0.2						2.6					
95% Queue Length, Q <sub>95</sub> (ft)					5.2						66.7					
Control Delay (s/veh)					8.2	0.5					13.1					
Level of Service (LOS)					A	A					B					
Approach Delay (s/veh)					5.1				13.1							
Approach LOS					A				B							

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Frontage Rd & Demer St		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Frenchtown Frontage Road (S-574)		
Analysis Year	2028			North/South Street	Demer Street (S-263)		
Time Analyzed	Weekday, PM Peak Hour			Peak Hour Factor	0.84		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Estimated Background Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			41	98		70	40			235		110				
Percent Heavy Vehicles (%)						2				1		3				
Proportion Time Blocked																
Percent Grade (%)										-3						
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)						4.1					7.1		6.2			
Critical Headway (sec)						4.12					5.81		5.93			
Base Follow-Up Headway (sec)						2.2					3.5		3.3			
Follow-Up Headway (sec)						2.22					3.51		3.33			

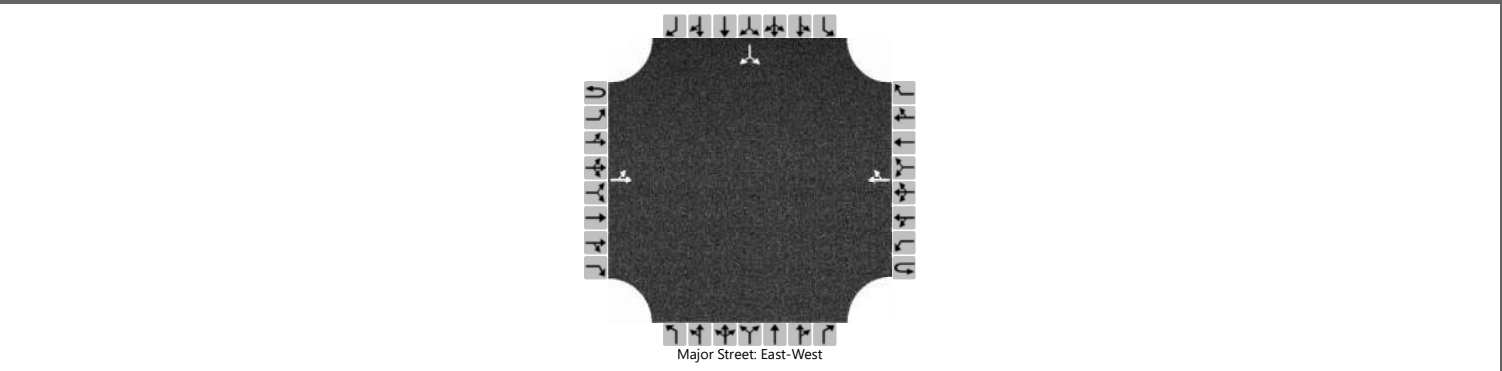
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						83						411				
Capacity, c (veh/h)						1413						932				
v/c Ratio						0.06						0.44				
95% Queue Length, Q <sub>95</sub> (veh)						0.2						2.3				
95% Queue Length, Q <sub>95</sub> (ft)						5.1						58.3				
Control Delay (s/veh)						7.7	0.5					11.9				
Level of Service (LOS)						A	A					B				
Approach Delay (s/veh)					5.1				11.9							
Approach LOS					A				B							

# HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	T. Eastwood	Intersection	Frontage Rd & Belker Ln
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / Missoula County
Date Performed	2/11/2026	East/West Street	Frenchtown Frontage Road (S-574)
Analysis Year	2028	North/South Street	Belker Lane
Time Analyzed	Weekday, AM Peak Hour	Peak Hour Factor	0.71
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Town Pump TIS   Estimated Background Traffic		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		26	99				232	8						5		22
Percent Heavy Vehicles (%)		4												0		0
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.14												6.40		6.20
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.24												3.50		3.30

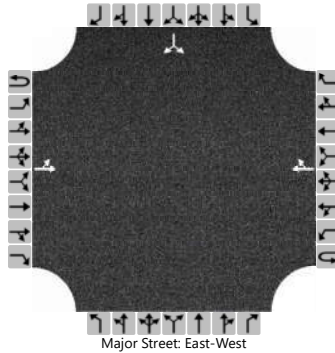
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		37														38	
Capacity, c (veh/h)		1208														656	
v/c Ratio		0.03														0.06	
95% Queue Length, Q <sub>95</sub> (veh)		0.1														0.2	
95% Queue Length, Q <sub>95</sub> (ft)		2.6														5.0	
Control Delay (s/veh)		8.1	0.3													10.8	
Level of Service (LOS)		A	A													B	
Approach Delay (s/veh)		1.9												10.8			
Approach LOS		A												B			

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood	Intersection	Frontage Rd & Belker Ln				
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / Missoula County				
Date Performed	2/11/2026	East/West Street	Frenchtown Frontage Road (S-574)				
Analysis Year	2028	North/South Street	Belker Lane				
Time Analyzed	Weekday, School PM Peak	Peak Hour Factor	0.77				
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25				
Project Description	Town Pump TIS   Estimated Background Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		23	164				74	5						6		21
Percent Heavy Vehicles (%)		0												17		0
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.10												6.57		6.20
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.65		3.30

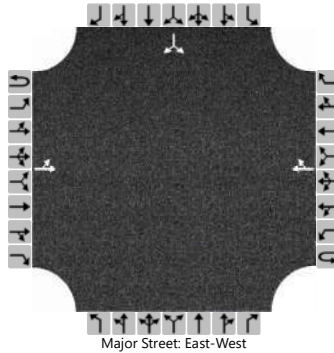
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		30														35	
Capacity, c (veh/h)		1497														838	
v/c Ratio		0.02														0.04	
95% Queue Length, Q <sub>95</sub> (veh)		0.1														0.1	
95% Queue Length, Q <sub>95</sub> (ft)		2.5														2.6	
Control Delay (s/veh)		7.5	0.2													9.5	
Level of Service (LOS)		A	A													A	
Approach Delay (s/veh)		1.1								1.1				9.5			
Approach LOS		A								A				A			

# HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	T. Eastwood	Intersection	Frontage Rd & Belker Ln
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / Missoula County
Date Performed	2/11/2026	East/West Street	Frenchtown Frontage Road (S-574)
Analysis Year	2028	North/South Street	Belker Lane
Time Analyzed	Weekday, PM Peak Hour	Peak Hour Factor	0.94
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Town Pump TIS   Estimated Background Traffic		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		12	139				94	3						2		16
Percent Heavy Vehicles (%)		0												0		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.10												6.40		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.50		3.33

## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		13														19	
Capacity, c (veh/h)		1496														913	
v/c Ratio		0.01														0.02	
95% Queue Length, Q <sub>95</sub> (veh)		0.0														0.1	
95% Queue Length, Q <sub>95</sub> (ft)		0.0														2.6	
Control Delay (s/veh)		7.4	0.1													9.0	
Level of Service (LOS)		A	A													A	
Approach Delay (s/veh)		0.7												9.0			
Approach LOS		A												A			



# Appendix F

## IN THIS SECTION:

*Estimated 2028  
Total Traffic*

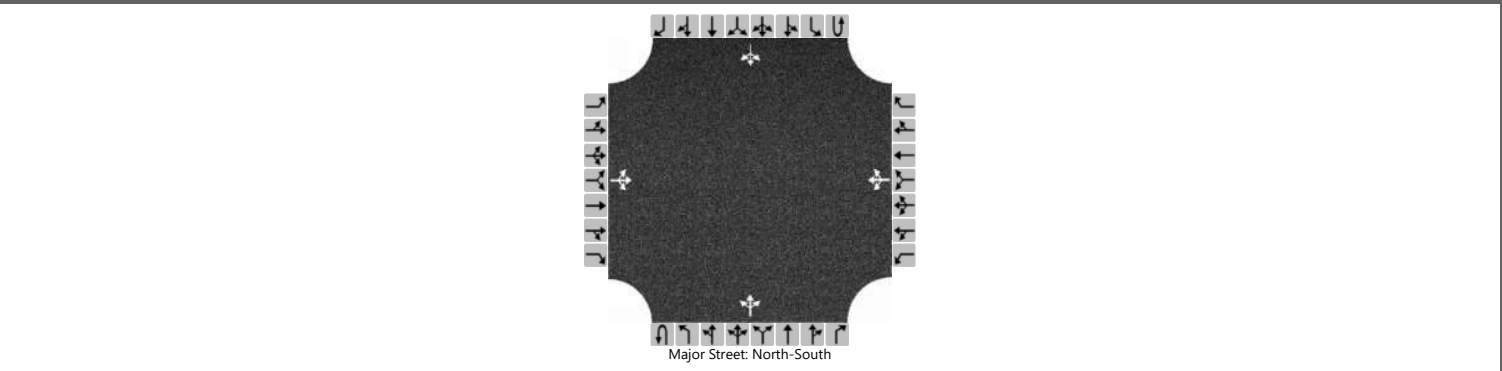
F-4



# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Duscharme & Marion		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	Missoula County		
Date Performed	2/11/2026			East/West Street	Marion Street		
Analysis Year	2028			North/South Street	Duscharme Street		
Time Analyzed	Weekday, AM Peak Hour			Peak Hour Factor	0.56		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Estimated Total Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		3	0	1		0	0	1		1	173	0		0	155	4
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked		0.167	0.167	0.000			0.167	0.167		0.000						
Percent Grade (%)		0				0										
Right Turn Channelized																
Median Type   Storage		Undivided														

## Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		

## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			7				2			2				0			
Capacity, c (veh/h)			510				831			1290				1263			
v/c Ratio			0.01				0.00			0.00				0.00			
95% Queue Length, Q <sub>95</sub> (veh)			0.0				0.0			0.0				0.0			
95% Queue Length, Q <sub>95</sub> (ft)			0.0				0.0			0.0				0.0			
Control Delay (s/veh)			12.2				9.3			7.8	0.0	0.0		7.9	0.0	0.0	
Level of Service (LOS)			B				A			A	A	A		A	A	A	
Approach Delay (s/veh)		12.2				9.3				0.1				0.0			
Approach LOS		B				A				A				A			

# HCS Two-Way Stop-Control Report

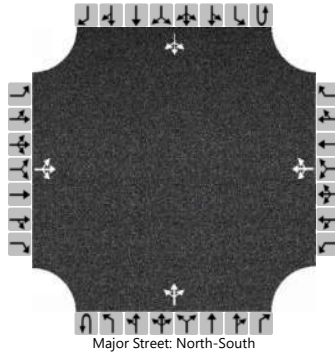
## General Information

Analyst	T. Eastwood
Agency/Co.	E5 Engineering, PLLC
Date Performed	2/11/2026
Analysis Year	2028
Time Analyzed	Weekday, School PM Peak
Intersection Orientation	North-South
Project Description	Town Pump TIS   Estimated Total Traffic

## Site Information

Intersection	Duscharme & Marion
Jurisdiction	Missoula County
East/West Street	Marion Street
North/South Street	Duscharme Street
Peak Hour Factor	0.59
Analysis Time Period (hrs)	0.25

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		3	0	0		0	0	1		1	114	0		1	52	2
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked		0.167	0.167	0.000			0.167	0.167		0.000				0.000		
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		

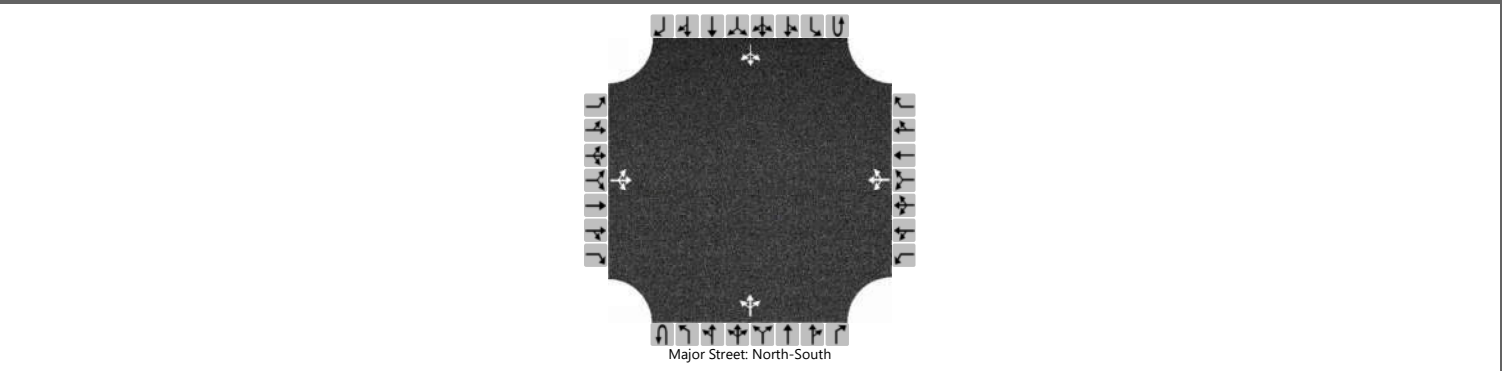
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			5				2			2				2		
Capacity, c (veh/h)			788				908			1505				1390		
v/c Ratio			0.01				0.00			0.00				0.00		
95% Queue Length, Q <sub>95</sub> (veh)			0.0				0.0			0.0				0.0		
95% Queue Length, Q <sub>95</sub> (ft)			0.0				0.0			0.0				0.0		
Control Delay (s/veh)			9.6				9.0			7.4	0.0	0.0		7.6	0.0	0.0
Level of Service (LOS)			A				A			A	A	A		A	A	A
Approach Delay (s/veh)	9.6				9.0				0.1				0.1			
Approach LOS	A				A				A				A			

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Duscharme & Marion		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	Missoula County		
Date Performed	2/11/2026			East/West Street	Marion Street		
Analysis Year	2028			North/South Street	Duscharme Street		
Time Analyzed	Weekday, PM Peak Hour			Peak Hour Factor	0.83		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Estimated Total Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		6	0	0		0	0	0		0	57	0		1	68	5
Percent Heavy Vehicles (%)		17	0	0		0	0	0		0				0		
Proportion Time Blocked		0.167	0.167	0.000			0.167	0.167						0.000		
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.27	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.65	4.00	3.30		3.50	4.00	3.30		2.20				2.20		

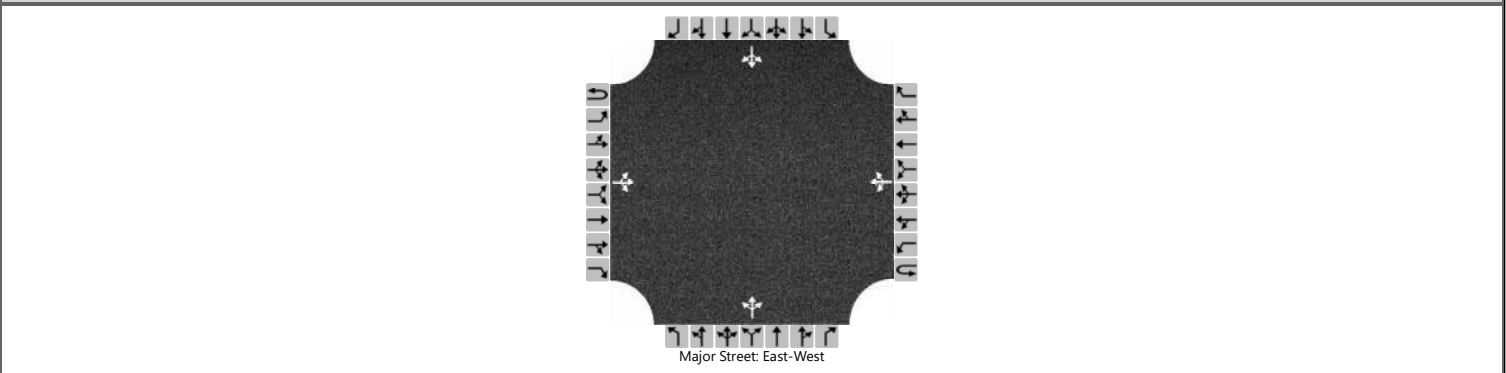
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			7				0			0				1		
Capacity, c (veh/h)			820				0			1521				1545		
v/c Ratio			0.01							0.00				0.00		
95% Queue Length, Q <sub>95</sub> (veh)			0.0							0.0				0.0		
95% Queue Length, Q <sub>95</sub> (ft)			0.0							0.0				0.0		
Control Delay (s/veh)			9.4							7.4	0.0	0.0		7.3	0.0	0.0
Level of Service (LOS)			A							A	A	A		A	A	A
Approach Delay (s/veh)	9.4								0.0				0.1			
Approach LOS	A								A				A			

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Beckwith & Duscharme		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Beckwith Street (S-263)		
Analysis Year	2028			North/South Street	Duscharme Street		
Time Analyzed	Weekday, AM Peak Hour			Peak Hour Factor	0.62		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Estimated Total Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Priority																	
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		8	156	139		18	156	7		146	5	26		2	2	5	
Percent Heavy Vehicles (%)		0				0				4	0	0		0	0	0	
Proportion Time Blocked																	
Percent Grade (%)										0				0			
Right Turn Channelized																	
Median Type   Storage	Undivided																

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.14	6.50	6.20		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.54	4.00	3.30		3.50	4.00	3.30

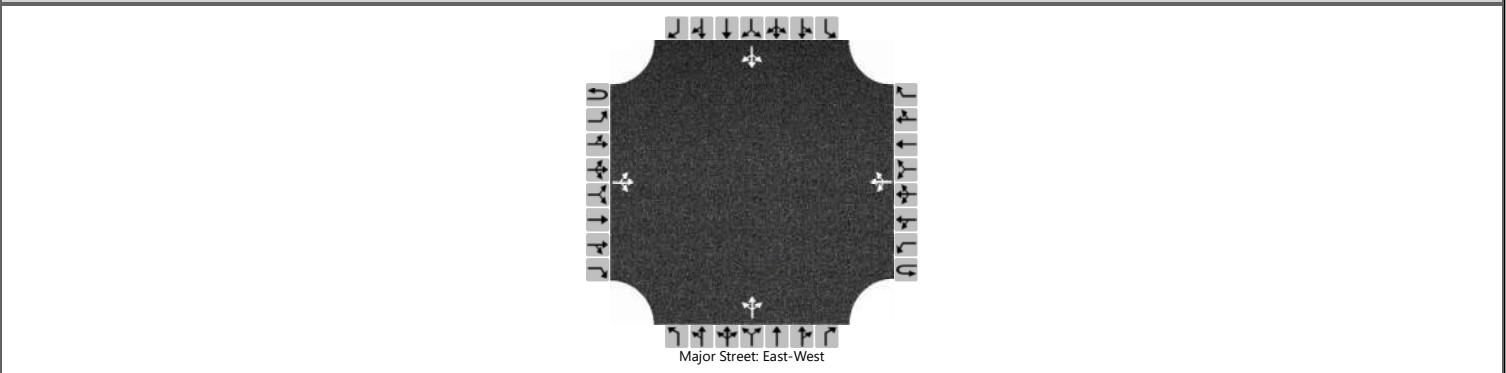
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		13				29					285				15		
Capacity, c (veh/h)		1313				1097					379				456		
v/c Ratio		0.01				0.03					0.75				0.03		
95% Queue Length, Q <sub>95</sub> (veh)		0.0				0.1					6.0				0.1		
95% Queue Length, Q <sub>95</sub> (ft)		0.0				2.5					154.0				2.5		
Control Delay (s/veh)		7.8	0.1	0.1		8.4	0.3	0.3			38.4				13.2		
Level of Service (LOS)		A	A	A		A	A	A			E				B		
Approach Delay (s/veh)		0.3				1.1				38.4					13.2		
Approach LOS		A				A				E					B		

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood	Intersection	Beckwith & Duscharme				
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / Missoula County				
Date Performed	2/11/2026	East/West Street	Beckwith Street (S-263)				
Analysis Year	2028	North/South Street	Duscharme Street				
Time Analyzed	Weekday, School PM Peak	Peak Hour Factor	0.75				
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25				
Project Description	Town Pump TIS   Estimated Total Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		5	158	39		15	216	5		85	2	31		6	1	2
Percent Heavy Vehicles (%)		0				0				13	0	13		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

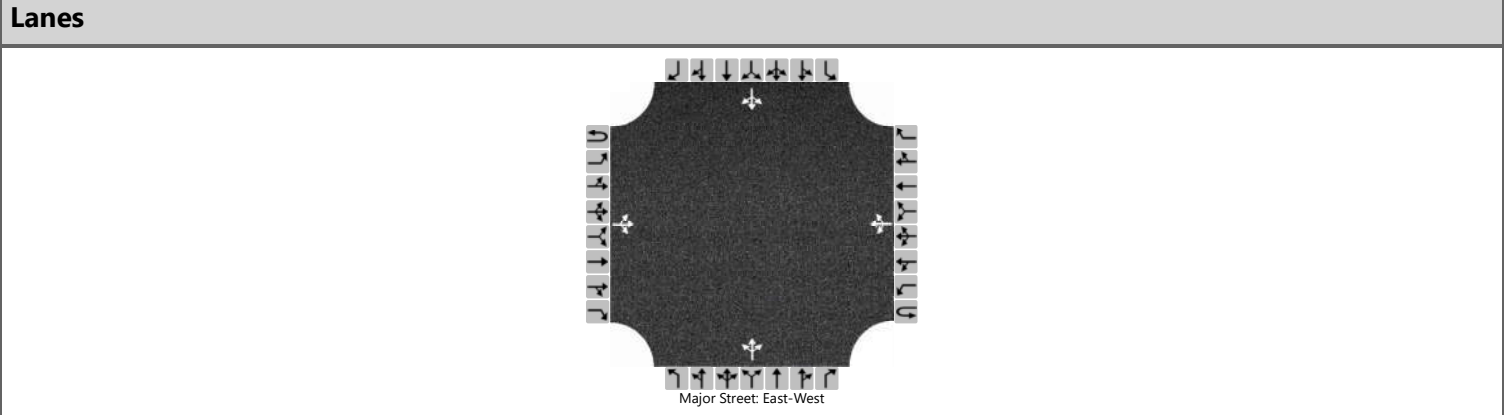
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.23	6.50	6.33		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.62	4.00	3.42		3.50	4.00	3.30

## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		7				20					157					12	
Capacity, c (veh/h)		1278				1313					526					429	
v/c Ratio		0.01				0.02					0.30					0.03	
95% Queue Length, Q <sub>95</sub> (veh)		0.0				0.0					1.2					0.1	
95% Queue Length, Q <sub>95</sub> (ft)		0.0				0.0					33.1					2.5	
Control Delay (s/veh)		7.8	0.0	0.0		7.8	0.1	0.1			14.7					13.6	
Level of Service (LOS)		A	A	A		A	A	A			B					B	
Approach Delay (s/veh)	0.2				0.6				14.7				13.6				
Approach LOS	A				A				B				B				

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Beckwith & Duscharme		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Beckwith Street (S-263)		
Analysis Year	2028			North/South Street	Duscharme Street		
Time Analyzed	Weekday, PM Peak Hour			Peak Hour Factor	0.94		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Estimated Total Traffic						



**Vehicle Volumes and Adjustments**

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Priority																	
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		4	144	56		18	153	3		45	1	18		1	0	3	
Percent Heavy Vehicles (%)		25				6				5	0	11		0	0	0	
Proportion Time Blocked																	
Percent Grade (%)										0				0			
Right Turn Channelized																	
Median Type   Storage	Undivided																

**Critical and Follow-up Headways**

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.35				4.16				7.15	6.50	6.31		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.43				2.25				3.55	4.00	3.40		3.50	4.00	3.30

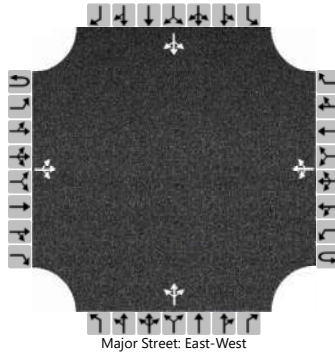
**Delay, Queue Length, and Level of Service**

Flow Rate, v (veh/h)		4				19					68				4	
Capacity, c (veh/h)		1275				1334					735				755	
v/c Ratio		0.00				0.01					0.09				0.01	
95% Queue Length, Q <sub>95</sub> (veh)		0.0				0.0					0.3				0.0	
95% Queue Length, Q <sub>95</sub> (ft)		0.0				0.0					7.9				0.0	
Control Delay (s/veh)		7.8	0.0	0.0		7.7	0.1	0.1			10.4				9.8	
Level of Service (LOS)		A	A	A		A	A	A			B				A	
Approach Delay (s/veh)		0.2				0.9				10.4					9.8	
Approach LOS		A				A				B					A	

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Beckwith & Demer		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Beckwith Street (S-263)		
Analysis Year	2028			North/South Street	Demer Street (S-263)		
Time Analyzed	Weekday, AM Peak Hour			Peak Hour Factor	0.70		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Estimated Total Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Priority																	
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		51	31	4		8	18	372		1	10	2		346	32	23	
Percent Heavy Vehicles (%)		4				0				0	20	50		6	9	0	
Proportion Time Blocked																	
Percent Grade (%)										2				-1			
Right Turn Channelized																	
Median Type   Storage	Undivided																

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.14				4.10				7.50	7.10	6.90		6.96	6.39	6.10
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.24				2.20				3.50	4.18	3.75		3.55	4.08	3.30

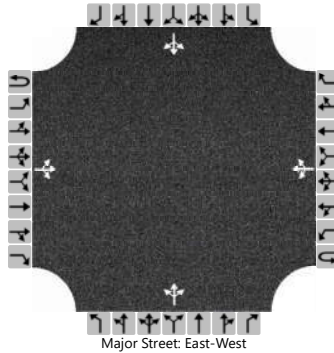
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		73				11					19					573
Capacity, c (veh/h)		1004				1570					298					439
v/c Ratio		0.07				0.01					0.06					1.30
95% Queue Length, Q <sub>95</sub> (veh)		0.2				0.0					0.2					25.2
95% Queue Length, Q <sub>95</sub> (ft)		5.0				0.0					5.9					659.7
Control Delay (s/veh)		8.9	0.7	0.7		7.3	0.1	0.1			17.9					179.2
Level of Service (LOS)		A	A	A		A	A	A			C					F
Approach Delay (s/veh)		5.5				0.2				17.9				179.2		
Approach LOS		A				A				C				F		

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Beckwith & Demer		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Beckwith Street (S-263)		
Analysis Year	2028			North/South Street	Demer Street (S-263)		
Time Analyzed	Weekday, School PM			Peak Hour Factor	0.81		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Estimated Total Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Priority																	
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		43	24	6		11	28	339		4	7	3		205	31	30	
Percent Heavy Vehicles (%)		0				9				0	0	0		5	3	3	
Proportion Time Blocked																	
Percent Grade (%)										2				-1			
Right Turn Channelized																	
Median Type   Storage	Undivided																

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.19				7.50	6.90	6.40		6.95	6.33	6.13
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.28				3.50	4.00	3.30		3.55	4.03	3.33

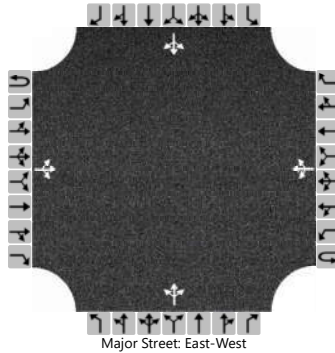
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		53				14					17					328		
Capacity, c (veh/h)		1118				1527					434					569		
v/c Ratio		0.05				0.01					0.04					0.58		
95% Queue Length, Q <sub>95</sub> (veh)		0.1				0.0					0.1					3.7		
95% Queue Length, Q <sub>95</sub> (ft)		2.5				0.0					2.5					95.9		
Control Delay (s/veh)		8.4	0.4	0.4		7.4	0.1	0.1			13.6					19.6		
Level of Service (LOS)		A	A	A		A	A	A			B					C		
Approach Delay (s/veh)		5.1				0.3					13.6				19.6			
Approach LOS		A				A					B				C			

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Beckwith & Demer		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Beckwith Street (S-263)		
Analysis Year	2028			North/South Street	Demer Street (S-263)		
Time Analyzed	Weekday, PM Peak Hour			Peak Hour Factor	0.90		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Estimated Total Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		37	15	5		11	26	244		5	10	4		222	37	47
Percent Heavy Vehicles (%)		3				0				20	0	0		3	3	2
Proportion Time Blocked																
Percent Grade (%)										2				-1		
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.10				7.70	6.90	6.40		6.93	6.33	6.12
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.20				3.68	4.00	3.30		3.53	4.03	3.32

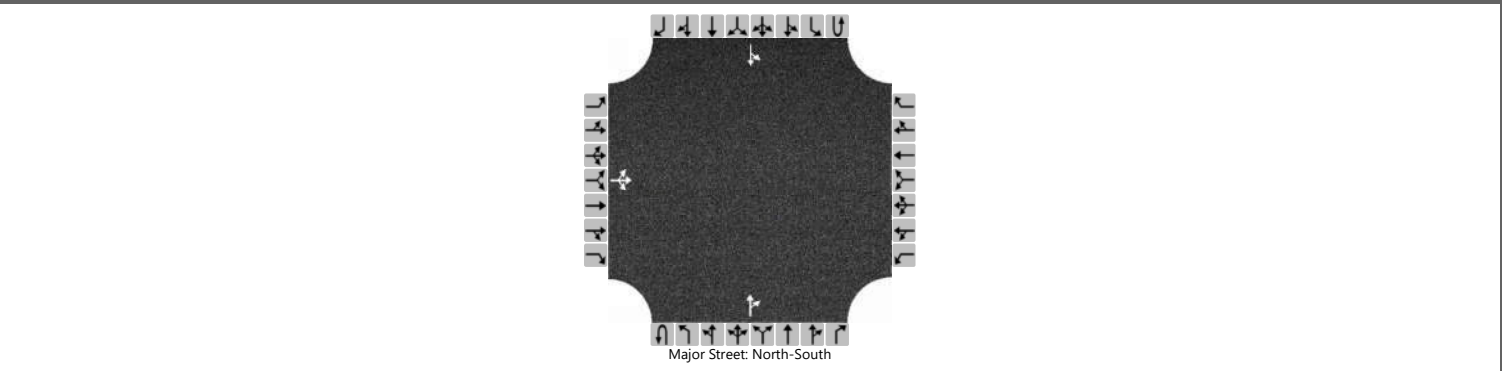
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		41				12				21				340		
Capacity, c (veh/h)		1255				1606				539				720		
v/c Ratio		0.03				0.01				0.04				0.47		
95% Queue Length, Q <sub>95</sub> (veh)		0.1				0.0				0.1				2.5		
95% Queue Length, Q <sub>95</sub> (ft)		2.5				0.0				2.6				63.9		
Control Delay (s/veh)		8.0	0.3	0.3		7.3	0.1	0.1		12.0				14.4		
Level of Service (LOS)		A	A	A		A	A	A		B				B		
Approach Delay (s/veh)		5.3				0.4				12.0				14.4		
Approach LOS		A				A				B				B		

# HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	T. Eastwood	Intersection	Demer St & I-90 EB Ramps
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / FHWA
Date Performed	2/11/2026	East/West Street	I-90 EB Off-Ramp
Analysis Year	2028	North/South Street	Demer Street (S-263)
Time Analyzed	Weekday, AM Peak Hour	Peak Hour Factor	0.73
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Town Pump TIS   Estimated Total Traffic		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration			LTR									TR		LT			
Volume (veh/h)		64	0	112							221	217		288	294		
Percent Heavy Vehicles (%)		6	0	2										1			
Proportion Time Blocked		0.167	0.167	0.167										0.167			
Percent Grade (%)		2															
Right Turn Channelized																	
Median Type   Storage		Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2										4.1			
Critical Headway (sec)		7.56	6.90	6.42										4.11			
Base Follow-Up Headway (sec)		3.5	4.0	3.3										2.2			
Follow-Up Headway (sec)		3.55	4.00	3.32										2.21			

## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			241											395			
Capacity, c (veh/h)			66											954			
v/c Ratio			3.65											0.41			
95% Queue Length, Q <sub>95</sub> (veh)			25.4											2.1			
95% Queue Length, Q <sub>95</sub> (ft)			652.5											52.9			
Control Delay (s/veh)			1323.9											11.4	6.1		
Level of Service (LOS)			F											B	A		
Approach Delay (s/veh)		1323.9												8.7			
Approach LOS		F												A			

# HCS Two-Way Stop-Control Report

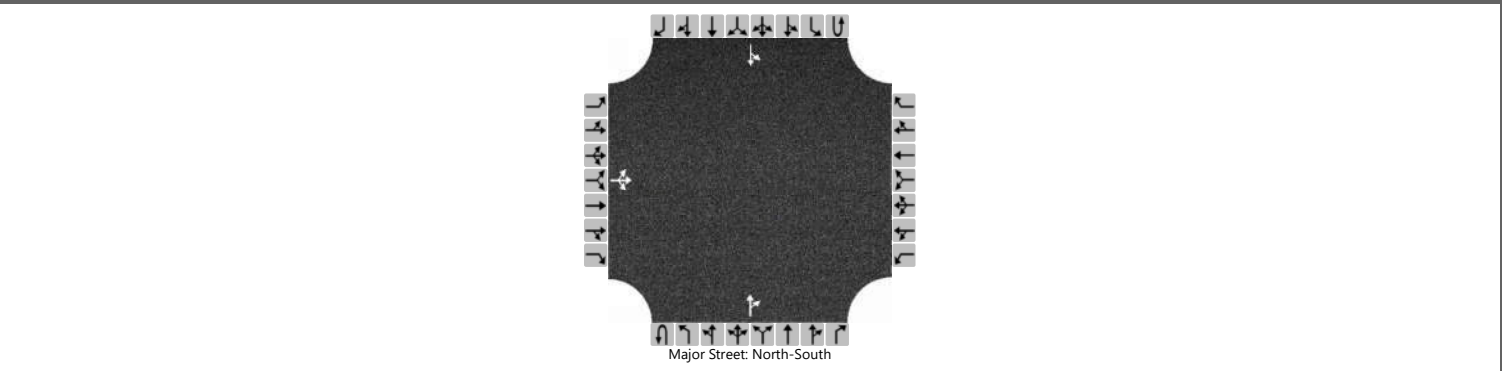
## General Information

Analyst	T. Eastwood
Agency/Co.	E5 Engineering, PLLC
Date Performed	2/11/2026
Analysis Year	2028
Time Analyzed	Weekday, School PM Peak
Intersection Orientation	North-South
Project Description	Town Pump TIS   Estimated Total Traffic

## Site Information

Intersection	Demer St & I-90 EB Ramps
Jurisdiction	MDT / FHWA
East/West Street	I-90 EB Off-Ramp
North/South Street	Demer Street (S-263)
Peak Hour Factor	0.80
Analysis Time Period (hrs)	0.25

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration			LTR									TR		LT			
Volume (veh/h)		47	0	44							270	124		164	227		
Percent Heavy Vehicles (%)		1	0	3										5			
Proportion Time Blocked																	
Percent Grade (%)		2															
Right Turn Channelized																	
Median Type   Storage		Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2										4.1		
Critical Headway (sec)		7.51	6.90	6.43										4.15		
Base Follow-Up Headway (sec)		3.5	4.0	3.3										2.2		
Follow-Up Headway (sec)		3.51	4.00	3.33										2.25		

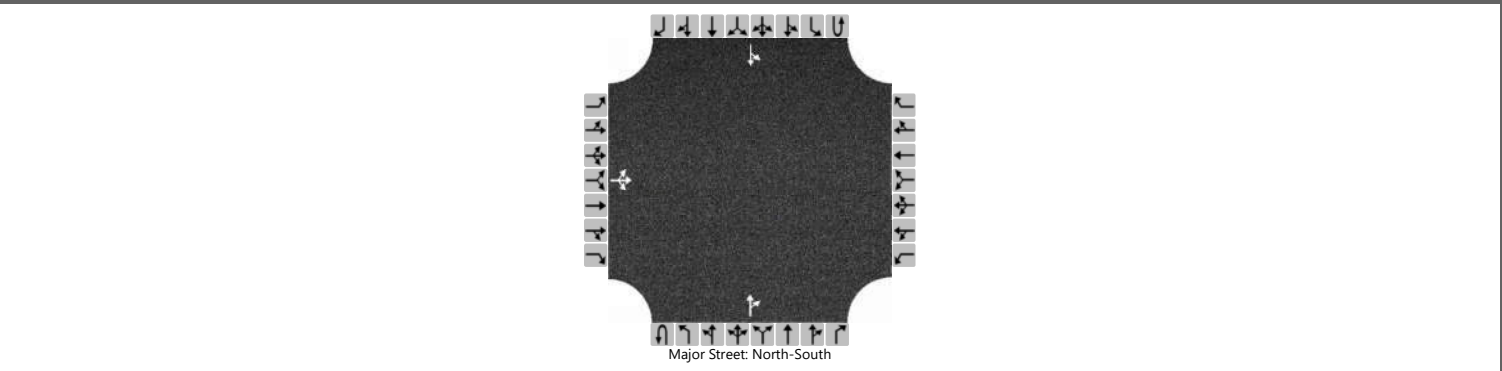
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			114											205		
Capacity, c (veh/h)			244											1056		
v/c Ratio			0.47											0.19		
95% Queue Length, Q <sub>95</sub> (veh)			2.3											0.7		
95% Queue Length, Q <sub>95</sub> (ft)			58.4											18.2		
Control Delay (s/veh)			32.0											9.2	2.1	
Level of Service (LOS)			D											A	A	
Approach Delay (s/veh)		32.0												5.1		
Approach LOS		D												A		

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Demer St & I-90 EB Ramps		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / FHWA		
Date Performed	2/11/2026			East/West Street	I-90 EB Off-Ramp		
Analysis Year	2028			North/South Street	Demer Street (S-263)		
Time Analyzed	Weekday, PM Peak Hour			Peak Hour Factor	0.90		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Estimated Total Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound					
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Movement																		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0		
Configuration			LTR									TR		LT				
Volume (veh/h)		57	0	57							231	80		124	275			
Percent Heavy Vehicles (%)		1	0	8										1				
Proportion Time Blocked																		
Percent Grade (%)		2																
Right Turn Channelized																		
Median Type   Storage		Undivided																

## Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2										4.1				
Critical Headway (sec)		7.51	6.90	6.48										4.11				
Base Follow-Up Headway (sec)		3.5	4.0	3.3										2.2				
Follow-Up Headway (sec)		3.51	4.00	3.37										2.21				

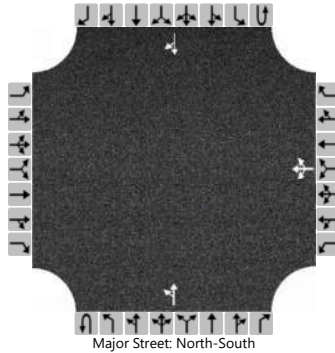
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			127											138				
Capacity, c (veh/h)			402											1219				
v/c Ratio			0.31											0.11				
95% Queue Length, Q <sub>95</sub> (veh)			1.3											0.4				
95% Queue Length, Q <sub>95</sub> (ft)			33.7											10.1				
Control Delay (s/veh)			18.0											8.3	1.1			
Level of Service (LOS)			C											A	A			
Approach Delay (s/veh)		18.0												3.4				
Approach LOS		C												A				

# HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	T. Eastwood	Intersection	Demer & I-90 WB Ramps
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / FHWA
Date Performed	2/11/2026	East/West Street	I-90 WB Off-Ramp
Analysis Year	2028	North/South Street	Demer Street (S-263)
Time Analyzed	Weekday, AM Peak Hour	Peak Hour Factor	0.77
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Town Pump TIS   Estimated Total Traffic		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LTR			LT						TR
Volume (veh/h)						114	0	136		36	249				468	37
Percent Heavy Vehicles (%)						6	0	3		22						
Proportion Time Blocked						0.167	0.167	0.167		0.000						
Percent Grade (%)						2										
Right Turn Channelized																
Median Type   Storage					Undivided											

## Critical and Follow-up Headways

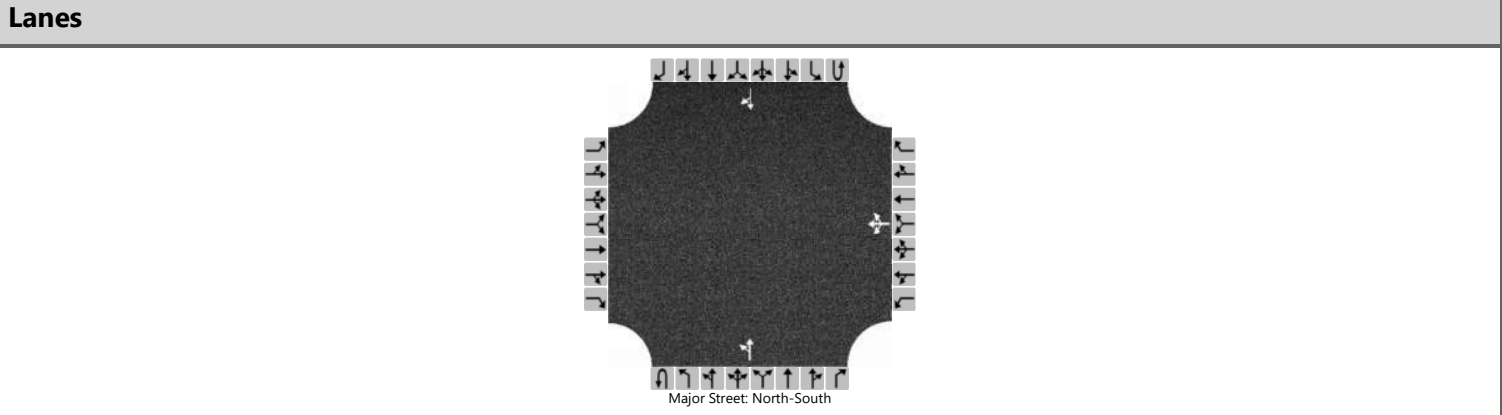
Base Critical Headway (sec)						7.1	6.5	6.2		4.1						
Critical Headway (sec)						7.56	6.90	6.43		4.32						
Base Follow-Up Headway (sec)						3.5	4.0	3.3		2.2						
Follow-Up Headway (sec)						3.55	4.00	3.33		2.40						

## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						325				47						
Capacity, c (veh/h)						347				843						
v/c Ratio						0.94				0.06						
95% Queue Length, Q <sub>95</sub> (veh)						9.7				0.2						
95% Queue Length, Q <sub>95</sub> (ft)						251.0				5.9						
Control Delay (s/veh)						68.8				9.5	0.6					
Level of Service (LOS)						F				A	A					
Approach Delay (s/veh)					68.8				1.8							
Approach LOS					F				A							

# HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	T. Eastwood	Intersection	Demer & I-90 WB Ramps
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / FHWA
Date Performed	2/11/2026	East/West Street	I-90 WB Off-Ramp
Analysis Year	2028	North/South Street	Demer Street (S-263)
Time Analyzed	Weekday, School PM Peak	Peak Hour Factor	0.79
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Town Pump TIS   Estimated Total Traffic		



**Vehicle Volumes and Adjustments**

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0		0	1	0		0	1	0
Configuration							LTR			LT						TR
Volume (veh/h)						126	0	154		86	231				265	53
Percent Heavy Vehicles (%)						5	0	1		5						
Proportion Time Blocked																
Percent Grade (%)						2										
Right Turn Channelized																
Median Type   Storage					Undivided											

**Critical and Follow-up Headways**

Base Critical Headway (sec)						7.1	6.5	6.2		4.1						
Critical Headway (sec)						7.55	6.90	6.41		4.15						
Base Follow-Up Headway (sec)						3.5	4.0	3.3		2.2						
Follow-Up Headway (sec)						3.55	4.00	3.31		2.25						

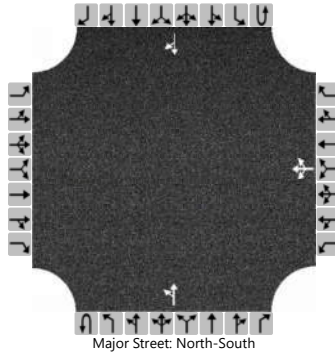
**Delay, Queue Length, and Level of Service**

Flow Rate, v (veh/h)						354				109						
Capacity, c (veh/h)						446				1140						
v/c Ratio						0.79				0.10						
95% Queue Length, Q <sub>95</sub> (veh)						7.2				0.3						
95% Queue Length, Q <sub>95</sub> (ft)						184.0				7.8						
Control Delay (s/veh)						37.8				8.5	1.0					
Level of Service (LOS)						E				A	A					
Approach Delay (s/veh)						37.8				3.0						
Approach LOS						E				A						

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Demer & I-90 WB Ramps		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / FHWA		
Date Performed	2/11/2026			East/West Street	I-90 WB Off-Ramp		
Analysis Year	2028			North/South Street	Demer Street (S-263)		
Time Analyzed	Weekday, PM Peak Hour			Peak Hour Factor	0.86		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Estimated Total Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes	0	0	0		0	1	0		0	0	1	0	0	0	1	0
Configuration							LTR			LT						TR
Volume (veh/h)						184	1	240		80	208				215	56
Percent Heavy Vehicles (%)						1	0	1		1						
Proportion Time Blocked																
Percent Grade (%)						2										
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)						7.1	6.5	6.2		4.1						
Critical Headway (sec)						7.51	6.90	6.41		4.11						
Base Follow-Up Headway (sec)						3.5	4.0	3.3		2.2						
Follow-Up Headway (sec)						3.51	4.00	3.31		2.21						

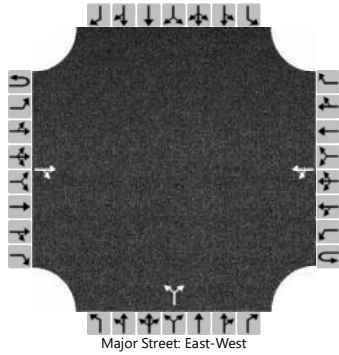
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						494				93						
Capacity, c (veh/h)						610				1251						
v/c Ratio						0.81				0.07						
95% Queue Length, Q <sub>95</sub> (veh)						8.2				0.2						
95% Queue Length, Q <sub>95</sub> (ft)						206.6				5.0						
Control Delay (s/veh)						31.2				8.1	0.7					
Level of Service (LOS)						D				A	A					
Approach Delay (s/veh)					31.2				2.8							
Approach LOS					D				A							

# HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	T. Eastwood	Intersection	Frontage Rd & Demer St
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / Missoula County
Date Performed	2/11/2026	East/West Street	Frenchtown Frontage Road (S-574)
Analysis Year	2028	North/South Street	Demer Street (S-263)
Time Analyzed	Weekday, AM Peak Hour	Peak Hour Factor	0.76
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Town Pump TIS   Estimated Total Traffic		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			50	323		183	118			262		123				
Percent Heavy Vehicles (%)						4				3		3				
Proportion Time Blocked																
Percent Grade (%)										-3						
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)						4.1					7.1		6.2			
Critical Headway (sec)						4.14					5.83		5.93			
Base Follow-Up Headway (sec)						2.2					3.5		3.3			
Follow-Up Headway (sec)						2.24					3.53		3.33			

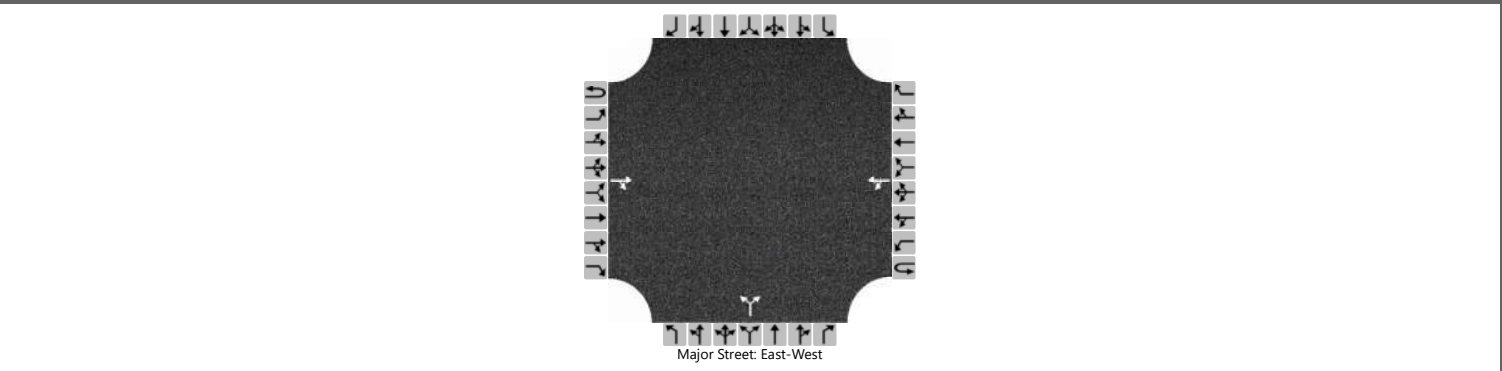
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						241						507				
Capacity, c (veh/h)						1062						383				
v/c Ratio						0.23						1.32				
95% Queue Length, Q <sub>95</sub> (veh)						0.9						23.5				
95% Queue Length, Q <sub>95</sub> (ft)						23.2						601.6				
Control Delay (s/veh)						9.4	2.3					191.0				
Level of Service (LOS)						A	A					F				
Approach Delay (s/veh)					6.6				191.0							
Approach LOS					A				F							

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Frontage Rd & Demer St		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Frenchtown Frontage Road (S-574)		
Analysis Year	2028			North/South Street	Demer Street (S-263)		
Time Analyzed	Weekday, School PM Peak			Peak Hour Factor	0.76		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Estimated Total Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			78	221		97	36			238		147				
Percent Heavy Vehicles (%)						6				3		4				
Proportion Time Blocked																
Percent Grade (%)										-3						
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)						4.1					7.1		6.2			
Critical Headway (sec)						4.16					5.83		5.94			
Base Follow-Up Headway (sec)						2.2					3.5		3.3			
Follow-Up Headway (sec)						2.25					3.53		3.34			

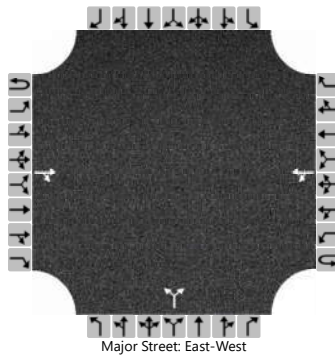
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						128						507				
Capacity, c (veh/h)						1144						727				
v/c Ratio						0.11						0.70				
95% Queue Length, Q <sub>95</sub> (veh)						0.4						5.7				
95% Queue Length, Q <sub>95</sub> (ft)						10.5						146.4				
Control Delay (s/veh)						8.5	1.0					20.5				
Level of Service (LOS)						A	A					C				
Approach Delay (s/veh)					6.5				20.5							
Approach LOS					A				C							

# HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	T. Eastwood	Intersection	Frontage Rd & Demer St
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / Missoula County
Date Performed	2/11/2026	East/West Street	Frenchtown Frontage Road (S-574)
Analysis Year	2028	North/South Street	Demer Street (S-263)
Time Analyzed	Weekday, PM Peak Hour	Peak Hour Factor	0.84
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Town Pump TIS   Estimated Total Traffic		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			38	149		123	37			286		162				
Percent Heavy Vehicles (%)						2				1		3				
Proportion Time Blocked																
Percent Grade (%)										-3						
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)						4.1					7.1		6.2			
Critical Headway (sec)						4.12					5.81		5.93			
Base Follow-Up Headway (sec)						2.2					3.5		3.3			
Follow-Up Headway (sec)						2.22					3.51		3.33			

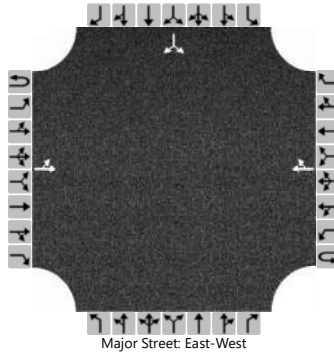
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						146						533				
Capacity, c (veh/h)						1346						792				
v/c Ratio						0.11						0.67				
95% Queue Length, Q <sub>95</sub> (veh)						0.4						5.3				
95% Queue Length, Q <sub>95</sub> (ft)						10.2						134.3				
Control Delay (s/veh)						8.0	0.9					18.4				
Level of Service (LOS)						A	A					C				
Approach Delay (s/veh)					6.4				18.4							
Approach LOS					A				C							

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Frontage Rd & Belker Ln		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Frenchtown Frontage Road (S-574)		
Analysis Year	2028			North/South Street	Belker Lane		
Time Analyzed	Weekday, AM Peak Hour			Peak Hour Factor	0.71		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Estimated Total Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		27	101				235	8						5		22
Percent Heavy Vehicles (%)		4												0		0
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.14												6.40		6.20
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.24												3.50		3.30

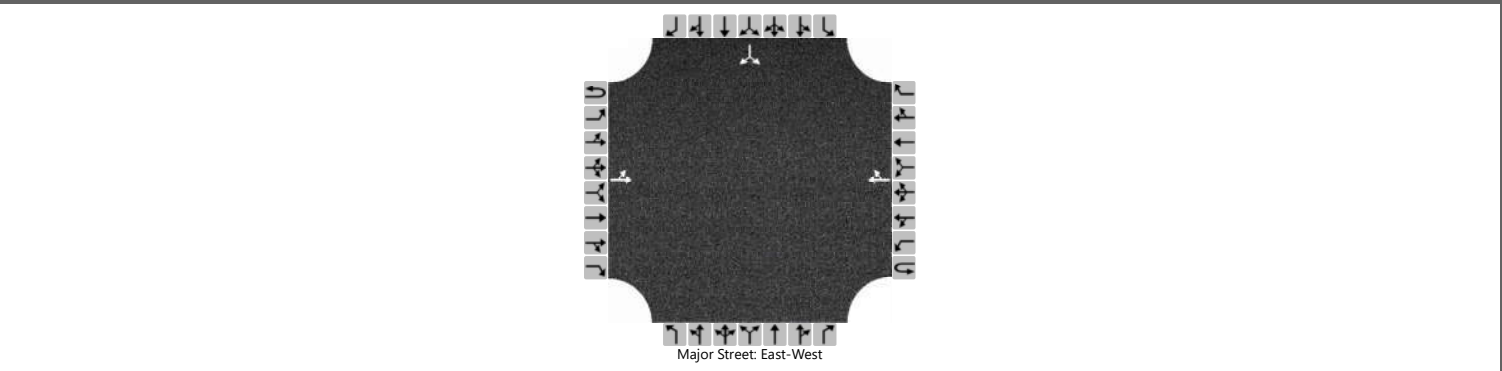
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		38													38		
Capacity, c (veh/h)		1204													650		
v/c Ratio		0.03													0.06		
95% Queue Length, Q <sub>95</sub> (veh)		0.1													0.2		
95% Queue Length, Q <sub>95</sub> (ft)		2.6													5.0		
Control Delay (s/veh)		8.1	0.3												10.9		
Level of Service (LOS)		A	A												B		
Approach Delay (s/veh)		1.9												10.9			
Approach LOS		A												B			

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Frontage Rd & Belker Ln		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Frenchtown Frontage Road (S-574)		
Analysis Year	2028			North/South Street	Belker Lane		
Time Analyzed	Weekday, School PM Peak			Peak Hour Factor	0.77		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Town Pump TIS   Estimated Total Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		23	167				77	5						6		21
Percent Heavy Vehicles (%)		0												17		0
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.10												6.57		6.20
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.65		3.30

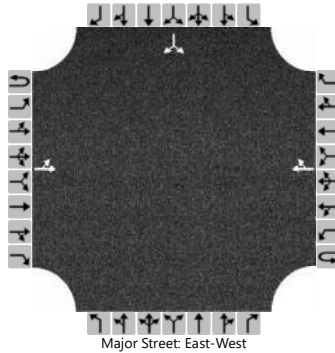
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		30														35		
Capacity, c (veh/h)		1492														833		
v/c Ratio		0.02														0.04		
95% Queue Length, Q <sub>95</sub> (veh)		0.1														0.1		
95% Queue Length, Q <sub>95</sub> (ft)		2.5														2.6		
Control Delay (s/veh)		7.5	0.2													9.5		
Level of Service (LOS)		A	A													A		
Approach Delay (s/veh)		1.1								1.1					9.5			
Approach LOS		A								A					A			

# HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	T. Eastwood	Intersection	Frontage Rd & Belker Ln
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / Missoula County
Date Performed	2/11/2026	East/West Street	Frenchtown Frontage Road (S-574)
Analysis Year	2028	North/South Street	Belker Lane
Time Analyzed	Weekday, PM Peak Hour	Peak Hour Factor	0.94
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Town Pump TIS   Estimated Total Traffic		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		12	143				98	3						2		16
Percent Heavy Vehicles (%)		0												0		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.10												6.40		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.50		3.33

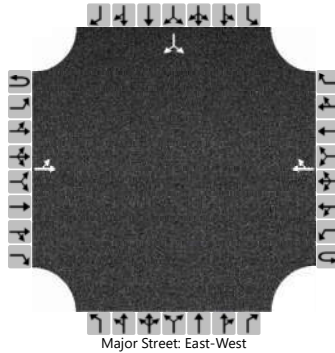
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		13														19	
Capacity, c (veh/h)		1491														907	
v/c Ratio		0.01														0.02	
95% Queue Length, Q <sub>95</sub> (veh)		0.0														0.1	
95% Queue Length, Q <sub>95</sub> (ft)		0.0														2.6	
Control Delay (s/veh)		7.4	0.1													9.1	
Level of Service (LOS)		A	A													A	
Approach Delay (s/veh)		0.6												9.1			
Approach LOS		A												A			

# HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	T. Eastwood	Intersection	Frontage Rd & Western Site Access
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / Missoula County
Date Performed	2/11/2026	East/West Street	Frenchtown Frontage Road (S-574)
Analysis Year	2028	North/South Street	Town Pump Western Site Access
Time Analyzed	Weekday, AM Peak Hour	Peak Hour Factor	0.76
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Town Pump TIS   Estimated Total Traffic		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		14	322				333	47						50		8
Percent Heavy Vehicles (%)		2												1		3
Proportion Time Blocked																
Percent Grade (%)														3		
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.12												7.01		6.53
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.22												3.51		3.33

## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		18														76	
Capacity, c (veh/h)		1062														270	
v/c Ratio		0.02														0.28	
95% Queue Length, Q <sub>95</sub> (veh)		0.1														1.1	
95% Queue Length, Q <sub>95</sub> (ft)		2.5														27.8	
Control Delay (s/veh)		8.4	0.2													23.5	
Level of Service (LOS)		A	A													C	
Approach Delay (s/veh)		0.5												23.5			
Approach LOS		A												C			

# HCS Two-Way Stop-Control Report

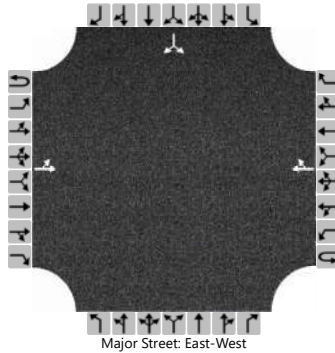
## General Information

Analyst	T. Eastwood
Agency/Co.	E5 Engineering, PLLC
Date Performed	2/11/2026
Analysis Year	2028
Time Analyzed	Weekday, School PM Peak
Intersection Orientation	East-West
Project Description	Town Pump TIS   Estimated Total Traffic

## Site Information

Intersection	Frontage Rd & Western Site Access
Jurisdiction	MDT / Missoula County
East/West Street	Frenchtown Frontage Road (S-574)
North/South Street	Town Pump Western Site Access
Peak Hour Factor	0.76
Analysis Time Period (hrs)	0.25

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		12	255				235	39						44		7
Percent Heavy Vehicles (%)		2												1		4
Proportion Time Blocked																
Percent Grade (%)														3		
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.12												7.01		6.54
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.22												3.51		3.34

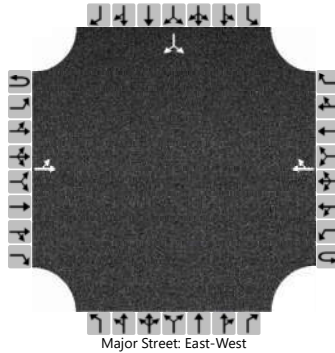
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		16													67		
Capacity, c (veh/h)		1192													377		
v/c Ratio		0.01													0.18		
95% Queue Length, Q <sub>95</sub> (veh)		0.0													0.6		
95% Queue Length, Q <sub>95</sub> (ft)		0.0													15.2		
Control Delay (s/veh)		8.1	0.1												16.6		
Level of Service (LOS)		A	A												C		
Approach Delay (s/veh)		0.5												16.6			
Approach LOS		A												C			

# HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	T. Eastwood	Intersection	Frontage Rd & Western Site Access
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / Missoula County
Date Performed	2/11/2026	East/West Street	Frenchtown Frontage Road (S-574)
Analysis Year	2028	North/South Street	Town Pump Western Site Access
Time Analyzed	Weekday, PM Peak Hour	Peak Hour Factor	0.84
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Town Pump TIS   Estimated Total Traffic		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		14	131				272	51						55		9
Percent Heavy Vehicles (%)		2												1		3
Proportion Time Blocked																
Percent Grade (%)														3		
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.12												7.01		6.53
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.22												3.51		3.33

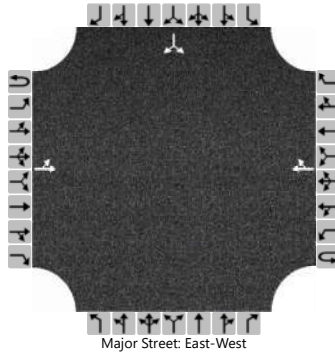
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		17														76	
Capacity, c (veh/h)		1170														471	
v/c Ratio		0.01														0.16	
95% Queue Length, Q <sub>95</sub> (veh)		0.0														0.6	
95% Queue Length, Q <sub>95</sub> (ft)		0.0														15.2	
Control Delay (s/veh)		8.1	0.1													14.1	
Level of Service (LOS)		A	A													B	
Approach Delay (s/veh)		0.9												14.1			
Approach LOS		A												B			

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood	Intersection	Frontage Rd & Eastern Site Access				
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / Missoula County				
Date Performed	2/11/2026	East/West Street	Frenchtown Frontage Road (S-574)				
Analysis Year	2028	North/South Street	Town Pump Eastern Site Access				
Time Analyzed	Weekday, AM Peak Hour	Peak Hour Factor	0.76				
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25				
Project Description	Town Pump TIS   Estimated Total Traffic						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		50	123				248	9						5		53
Percent Heavy Vehicles (%)		1												3		1
Proportion Time Blocked																
Percent Grade (%)														3		
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.11												7.03		6.51
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.21												3.53		3.31

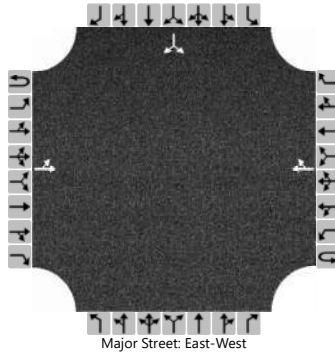
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		66													76		
Capacity, c (veh/h)		1224													645		
v/c Ratio		0.05													0.12		
95% Queue Length, Q <sub>95</sub> (veh)		0.2													0.4		
95% Queue Length, Q <sub>95</sub> (ft)		5.0													10.1		
Control Delay (s/veh)		8.1	0.5												11.3		
Level of Service (LOS)		A	A												B		
Approach Delay (s/veh)		2.7												11.3			
Approach LOS		A												B			

# HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	T. Eastwood	Intersection	Frontage Rd & Eastern Site Access
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / Missoula County
Date Performed	2/11/2026	East/West Street	Frenchtown Frontage Road (S-574)
Analysis Year	2028	North/South Street	Town Pump Eastern Site Access
Time Analyzed	Weekday, School PM Peak	Peak Hour Factor	0.76
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Town Pump TIS   Estimated Total Traffic		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		40	185				90	8						5		43
Percent Heavy Vehicles (%)		1												3		1
Proportion Time Blocked																
Percent Grade (%)														3		
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.11												7.03		6.51
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.21												3.53		3.31

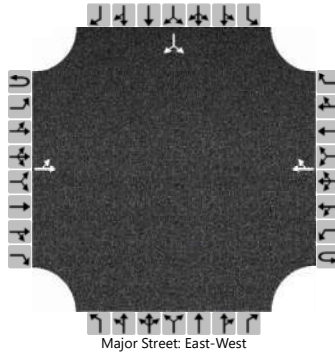
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		53													63		
Capacity, c (veh/h)		1455													836		
v/c Ratio		0.04													0.08		
95% Queue Length, Q <sub>95</sub> (veh)		0.1													0.2		
95% Queue Length, Q <sub>95</sub> (ft)		2.5													5.0		
Control Delay (s/veh)		7.6	0.3												9.7		
Level of Service (LOS)		A	A												A		
Approach Delay (s/veh)		1.6												9.7			
Approach LOS		A												A			

# HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	T. Eastwood	Intersection	Frontage Rd & Eastern Site Access
Agency/Co.	E5 Engineering, PLLC	Jurisdiction	MDT / Missoula County
Date Performed	2/11/2026	East/West Street	Frenchtown Frontage Road (S-574)
Analysis Year	2028	North/South Street	Town Pump Eastern Site Access
Time Analyzed	Weekday, PM Peak Hour	Peak Hour Factor	0.84
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Town Pump TIS   Estimated Total Traffic		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		52	148				103	11						7		57
Percent Heavy Vehicles (%)		1												3		1
Proportion Time Blocked																
Percent Grade (%)														3		
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.11												7.03		6.51
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.21												3.53		3.31

## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		62														76	
Capacity, c (veh/h)		1449														838	
v/c Ratio		0.04														0.09	
95% Queue Length, Q <sub>95</sub> (veh)		0.1														0.3	
95% Queue Length, Q <sub>95</sub> (ft)		2.5														7.6	
Control Delay (s/veh)		7.6	0.4													9.7	
Level of Service (LOS)		A	A													A	
Approach Delay (s/veh)		2.2												9.7			
Approach LOS		A												A			





# Appendix G



# All-Way Stop Control Warrant Evaluation

## Intersection of Beckwith Street (S-263) & Duscharme Street



### Background Intersection Information

<b>Major Roadway:</b>	Beckwith Street (S-263)
Posted or 85% Speed:	25 mph
Approach Lanes:	1
<b>Minor Roadway:</b>	Duscharme Street
Posted or 85% Speed:	25 mph
Approach Lanes:	1
<b>Total Number of Approaches:</b>	4
<b>Analysis Case:</b>	2026 Existing Conditions

### All-Way Stop Control Warrant A: Crash Experience

Number of Approaches at Intersection: 4

Warrant Evaluation Criteria	# of Reported Crashes	Warrant Minimum	Warrant Satisfied
A. Number of reported crashes in a 12-month period susceptible to correction by the installation of all-way stop control:	0	5	
B. Number of reported crashes in a 36-month period susceptible to correction by the installation of all-way stop control:	0	6	

**Warrant Satisfied for Conditions A or B? No**

### All-Way Stop Control Warrant B: Sight Distance

Is the sight distance on the minor-road approach(es) controlled by a STOP sign adequate for a vehicle to turn onto or cross the major (uncontrolled) road? Yes

**Warrant Satisfied? No**

### All-Way Stop Control Warrant C: Transition to Signal Control or Transition to Yield Control at a Circular Intersection

Will all-way stop control serve as an interim measure that can be installed to control traffic while arrangements are being made for the installation of a traffic control signal at the intersection or for the installation of yield control at a circular intersection? No

**Warrant Satisfied? No**

# All-Way Stop Control Warrant Evaluation

## Intersection of Beckwith Street (S-263) & Duscharme Street



### All-Way Stop Control Warrant D: 8-Hour Volume (Vehicles, Pedestrians, Bicycles)

#### Intersection Traffic Volume Summary

Start Time	End Time	Major Roadway Beckwith Street (S-263)			Minor Roadway Duscharme Street			Combined Hourly Volume	Rank
		Total Vehicles (veh/hr)	Total Peds (peds/hr)	Total Bikes (bikes/hr)	Total Vehicles (veh/hr)	Total Peds (peds/hr)	Total Bikes (bikes/hr)		
6:00 AM	7:00 AM	100	0	0	44	0	0	144	14
7:00 AM	8:00 AM	401	0	0	133	0	0	534	2
8:00 AM	9:00 AM	222	0	0	89	0	0	311	7
9:00 AM	10:00 AM	164	6	0	34	2	0	206	11
10:00 AM	11:00 AM	212	0	0	42	1	0	255	10
11:00 AM	12:00 PM	296	1	1	42	0	1	341	6
12:00 PM	1:00 PM	251	1	0	59	0	0	311	7
1:00 PM	2:00 PM	244	2	0	43	3	0	292	9
2:00 PM	3:00 PM	318	2	0	52	1	0	373	5
3:00 PM	4:00 PM	426	3	0	123	0	0	552	1
4:00 PM	5:00 PM	375	0	0	50	3	0	428	3
5:00 PM	6:00 PM	341	0	0	59	3	0	403	4
6:00 PM	7:00 PM	175	0	1	25	2	1	204	12
7:00 PM	8:00 PM	121	0	0	25	1	0	147	13
<b>TOTALS</b>		<b>3,646</b>	<b>15</b>	<b>2</b>	<b>820</b>	<b>16</b>	<b>2</b>	<b>4,501</b>	

Estimated Average Daily Volumes:	4,010	16	2	900	18	2	4,948
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Estimated Eighth Highest Hourly Volumes:	227	1	0	51	1	0	280
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The eighth highest hourly volume is based on the assumption that it is approximately 5.65% of the estimated average daily volumes.

Warrant Evaluation Criteria	Eighth Highest Volume	Warrant Minimum	Warrant Satisfied
A. Combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the major street approach(es):	228	300	
B. Combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the minor street approach(es):	52	200	
<b>Warrant Satisfied for Conditions A or B?</b>			<b>No</b>

# All-Way Stop Control Warrant Evaluation

## Intersection of Beckwith Street (S-263) & Duscharme Street



### All-Way Stop Control Warrant E: Other Factors

A. Is all-way stop control needed to control left-turn conflicts? No

B. Is all-way stop control needed to improve traffic operational characteristics at an intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics? No

C. Is all-way stop control needed where pedestrian and/or bicyclist movements support the installation of all-way stop control? No

D. Other:  
Is all-way stop control needed to improve traffic operational characteristics at an intersection where there are concerns related to conflicting traffic movements or other safety elements? Yes

Warrant Satisfied? **Yes**

# All-Way Stop Control Warrant Evaluation

## Intersection of Beckwith Street (S-263) & Demer Street (S-263)



### Background Intersection Information

<b>Major Roadway:</b>	Beckwith Street (S-263)
Posted or 85% Speed:	25 mph
Approach Lanes:	1
<b>Minor Roadway:</b>	Duscharme Street
Posted or 85% Speed:	25 mph
Approach Lanes:	1
<b>Total Number of Approaches:</b>	4
<b>Analysis Case:</b>	2026 Existing Conditions

### All-Way Stop Control Warrant A: Crash Experience

Number of Approaches at Intersection: 4

Warrant Evaluation Criteria	# of Reported Crashes	Warrant Minimum	Warrant Satisfied
A. Number of reported crashes in a 12-month period susceptible to correction by the installation of all-way stop control:	2	5	
B. Number of reported crashes in a 36-month period susceptible to correction by the installation of all-way stop control:	5	6	

**Warrant Satisfied for Conditions A or B? No**

### All-Way Stop Control Warrant B: Sight Distance

Is the sight distance on the minor-road approach(es) controlled by a STOP sign adequate for a vehicle to turn onto or cross the major (uncontrolled) road? Yes

**Warrant Satisfied? No**

### All-Way Stop Control Warrant C: Transition to Signal Control or Transition to Yield Control at a Circular Intersection

Will all-way stop control serve as an interim measure that can be installed to control traffic while arrangements are being made for the installation of a traffic control signal at the intersection or for the installation of yield control at a circular intersection? No

**Warrant Satisfied? No**

# All-Way Stop Control Warrant Evaluation

## Intersection of Beckwith Street (S-263) & Demer Street (S-263)



### All-Way Stop Control Warrant D: 8-Hour Volume (Vehicles, Pedestrians, Bicycles)

#### Intersection Traffic Volume Summary

Start Time	End Time	Major Roadway Beckwith Street (S-263)			Minor Roadway Duscharme Street			Combined Hourly Volume	Rank
		Total Vehicles (veh/hr)	Total Peds (peds/hr)	Total Bikes (bikes/hr)	Total Vehicles (veh/hr)	Total Peds (peds/hr)	Total Bikes (bikes/hr)		
6:00 AM	7:00 AM	127	0	0	133	0	0	260	13
7:00 AM	8:00 AM	346	0	0	314	1	0	661	1
8:00 AM	9:00 AM	256	0	0	176	0	0	432	6
9:00 AM	10:00 AM	135	0	1	128	0	0	264	12
10:00 AM	11:00 AM	171	0	0	135	0	0	306	10
11:00 AM	12:00 PM	250	1	0	210	0	0	461	5
12:00 PM	1:00 PM	217	0	0	165	1	0	383	8
1:00 PM	2:00 PM	206	0	0	160	2	0	368	9
2:00 PM	3:00 PM	201	0	0	224	0	0	425	7
3:00 PM	4:00 PM	384	1	0	254	1	0	640	2
4:00 PM	5:00 PM	289	1	0	265	0	0	555	4
5:00 PM	6:00 PM	296	1	0	266	0	0	563	3
6:00 PM	7:00 PM	151	0	0	138	3	0	292	11
7:00 PM	8:00 PM	108	0	0	94	0	0	202	14
<b>TOTALS</b>		<b>3,137</b>	<b>4</b>	<b>1</b>	<b>2,662</b>	<b>8</b>	<b>0</b>	<b>5,812</b>	

<b>Estimated Average Daily Volumes:</b>	<b>3,450</b>	<b>4</b>	<b>1</b>	<b>2,930</b>	<b>9</b>	<b>0</b>	<b>6,394</b>
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<b>Estimated Eighth Highest Hourly Volumes:</b>	<b>195</b>	<b>0</b>	<b>0</b>	<b>166</b>	<b>1</b>	<b>0</b>	<b>362</b>
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The eighth highest hourly volume is based on the assumption that it is approximately 5.65% of the estimated average daily volumes.

Warrant Evaluation Criteria	Eighth Highest Volume	Warrant Minimum	Warrant Satisfied
A. Combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the major street approach(es):	195	300	
B. Combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the minor street approach(es):	167	200	
<b>Warrant Satisfied for Conditions A or B?</b>			<b>No</b>

# All-Way Stop Control Warrant Evaluation

## Intersection of Beckwith Street (S-263) & Demer Street (S-263)



### All-Way Stop Control Warrant E: Other Factors

A. Is all-way stop control needed to control left-turn conflicts? No

B. Is all-way stop control needed to improve traffic operational characteristics at an intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics? No

C. Is all-way stop control needed where pedestrian and/or bicyclist movements support the installation of all-way stop control? No

D. Other:  
Is all-way stop control needed to improve traffic operational characteristics at an intersection where there are concerns related to conflicting traffic movements or other safety elements? No

Warrant Satisfied? **No**

# Traffic Signal Warrant Evaluation

## Intersection of Beckwith Street (S-263) & Demer Street (S-263)



### Background Intersection Information

<b>Major Roadway:</b>	Beckwith Street (S-263)		
Posted or 85% Speed:	25 mph		
Approach Lanes:	1		
Distance to Nearest Traffic Signal:	- ft	None in the Area	
<b>Minor Roadway:</b>	Demer Street (S-263)		
Posted or 85% Speed:	25 mph		
Approach Lanes:	1		
<b>Total Number of Approaches:</b>	4		
Community with a population less than 10,000 or speeds above 40 mph on the major street?	Yes		
<b>Analysis Case:</b>	2026 Existing Conditions		

### Warrant Analyses Summary

Traffic Signal Warrant	Warrant Satisfied?
Warrant 1   Eight-Hour Vehicular Volume	No
Warrant 2   Four-Hour Vehicular Volume	No
Warrant 3   Peak Hour	Not Evaluated
Warrant 4   Pedestrian Volume	Insufficient Ped Volumes
Warrant 5   School Crossing	Not Evaluated
Warrant 6   Coordinated Signal System	Not Evaluated
Warrant 7   Crash Experience	Not Evaluated
Warrant 8   Roadway Network	Not Evaluated
Warrant 9   Intersection Near a Grade Crossing	Not Evaluated

### Notes & Comments

The intersection of Beckwith Street (S-263) & Demer Street (S-263) was not determined to be at a location that would present an unusual case, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time; therefore, Warrant 3 | Peak Hour was not evaluated as a part of this study.

Warrants 5, 6, and 9 were not applicable to the intersection of Beckwith Street (S-263) & Demer Street (S-263) and were therefore not evaluated.

An adequate trial of alternatives to reduce crash frequency at the intersection of Beckwith Street (S-263) and Demer Street (S-263) have not been implemented; therefore, Warrant 7 has not been evaluated.

The existing traffic volumes at the intersection of Beckwith Street (S-263) and Demer Street (S-263) do not currently meet the hourly volume thresholds for Warrant 8 to be evaluated, at this time.

**Traffic Signal Warrant Evaluation**  
**Intersection of Beckwith Street (S-263) & Demer Street (S-263)**



**Intersection Traffic Volume Summary**

START TIME	END TIME	MAJOR ROADWAY Beckwith Street (S-263)			MINOR ROADWAY Demer Street (S-263)			MAJOR & MINOR ROADWAYS COMBINED TOTAL VOLUMES		Pedestrians Crossing Major Roadway (peds/hr)
		Total Volume (veh/hr)	Excluded Right-Turns (veh/hr)	Adjusted Volume (veh/hr)	Total Volume (veh/hr)	Excluded Right-Turns (veh/hr)	Adjusted Volume (veh/hr)	Unadjusted Volume (veh/hr)	Adjusted Volume (veh/hr)	
6:00 AM	7:00 AM	127	69	58	123	29	94	250	152	0
7:00 AM	8:00 AM	346	253	93	306	19	287	652	380	0
8:00 AM	9:00 AM	256	186	70	165	13	152	421	222	0
9:00 AM	10:00 AM	135	87	48	121	10	111	256	159	0
10:00 AM	11:00 AM	171	124	47	131	12	119	302	166	0
11:00 AM	12:00 PM	250	169	81	201	18	183	451	264	1
12:00 PM	1:00 PM	217	154	63	157	15	142	374	205	0
1:00 PM	2:00 PM	206	152	54	146	18	128	352	182	0
2:00 PM	3:00 PM	201	136	65	214	17	197	415	262	0
3:00 PM	4:00 PM	384	288	96	243	27	216	627	312	1
4:00 PM	5:00 PM	289	199	90	251	35	216	540	306	1
5:00 PM	6:00 PM	296	219	77	247	43	204	543	281	1
6:00 PM	7:00 PM	151	109	42	133	38	95	284	137	0
7:00 PM	8:00 PM	108	76	32	88	22	66	196	98	0
<b>TOTALS</b>		<b>3,137</b>	<b>2,221</b>	<b>916</b>	<b>2,526</b>	<b>316</b>	<b>2,210</b>	<b>5,663</b>	<b>3,126</b>	<b>4</b>

**Hourly Volume Warrant Summary**

Warrant Analyses Volume Data							
START TIME	END TIME	Major Volume (veh/hr)	Minor Volume (veh/hr)	Total Volume (veh/hr)	Pedestrian Volume (veh/hr)	Adequate Gaps (gaps/hr)	Rank
6:00 AM	7:00 AM	58	94	152	0	-	12
7:00 AM	8:00 AM	93	287	380	0	-	1
8:00 AM	9:00 AM	70	152	222	0	-	7
9:00 AM	10:00 AM	48	111	159	0	-	11
10:00 AM	11:00 AM	47	119	166	0	-	10
11:00 AM	12:00 PM	81	183	264	1	-	5
12:00 PM	1:00 PM	63	142	205	0	-	8
1:00 PM	2:00 PM	54	128	182	0	-	9
2:00 PM	3:00 PM	65	197	262	0	-	6
3:00 PM	4:00 PM	96	216	312	1	-	2
4:00 PM	5:00 PM	90	216	306	1	-	3
5:00 PM	6:00 PM	77	204	281	1	-	4
6:00 PM	7:00 PM	42	95	137	0	-	13
7:00 PM	8:00 PM	32	66	98	0	-	14
<b>TOTALS</b>		<b>916</b>	<b>2,210</b>	<b>3,126</b>	<b>4</b>	<b>-</b>	

**Traffic Signal Warrant Evaluation**  
**Intersection of Beckwith Street (S-263) & Demer Street (S-263)**



**Warrant 1 | Eight-Hour Vehicular Volume**

**Condition A - Minimum Vehicular Volume**

Number of Lanes for Moving Traffic on each Approach		Vehicles Per Hour on Major Street (Total of Both Approaches)				Vehicles Per Hour on More Critical Minor Street Approach (One Direction Only)			
Major Street	Minor Street	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>	56% <sup>d</sup>	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>	56% <sup>d</sup>
1	1	500	400	350	280	150	120	105	84
2 or More	1	600	480	420	336	150	120	105	84
2 or More	2 or More	600	480	420	336	200	160	140	112
1	2 or More	500	400	350	280	200	160	140	112

**Condition B - Interruption of Continuous Traffic**

Number of Lanes for Moving Traffic on each Approach		Vehicles Per Hour on Major Street (Total of Both Approaches)				Vehicles Per Hour on More Critical Minor Street Approach (One Direction Only)			
Major Street	Minor Street	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>	56% <sup>d</sup>	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>	56% <sup>d</sup>
1	1	750	600	525	420	75	60	53	42
2 or More	1	900	720	630	504	75	60	53	42
2 or More	2 or More	900	720	630	504	100	80	70	56
1	2 or More	750	600	525	420	100	80	70	56

<sup>a</sup>Basic minimum hourly volume.  
<sup>b</sup>Used for combination of Conditions A and B after adequate trial of other remedial measures.  
<sup>c</sup>May be used when the major street speed exceeds 40 mph or in an isolated community with a population of less than 10,000.  
<sup>d</sup>May be used for combination of Conditions A and B after adequate trial of other remedial measures when the major street speed exceeds 40 mph or in an isolated community with a population of less than 10,000.

**Analyses of Warrant Conditions A & B**

HOURLY VOLUME			Major Roadway (veh/hr)	Minor Roadway (veh/hr)	Condition A - Minimum Vehicular Volume				Condition B - Interruption of Continuous Traffic				Condition A Warrant Satisfied	Condition B Warrant Satisfied
					Major Roadway Warrant Minimum Volume (veh/hr)		Minor Roadway Warrant Minimum Volume (veh/hr)		Major Roadway Warrant Minimum Volume (veh/hr)		Minor Roadway Warrant Minimum Volume (veh/hr)			
START TIME	END TIME	RANK	100%	70%	100%	70%	100%	70%	100%	70%	100%	70%		
7:00 AM	8:00 AM	1	93	287										
3:00 PM	4:00 PM	2	96	216										
4:00 PM	5:00 PM	3	90	216										
5:00 PM	6:00 PM	4	77	204										
11:00 AM	12:00 PM	5	81	183										
2:00 PM	3:00 PM	6	65	197										
8:00 AM	9:00 AM	7	70	152	-	350	-	120	-	525	-	53		
12:00 PM	1:00 PM	8	63	142										
1:00 PM	2:00 PM	9	54	128										
10:00 AM	11:00 AM	10	47	119										
9:00 AM	10:00 AM	11	48	111										
6:00 AM	7:00 AM	12	58	94										
6:00 PM	7:00 PM	13	42	95										
7:00 PM	8:00 PM	14	32	66										

Warrant Satisfied for Conditions A or B? ✖ ✖

**Analyses of Combination of Warrant Conditions A & B**

HOURLY VOLUME			Major Roadway (veh/hr)	Minor Roadway (veh/hr)	Condition A - Minimum Vehicular Volume				Condition B - Interruption of Continuous Traffic				Condition A Warrant Satisfied	Condition B Warrant Satisfied	Combination of Conditions A & B Satisfied for Warrant
					Major Roadway Warrant Minimum Volume (veh/hr)		Minor Roadway Warrant Minimum Volume (veh/hr)		Major Roadway Warrant Minimum Volume (veh/hr)		Minor Roadway Warrant Minimum Volume (veh/hr)				
START TIME	END TIME	RANK	80%	56%	80%	56%	80%	56%	80%	56%	80%	56%			
7:00 AM	8:00 AM	1	93	287											✖
3:00 PM	4:00 PM	2	96	216											✖
4:00 PM	5:00 PM	3	90	216											✖
5:00 PM	6:00 PM	4	77	204											✖
11:00 AM	12:00 PM	5	81	183											✖
2:00 PM	3:00 PM	6	65	197											✖
8:00 AM	9:00 AM	7	70	152											✖
12:00 PM	1:00 PM	8	63	142	-	280	-	84	-	420	-	42			✖
1:00 PM	2:00 PM	9	54	128											✖
10:00 AM	11:00 AM	10	47	119											✖
9:00 AM	10:00 AM	11	48	111											✖
6:00 AM	7:00 AM	12	58	94											✖
6:00 PM	7:00 PM	13	42	95											✖
7:00 PM	8:00 PM	14	32	66											✖

Warrant Satisfied for Combination of Conditions A or B? ✖

**Warrant 1 | Eight-Hour Vehicular Volume Satisfied? ✖**

**Traffic Signal Warrant Evaluation**  
**Intersection of Beckwith Street (S-263) & Demer Street (S-263)**



**Warrant 2 | Four-Hour Vehicular Volume**

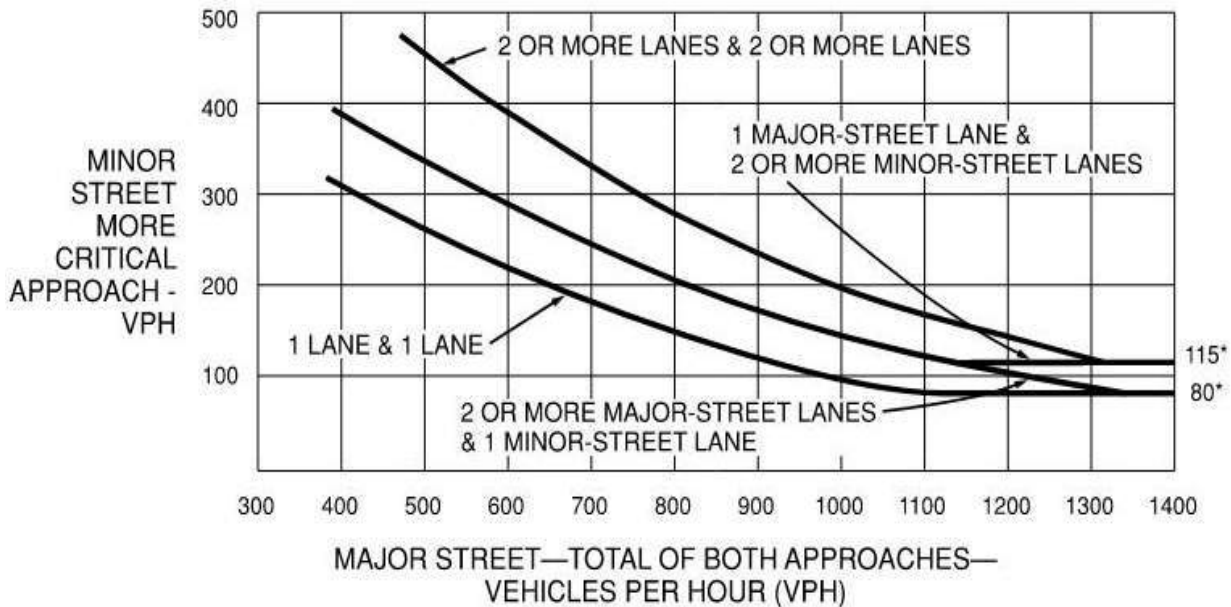
HOURLY VOLUME			Major Roadway (veh/hr)	Minor Roadway (veh/hr)	Minor Roadway Warrant Minimum Volume (veh/hr)		Warrant Satisfied
					100% Figure 4C-1	70% Figure 4C-2	
START TIME	END TIME	RANK					
7:00 AM	8:00 AM	1	93	287	-	305	
3:00 PM	4:00 PM	2	96	216	-	304	
4:00 PM	5:00 PM	3	90	216	-	307	
5:00 PM	6:00 PM	4	77	204	-	313	
11:00 AM	12:00 PM	5	81	183	-	311	
2:00 PM	3:00 PM	6	65	197	-	319	
8:00 AM	9:00 AM	7	70	152	-	317	
12:00 PM	1:00 PM	8	63	142	-	320	
1:00 PM	2:00 PM	9	54	128	-	325	
10:00 AM	11:00 AM	10	47	119	-	329	
9:00 AM	10:00 AM	11	48	111	-	328	
6:00 AM	7:00 AM	12	58	94	-	323	
6:00 PM	7:00 PM	13	42	95	-	331	
7:00 PM	8:00 PM	14	32	66	-	336	

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**Warrant 2 | Four-Hour Vehicular Volume Satisfied? \***

**Warrant 2 | Four-Hour Vehicular Volume**

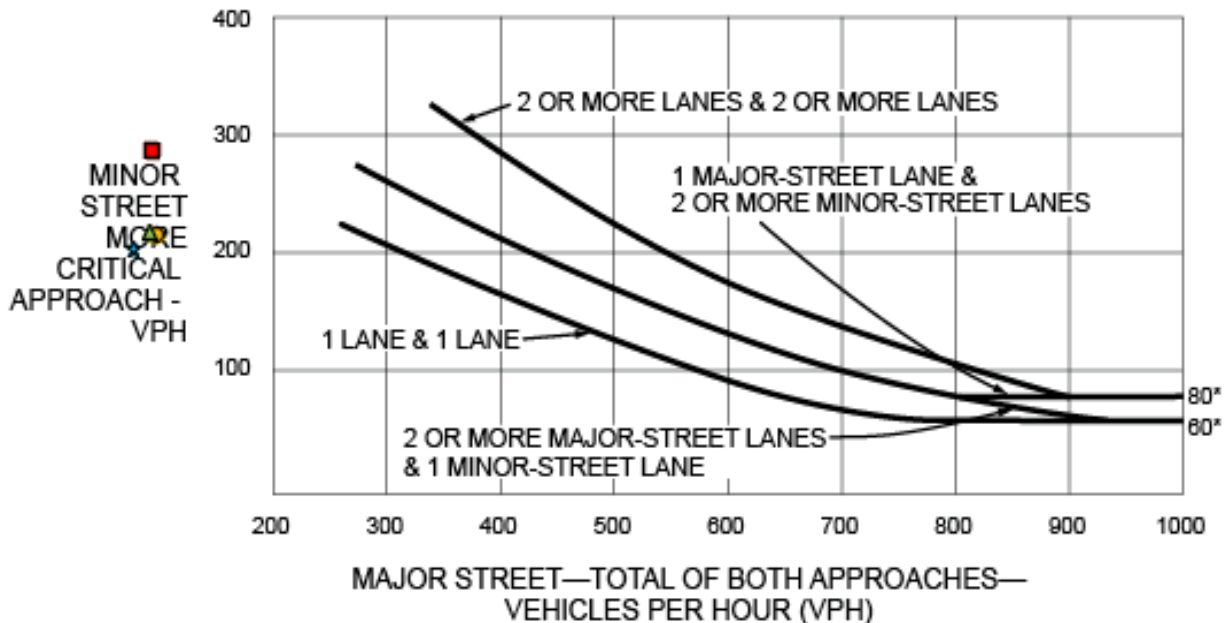
**Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume**



\*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane

**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

# All-Way Stop Control Warrant Evaluation

## Intersection of Demer Street (S-263) & I-90 Eastbound Ramps



### Background Intersection Information

<b>Major Roadway:</b>	Demer Street (S-263)
Posted or 85% Speed:	35 mph
Approach Lanes:	1
<b>Minor Roadway:</b>	Interstate 90 (I-90) EB Ramps
Posted or 85% Speed:	35 mph
Approach Lanes:	1
<b>Total Number of Approaches:</b>	4
<b>Analysis Case:</b>	2026 Existing Conditions

### All-Way Stop Control Warrant A: Crash Experience

Number of Approaches at Intersection: 4

Warrant Evaluation Criteria	# of Reported Crashes	Warrant Minimum	Warrant Satisfied
A. Number of reported crashes in a 12-month period susceptible to correction by the installation of all-way stop control:	0	5	
B. Number of reported crashes in a 36-month period susceptible to correction by the installation of all-way stop control:	0	6	

**Warrant Satisfied for Conditions A or B? No**

### All-Way Stop Control Warrant B: Sight Distance

Is the sight distance on the minor-road approach(es) controlled by a STOP sign adequate for a vehicle to turn onto or cross the major (uncontrolled) road? Yes

**Warrant Satisfied? No**

### All-Way Stop Control Warrant C: Transition to Signal Control or Transition to Yield Control at a Circular Intersection

Will all-way stop control serve as an interim measure that can be installed to control traffic while arrangements are being made for the installation of a traffic control signal at the intersection or for the installation of yield control at a circular intersection? No

**Warrant Satisfied? No**

# All-Way Stop Control Warrant Evaluation

## Intersection of Demer Street (S-263) & I-90 Eastbound Ramps



### All-Way Stop Control Warrant D: 8-Hour Volume (Vehicles, Pedestrians, Bicycles)

#### Intersection Traffic Volume Summary

Start Time	End Time	Major Roadway Demer Street (S-263)			Minor Roadway Interstate 90 (I-90) EB Ramps			Combined Hourly Volume	Rank
		Total Vehicles (veh/hr)	Total Peds (peds/hr)	Total Bikes (bikes/hr)	Total Vehicles (veh/hr)	Total Peds (peds/hr)	Total Bikes (bikes/hr)		
6:00 AM	7:00 AM	310	0	0	42	0	0	352	10
7:00 AM	8:00 AM	761	0	0	111	0	0	872	1
8:00 AM	9:00 AM	486	0	0	43	0	0	529	5
9:00 AM	10:00 AM	292	0	0	45	0	1	338	12
10:00 AM	11:00 AM	296	0	0	52	0	0	348	11
11:00 AM	12:00 PM	437	0	0	50	0	0	487	6
12:00 PM	1:00 PM	354	0	0	44	0	0	398	8
1:00 PM	2:00 PM	341	0	0	47	0	0	388	9
2:00 PM	3:00 PM	386	0	0	60	0	1	447	7
3:00 PM	4:00 PM	648	0	0	51	1	0	700	2
4:00 PM	5:00 PM	526	0	0	54	0	0	580	4
5:00 PM	6:00 PM	536	0	0	55	0	0	591	3
6:00 PM	7:00 PM	300	0	0	28	0	1	329	13
7:00 PM	8:00 PM	193	0	0	15	0	0	208	14
<b>TOTALS</b>		<b>5,866</b>	<b>0</b>	<b>0</b>	<b>697</b>	<b>1</b>	<b>3</b>	<b>6,567</b>	

Estimated Average Daily Volumes:	6,450	0	0	770	1	3	7,224
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Estimated Eighth Highest Hourly Volumes:	364	0	0	44	0	0	408
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The eighth highest hourly volume is based on the assumption that it is approximately 5.65% of the estimated average daily volumes.

Warrant Evaluation Criteria	Eighth Highest Volume	Warrant Minimum	Warrant Satisfied
A. Combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the major street approach(es):	364	300	<input checked="" type="checkbox"/>
B. Combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the minor street approach(es):	44	200	<input type="checkbox"/>
<b>Warrant Satisfied for Conditions A or B?</b>			<b>Yes</b>

# All-Way Stop Control Warrant Evaluation

## Intersection of Demer Street (S-263) & I-90 Eastbound Ramps



### All-Way Stop Control Warrant E: Other Factors

A. Is all-way stop control needed to control left-turn conflicts? No

B. Is all-way stop control needed to improve traffic operational characteristics at an intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics? No

C. Is all-way stop control needed where pedestrian and/or bicyclist movements support the installation of all-way stop control? No

D. Other:  
Is all-way stop control needed to improve traffic operational characteristics at an intersection where there are concerns related to conflicting traffic movements or other safety elements? No

**Warrant Satisfied? No**

# All-Way Stop Control Warrant Evaluation

## Intersection of Demer Street (S-263) & I-90 Eastbound Ramps



### Background Intersection Information

<b>Major Roadway:</b>	Demer Street (S-263)
Posted or 85% Speed:	35 mph
Approach Lanes:	1
<b>Minor Roadway:</b>	Interstate 90 (I-90) EB Ramps
Posted or 85% Speed:	35 mph
Approach Lanes:	1
<b>Total Number of Approaches:</b>	4
<b>Analysis Case:</b>	Estimated 2028 Total Traffic

### All-Way Stop Control Warrant A: Crash Experience

Number of Approaches at Intersection: 4

Warrant Evaluation Criteria	# of Reported Crashes	Warrant Minimum	Warrant Satisfied
A. Number of reported crashes in a 12-month period susceptible to correction by the installation of all-way stop control:	0	5	
B. Number of reported crashes in a 36-month period susceptible to correction by the installation of all-way stop control:	0	6	

**Warrant Satisfied for Conditions A or B? No**

### All-Way Stop Control Warrant B: Sight Distance

Is the sight distance on the minor-road approach(es) controlled by a STOP sign adequate for a vehicle to turn onto or cross the major (uncontrolled) road? Yes

**Warrant Satisfied? No**

### All-Way Stop Control Warrant C: Transition to Signal Control or Transition to Yield Control at a Circular Intersection

Will all-way stop control serve as an interim measure that can be installed to control traffic while arrangements are being made for the installation of a traffic control signal at the intersection or for the installation of yield control at a circular intersection? No

**Warrant Satisfied? No**

# All-Way Stop Control Warrant Evaluation

## Intersection of Demer Street (S-263) & I-90 Eastbound Ramps



### All-Way Stop Control Warrant D: 8-Hour Volume (Vehicles, Pedestrians, Bicycles)

#### Intersection Traffic Volume Summary

Start Time	End Time	Major Roadway Demer Street (S-263)			Minor Roadway Interstate 90 (I-90) EB Ramps			Combined Hourly Volume	Rank
		Total Vehicles (veh/hr)	Total Peds (peds/hr)	Total Bikes (bikes/hr)	Total Vehicles (veh/hr)	Total Peds (peds/hr)	Total Bikes (bikes/hr)		
6:00 AM	7:00 AM								
7:00 AM	8:00 AM								
8:00 AM	9:00 AM								
9:00 AM	10:00 AM								
10:00 AM	11:00 AM								
11:00 AM	12:00 PM								
12:00 PM	1:00 PM								
1:00 PM	2:00 PM								
2:00 PM	3:00 PM								
3:00 PM	4:00 PM								
4:00 PM	5:00 PM								
5:00 PM	6:00 PM								
6:00 PM	7:00 PM								
7:00 PM	8:00 PM								
<b>TOTALS</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

Estimated Average Daily Volumes:	8,257	0	0	1,436	1	2	9,696
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Estimated Eighth Highest Hourly Volumes:	467	0	0	81	0	0	548
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The eighth highest hourly volume is based on the assumption that it is approximately 5.65% of the estimated average daily volumes.

Warrant Evaluation Criteria	Eighth Highest Volume	Warrant Minimum	Warrant Satisfied
A. Combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the major street approach(es):	467	300	<input checked="" type="checkbox"/>
B. Combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the minor street approach(es):	81	200	<input type="checkbox"/>
<b>Warrant Satisfied for Conditions A or B?</b>			<b>Yes</b>

# All-Way Stop Control Warrant Evaluation

## Intersection of Demer Street (S-263) & I-90 Eastbound Ramps



### All-Way Stop Control Warrant E: Other Factors

A. Is all-way stop control needed to control left-turn conflicts? No

B. Is all-way stop control needed to improve traffic operational characteristics at an intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics? No

C. Is all-way stop control needed where pedestrian and/or bicyclist movements support the installation of all-way stop control? No

D. Other:  
Is all-way stop control needed to improve traffic operational characteristics at an intersection where there are concerns related to conflicting traffic movements or other safety elements? No

**Warrant Satisfied? No**

# Traffic Signal Warrant Evaluation

## Intersection of Demer Street (S-263) & I-90 Eastbound Ramps



### Background Intersection Information

<b>Major Roadway:</b>	Demer Street (S-263)		
Posted or 85% Speed:	35 mph		
Approach Lanes:	1		
Distance to Nearest Traffic Signal:	- ft	None in the Area	
<b>Minor Roadway:</b>	I-90 Eastbound Ramps		
Posted or 85% Speed:	35 mph		
Approach Lanes:	1		
<b>Total Number of Approaches:</b>	4		
Community with a population less than 10,000 or speeds above 40 mph on the major street?	Yes		
<b>Analysis Case:</b>	2026 Existing Conditions		

### Warrant Analyses Summary

Traffic Signal Warrant	Warrant Satisfied?
Warrant 1   Eight-Hour Vehicular Volume	No
Warrant 2   Four-Hour Vehicular Volume	No
Warrant 3   Peak Hour	Not Evaluated
Warrant 4   Pedestrian Volume	Insufficient Ped Volumes
Warrant 5   School Crossing	Not Evaluated
Warrant 6   Coordinated Signal System	Not Evaluated
Warrant 7   Crash Experience	Not Evaluated
Warrant 8   Roadway Network	Not Evaluated
Warrant 9   Intersection Near a Grade Crossing	Not Evaluated

### Notes & Comments

The intersection of Demer Street (S-263) & the I-90 eastbound ramps was not determined to be at a location that would present an unusual case, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time; therefore, Warrant 3 | Peak Hour was not evaluated as a part of this study.

Warrants 5, 6, and 9 were not applicable to the intersection of Demer Street (S-263) and the I-90 eastbound ramps and were therefore not evaluated.

An adequate trial of alternatives to reduce crash frequency at the intersection of Demer Street (S-263) and the I-90 eastbound ramps have not been implemented; therefore, Warrant 7 has not been evaluated.

The existing traffic volumes at the intersection of Demer Street (S-263) and the I-90 eastbound ramps do not currently meet the hourly volume thresholds for Warrant 8 to be evaluated, at this time.

# Traffic Signal Warrant Evaluation

## Intersection of Demer Street (S-263) & I-90 Eastbound Ramps



### Intersection Traffic Volume Summary

START TIME	END TIME	MAJOR ROADWAY Demer Street (S-263)			MINOR ROADWAY I-90 Eastbound Ramps			MAJOR & MINOR ROADWAYS COMBINED TOTAL VOLUMES		Pedestrians Crossing Major Roadway (peds/hr)
		Total Volume (veh/hr)	Excluded Right-Turns (veh/hr)	Adjusted Volume (veh/hr)	Total Volume (veh/hr)	Excluded Right-Turns (veh/hr)	Adjusted Volume (veh/hr)	Unadjusted Volume (veh/hr)	Adjusted Volume (veh/hr)	
6:00 AM	7:00 AM	201	0	201	42	37	5	243	206	0
7:00 AM	8:00 AM	445	0	445	111	95	16	556	461	0
8:00 AM	9:00 AM	250	0	250	43	30	13	293	263	0
9:00 AM	10:00 AM	176	0	176	45	34	11	221	187	0
10:00 AM	11:00 AM	151	0	151	52	44	8	203	159	0
11:00 AM	12:00 PM	230	0	230	50	45	5	280	235	0
12:00 PM	1:00 PM	184	0	184	44	41	3	228	187	0
1:00 PM	2:00 PM	167	0	167	47	41	6	214	173	0
2:00 PM	3:00 PM	223	0	223	60	54	6	283	229	0
3:00 PM	4:00 PM	303	0	303	51	41	10	354	313	0
4:00 PM	5:00 PM	282	0	282	54	45	9	336	291	0
5:00 PM	6:00 PM	271	0	271	55	48	7	326	278	0
6:00 PM	7:00 PM	166	0	166	28	20	8	194	174	0
7:00 PM	8:00 PM	101	0	101	15	13	2	116	103	0
<b>TOTALS</b>		<b>3,150</b>	<b>0</b>	<b>3,150</b>	<b>697</b>	<b>588</b>	<b>109</b>	<b>3,847</b>	<b>3,259</b>	<b>0</b>

### Hourly Volume Warrant Summary

Warrant Analyses Volume Data							
START TIME	END TIME	Major Volume (veh/hr)	Minor Volume (veh/hr)	Total Volume (veh/hr)	Pedestrian Volume (veh/hr)	Adequate Gaps (gaps/hr)	Rank
6:00 AM	7:00 AM	201	5	206	0	-	8
7:00 AM	8:00 AM	445	16	461	0	-	1
8:00 AM	9:00 AM	250	13	263	0	-	5
9:00 AM	10:00 AM	176	11	187	0	-	9
10:00 AM	11:00 AM	151	8	159	0	-	13
11:00 AM	12:00 PM	230	5	235	0	-	6
12:00 PM	1:00 PM	184	3	187	0	-	9
1:00 PM	2:00 PM	167	6	173	0	-	12
2:00 PM	3:00 PM	223	6	229	0	-	7
3:00 PM	4:00 PM	303	10	313	0	-	2
4:00 PM	5:00 PM	282	9	291	0	-	3
5:00 PM	6:00 PM	271	7	278	0	-	4
6:00 PM	7:00 PM	166	8	174	0	-	11
7:00 PM	8:00 PM	101	2	103	0	-	14
<b>TOTALS</b>		<b>3,150</b>	<b>109</b>	<b>3,259</b>	<b>0</b>	<b>-</b>	

**Traffic Signal Warrant Evaluation**  
**Intersection of Demer Street (S-263) & I-90 Eastbound Ramps**



**Warrant 1 | Eight-Hour Vehicular Volume**

**Condition A - Minimum Vehicular Volume**

Number of Lanes for Moving Traffic on each Approach		Vehicles Per Hour on Major Street (Total of Both Approaches)				Vehicles Per Hour on More Critical Minor Street Approach (One Direction Only)			
Major Street	Minor Street	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>	56% <sup>d</sup>	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>	56% <sup>d</sup>
1	1	500	400	350	280	150	120	105	84
2 or More	1	600	480	420	336	150	120	105	84
2 or More	2 or More	600	480	420	336	200	160	140	112
1	2 or More	500	400	350	280	200	160	140	112

**Condition B - Interruption of Continuous Traffic**

Number of Lanes for Moving Traffic on each Approach		Vehicles Per Hour on Major Street (Total of Both Approaches)				Vehicles Per Hour on More Critical Minor Street Approach (One Direction Only)			
Major Street	Minor Street	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>	56% <sup>d</sup>	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>	56% <sup>d</sup>
1	1	750	600	525	420	75	60	53	42
2 or More	1	900	720	630	504	75	60	53	42
2 or More	2 or More	900	720	630	504	100	80	70	56
1	2 or More	750	600	525	420	100	80	70	56

<sup>a</sup>Basic minimum hourly volume.  
<sup>b</sup>Used for combination of Conditions A and B after adequate trial of other remedial measures.  
<sup>c</sup>May be used when the major street speed exceeds 40 mph or in an isolated community with a population of less than 10,000.  
<sup>d</sup>May be used for combination of Conditions A and B after adequate trial of other remedial measures when the major street speed exceeds 40 mph or in an isolated community with a population of less than 10,000.

**Analyses of Warrant Conditions A & B**

HOURLY VOLUME			Major Roadway (veh/hr)	Minor Roadway (veh/hr)	Condition A - Minimum Vehicular Volume				Condition B - Interruption of Continuous Traffic				Condition A Warrant Satisfied	Condition B Warrant Satisfied
					Major Roadway Warrant Minimum Volume (veh/hr)		Minor Roadway Warrant Minimum Volume (veh/hr)		Major Roadway Warrant Minimum Volume (veh/hr)		Minor Roadway Warrant Minimum Volume (veh/hr)			
START TIME	END TIME	RANK	100%	70%	100%	70%	100%	70%	100%	70%	100%	70%		
7:00 AM	8:00 AM	1	445	16										
3:00 PM	4:00 PM	2	303	10										
4:00 PM	5:00 PM	3	282	9										
5:00 PM	6:00 PM	4	271	7										
8:00 AM	9:00 AM	5	250	13										
11:00 AM	12:00 PM	6	230	5										
2:00 PM	3:00 PM	7	223	6										
6:00 AM	7:00 AM	8	201	5	-	350	-	120	-	525	-	53		
12:00 PM	1:00 PM	9	360	14										
9:00 AM	10:00 AM	10	360	14										
6:00 PM	7:00 PM	11	166	8										
1:00 PM	2:00 PM	12	167	6										
10:00 AM	11:00 AM	13	151	8										
7:00 PM	8:00 PM	14	101	2										

Warrant Satisfied for Conditions A or B? **✘ ✘**

**Analyses of Combination of Warrant Conditions A & B**

HOURLY VOLUME			Major Roadway (veh/hr)	Minor Roadway (veh/hr)	Condition A - Minimum Vehicular Volume				Condition B - Interruption of Continuous Traffic				Condition A Warrant Satisfied	Condition B Warrant Satisfied	Combination of Conditions A & B Satisfied for Warrant
					Major Roadway Warrant Minimum Volume (veh/hr)		Minor Roadway Warrant Minimum Volume (veh/hr)		Major Roadway Warrant Minimum Volume (veh/hr)		Minor Roadway Warrant Minimum Volume (veh/hr)				
START TIME	END TIME	RANK	80%	56%	80%	56%	80%	56%	80%	56%	80%	56%			
7:00 AM	8:00 AM	1	445	16											✘
3:00 PM	4:00 PM	2	303	10											✘
4:00 PM	5:00 PM	3	282	9											✘
5:00 PM	6:00 PM	4	271	7											✘
8:00 AM	9:00 AM	5	250	13											✘
11:00 AM	12:00 PM	6	230	5											✘
2:00 PM	3:00 PM	7	223	6											✘
6:00 AM	7:00 AM	8	201	5	-	280	-	84	-	420	-	42			✘
12:00 PM	1:00 PM	9	360	14											✘
9:00 AM	10:00 AM	10	360	14											✘
6:00 PM	7:00 PM	11	166	8											✘
1:00 PM	2:00 PM	12	167	6											✘
10:00 AM	11:00 AM	13	151	8											✘
7:00 PM	8:00 PM	14	101	2											✘

Warrant Satisfied for Combination of Conditions A or B? **✘**

**Warrant 1 | Eight-Hour Vehicular Volume Satisfied? **✘****

**Traffic Signal Warrant Evaluation**  
**Intersection of Demer Street (S-263) & I-90 Eastbound Ramps**



**Warrant 2 | Four-Hour Vehicular Volume**

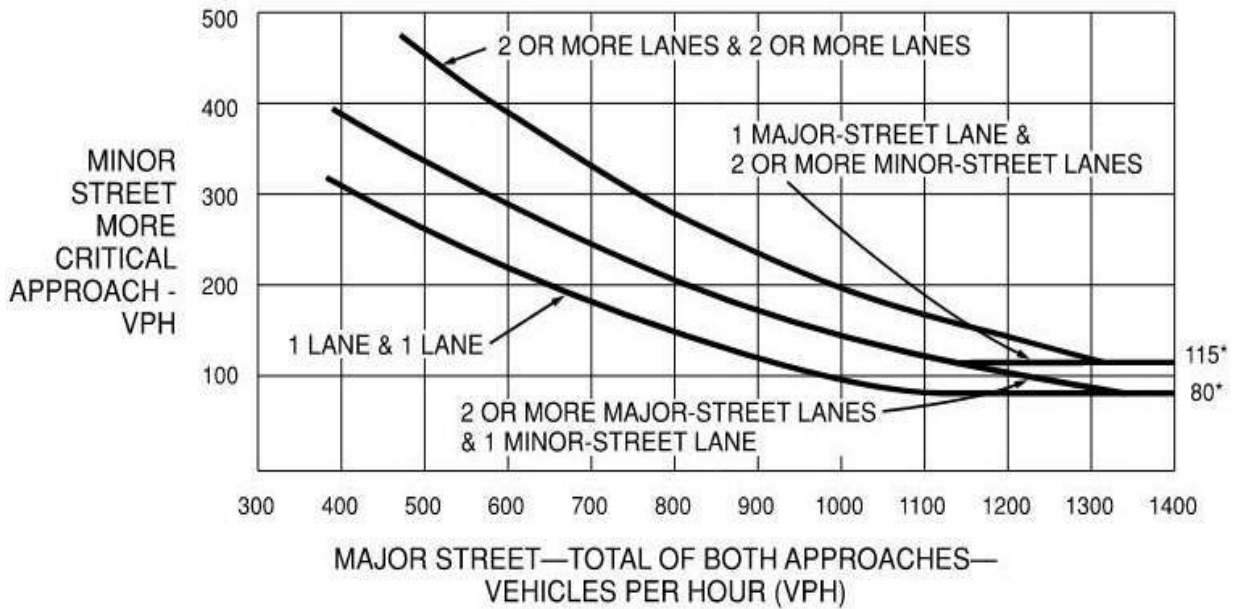
HOURLY VOLUME			Major Roadway (veh/hr)	Minor Roadway (veh/hr)	Minor Roadway Warrant Minimum Volume (veh/hr)		Warrant Satisfied
START TIME	END TIME	RANK			100% Figure 4C-1	70% Figure 4C-2	
7:00 AM	8:00 AM	1	445	16	-	150	
3:00 PM	4:00 PM	2	303	10	-	208	
4:00 PM	5:00 PM	3	282	9	-	217	
5:00 PM	6:00 PM	4	271	7	-	221	
8:00 AM	9:00 AM	5	250	13	-	231	
11:00 AM	12:00 PM	6	230	5	-	240	
2:00 PM	3:00 PM	7	223	6	-	243	
6:00 AM	7:00 AM	8	201	5	-	253	
12:00 PM	1:00 PM	9	360	14	-	184	
9:00 AM	10:00 AM	10	360	14	-	184	
6:00 PM	7:00 PM	11	166	8	-	269	
1:00 PM	2:00 PM	12	167	6	-	269	
10:00 AM	11:00 AM	13	151	8	-	277	
7:00 PM	8:00 PM	14	101	2	-	301	

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**Warrant 2 | Four-Hour Vehicular Volume Satisfied? \***

**Warrant 2 | Four-Hour Vehicular Volume**

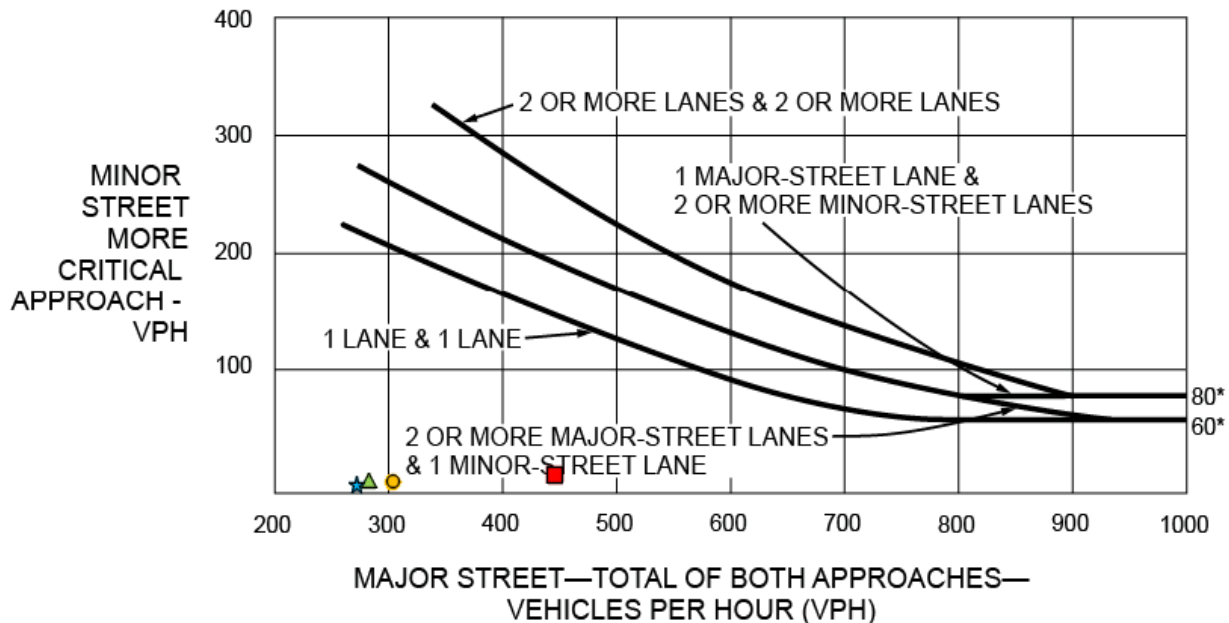
**Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume**



\*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane

**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

**Proposed Town Pump - Frenchtown | Independent Traffic Impact Study**  
**Demer Street (S-263) & the Interstate 90 (I-90) Eastbound Ramps**  
**Traffic Signal Warrant Evaluation - Estimated Traffic Conditions**



Based on procedures developed by the Oregon Department of Transportation utilizing estimated average daily traffic volumes as delineated in its *Analysis Procedures Manual, Version 2 (July 2025)*.

**Estimated Average Daily Traffic Volumes**

Description	ESTIMATED WEEKDAY, AM PEAK HOUR		
	Demer Street (S-263) South of the I-90 EB Ramps (Vehicles Per Hour) <i>Excluding Right-Turns</i>	Demer Street (S-263) North of the I-90 EB Ramps (Vehicles Per Hour)	I-90 Eastbound Off-Ramp West of Demer Street (Vehicles Per Hour) <i>Excluding Right-Turns</i>
2026 Existing Conditions	221	581	64
2026 - 2028 Background Traffic Growth	5	52	3
2026 - 2028 Traffic Growth Town Pump Site Development Project	7	57	44
<b>Estimated 2028 Total Traffic</b>	<b>233</b>	<b>690</b>	<b>111</b>

Description	ESTIMATED WEEKDAY, SCHOOL PM PEAK HOUR		
	Demer Street (S-263) South of the I-90 EB Ramps (Vehicles Per Hour) <i>Excluding Right-Turns</i>	Demer Street (S-263) North of the I-90 EB Ramps (Vehicles Per Hour)	I-90 Eastbound Off-Ramp West of Demer Street (Vehicles Per Hour) <i>Excluding Right-Turns</i>
2026 Existing Conditions	252	308	11
2026 - 2028 Background Traffic Growth	7	38	2
2026 - 2028 Traffic Growth Town Pump Site Development Project	5	45	34
<b>Estimated 2028 Total Traffic</b>	<b>264</b>	<b>391</b>	<b>47</b>

Description	ESTIMATED WEEKDAY, PM PEAK HOUR		
	Demer Street (S-263) South of the I-90 EB Ramps (Vehicles Per Hour) <i>Excluding Right-Turns</i>	Demer Street (S-263) North of the I-90 EB Ramps (Vehicles Per Hour)	I-90 Eastbound Off-Ramp West of Demer Street (Vehicles Per Hour) <i>Excluding Right-Turns</i>
2026 Existing Conditions	204	281	9
2026 - 2028 Background Traffic Growth	14	59	2
2026 - 2028 Traffic Growth Town Pump Site Development Project	7	58	46
<b>Estimated 2028 Total Traffic</b>	<b>225</b>	<b>398</b>	<b>57</b>

Description	ESTIMATED AVERAGE WEEKDAY TRAFFIC VOLUMES		
	Demer Street (S-263) South of the I-90 EB Ramps (Vehicles Per Day) <i>Excluding Right-Turns</i>	Demer Street (S-263) North of the I-90 EB Ramps (Vehicles Per Day)	I-90 Eastbound Off-Ramp West of Demer Street (Vehicles Per Day) <i>Excluding Right-Turns</i>
2026 Existing Conditions	1,795	3,475	125
2026 - 2028 Background Traffic Growth	250	480	20
2026 - 2028 Traffic Growth Town Pump Site Development Project	159	718	526
<b>Estimated 2028 Total Traffic</b>	<b>2,204</b>	<b>4,673</b>	<b>671</b>

**Proposed Town Pump - Frenchtown | Independent Traffic Impact Study**  
**Demer Street (S-263) & the Interstate 90 (I-90) Eastbound Ramps**  
**Traffic Signal Warrant Evaluation - Estimated Traffic Conditions**



Based on procedures developed by the Oregon Department of Transportation utilizing estimated average daily traffic volumes as delineated in its *Analysis Procedures Manual, Version 2* (July 2025).

**Warrant #1 - Eight-Hour Vehicular Volumes** (Using Eighth-Highest Hour)

The eighth highest hourly volumes are based on the assumption that they are approximately 5.65% of the estimated average daily traffic (EADT).

Only MUTCD Warrant 1 Condition A and Condition B are utilized by the Oregon Department of Transportation to evaluate future needs for traffic signals beyond three years from the present year. This is presented in Section 12.4.1 of the *Analysis Procedures Manual, Version 2*. The warrant analyses utilize the above estimate for the eighth highest hourly volumes as a percentage of average daily traffic in comparison to the *Manual on Uniform Traffic Control Devices, 11th Edition* Table 4C-1.

**Estimated Average Daily Traffic (EADT) Volumes for Warrant Analysis**

Description	Vehicles Per Day on Major Street (Demer Street   S-263) (Total of Both Approaches)		Vehicles Per Day on Minor Street (I-90 EB Off-Ramp) (Eastbound Movements - Excluding Right-Turns)	
	Contributing Portion (Vehicles Per Day)	Cumulative (Vehicles Per Day)	Contributing Portion (Vehicles Per Day)	Cumulative (Vehicles Per Day)
2026 Existing Conditions	-	5,270	-	125
2026 - 2028 Background Traffic Growth	730	6,000	20	145
2026 - 2028 Traffic Growth Town Pump Site Development Project	877	6,877	526	671
<b>Combined Totals</b>	<b>1,607</b>	<b>6,877</b>	<b>546</b>	<b>671</b>

**Condition A - Minimum Vehicular Volume**

Description	Vehicles Per Day on Major Street (Demer Street   S-263) (Total of Both Approaches)		Vehicles Per Day on Minor Street (I-90 EB Off-Ramp) (Eastbound Movements - Excluding Right-Turns)	
	Cumulative (Vehicles Per Day)	Minimum Warrant Criteria Met? Yes or No - [% of Warrant]	Contributing Portion (Vehicles Per Day)	Minimum Warrant Criteria Met? Yes or No - [% of Warrant]
2026 Existing Conditions	5,270	No - [85%]	125	No - [6.8%]
2026 - 2028 Background Traffic Growth	6,000	No - [96.8%]	145	No - [7.8%]
2026 - 2028 Traffic Growth Town Pump Site Development Project	6,877	Yes - [110.9%]	671	No - [36.3%]
<b>Warrant Criteria Met?</b>	<b>6,877</b>	<b>Yes - [110.9%]</b>	<b>671</b>	<b>No - [36.3%]</b>
<b>No</b>				

**Condition B - Interruption of Continuous Traffic**

Description	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Minor Street (Eastbound - Excluding Right-Turns)	
	Cumulative (Vehicles Per Day)	Minimum Warrant Criteria Met? Yes or No - [% of Warrant]	Contributing Portion (Vehicles Per Day)	Cumulative (Vehicles Per Day)
2026 Existing Conditions	5,270	No - [56.7%]	125	No - [13.2%]
2026 - 2028 Background Traffic Growth	6,000	No - [64.5%]	145	No - [15.3%]
2026 - 2028 Traffic Growth Town Pump Site Development Project	6,877	No - [73.9%]	671	No - [70.6%]
<b>Warrant Criteria Met?</b>	<b>6,877</b>	<b>No - [73.9%]</b>	<b>671</b>	<b>No - [70.6%]</b>
<b>No</b>				

**Minimum criteria satisfied for Warrant #1 - Eight-Hour Vehicular Volume? No**

**Proposed Town Pump - Frenchtown | Independent Traffic Impact Study**  
**Demer Street (S-263) & the Interstate 90 (I-90) Eastbound Ramps**  
**Traffic Signal Warrant Evaluation - Estimated Traffic Conditions**



Based on procedures developed by the Oregon Department of Transportation utilizing estimated average daily traffic volumes as delineated in its *Analysis Procedures Manual, Version 2* (July 2025).

**Warrant #2 - Four-Hour Vehicular Volumes** (Using Fourth-Highest Hour)

The fourth highest hourly volumes are based on the assumption that they are approximately 8.25% of the estimated average daily traffic (EADT).

Analysis of Warrant 2 is not included in the Oregon Department of Transportation *Analysis Procedures Manual, Version 2*. It is included herein based on Version 1 of the manual and utilization of the above estimate for the fourth highest hourly volumes in comparison to the *Manual on Uniform Traffic Control Devices, 11th Edition* Figure 4C-1.

Description	Vehicles Per Hour on Major Street (Demer Street   S-263) (Total of Both Approaches)		Vehicles Per Hour on Minor Street (I-90 EB Off-Ramp) (Eastbound Movements - Excluding Right-Turns)	
	Contributing Portion (Vehicles Per Hour)	Cumulative (Vehicles Per Hour)	Contributing Portion (Vehicles Per Hour)	Cumulative (Vehicles Per Hour)
2026 Existing Conditions	-	435	-	10
2026 - 2028 Background Traffic Growth	60	495	2	12
2026 - 2028 Traffic Growth Town Pump Site Development Project	72	567	43	55
<b>Combined Totals</b>	<b>132</b>	<b>567</b>	<b>45</b>	<b>55</b>

Description	Vehicles Per Hour on Major Street (Total of Both Approaches)	Vehicles Per Hour on Minor Street (I-90 EB Off-Ramp) (Eastbound Movements - Excluding Right-Turns)		Minimum Warrant Criteria Met? Yes or No - [% of Warrant]
	Cumulative (Vehicles Per Hour)	Cumulative Contributing Portion (Vehicles Per Hour)	Warrant Minimum Volume (Vehicles Per Hour)	
2026 Existing Conditions	435	10	155	No - [6.5%]
2026 - 2028 Background Traffic Growth	495	12	132	No - [9.1%]
2026 - 2028 Traffic Growth Town Pump Site Development Project	567	55	107	No - [51.4%]
<b>Warrant Criteria Met?</b>	<b>567</b>	<b>55</b>	<b>107</b>	<b>No - [51.4%]</b>
<b>No</b>				

Minimum criteria satisfied for Warrant #2 - Four-Hour Vehicular Volume? No

# All-Way Stop Control Warrant Evaluation

## Intersection of Demer Street (S-263) & I-90 Westbound Ramps



### Background Intersection Information

<b>Major Roadway:</b>	Demer Street
Posted or 85% Speed:	35 mph
Approach Lanes:	1
<b>Minor Roadway:</b>	Interstate 90 (I-90) WB Ramps
Posted or 85% Speed:	35 mph
Approach Lanes:	1
<b>Total Number of Approaches:</b>	4
<b>Analysis Case:</b>	2026 Existing Conditions

### All-Way Stop Control Warrant A: Crash Experience

Number of Approaches at Intersection: 4

Warrant Evaluation Criteria	# of Reported Crashes	Warrant Minimum	Warrant Satisfied
A. Number of reported crashes in a 12-month period susceptible to correction by the installation of all-way stop control:	2	5	
B. Number of reported crashes in a 36-month period susceptible to correction by the installation of all-way stop control:	5	6	

**Warrant Satisfied for Conditions A or B? No**

### All-Way Stop Control Warrant B: Sight Distance

Is the sight distance on the minor-road approach(es) controlled by a STOP sign adequate for a vehicle to turn onto or cross the major (uncontrolled) road? Yes

**Warrant Satisfied? No**

### All-Way Stop Control Warrant C: Transition to Signal Control or Transition to Yield Control at a Circular Intersection

Will all-way stop control serve as an interim measure that can be installed to control traffic while arrangements are being made for the installation of a traffic control signal at the intersection or for the installation of yield control at a circular intersection? No

**Warrant Satisfied? No**

# All-Way Stop Control Warrant Evaluation

## Intersection of Demer Street (S-263) & I-90 Westbound Ramps



### All-Way Stop Control Warrant D: 8-Hour Volume (Vehicles, Pedestrians, Bicycles)

#### Intersection Traffic Volume Summary

Start Time	End Time	Major Roadway Demer Street			Minor Roadway Interstate 90 (I-90) WB Ramps			Combined Hourly Volume	Rank
		Total Vehicles (veh/hr)	Total Peds (peds/hr)	Total Bikes (bikes/hr)	Total Vehicles (veh/hr)	Total Peds (peds/hr)	Total Bikes (bikes/hr)		
6:00 AM	7:00 AM	184	0	0	64	0	0	248	13
7:00 AM	8:00 AM	486	0	0	171	0	0	657	3
8:00 AM	9:00 AM	345	0	0	98	0	0	443	5
9:00 AM	10:00 AM	200	0	0	87	1	1	289	11
10:00 AM	11:00 AM	191	0	0	81	0	0	272	12
11:00 AM	12:00 PM	323	0	0	117	0	0	440	6
12:00 PM	1:00 PM	244	0	0	107	0	0	351	10
1:00 PM	2:00 PM	244	0	0	126	0	0	370	9
2:00 PM	3:00 PM	239	0	0	182	0	1	422	7
3:00 PM	4:00 PM	476	0	0	210	1	0	687	2
4:00 PM	5:00 PM	342	0	0	265	0	0	607	4
5:00 PM	6:00 PM	367	0	0	325	0	0	692	1
6:00 PM	7:00 PM	190	0	0	195	0	1	386	8
7:00 PM	8:00 PM	137	0	0	111	0	0	248	13
<b>TOTALS</b>		<b>3,968</b>	<b>0</b>	<b>0</b>	<b>2,139</b>	<b>2</b>	<b>3</b>	<b>6,112</b>	

Estimated Average Daily Volumes:	4,360	0	0	2,350	2	3	6,715
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Estimated Eighth Highest Hourly Volumes:	246	0	0	133	0	0	379
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The eighth highest hourly volume is based on the assumption that it is approximately 5.65% of the estimated average daily volumes.

Warrant Evaluation Criteria	Eighth Highest Volume	Warrant Minimum	Warrant Satisfied
A. Combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the major street approach(es):	246	300	
B. Combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the minor street approach(es):	133	200	
<b>Warrant Satisfied for Conditions A or B?</b>			<b>No</b>

# All-Way Stop Control Warrant Evaluation

## Intersection of Demer Street (S-263) & I-90 Westbound Ramps



### All-Way Stop Control Warrant E: Other Factors

A. Is all-way stop control needed to control left-turn conflicts? No

B. Is all-way stop control needed to improve traffic operational characteristics at an intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics? No

C. Is all-way stop control needed where pedestrian and/or bicyclist movements support the installation of all-way stop control? No

D. Other:  
Is all-way stop control needed to improve traffic operational characteristics at an intersection where there are concerns related to conflicting traffic movements or other safety elements? No

**Warrant Satisfied? No**

# All-Way Stop Control Warrant Evaluation

## Intersection of Demer Street & I-90 Westbound Ramps



### Background Intersection Information

<b>Major Roadway:</b>	Demer Street
Posted or 85% Speed:	35 mph
Approach Lanes:	1
<b>Minor Roadway:</b>	Interstate 90 (I-90) WB Ramps
Posted or 85% Speed:	35 mph
Approach Lanes:	1
<b>Total Number of Approaches:</b>	4
<b>Analysis Case:</b>	Estimated 2028 Total Traffic

### All-Way Stop Control Warrant A: Crash Experience

Number of Approaches at Intersection: 4

Warrant Evaluation Criteria	# of Reported Crashes	Warrant Minimum	Warrant Satisfied
A. Number of reported crashes in a 12-month period susceptible to correction by the installation of all-way stop control:	2	5	
B. Number of reported crashes in a 36-month period susceptible to correction by the installation of all-way stop control:	5	6	

**Warrant Satisfied for Conditions A or B? No**

### All-Way Stop Control Warrant B: Sight Distance

Is the sight distance on the minor-road approach(es) controlled by a STOP sign adequate for a vehicle to turn onto or cross the major (uncontrolled) road? Yes

**Warrant Satisfied? No**

### All-Way Stop Control Warrant C: Transition to Signal Control or Transition to Yield Control at a Circular Intersection

Will all-way stop control serve as an interim measure that can be installed to control traffic while arrangements are being made for the installation of a traffic control signal at the intersection or for the installation of yield control at a circular intersection? No

**Warrant Satisfied? No**

# All-Way Stop Control Warrant Evaluation

## Intersection of Demer Street & I-90 Westbound Ramps



### All-Way Stop Control Warrant D: 8-Hour Volume (Vehicles, Pedestrians, Bicycles)

#### Intersection Traffic Volume Summary

Start Time	End Time	Major Roadway Demer Street			Minor Roadway Interstate 90 (I-90) WB Ramps			Combined Hourly Volume	Rank
		Total Vehicles (veh/hr)	Total Peds (peds/hr)	Total Bikes (bikes/hr)	Total Vehicles (veh/hr)	Total Peds (peds/hr)	Total Bikes (bikes/hr)		
6:00 AM	7:00 AM								
7:00 AM	8:00 AM								
8:00 AM	9:00 AM								
9:00 AM	10:00 AM								
10:00 AM	11:00 AM								
11:00 AM	12:00 PM								
12:00 PM	1:00 PM								
1:00 PM	2:00 PM								
2:00 PM	3:00 PM								
3:00 PM	4:00 PM								
4:00 PM	5:00 PM								
5:00 PM	6:00 PM								
6:00 PM	7:00 PM								
7:00 PM	8:00 PM								
<b>TOTALS</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

Estimated Average Daily Volumes:	6,606	0	0	3,340	0	1	9,947
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Estimated Eighth Highest Hourly Volumes:	373	0	0	189	0	0	562
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The eighth highest hourly volume is based on the assumption that it is approximately 5.65% of the estimated average daily volumes.

Warrant Evaluation Criteria	Eighth Highest Volume	Warrant Minimum	Warrant Satisfied
A. Combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the major street approach(es):	373	300	<input checked="" type="checkbox"/>
B. Combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the minor street approach(es):	189	200	<input type="checkbox"/>
<b>Warrant Satisfied for Conditions A or B?</b>			<b>Yes</b>

# All-Way Stop Control Warrant Evaluation

## Intersection of Demer Street & I-90 Westbound Ramps



### All-Way Stop Control Warrant E: Other Factors

A. Is all-way stop control needed to control left-turn conflicts? No

B. Is all-way stop control needed to improve traffic operational characteristics at an intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics? No

C. Is all-way stop control needed where pedestrian and/or bicyclist movements support the installation of all-way stop control? No

D. Other:  
Is all-way stop control needed to improve traffic operational characteristics at an intersection where there are concerns related to conflicting traffic movements or other safety elements? No

**Warrant Satisfied? No**

**Proposed Town Pump - Frenchtown | Independent Traffic Impact Study**  
**Demer Street & the Interstate 90 (I-90) Westbound Ramps**  
**Traffic Signal Warrant Evaluation - Estimated Traffic Conditions**



Based on procedures developed by the Oregon Department of Transportation utilizing estimated average daily traffic volumes as delineated in its *Analysis Procedures Manual, Version 2 (July 2025)*.

Estimated Average Daily Traffic Volumes				
Description	ESTIMATED WEEKDAY, AM PEAK HOUR			
	Demer Street South of the I-90 WB Ramps (Vehicles Per Hour)	Demer Street North of the I-90 WB Ramps (Vehicles Per Hour) <i>Excluding Right-Turns</i>	I-90 Westbound Off-Ramp West of Demer Street (Vehicles Per Hour) <i>Excluding Right-Turns</i>	
2026 Existing Conditions	217	376	96	
2026 - 2028 Background Traffic Growth	8	34	18	
2026 - 2028 Traffic Growth Town Pump Site Development Project	60	57	0	
<b>Estimated 2028 Total Traffic</b>	<b>285</b>	<b>467</b>	<b>114</b>	

Description	ESTIMATED WEEKDAY, SCHOOL PM PEAK HOUR			
	Demer Street South of the I-90 WB Ramps (Vehicles Per Hour)	Demer Street North of the I-90 WB Ramps (Vehicles Per Hour) <i>Excluding Right-Turns</i>	I-90 Westbound Off-Ramp West of Demer Street (Vehicles Per Hour) <i>Excluding Right-Turns</i>	
2026 Existing Conditions	263	202	106	
2026 - 2028 Background Traffic Growth	9	18	20	
2026 - 2028 Traffic Growth Town Pump Site Development Project	45	45	0	
<b>Estimated 2028 Total Traffic</b>	<b>317</b>	<b>265</b>	<b>126</b>	

Description	ESTIMATED WEEKDAY, PM PEAK HOUR			
	Demer Street South of the I-90 WB Ramps (Vehicles Per Hour)	Demer Street North of the I-90 WB Ramps (Vehicles Per Hour) <i>Excluding Right-Turns</i>	I-90 Westbound Off-Ramp West of Demer Street (Vehicles Per Hour) <i>Excluding Right-Turns</i>	
2026 Existing Conditions	213	143	139	
2026 - 2028 Background Traffic Growth	16	13	46	
2026 - 2028 Traffic Growth Town Pump Site Development Project	59	58	0	
<b>Estimated 2028 Total Traffic</b>	<b>288</b>	<b>214</b>	<b>185</b>	

Description	ESTIMATED AVERAGE WEEKDAY TRAFFIC VOLUMES			
	Demer Street South of the I-90 WB Ramps (Vehicles Per Day)	Demer Street North of the I-90 WB Ramps (Vehicles Per Day) <i>Excluding Right-Turns</i>	I-90 Westbound Off-Ramp West of Demer Street (Vehicles Per Day) <i>Excluding Right-Turns</i>	
2026 Existing Conditions	2,025	2,260	1,235	
2026 - 2028 Background Traffic Growth	155	110	355	
2026 - 2028 Traffic Growth Town Pump Site Development Project	732	718	0	
<b>Estimated 2028 Total Traffic</b>	<b>2,912</b>	<b>3,088</b>	<b>1,590</b>	

**Proposed Town Pump - Frenchtown | Independent Traffic Impact Study**  
**Demer Street & the Interstate 90 (I-90) Westbound Ramps**  
**Traffic Signal Warrant Evaluation - Estimated Traffic Conditions**



Based on procedures developed by the Oregon Department of Transportation utilizing estimated average daily traffic volumes as delineated in its *Analysis Procedures Manual, Version 2* (July 2025).

**Warrant #1 - Eight-Hour Vehicular Volumes** (Using Eighth-Highest Hour)

The eighth highest hourly volumes are based on the assumption that they are approximately 5.65% of the estimated average daily traffic (EADT).

Only MUTCD Warrant 1 Condition A and Condition B are utilized by the Oregon Department of Transportation to evaluate future needs for traffic signals beyond three years from the present year. This is presented in Section 12.4.1 of the *Analysis Procedures Manual, Version 2*. The warrant analyses utilize the above estimate for the eighth highest hourly volumes as a percentage of average daily traffic in comparison to the *Manual on Uniform Traffic Control Devices, 11th Edition* Table 4C-1.

**Estimated Average Daily Traffic (EADT) Volumes for Warrant Analysis**

Description	Vehicles Per Day on Major Street (Demer Street) (Total of Both Approaches)		Vehicles Per Day on Minor Street (I-90 WB Off-Ramp) (Westbound Movements - Excluding Right-Turns)	
	Contributing Portion (Vehicles Per Day)	Cumulative (Vehicles Per Day)	Contributing Portion (Vehicles Per Day)	Cumulative (Vehicles Per Day)
2026 Existing Conditions	-	4,285	-	1,235
2026 - 2028 Background Traffic Growth	265	4,550	355	1,590
2026 - 2028 Traffic Growth Town Pump Site Development Project	1,450	6,000	0	1,590
<b>Combined Totals</b>	<b>1,715</b>	<b>6,000</b>	<b>355</b>	<b>1,590</b>

**Condition A - Minimum Vehicular Volume**

Description	Vehicles Per Day on Major Street (Demer Street) (Total of Both Approaches)		Vehicles Per Day on Minor Street (I-90 WB Off-Ramp) (Westbound Movements - Excluding Right-Turns)	
	Cumulative (Vehicles Per Day)	Minimum Warrant Criteria Met? Yes or No - [% of Warrant]	Contributing Portion (Vehicles Per Day)	Minimum Warrant Criteria Met? Yes or No - [% of Warrant]
2026 Existing Conditions	4,285	No - [69.1%]	1,235	No - [66.8%]
2026 - 2028 Background Traffic Growth	4,550	No - [73.4%]	1,590	No - [85.9%]
2026 - 2028 Traffic Growth Town Pump Site Development Project	6,000	No - [96.8%]	1,590	No - [85.9%]
<b>Warrant Criteria Met?</b>	<b>6,000</b>	<b>No - [96.8%]</b>	<b>1,590</b>	<b>No - [85.9%]</b>
<b>No</b>				

**Condition B - Interruption of Continuous Traffic**

Description	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Minor Street (Westbound - Excluding Right-Turns)	
	Cumulative (Vehicles Per Day)	Minimum Warrant Criteria Met? Yes or No - [% of Warrant]	Contributing Portion (Vehicles Per Day)	Cumulative (Vehicles Per Day)
2026 Existing Conditions	4,285	No - [46.1%]	1,235	Yes - [130%]
2026 - 2028 Background Traffic Growth	4,550	No - [48.9%]	1,590	Yes - [167.4%]
2026 - 2028 Traffic Growth Town Pump Site Development Project	6,000	No - [64.5%]	1,590	Yes - [167.4%]
<b>Warrant Criteria Met?</b>	<b>6,000</b>	<b>No - [64.5%]</b>	<b>1,590</b>	<b>Yes - [167.4%]</b>
<b>No</b>				

**Minimum criteria satisfied for Warrant #1 - Eight-Hour Vehicular Volume? No**

**Proposed Town Pump - Frenchtown | Independent Traffic Impact Study**  
**Demer Street & the Interstate 90 (I-90) Westbound Ramps**  
**Traffic Signal Warrant Evaluation - Estimated Traffic Conditions**



Based on procedures developed by the Oregon Department of Transportation utilizing estimated average daily traffic volumes as delineated in its *Analysis Procedures Manual, Version 2* (July 2025).

**Warrant #2 - Four-Hour Vehicular Volumes** (Using Fourth-Highest Hour)

The fourth highest hourly volumes are based on the assumption that they are approximately 8.25% of the estimated average daily traffic (EADT).

Analysis of Warrant 2 is not included in the Oregon Department of Transportation *Analysis Procedures Manual, Version 2*. It is included herein based on Version 1 of the manual and utilization of the above estimate for the fourth highest hourly volumes in comparison to the *Manual on Uniform Traffic Control Devices, 11th Edition* Figure 4C-1.

Description	Vehicles Per Hour on Major Street (Demer Street) (Total of Both Approaches)		Vehicles Per Hour on Minor Street (I-90 WB Off-Ramp) (Westbound Movements - Excluding Right-Turns)	
	Contributing Portion (Vehicles Per Hour)	Cumulative (Vehicles Per Hour)	Contributing Portion (Vehicles Per Hour)	Cumulative (Vehicles Per Hour)
2026 Existing Conditions	-	354	-	102
2026 - 2028 Background Traffic Growth	22	376	29	131
2026 - 2028 Traffic Growth Town Pump Site Development Project	120	496	0	131
<b>Combined Totals</b>	<b>142</b>	<b>496</b>	<b>29</b>	<b>131</b>

Description	Vehicles Per Hour on Major Street (Total of Both Approaches)	Vehicles Per Hour on Minor Street (I-90 WB Off-Ramp) (Westbound Movements - Excluding Right-Turns)		Minimum Warrant Criteria Met? Yes or No - [% of Warrant]
	Cumulative (Vehicles Per Hour)	Cumulative Contributing Portion (Vehicles Per Hour)	Warrant Minimum Volume (Vehicles Per Hour)	
2026 Existing Conditions	354	102	187	No - [54.5%]
2026 - 2028 Background Traffic Growth	376	131	178	No - [73.6%]
2026 - 2028 Traffic Growth Town Pump Site Development Project	496	131	132	No - [99.2%]
<b>Warrant Criteria Met?</b>	<b>496</b>	<b>131</b>	<b>132</b>	<b>No - [99.2%]</b>
<b>No</b>				

Minimum criteria satisfied for Warrant #2 - Four-Hour Vehicular Volume? No

# All-Way Stop Control Warrant Evaluation

## Intersection of Frenchtown Frontage Road (S-574) & Demer Street



### Background Intersection Information

<b>Major Roadway:</b>	Frenchtown Frontage Road (S-574)
Posted or 85% Speed:	50 mph
Approach Lanes:	1
<b>Minor Roadway:</b>	Demer Street
Posted or 85% Speed:	35 mph
Approach Lanes:	1
<b>Total Number of Approaches:</b>	3
<b>Analysis Case:</b>	2026 Existing Conditions

### All-Way Stop Control Warrant A: Crash Experience

Number of Approaches at Intersection: 3

Warrant Evaluation Criteria	# of Reported Crashes	Warrant Minimum	Warrant Satisfied
A. Number of reported crashes in a 12-month period susceptible to correction by the installation of all-way stop control:	2	4	
B. Number of reported crashes in a 36-month period susceptible to correction by the installation of all-way stop control:	6	5	<input checked="" type="checkbox"/>

**Warrant Satisfied for Conditions A or B? Yes**

### All-Way Stop Control Warrant B: Sight Distance

Is the sight distance on the minor-road approach(es) controlled by a STOP sign adequate for a vehicle to turn onto or cross the major (uncontrolled) road? Yes

**Warrant Satisfied? No**

### All-Way Stop Control Warrant C: Transition to Signal Control or Transition to Yield Control at a Circular Intersection

Will all-way stop control serve as an interim measure that can be installed to control traffic while arrangements are being made for the installation of a traffic control signal at the intersection or for the installation of yield control at a circular intersection? No

**Warrant Satisfied? No**

# All-Way Stop Control Warrant Evaluation

## Intersection of Frenchtown Frontage Road (S-574) & Demer Street



### All-Way Stop Control Warrant D: 8-Hour Volume (Vehicles, Pedestrians, Bicycles)

#### Intersection Traffic Volume Summary

Start Time	End Time	Major Roadway Frenchtown Frontage Road (S-574)			Minor Roadway Demer Street			Combined Hourly Volume	Rank
		Total Vehicles (veh/hr)	Total Peds (peds/hr)	Total Bikes (bikes/hr)	Total Vehicles (veh/hr)	Total Peds (peds/hr)	Total Bikes (bikes/hr)		
6:00 AM	7:00 AM	171	0	0	35	0	0	206	12
7:00 AM	8:00 AM	439	0	0	172	0	1	612	1
8:00 AM	9:00 AM	303	0	0	164	0	1	468	4
9:00 AM	10:00 AM	164	0	1	78	0	0	243	11
10:00 AM	11:00 AM	126	0	0	76	0	1	203	13
11:00 AM	12:00 PM	230	0	0	157	0	0	387	6
12:00 PM	1:00 PM	167	0	0	116	0	0	283	10
1:00 PM	2:00 PM	159	0	0	134	7	0	300	7
2:00 PM	3:00 PM	160	0	1	127	0	0	288	9
3:00 PM	4:00 PM	327	0	0	263	0	3	593	2
4:00 PM	5:00 PM	205	0	0	217	1	0	423	5
5:00 PM	6:00 PM	224	0	0	294	2	0	520	3
6:00 PM	7:00 PM	132	0	0	161	0	0	293	8
7:00 PM	8:00 PM	83	0	0	98	0	0	181	14
<b>TOTALS</b>		<b>2,890</b>	<b>0</b>	<b>2</b>	<b>2,092</b>	<b>10</b>	<b>6</b>	<b>5,000</b>	

<b>Estimated Average Daily Volumes:</b>	<b>3,075</b>	<b>0</b>	<b>2</b>	<b>2,225</b>	<b>0</b>	<b>0</b>	<b>5,302</b>
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<b>Eighth Highest Hourly Volumes:</b>	<b>132</b>	<b>0</b>	<b>0</b>	<b>161</b>	<b>0</b>	<b>0</b>	<b>293</b>
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Warrant Evaluation Criteria	Eighth Highest Volume	Warrant Minimum	Warrant Satisfied
A. Combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the major street approach(es):	132	210	
B. Combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the minor street approach(es):	161	140	<input checked="" type="checkbox"/>
<b>Warrant Satisfied for Conditions A or B?</b>			<b>Yes</b>

**All-Way Stop Control Warrant Evaluation**  
**Intersection of Frenchtown Frontage Road (S-574) & Demer Street**



**All-Way Stop Control Warrant E: Other Factors**

A. Is all-way stop control needed to control left-turn conflicts?	No
B. Is all-way stop control needed to improve traffic operational characteristics at an intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics?	No
C. Is all-way stop control needed where pedestrian and/or bicyclist movements support the installation of all-way stop control?	No
D. Other: Is all-way stop control needed to improve traffic operational characteristics at an intersection where there are concerns related to conflicting traffic movements or other safety elements?	Yes

**Warrant Satisfied? Yes**

# All-Way Stop Control Warrant Evaluation

## Intersection of the Frenchtown Frontage Road (S-574) & Demer Street



### Background Intersection Information

<b>Major Roadway:</b>	Frenchtown Frontage Road (S-574)
Posted or 85% Speed:	50 mph
Approach Lanes:	1
<b>Minor Roadway:</b>	Demer Street
Posted or 85% Speed:	35 mph
Approach Lanes:	1
<b>Total Number of Approaches:</b>	4
<b>Analysis Case:</b>	Estimated 2028 Total Traffic Mitigation

### All-Way Stop Control Warrant A: Crash Experience

Number of Approaches at Intersection: 4

Warrant Evaluation Criteria	# of Reported Crashes	Warrant Minimum	Warrant Satisfied
A. Number of reported crashes in a 12-month period susceptible to correction by the installation of all-way stop control:	2	5	
B. Number of reported crashes in a 36-month period susceptible to correction by the installation of all-way stop control:	6	6	<input checked="" type="checkbox"/>

**Warrant Satisfied for Conditions A or B? Yes**

### All-Way Stop Control Warrant B: Sight Distance

Is the sight distance on the minor-road approach(es) controlled by a STOP sign adequate for a vehicle to turn onto or cross the major (uncontrolled) road? Yes

**Warrant Satisfied? No**

### All-Way Stop Control Warrant C:

#### Transition to Signal Control or Transition to Yield Control at a Circular Intersection

Will all-way stop control serve as an interim measure that can be installed to control traffic while arrangements are being made for the installation of a traffic control signal at the intersection or for the installation of yield control at a circular intersection? No

**Warrant Satisfied? No**

# All-Way Stop Control Warrant Evaluation

## Intersection of the Frenchtown Frontage Road (S-574) & Demer Street



### All-Way Stop Control Warrant D: 8-Hour Volume (Vehicles, Pedestrians, Bicycles)

#### Intersection Traffic Volume Summary

		Major Roadway Frenchtown Frontage Road (S-574)			Minor Roadway Demer Street			Combined Hourly Volume	Rank
		Total Vehicles (veh/hr)	Total Peds (peds/hr)	Total Bikes (bikes/hr)	Total Vehicles (veh/hr)	Total Peds (peds/hr)	Total Bikes (bikes/hr)		
Start Time	End Time								
6:00 AM	7:00 AM								
7:00 AM	8:00 AM								
8:00 AM	9:00 AM								
9:00 AM	10:00 AM								
10:00 AM	11:00 AM								
11:00 AM	12:00 PM								
12:00 PM	1:00 PM								
1:00 PM	2:00 PM								
2:00 PM	3:00 PM								
3:00 PM	4:00 PM								
4:00 PM	5:00 PM								
5:00 PM	6:00 PM								
6:00 PM	7:00 PM								
7:00 PM	8:00 PM								
<b>TOTALS</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

Estimated Average Daily Volumes:	3,480	0	2	4,921	11	6	8,420
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Estimated Eighth Highest Hourly Volumes:	197	0	0	278	1	0	476
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**The eighth highest hourly volume is based on the assumption that it is approximately 5.65% of the estimated average daily volumes.**

Warrant Evaluation Criteria	Eighth Highest Volume	Warrant Minimum	Warrant Satisfied
A. Combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the major street approach(es):	197	210	
B. Combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the minor street approach(es):	279	140	<input checked="" type="checkbox"/>
<b>Warrant Satisfied for Conditions A or B?</b>			<b>Yes</b>

# All-Way Stop Control Warrant Evaluation

## Intersection of the Frenchtown Frontage Road (S-574) & Demer Street



### All-Way Stop Control Warrant E: Other Factors

A. Is all-way stop control needed to control left-turn conflicts? No

B. Is all-way stop control needed to improve traffic operational characteristics at an intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics? No

C. Is all-way stop control needed where pedestrian and/or bicyclist movements support the installation of all-way stop control? No

D. Other:  
Is all-way stop control needed to improve traffic operational characteristics at an intersection where there are concerns related to conflicting traffic movements or other safety elements? No

**Warrant Satisfied? No**

**Town Pump Site Development Project | Independent Traffic Study**  
**US Highway 93 & Rocky Cliff Drive / Auction Road / Demersville Road**  
**Traffic Signal Warrant Evaluation - Estimated Traffic Conditions**



Based on procedures developed by the Oregon Department of Transportation utilizing estimated average daily traffic volumes as delineated in its Analysis Procedures Manual, Version 2 (July 2025).

**Estimated Average Daily Traffic Volumes**

Description	ESTIMATED WEEKDAY, AM PEAK HOUR			
	Frenchtown Frontage Road (S-574) West of Demer Street (Vehicles Per Hour) <i>Excluding Right-Turns</i>	Frenchtown Frontage Road (S-574) East of Demer Street (Vehicles Per Hour) <i>Excluding Right-Turns</i>	Demer Street South of the Frontage Road (S-574) (Vehicles Per Hour) <i>Excluding Right-Turns</i>	Town Pump Relocated Site Access North of the Frontage Road (S-574) (Vehicles Per Hour) <i>Excluding Right-Turns</i>
	2026 Existing Conditions	48	231	200
2026 - 2028 Background Traffic Growth	4	23	15	0
2026 - 2028 Traffic Growth Town Pump Site Development Project	3	-4	93	98
<b>Estimated 2028 Total Traffic</b>	<b>55</b>	<b>250</b>	<b>308</b>	<b>98</b>

Description	ESTIMATED WEEKDAY, SCHOOL PM PEAK HOUR			
	Frenchtown Frontage Road (S-574) West of Demer Street (Vehicles Per Hour) <i>Excluding Right-Turns</i>	Frenchtown Frontage Road (S-574) East of Demer Street (Vehicles Per Hour) <i>Excluding Right-Turns</i>	Demer Street South of the Frontage Road (S-574) (Vehicles Per Hour) <i>Excluding Right-Turns</i>	Town Pump Relocated Site Access North of the Frontage Road (S-574) (Vehicles Per Hour) <i>Excluding Right-Turns</i>
	2026 Existing Conditions	74	86	185
2026 - 2028 Background Traffic Growth	6	9	14	0
2026 - 2028 Traffic Growth Town Pump Site Development Project	1	-4	75	85
<b>Estimated 2028 Total Traffic</b>	<b>81</b>	<b>91</b>	<b>274</b>	<b>85</b>

Description	ESTIMATED WEEKDAY, PM PEAK HOUR			
	Frenchtown Frontage Road (S-574) West of Demer Street (Vehicles Per Hour) <i>Excluding Right-Turns</i>	Frenchtown Frontage Road (S-574) East of Demer Street (Vehicles Per Hour) <i>Excluding Right-Turns</i>	Demer Street South of the Frontage Road (S-574) (Vehicles Per Hour) <i>Excluding Right-Turns</i>	Town Pump Relocated Site Access North of the Frontage Road (S-574) (Vehicles Per Hour) <i>Excluding Right-Turns</i>
	2026 Existing Conditions	38	100	218
2026 - 2028 Background Traffic Growth	3	10	17	0
2026 - 2028 Traffic Growth Town Pump Site Development Project	3	-5	97	108
<b>Estimated 2028 Total Traffic</b>	<b>44</b>	<b>105</b>	<b>332</b>	<b>108</b>

Description	ESTIMATED AVERAGE WEEKDAY TRAFFIC VOLUMES			
	Frenchtown Frontage Road (S-574) West of Demer Street (Vehicles Per Day) <i>Excluding Right-Turns</i>	Frenchtown Frontage Road (S-574) East of Demer Street (Vehicles Per Day) <i>Excluding Right-Turns</i>	Demer Street South of the Frontage Road (S-574) (Vehicles Per Day) <i>Excluding Right-Turns</i>	Town Pump Relocated Site Access North of the Frontage Road (S-574) (Vehicles Per Day) <i>Excluding Right-Turns</i>
	2026 Existing Conditions	405	1,155	1,515
2026 - 2028 Background Traffic Growth	30	115	120	0
2026 - 2028 Traffic Growth Town Pump Site Development Project	31	-30	1,202	1,290
<b>Estimated 2028 Total Traffic</b>	<b>466</b>	<b>1,240</b>	<b>2,837</b>	<b>1,290</b>

**Town Pump Site Development Project | Independent Traffic Study**  
**US Highway 93 & Rocky Cliff Drive / Auction Road / Demersville Road**  
**Traffic Signal Warrant Evaluation - Estimated Traffic Conditions**



Based on procedures developed by the Oregon Department of Transportation utilizing estimated average daily traffic volumes as delineated in its *Analysis Procedures Manual, Version 2* (July 2025).

**Warrant #1 - Eight-Hour Vehicular Volumes** (Using Eighth-Highest Hour)

The eighth highest hourly volumes are based on the assumption that they are approximately 5.65% of the estimated average daily traffic (EADT).

Only MUTCD Warrant 1 Condition A and Condition B are utilized by the Oregon Department of Transportation to evaluate future needs for traffic signals beyond three years from the present year. This is presented in Section 12.4.1 of the *Analysis Procedures Manual, Version 2*. The warrant analyses utilize the above estimate for the eighth highest hourly volumes as a percentage of average daily traffic in comparison to the *Manual on Uniform Traffic Control Devices, 11th Edition* Table 4C-1.

**Estimated Average Daily Traffic (EADT) Volumes for Warrant Analysis**

Description	Vehicles Per Day on Major Street (Frenchtown Frontage Road   S-574) (Total of Both Approaches)		Vehicles Per Day on Minor Street (Demer Street) (Northbound Movements - Excluding Right-Turns)	
	Contributing Portion (Vehicles Per Day)	Cumulative (Vehicles Per Day)	Contributing Portion (Vehicles Per Day)	Cumulative (Vehicles Per Day)
2026 Existing Conditions	-	1,560	-	1,515
2026 - 2028 Background Traffic Growth	145	1,705	120	1,635
2026 - 2028 Traffic Growth Town Pump Site Development Project	1	1,706	1,202	2,837
<b>Combined Totals</b>	<b>146</b>	<b>1,706</b>	<b>1,322</b>	<b>2,837</b>

**Condition A - Minimum Vehicular Volume**

Description	Warrant Minimum Volumes (Vehicles Per Day) Major Street		Warrant Minimum Volumes (Vehicles Per Day) Minor Street	
	Cumulative (Vehicles Per Day)	Minimum Warrant Criteria Met? Yes or No - [% of Warrant]	Contributing Portion (Vehicles Per Day)	Minimum Warrant Criteria Met? Yes or No - [% of Warrant]
2026 Existing Conditions	1,560	No - [25.2%]	1,515	No - [81.9%]
2026 - 2028 Background Traffic Growth	1,705	No - [27.5%]	1,635	No - [88.4%]
2026 - 2028 Traffic Growth Town Pump Site Development Project	1,706	No - [27.5%]	2,837	Yes - [153.4%]
<b>Warrant Criteria Met?</b>	<b>1,706</b>	<b>No - [27.5%]</b>	<b>2,837</b>	<b>Yes - [153.4%]</b>
<b>No</b>				

**Condition B - Interruption of Continuous Traffic**

Description	Warrant Minimum Volumes (Vehicles Per Day) Major Street		Warrant Minimum Volumes (Vehicles Per Day) Minor Street	
	Cumulative (Vehicles Per Day)	Minimum Warrant Criteria Met? Yes or No - [% of Warrant]	Contributing Portion (Vehicles Per Day)	Cumulative (Vehicles Per Day)
2026 Existing Conditions	1,560	No - [16.8%]	1,515	Yes - [159.5%]
2026 - 2028 Background Traffic Growth	1,705	No - [18.3%]	1,635	Yes - [172.1%]
2026 - 2028 Traffic Growth Town Pump Site Development Project	1,706	No - [18.3%]	2,837	Yes - [298.6%]
<b>Warrant Criteria Met?</b>	<b>1,706</b>	<b>No - [18.3%]</b>	<b>2,837</b>	<b>Yes - [298.6%]</b>
<b>No</b>				

**Minimum criteria satisfied for Warrant #1 - Eight-Hour Vehicular Volume? No**

**Town Pump Site Development Project | Independent Traffic Study**  
**US Highway 93 & Rocky Cliff Drive / Auction Road / Demersville Road**  
**Traffic Signal Warrant Evaluation - Estimated Traffic Conditions**



Based on procedures developed by the Oregon Department of Transportation utilizing estimated average daily traffic volumes as delineated in its *Analysis Procedures Manual, Version 2* (July 2025).

**Warrant #2 - Four-Hour Vehicular Volumes** (Using Fourth-Highest Hour)

The fourth highest hourly volumes are based on the assumption that they are approximately 8.25% of the estimated average daily traffic (EADT).

Analysis of Warrant 2 is not included in the Oregon Department of Transportation *Analysis Procedures Manual, Version 2*. It is included herein based on Version 1 of the manual and utilization of the above estimate for the fourth highest hourly volumes in comparison to the *Manual on Uniform Traffic Control Devices, 11th Edition* Figure 4C-1.

Description	Vehicles Per Hour on Major Street (Total of Both Approaches)		Vehicles Per Hour on Minor Street (Demer Street) (Northbound Movements - Excluding Right-Turns)	
	Contributing Portion (Vehicles Per Hour)	Cumulative (Vehicles Per Hour)	Contributing Portion (Vehicles Per Hour)	Cumulative (Vehicles Per Hour)
2026 Existing Conditions	-	129	-	125
2026 - 2028 Background Traffic Growth	12	141	10	135
2026 - 2028 Traffic Growth Town Pump Site Development Project	0	141	99	234
<b>Combined Totals</b>	<b>12</b>	<b>141</b>	<b>109</b>	<b>234</b>

Description	Vehicles Per Hour on Major Street (Total of Both Approaches)	Vehicles Per Hour on Minor Street (Demer Street) (Northbound Movements - Excluding Right-Turns)		Minimum Warrant Criteria Met? Yes or No - [% of Warrant]
	Cumulative (Vehicles Per Hour)	Cumulative Contributing Portion (Vehicles Per Hour)	Warrant Minimum Volume (Vehicles Per Hour)	
2026 Existing Conditions	129	125	287	No - [43.6%]
2026 - 2028 Background Traffic Growth	141	135	281	No - [48%]
2026 - 2028 Traffic Growth Town Pump Site Development Project	141	234	281	No - [83.3%]
<b>Warrant Criteria Met?</b>	<b>141</b>	<b>234</b>	<b>281</b>	<b>No - [83.3%]</b>
<b>No</b>				

Minimum criteria satisfied for Warrant #2 - Four-Hour Vehicular Volume? No

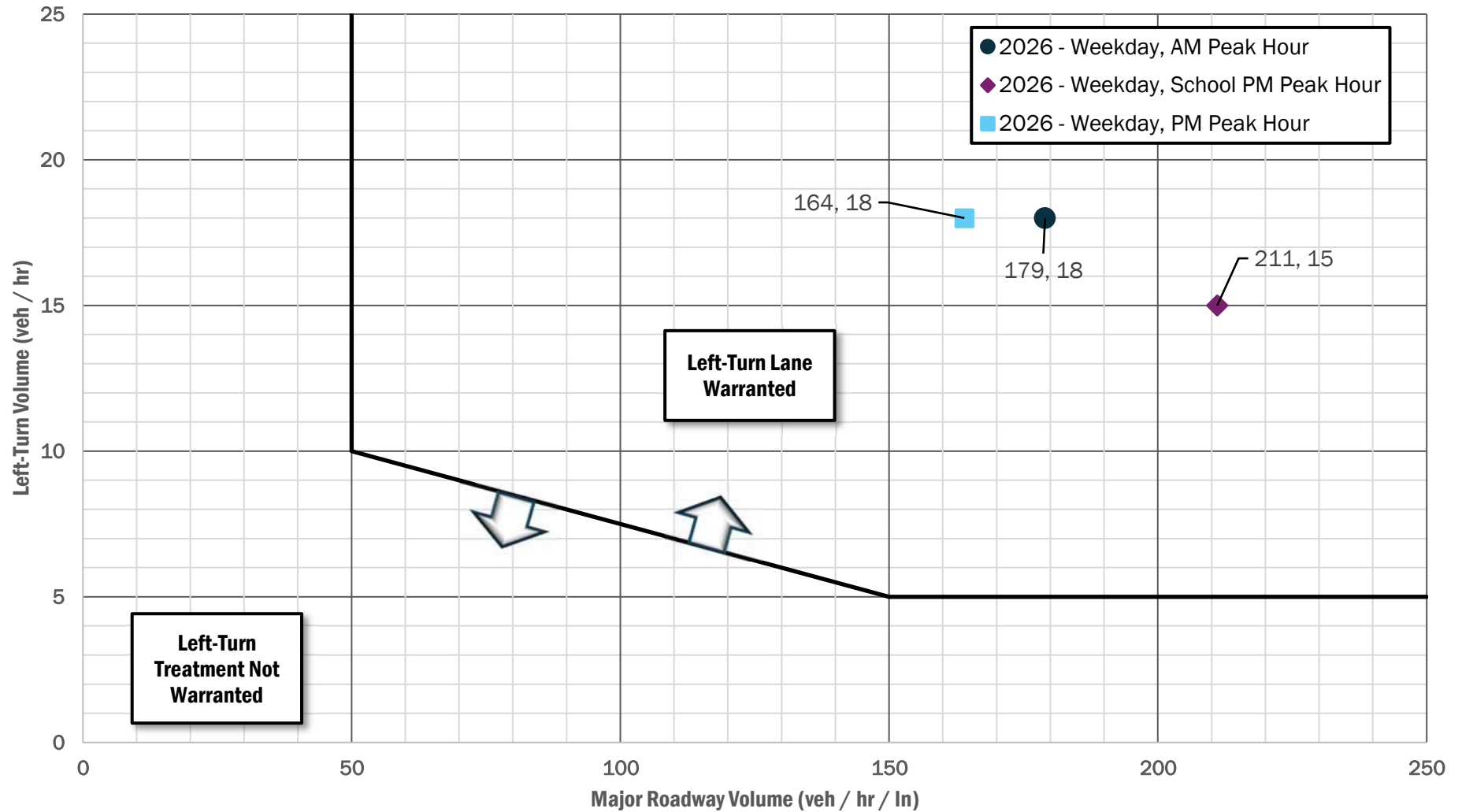


# Appendix H





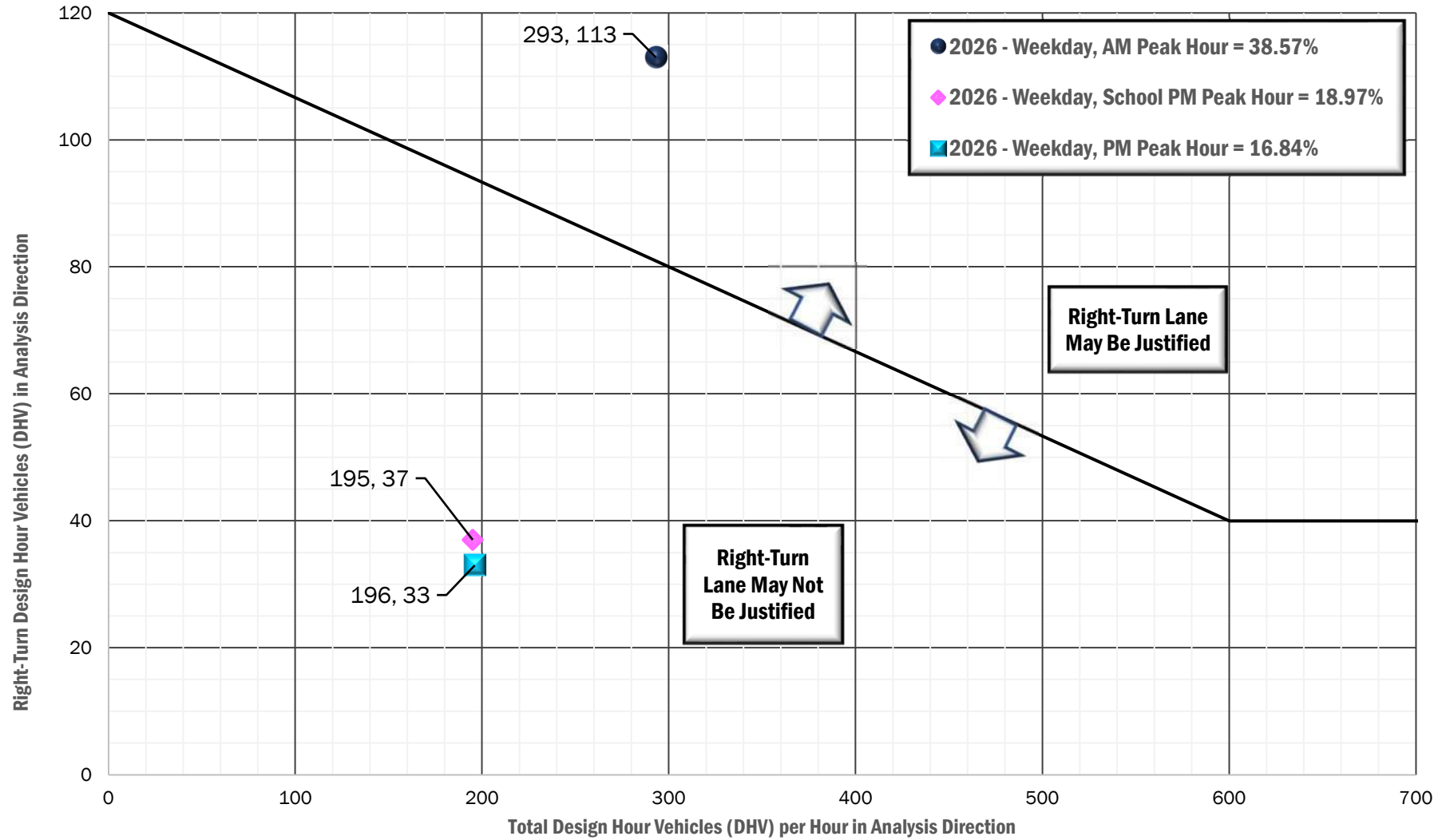
### Suggested Left-Turn Treatment Guidelines Based on Results from Benefit-Cost Evaluations for Intersections on Two-Lane Roadways in Rural Areas Beckwith Street (S-263) & Ducharme Street



Source: Figure 9-36. Suggested Left-Turn Treatment Warrants Based on Results from Benefit-Cost Evaluations for Intersections on Two-Lane Highways in Rural Areas. Adapted from *A Policy on Geometric Design of Highways and Streets, 7th Edition, 2nd Printing* (p. 9-107), by the American Association of State Highway and Transportation Officials, 2018, Washington, DC.



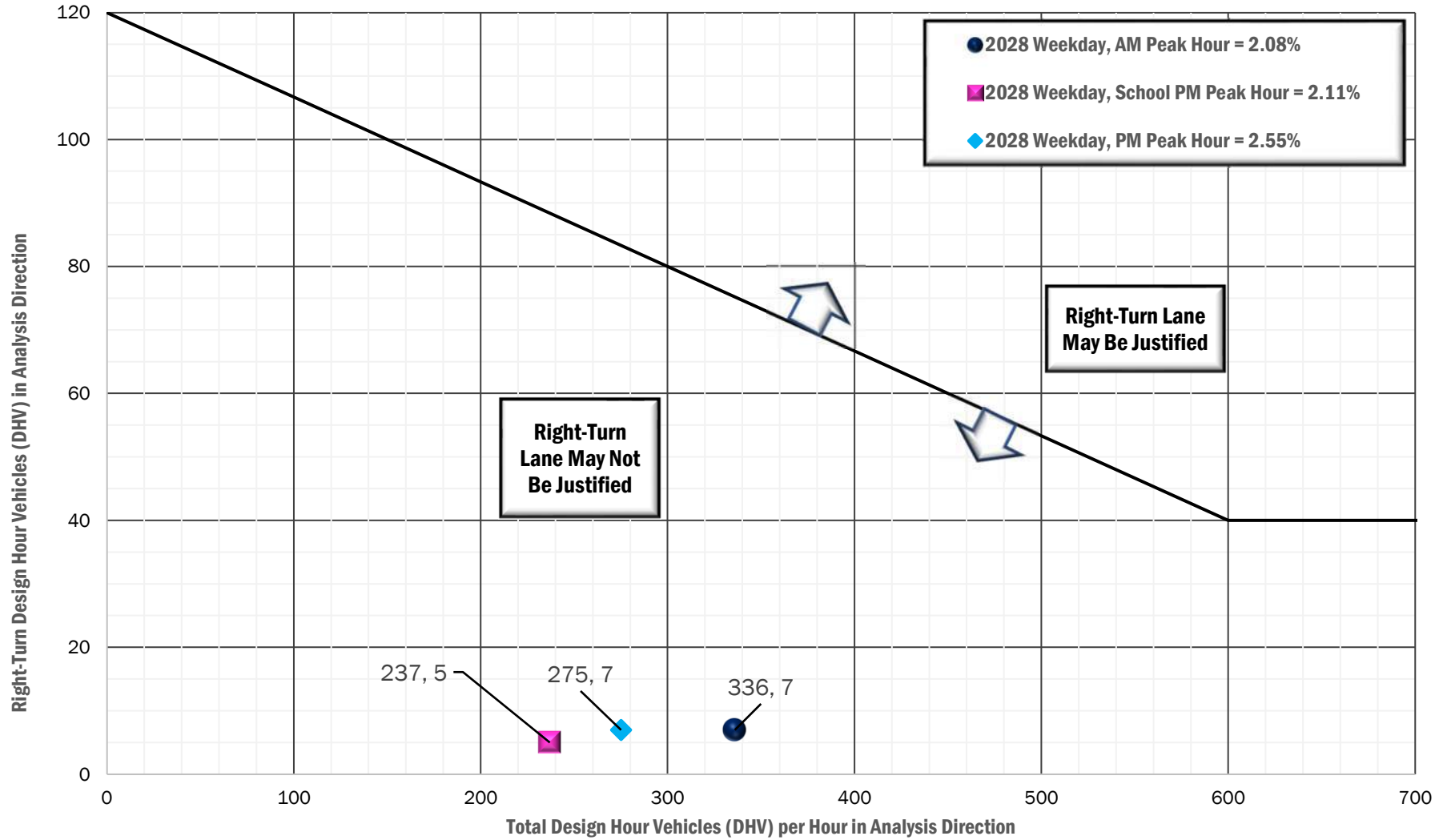
### Guidelines for Right-Turn Lanes at Unsignalized Intersections on 2-Lane Highways Beckwith Street (S-263) & Ducharme Street



Note: For Highways with a design speed below 50 mph (80 km/h) with a DHV < 300 and where right turns are > 40, an adjustment should be used. To read the vertical axis of the chart, subtract 20 from the actual number of right turns.

## Guidelines for Right-Turn Lanes at Unsignalized Intersections on 2-Lane Highways

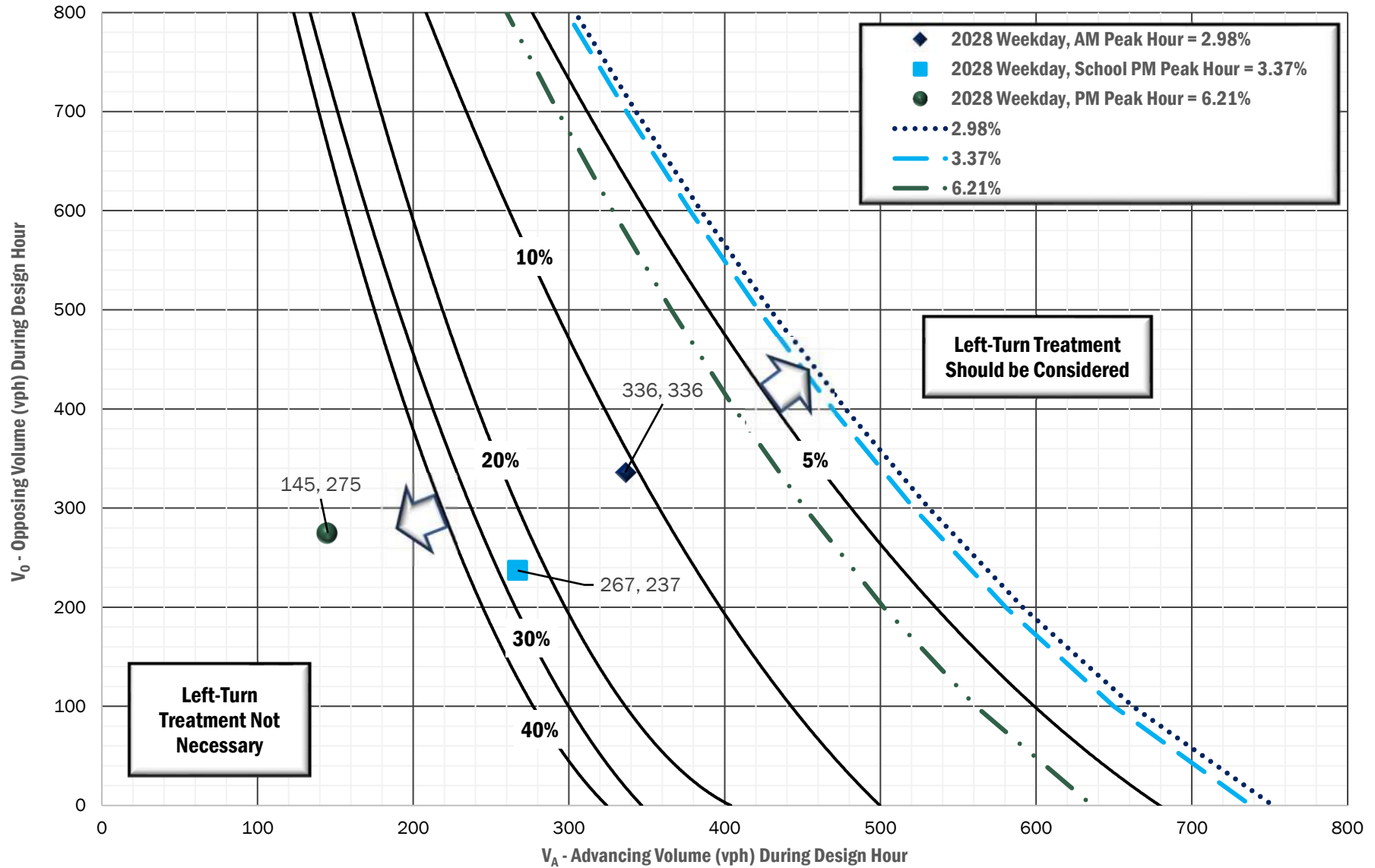
### Frenchtown Frontage Road (S-574) & Proposed Western Town Pump Site Access



Note: For Highways with a design speed below 50 mph (80 km/h) with a DHV < 300 and where right turns are > 40, an adjustment should be used. To read the vertical axis of the chart, subtract 20 from the actual number of right turns.

## Volume Guidelines for Left-Turn Lanes at Unsignalized Intersections on 2-Lane Highways (50 mph)

### Frenchtown Frontage Road (S-574) & Town Pump Western Site Access





# Appendix I



# Appendix I

I-1

## **IN THIS SECTION:**

*Beckwith Street (S-263)  
& Ducharme Street  
Intersection*





**Traffic Operations Summary**  
Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

Intersection:

Beckwith Street (S-263) &  
Duscharme Street

**WEEKDAY, AM PEAK HOUR | MITIGATION SUMMARY**

Analysis Scenario	Analysis Data	BECKWITH STREET (S-263) From the West (Eastbound)				BECKWITH STREET (S-263) From the East (Westbound)				DUSCHARME STREET From the South (Northbound)				PRIVATE DRIVEWAY From the North (Southbound)				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
		<b>Traffic Control</b>		Stop Controlled				Stop Controlled				Stop Controlled				Stop Controlled			
<b>Minor or Major Approach?</b>		Major				Major				Minor				Minor					
<b>Entry Volume, V (veh/hr)</b>		0	8	156	139	0	18	156	7	0	146	5	26	0	2	2	5		
<b>Peak Hour Factor (PHF)</b>		0.62				0.62				0.62				0.62					
<b>Adjusted Volume, V<sub>A</sub> (veh/hr)</b>		0	13	252	224	0	29	252	11	0	235	8	42	0	3	3	8		
<b>Ped + Bike Volume, PBV (ped+bike/hr)</b>		0				0				0				0				0	0
<b>Lane Group</b>		LT		R		L		TR		LTR				LTR					
<b>Lane Group Volume, V<sub>LG</sub> (veh/hr)</b>		265		224		29		263		285				15				300	1,081
<b>Capacity, c (veh/hr)</b>		593		685		544		585		608				582				1,190	3,597
<b>Volume-to-Capacity Ratio, V<sub>A</sub>/c</b>		0.45		0.33		0.05		0.45		0.47				0.02				0.25	0.30
<b>HCM 95% Queue Length, Q<sub>95</sub> (veh)</b>		2.3		1.4		0.2		2.3		2.5				0.1					
<b>HCM 95% Queue Length, Q<sub>95</sub> (ft)</b>		61.6		36.1		5.0		59.3		64.5				2.5					
<b>Available Queue Storage, S<sub>0</sub> (ft)</b>		130		75		100		160		100				70					
<b>Average Control Delay (sec/veh)</b>		13.6		10.5		9.7		13.8		14.0				9.3				13.8	12.9
<b>Level of Service, LOS</b>		B		B		A		B		B				A					
<b>Approach Delay (sec/veh)</b>		12.2				13.4				14.0				9.3				B	B
<b>Approach Level of Service, LOS</b>		B				B				B				A					
<b>Traffic Control</b>		Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
<b>Minor or Major Approach?</b>		Major				Major				Minor				Minor					
<b>Entry Volume, V (veh/hr)</b>		0	8	253	42	0	5	258	7	0	44	5	8	0	2	2	5		
<b>Peak Hour Factor (PHF)</b>		0.62				0.62				0.62				0.62					
<b>Adjusted Volume, V<sub>A</sub> (veh/hr)</b>		0	13	408	68	0	8	416	11	0	71	8	13	0	3	3	8		
<b>Ped + Bike Volume, PBV (ped+bike/hr)</b>		0				0				0				0				0	0
<b>Lane Group</b>		LTR				LTR				LTR				LTR					
<b>Lane Group Volume, V<sub>LG</sub> (veh/hr)</b>		489				435				92				15				106	1,031
<b>Capacity, c (veh/hr)</b>		1,143				1,097				272				374				646	2,886
<b>Volume-to-Capacity Ratio, V<sub>A</sub>/c</b>		0.43				0.40				0.34				0.04				0.16	0.36
<b>HCM 95% Queue Length, Q<sub>95</sub> (veh)</b>		0.0				0.0				1.4				0.1					
<b>HCM 95% Queue Length, Q<sub>95</sub> (ft)</b>		0.0				0.0				38.0				2.5					
<b>Available Queue Storage, S<sub>0</sub> (ft)</b>		130				160				100				70					
<b>Average Control Delay (sec/veh)</b>		0.3				0.2				24.9				15.0				23.6	2.7
<b>Level of Service, LOS</b>		A				A				C				C					
<b>Approach Delay (sec/veh)</b>		0.3				0.2				24.9				15.0				C	A
<b>Approach Level of Service, LOS</b>		A				A				C				C					

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LT = Left-Through; R = Right; L = Left; TR = Through-Right; and LTR = Left-Through-Right



**Traffic Operations Summary**  
Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

Intersection:

Beckwith Street (S-263) &  
Duscharme Street

**WEEKDAY, SCHOOL PM PEAK HOUR | MITIGATION SUMMARY**

Analysis Scenario	Analysis Data	BECKWITH STREET (S-263) From the West (Eastbound)				BECKWITH STREET (S-263) From the East (Westbound)				DUSCHARME STREET From the South (Northbound)				PRIVATE DRIVEWAY From the North (Southbound)				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
		Stop Controlled				Stop Controlled				Stop Controlled				Stop Controlled					
<b>ESTIMATED 2028 TOTAL TRAFFIC</b>  <i>All-Way Stop Control with an Eastbound, Right-Turn Lane &amp; Westbound, Left-Turn Lane</i>	Traffic Control	STOP				STOP				STOP				STOP					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	5	158	39	0	15	216	5	0	85	2	31	0	6	1	2		
	Peak Hour Factor (PHF)	0.75				0.75				0.75				0.75					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	7	211	52	0	20	288	7	0	113	3	41	0	8	1	3		
	Ped + Bike Volume, PBV (ped+bike/hr)	2				1				0				0				0	3
	Lane Group	LT		R		L		TR		LTR		LTR		LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	217		52		20		295		157		12		169		753			
	Capacity, c (veh/hr)	665		748		622		679		652		642		1,294		4,008			
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.33		0.07		0.03		0.43		0.24		0.02		0.13		0.19			
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	1.4		0.2		0.1		2.2		0.9		0.1							
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	36.1		5.4		2.5		55.9		24.8		2.5							
	Available Queue Storage, S <sub>0</sub> (ft)	130		75		100		160		100		70							
	Average Control Delay (sec/veh)	10.7		7.9		8.7		12.0		10.3		8.7		10.2		10.8			
	Level of Service, LOS	B		A		A		B		B		A							
Approach Delay (sec/veh)	10.2				11.8				10.3				8.7				B	B	
Approach Level of Service, LOS	B				B				B				A						
<b>ESTIMATED 2028 TOTAL TRAFFIC</b>  <i>70% Redistribution of Existing School Related Traffic to Access on East Side of School</i>	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	5	185	12	0	5	276	5	0	25	2	9	0	6	1	2		
	Peak Hour Factor (PHF)	0.75				0.75				0.75				0.75					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	7	247	16	0	7	368	7	0	33	3	12	0	8	1	3		
	Ped + Bike Volume, PBV (ped+bike/hr)	2				1				0				0				0	3
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	269				381				48				12				60	711
	Capacity, c (veh/hr)	1,195				1,313				424				408				832	3,340
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.23				0.29				0.11				0.03				0.07	0.21
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.0				0.4				0.1					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				0.0				13.4				2.5					
	Available Queue Storage, S <sub>0</sub> (ft)	130				160				100				70					
	Average Control Delay (sec/veh)	0.3				0.2				14.6				14.1				14.5	
	Level of Service, LOS	A				A				B				B				1.4	
Approach Delay (sec/veh)	0.3				0.2				14.6				14.1				B		
Approach Level of Service, LOS	A				A				B				B				A		

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LT = Left-Through; R = Right; L = Left; TR = Through-Right; and LTR = Left-Through-Right



**Traffic Operations Summary**  
Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

Intersection:

Beckwith Street (S-263) & Duscharme Street

**WEEKDAY, PM PEAK HOUR | MITIGATION SUMMARY**

Analysis Scenario	Analysis Data	BECKWITH STREET (S-263) From the West (Eastbound)				BECKWITH STREET (S-263) From the East (Westbound)				DUSCHARME STREET From the South (Northbound)				PRIVATE DRIVEWAY From the North (Southbound)				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
		Stop Controlled				Stop Controlled				Stop Controlled				Stop Controlled					
<b>ESTIMATED 2028 TOTAL TRAFFIC</b>  <i>All-Way Stop Control with an Eastbound, Right-Turn Lane &amp; Westbound, Left-Turn Lane</i>	Traffic Control	STOP				STOP				STOP				STOP					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	1	3	144	56	0	18	153	3	0	45	1	18	0	1	0	3		
	Peak Hour Factor (PHF)	0.94				0.94				0.94				0.94					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	1	3	153	60	0	19	163	3	0	48	1	19	0	1	0	3		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				4				4	4
	Lane Group	LT		R		L		TR		LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	157		60		19		166		68				4				72	474
	Capacity, c (veh/hr)	665		859		659		735		732				793				1,525	4,443
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.24		0.07		0.03		0.23		0.09				0.01				0.05	0.11
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.9		0.2		0.1		0.9		0.3				0.0					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	28.4		5.1		2.6		22.9		7.9				0.0					
	Available Queue Storage, S <sub>0</sub> (ft)	130		75		100		160		100				70					
	Average Control Delay (sec/veh)	9.8		7.2		8.3		9.0		8.4				7.6				8.4	8.9
	Level of Service, LOS	A		A		A		A		A				A					
Approach Delay (sec/veh)	9.1				8.9				8.4				7.6				A	A	
Approach Level of Service, LOS	A				A				A				A						
<b>ESTIMATED 2028 TOTAL TRAFFIC</b>  <i>No Redistribution Estimated for the Weekday, PM Peak Hour</i>	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	1	3	144	56	0	18	153	3	0	45	1	18	0	1	0	3		
	Peak Hour Factor (PHF)	0.94				0.94				0.94				0.94					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	1	3	153	60	0	19	163	3	0	48	1	19	0	1	0	3		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				4				4	4
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	217				185				68				4				72	474
	Capacity, c (veh/hr)	1,235				1,334				735				755				1,490	4,059
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.18				0.14				0.09				0.01				0.05	0.12
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.0				0.3				0.0					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				0.0				7.9				0.0					
	Available Queue Storage, S <sub>0</sub> (ft)	130				160				100				70					
	Average Control Delay (sec/veh)	0.2				0.9				10.4				9.8				10.4	2.0
	Level of Service, LOS	A				A				B				A					
Approach Delay (sec/veh)	0.2				0.9				10.4				9.8				B	A	
Approach Level of Service, LOS	A				A				B				A						

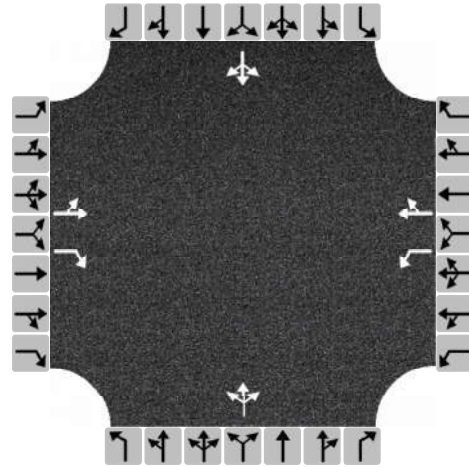
U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LT = Left-Through; R = Right; L = Left; TR = Through-Right; and LTR = Left-Through-Right

# HCS All-Way Stop Control Report

## General and Site Information

Analyst	T. Eastwood
Agency/Co.	E5 Engineering, PLLC
Date Performed	2/11/2026
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	Weekday, AM Peak Hour
Project Description	Estimated Total Traffic Mitigation
Intersection	Beckwith & Duscharme
Jurisdiction	MDT / Missoula County
East/West Street	Beckwith Street (S-263)
North/South Street	Duscharme Street
Peak Hour Factor	0.62

## Lanes



## Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	8	156	139	18	156	7	146	5	26	2	2	5
% Thrus in Shared Lane												

## Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LT	R		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	265	224		29	263		285			15		
Percent Heavy Vehicles	9	4		0	4		4			0		
Initial Departure Headway, h <sub>d</sub> (s)	3.20	3.20		3.20	3.20		3.20			3.20		
Initial Degree of Utilization, x	0.235	0.199		0.026	0.234		0.254			0.013		
Final Departure Headway, h <sub>d</sub> (s)	6.08	5.25		6.62	6.15		5.92			6.18		
Final Degree of Utilization, x	0.446	0.327		0.053	0.449		0.469			0.025		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.0		
Service Time, t <sub>s</sub> (s)	3.78	2.95		4.32	3.85		3.92			4.18		

## Capacity, Delay and Level of Service

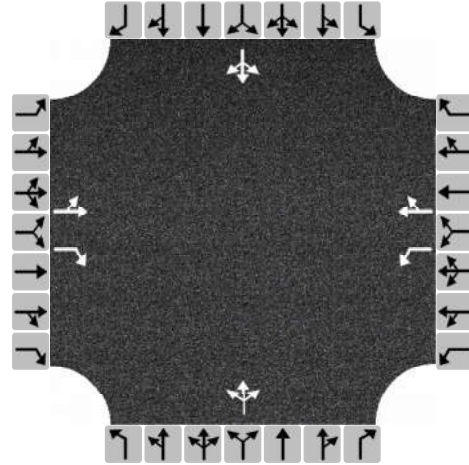
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LT	R		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	265	224		29	263		285			15		
Capacity (veh/h)	593	685		544	585		608			582		
95% Queue Length, Q <sub>95</sub> (veh)	2.3	1.4		0.2	2.3		2.5			0.1		
95% Queue Length, Q <sub>95</sub> (ft)	61.6	36.1		5.0	59.3		64.5			2.5		
Control Delay (s/veh)	13.6	10.5		9.7	13.8		14.0			9.3		
Level of Service, LOS	B	B		A	B		B			A		
Approach Delay (s/veh)   LOS	12.2	B		13.4	B		14.0	B		9.3	A	
Intersection Delay (s/veh)   LOS	12.9						B					

# HCS All-Way Stop Control Report

## General and Site Information

Analyst	T. Eastwood
Agency/Co.	E5 Engineering, PLLC
Date Performed	2/11/2026
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	Weekday, School PM Peak
Project Description	Estimated Total Traffic Mitigation
Intersection	Beckwith & Duscharme
Jurisdiction	MDT / Missoula County
East/West Street	Beckwith Street (S-263)
North/South Street	Duscharme Street
Peak Hour Factor	0.75

## Lanes



## Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	5	158	39	15	216	5	85	2	31	6	1	2
% Thrus in Shared Lane												

## Lane Flow Rate and Adjustments

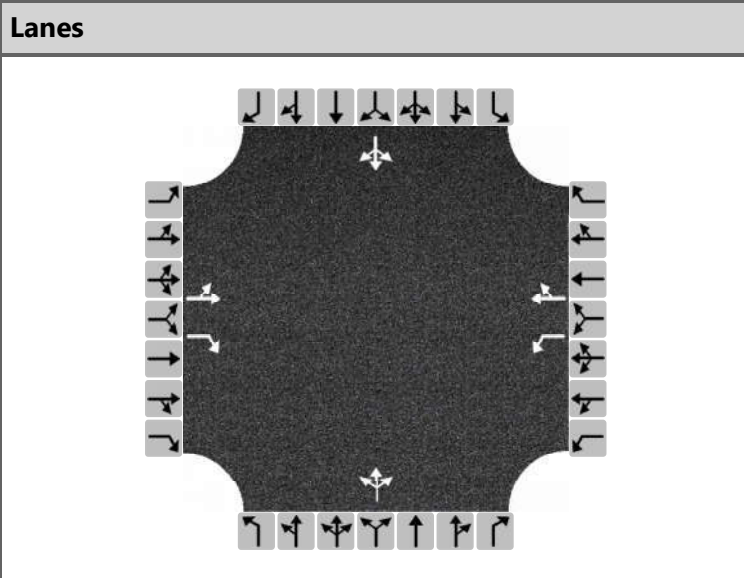
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LT	R		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	217	52		20	295		157			12		
Percent Heavy Vehicles	4	11		0	2		13			0		
Initial Departure Headway, h <sub>d</sub> (s)	3.20	3.20		3.20	3.20		3.20			3.20		
Initial Degree of Utilization, x	0.193	0.046		0.018	0.262		0.140			0.011		
Final Departure Headway, h <sub>d</sub> (s)	5.41	4.81		5.78	5.30		5.52			5.61		
Final Degree of Utilization, x	0.327	0.069		0.032	0.434		0.241			0.019		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.0		
Service Time, t <sub>s</sub> (s)	3.11	2.51		3.48	3.00		3.52			3.61		

## Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LT	R		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	217	52		20	295		157			12		
Capacity (veh/h)	665	748		622	679		652			642		
95% Queue Length, Q <sub>95</sub> (veh)	1.4	0.2		0.1	2.2		0.9			0.1		
95% Queue Length, Q <sub>95</sub> (ft)	36.1	5.4		2.5	55.9		24.8			2.5		
Control Delay (s/veh)	10.7	7.9		8.7	12.0		10.3			8.7		
Level of Service, LOS	B	A		A	B		B			A		
Approach Delay (s/veh)   LOS	10.2	B		11.8	B		10.3	B		8.7	A	
Intersection Delay (s/veh)   LOS	10.8						B					

# HCS All-Way Stop Control Report

General and Site Information	
Analyst	T. Eastwood
Agency/Co.	E5 Engineering, PLLC
Date Performed	2/11/2026
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	Weekday, PM Peak Hour
Project Description	Estimated Total Traffic Mitigation
Intersection	Beckwith & Duscharme
Jurisdiction	MDT / Missoula County
East/West Street	Beckwith Street (S-263)
North/South Street	Duscharme Street
Peak Hour Factor	0.94



## Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	4	144	56	18	153	3	45	1	18	1	0	3
% Thrus in Shared Lane												

## Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LT	R		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	157	60		19	166		68			4		
Percent Heavy Vehicles	33	3		5	2		6			0		
Initial Departure Headway, h <sub>d</sub> (s)	3.20	3.20		3.20	3.20		3.20			3.20		
Initial Degree of Utilization, x	0.140	0.053		0.017	0.148		0.061			0.004		
Final Departure Headway, h <sub>d</sub> (s)	5.42	4.19		5.46	4.90		4.92			4.54		
Final Degree of Utilization, x	0.237	0.069		0.029	0.226		0.093			0.005		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.0		
Service Time, t <sub>s</sub> (s)	3.12	1.89		3.16	2.60		2.92			2.54		

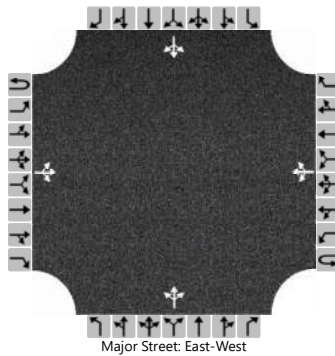
## Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LT	R		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	157	60		19	166		68			4		
Capacity (veh/h)	665	859		659	735		732			793		
95% Queue Length, Q <sub>95</sub> (veh)	0.9	0.2		0.1	0.9		0.3			0.0		
95% Queue Length, Q <sub>95</sub> (ft)	28.4	5.1		2.6	22.9		7.9			0.0		
Control Delay (s/veh)	9.8	7.2		8.3	9.0		8.4			7.6		
Level of Service, LOS	A	A		A	A		A			A		
Approach Delay (s/veh)   LOS	9.1	A		8.9	A		8.4	A		7.6	A	
Intersection Delay (s/veh)   LOS	8.9						A					

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Beckwith & Duscharme		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Beckwith Street (S-263)		
Analysis Year	2028			North/South Street	Duscharme Street		
Time Analyzed	Weekday, AM Peak Hour			Peak Hour Factor	0.62		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Est. Total Traffic Mitigation - 70% Redistribution						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		8	253	42		5	258	7		44	5	8		2	2	5
Percent Heavy Vehicles (%)		0				0				14	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.24	6.50	6.20		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.63	4.00	3.30		3.50	4.00	3.30

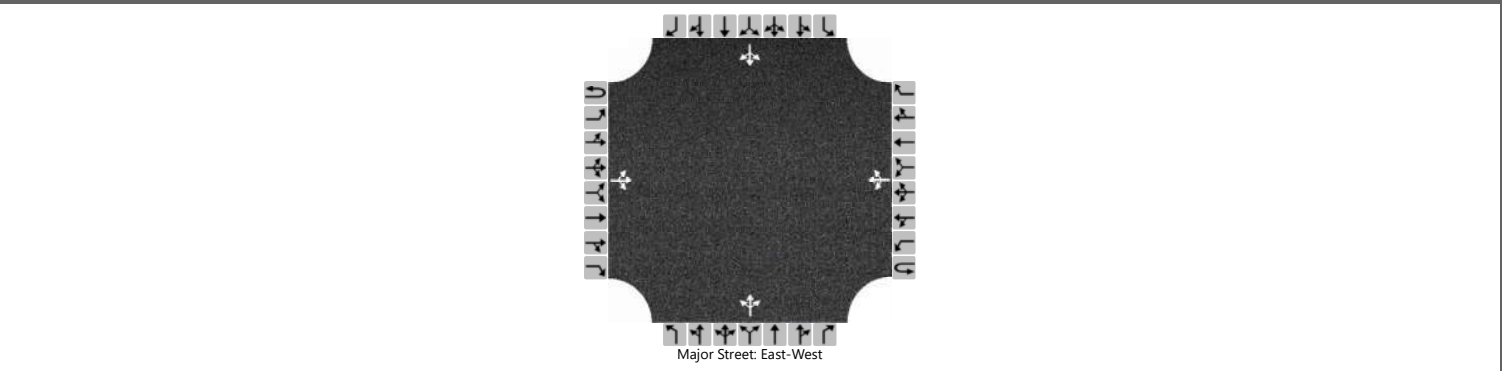
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		13				8					92				15	
Capacity, c (veh/h)		1143				1097					272				374	
v/c Ratio		0.01				0.01					0.34				0.04	
95% Queue Length, Q <sub>95</sub> (veh)		0.0				0.0					1.4				0.1	
95% Queue Length, Q <sub>95</sub> (ft)		0.0				0.0					38.0				2.5	
Control Delay (s/veh)		8.2	0.1	0.1		8.3	0.1	0.1			24.9				15.0	
Level of Service (LOS)		A	A	A		A	A	A			C				C	
Approach Delay (s/veh)		0.3				0.2				24.9				15.0		
Approach LOS		A				A				C				C		

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Beckwith & Duscharme		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Beckwith Street (S-263)		
Analysis Year	2028			North/South Street	Duscharme Street		
Time Analyzed	Weekday, School PM Peak			Peak Hour Factor	0.75		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Est. Total Traffic Mitigation - 70% Redistribution						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Priority																	
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		5	185	12		5	276	5		25	2	9		6	1	2	
Percent Heavy Vehicles (%)		0				0				46	0	44		0	0	0	
Proportion Time Blocked																	
Percent Grade (%)										0				0			
Right Turn Channelized																	
Median Type   Storage	Undivided																

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.56	6.50	6.64		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.91	4.00	3.70		3.50	4.00	3.30

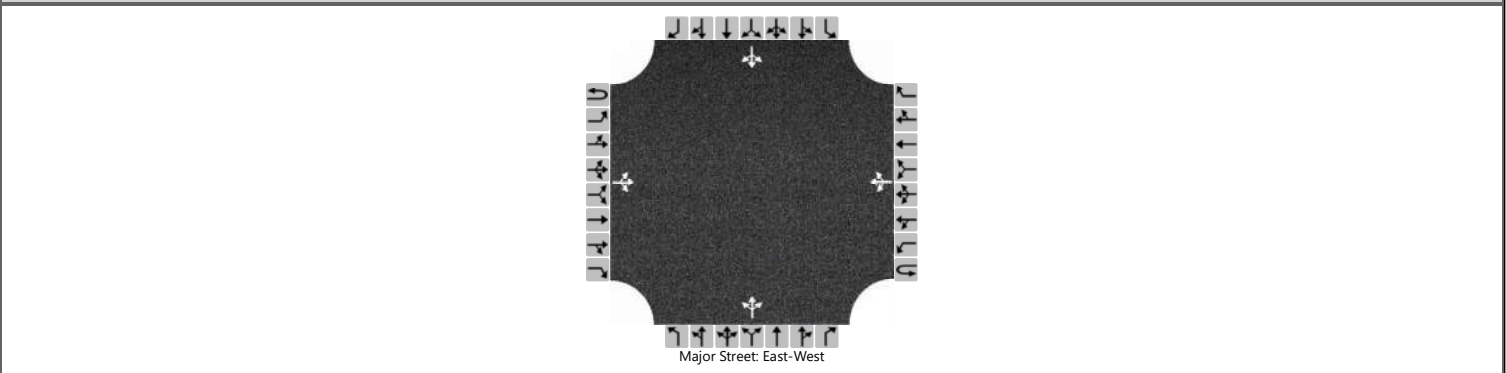
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		7				7					48					12
Capacity, c (veh/h)		1195				1313					424					408
v/c Ratio		0.01				0.01					0.11					0.03
95% Queue Length, Q <sub>95</sub> (veh)		0.0				0.0					0.4					0.1
95% Queue Length, Q <sub>95</sub> (ft)		0.0				0.0					13.4					2.5
Control Delay (s/veh)		8.0	0.1	0.1		7.8	0.0	0.0			14.6					14.1
Level of Service (LOS)		A	A	A		A	A	A			B					B
Approach Delay (s/veh)		0.3			0.2					14.6			14.1			
Approach LOS		A			A					B			B			

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Beckwith & Duscharme		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Beckwith Street (S-263)		
Analysis Year	2028			North/South Street	Duscharme Street		
Time Analyzed	Weekday, PM Peak Hour			Peak Hour Factor	0.94		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Est. Total Traffic Mitigation - No Redistribution						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Priority																	
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		4	144	56		18	153	3		45	1	18		1	0	3	
Percent Heavy Vehicles (%)		33				6				5	0	11		0	0	0	
Proportion Time Blocked																	
Percent Grade (%)										0				0			
Right Turn Channelized																	
Median Type   Storage	Undivided																

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.43				4.16				7.15	6.50	6.31		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.50				2.25				3.55	4.00	3.40		3.50	4.00	3.30

## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		4				19					68				4	
Capacity, c (veh/h)		1235				1334					735				755	
v/c Ratio		0.00				0.01					0.09				0.01	
95% Queue Length, Q <sub>95</sub> (veh)		0.0				0.0					0.3				0.0	
95% Queue Length, Q <sub>95</sub> (ft)		0.0				0.0					7.9				0.0	
Control Delay (s/veh)		7.9	0.0	0.0		7.7	0.1	0.1			10.4				9.8	
Level of Service (LOS)		A	A	A		A	A	A			B				A	
Approach Delay (s/veh)		0.2			0.9					10.4				9.8		
Approach LOS		A			A					B				A		

# Appendix I

I-2

## IN THIS SECTION:

*Beckwith Street (S-263)  
& Demer Street (S-263)  
Intersection*





**WEEKDAY, AM PEAK HOUR | MITIGATION SUMMARY**

Analysis Scenario	Analysis Data	BECKWITH STREET		BECKWITH STREET (S-263)				PRIVATE DRIVEWAY				DEMER STREET (S-263)				Minor Approach Totals	Intersection Totals		
		From the West (Eastbound)		From the East (Westbound)				From the South (Northbound)				From the North (Southbound)							
		U	L	T	R	U	L	T	R	U	L	T	R	U	L			T	R
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Roundabout		Roundabout				Roundabout				Roundabout							
	Minor or Major Approach?	Minor		Major				Minor				Major							
	Entry Volume, V (veh/hr)	0	51	31	4	0	8	18	372	0	1	10	2	0	346	32	23		
	Peak Hour Factor (PHF)	0.70		0.70				0.70				0.70							
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	73	44	6	0	11	26	531	0	1	14	3	0	494	46	33		
	Ped + Bike Volume, PBV (ped+bike/hr)	0		0				0				0				0	0		
	Lane Group	LTR		LTR				LTR				LTR							
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	123		569				19				573				91	1,283		
	Capacity, c (veh/hr)	735		1,195				579				1,252				1,314	3,761		
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.17		0.48				0.03				0.46				0.07	0.34		
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.6		2.6				0.1				2.5							
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	15.4		67.6				3.0				65.4							
	Available Queue Storage, S <sub>q</sub> (ft)	140		160				60				260							
	Average Control Delay (sec/veh)	6.7		8.1				6.6				7.6				6.7	7.7		
	Level of Service, LOS	A		A				A				A				A	A		
Approach Delay (sec/veh)	6.7		8.1				6.6				7.6				A	A			
Approach Level of Service, LOS	A		A				A				A								

**WEEKDAY, SCHOOL PM PEAK HOUR | MITIGATION SUMMARY**

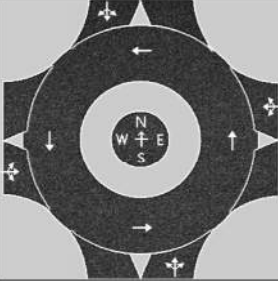
Analysis Scenario	Analysis Data	BECKWITH STREET		BECKWITH STREET (S-263)				PRIVATE DRIVEWAY				DEMER STREET (S-263)				Minor Approach Totals	Intersection Totals		
		From the West (Eastbound)		From the East (Westbound)				From the South (Northbound)				From the North (Southbound)							
		U	L	T	R	U	L	T	R	U	L	T	R	U	L			T	R
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Roundabout		Roundabout				Roundabout				Roundabout							
	Minor or Major Approach?	Minor		Major				Minor				Major							
	Entry Volume, V (veh/hr)	0	43	24	6	0	11	28	339	0	4	7	3	0	205	31	30		
	Peak Hour Factor (PHF)	0.81		0.81				0.81				0.81							
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	53	30	7	0	14	35	419	0	5	9	4	0	253	38	37		
	Ped + Bike Volume, PBV (ped+bike/hr)	1		0				1				0				2	2		
	Lane Group	LTR		LTR				LTR				LTR							
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	90		467				17				328				107	902		
	Capacity, c (veh/hr)	983		1,238				966				1,247				1,949	4,434		
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.09		0.38				0.02				0.26				0.06	0.20		
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.3		1.8				0.1				1.1							
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	7.6		46.5				2.5				28.5							
	Available Queue Storage, S <sub>q</sub> (ft)	140		160				60				260							
	Average Control Delay (sec/veh)	4.5		6.5				3.9				5.2				4.4	5.8		
	Level of Service, LOS	A		A				A				A				A	A		
Approach Delay (sec/veh)	4.5		6.5				3.9				5.2				A	A			
Approach Level of Service, LOS	A		A				A				A								

**WEEKDAY, PM PEAK HOUR | MITIGATION SUMMARY**

Analysis Scenario	Analysis Data	BECKWITH STREET		BECKWITH STREET (S-263)				PRIVATE DRIVEWAY				DEMER STREET (S-263)				Minor Approach Totals	Intersection Totals		
		From the West (Eastbound)		From the East (Westbound)				From the South (Northbound)				From the North (Southbound)							
		U	L	T	R	U	L	T	R	U	L	T	R	U	L			T	R
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Roundabout		Roundabout				Roundabout				Roundabout							
	Minor or Major Approach?	Minor		Major				Minor				Major							
	Entry Volume, V (veh/hr)	0	37	15	5	0	11	26	263	0	5	10	4	0	241	37	47		
	Peak Hour Factor (PHF)	0.90		0.90				0.90				0.90							
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	41	17	6	0	12	29	292	0	6	11	4	0	268	41	52		
	Ped + Bike Volume, PBV (ped+bike/hr)	0		1				0				0				0	1		
	Lane Group	LTR		LTR				LTR				LTR							
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	63		333				21				361				84	779		
	Capacity, c (veh/hr)	950		1,271				928				1,276				1,878	4,425		
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.07		0.26				0.02				0.28				0.04	0.18		
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.2		1.1				0.1				1.2							
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	5.2		28.0				2.6				30.7							
	Available Queue Storage, S <sub>q</sub> (ft)	140		160				60				260							
	Average Control Delay (sec/veh)	4.4		5.1				4.1				5.3				4.3	5.1		
	Level of Service, LOS	A		A				A				A				A	A		
Approach Delay (sec/veh)	4.4		5.1				4.1				5.3				A	A			
Approach Level of Service, LOS	A		A				A				A								

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LTR = Left-Through-Right  
Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes.

# HCS Roundabouts Report

General Information				Site Information				
Analyst	T. Eastwood				Intersection	Beckwith & Demer		
Agency or Co.	E5 Engineering, PLLC				E/W Street Name	Beckwith Street (S-263)		
Date Performed	2/11/2026				N/S Street Name	Demer Street (S-263)		
Analysis Year	2028				Analysis Time Period, hrs	0.25		
Time Analyzed	Weekday, AM Peak Hour				Peak Hour Factor	0.70		
Project Description	Est. Total Traffic Mitigation				Jurisdiction	MDT / Missoula County		

## Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment	LTR				LTR				LTR				LTR			
Volume (V), veh/h	0	51	31	4	0	8	18	372	0	1	10	2	0	346	32	23
Percent Heavy Vehicles, %	0	4	3	0	0	0	6	5	0	0	20	50	0	6	9	0
Flow Rate (V <sub>PCE</sub> ), pc/h	0	76	46	6	0	11	27	558	0	1	17	4	0	524	50	33
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				0			
Proportion of CAVs, %	0															

## Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway, s		4.9763			4.9763			4.9763			4.9763	
Follow-Up Headway, s		2.6087			2.6087			2.6087			2.6087	

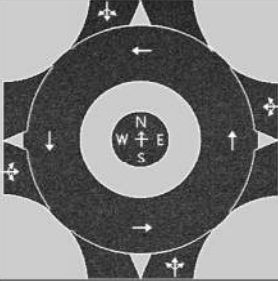
## Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v <sub>e</sub> ), pc/h		128			596			22			607	
Entry Volume, veh/h		124			568			18			573	
Circulating Flow (v <sub>c</sub> ), pc/h	585			94			646			39		
Exiting Flow (v <sub>ex</sub> ), pc/h	574			61			651			67		
Capacity (C <sub>PCE</sub> ), pc/h		760			1254			714			1326	
Capacity (c), veh/h		735			1195			579			1252	
v/c Ratio (x)		0.17			0.48			0.03			0.46	

## Delay and Level of Service

Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		6.7			8.1			6.6			7.6	
Lane LOS		A			A			A			A	
95% Queue Length, Q <sub>95</sub> (veh)		0.6			2.6			0.1			2.5	
95% Queue Length, Q <sub>95</sub> (ft)		15.4			67.6			3.0			65.4	
Approach Delay, s/veh   LOS	6.7	A		8.1	A		6.6	A		7.6	A	
Intersection Delay, s/veh   LOS	7.7						A					

# HCS Roundabouts Report

General Information				Site Information				
Analyst	T. Eastwood				Intersection	Beckwith & Demer		
Agency or Co.	E5 Engineering, PLLC				E/W Street Name	Beckwith Street (S-263)		
Date Performed	2/11/2026				N/S Street Name	Demer Street (S-263)		
Analysis Year	2028				Analysis Time Period, hrs	0.25		
Time Analyzed	Weekday, School PM Peak				Peak Hour Factor	0.81		
Project Description	Est. Total Traffic Mitigation				Jurisdiction	MDT / Missoula County		

## Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment	LTR				LTR				LTR							
Volume (V), veh/h	0	43	24	6	0	11	28	339	0	4	7	3	0	205	31	30
Percent Heavy Vehicles, %	0	0	4	0	0	9	4	4	0	0	0	0	0	5	3	3
Flow Rate (v <sub>PCE</sub> ), pc/h	0	53	31	7	0	15	36	435	0	5	9	4	0	266	39	38
Right-Turn Bypass	None				None				None							
Conflicting Lanes	1				1				1							
Pedestrians Crossing, p/h	1				0				1							
Proportion of CAVs, %	0															

## Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway, s		4.9763			4.9763			4.9763			4.9763	
Follow-Up Headway, s		2.6087			2.6087			2.6087			2.6087	

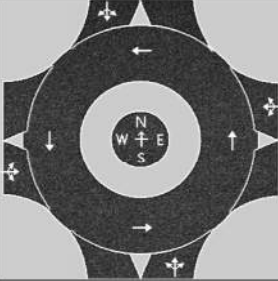
## Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v <sub>e</sub> ), pc/h		91			486			18			343	
Entry Volume, veh/h		90			467			18			328	
Circulating Flow (v <sub>c</sub> ), pc/h	320			67			350			56		
Exiting Flow (v <sub>ex</sub> ), pc/h	301			79			497			61		
Capacity (C <sub>PCE</sub> ), pc/h		996			1289			966			1303	
Capacity (c), veh/h		983			1238			966			1247	
v/c Ratio (x)		0.09			0.38			0.02			0.26	

## Delay and Level of Service

Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		4.5			6.5			3.9			5.2	
Lane LOS		A			A			A			A	
95% Queue Length, Q <sub>95</sub> (veh)		0.3			1.8			0.1			1.1	
95% Queue Length, Q <sub>95</sub> (ft)		7.6			46.5			2.5			28.5	
Approach Delay, s/veh   LOS	4.5	A		6.5	A		3.9	A		5.2	A	
Intersection Delay, s/veh   LOS	5.8						A					

# HCS Roundabouts Report

General Information				Site Information				
Analyst	T. Eastwood				Intersection	Beckwith & Demer		
Agency or Co.	E5 Engineering, PLLC				E/W Street Name	Beckwith Street (S-263)		
Date Performed	2/11/2026				N/S Street Name	Demer Street (S-263)		
Analysis Year	2028				Analysis Time Period, hrs	0.25		
Time Analyzed	Weekday, PM Peak Hour				Peak Hour Factor	0.90		
Project Description	Est. Total Traffic Mitigation				Jurisdiction	MDT / Missoula County		

## Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment	LTR				LTR				LTR							
Volume (V), veh/h	0	37	15	5	0	11	26	263	0	5	10	4	0	241	37	47
Percent Heavy Vehicles, %	0	3	7	0	0	0	4	2	0	20	0	0	0	3	3	2
Flow Rate (v <sub>PCE</sub> ), pc/h	0	42	18	6	0	12	30	298	0	7	11	4	0	276	42	53
Right-Turn Bypass	None				None				None							
Conflicting Lanes	1				1				1							
Pedestrians Crossing, p/h	0				1				1							
Proportion of CAVs, %	0															

## Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway, s		4.9763			4.9763			4.9763			4.9763	
Follow-Up Headway, s		2.6087			2.6087			2.6087			2.6087	

## Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v <sub>e</sub> ), pc/h		66			340			22			371	
Entry Volume, veh/h		64			333			21			361	
Circulating Flow (v <sub>c</sub> ), pc/h	330			60			336			49		
Exiting Flow (v <sub>ex</sub> ), pc/h	298			90			351			60		
Capacity (C <sub>PCE</sub> ), pc/h		986			1298			980			1313	
Capacity (c), veh/h		950			1271			928			1276	
v/c Ratio (x)		0.07			0.26			0.02			0.28	

## Delay and Level of Service

Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		4.4			5.1			4.1			5.3	
Lane LOS		A			A			A			A	
95% Queue Length, Q <sub>95</sub> (veh)		0.2			1.1			0.1			1.2	
95% Queue Length, Q <sub>95</sub> (ft)		5.2			28.0			2.6			30.7	
Approach Delay, s/veh   LOS	4.4	A		5.1	A		4.1	A		5.3	A	
Intersection Delay, s/veh   LOS	5.1						A					

# Appendix I

I-3

## **IN THIS SECTION:**

*Demer Street (S-263) & the  
Interstate 90 (I-90)  
Eastbound Ramps  
Intersection*





**WEEKDAY, AM PEAK HOUR | MITIGATION SUMMARY**

Analysis Scenario	Analysis Data	I-90 EB OFF-RAMP				I-90 EB ON-RAMP				DEMER STREET (S-263)				Minor Approach Totals	Intersection Totals				
		From the West (Eastbound)				From the East (Westbound)				From the South (Northbound)						From the North (Southbound)			
		U	L	T	R	U	L	T	R	U	L	T	R			U	L	T	R
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Roundabout				Roundabout				Roundabout				Roundabout					
	Minor or Major Approach?	Minor				Minor				Major				Major					
	Entry Volume, V (veh/hr)	64	0	112					0		221	217	0	287	294				
	Peak Hour Factor (PHF)	0.73								0.73				0.73					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	88	0	153					0		303	297	0	393	403				
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				0				0	0
	Lane Group	LTR								TR				LT					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	241								600				796				241	1,637
	Capacity, c (veh/hr)	576								797				1,333				576	2,706
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.42								0.75				0.60				0.42	0.60
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	2.1								7.1				4.2					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	54.0								184.6				105.0					
	Available Queue Storage, S <sub>Q</sub> (ft)	1,130								260				500					
	Average Control Delay (sec/veh)	12.8								20.6				9.6				12.8	14.1
	Level of Service, LOS	B								C				A					
Approach Delay (sec/veh)	12.8								20.6				9.6				B	B	
Approach Level of Service, LOS	B								C				A						

**WEEKDAY, SCHOOL PM PEAK HOUR | MITIGATION SUMMARY**

Analysis Scenario	Analysis Data	I-90 EB OFF-RAMP				I-90 EB ON-RAMP				DEMER STREET (S-263)				Minor Approach Totals	Intersection Totals				
		From the West (Eastbound)				From the East (Westbound)				From the South (Northbound)						From the North (Southbound)			
		U	L	T	R	U	L	T	R	U	L	T	R			U	L	T	R
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Roundabout				Roundabout				Roundabout				Roundabout					
	Minor or Major Approach?	Minor				Minor				Major				Major					
	Entry Volume, V (veh/hr)	47	0	44					0		270	124	0	164	227				
	Peak Hour Factor (PHF)	0.80								0.80				0.80					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	59	0	55					0		338	155	0	205	284				
	Ped + Bike Volume, PBV (ped+bike/hr)	1				0				0				0				1	1
	Lane Group	LTR								TR				LT					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	114								493				489				114	1,095
	Capacity, c (veh/hr)	802								1,009				1,314				802	3,125
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.14								0.49				0.37				0.14	0.35
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.5								2.7				1.7					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	12.7								69.4				42.5					
	Available Queue Storage, S <sub>Q</sub> (ft)	1,130								260				500					
	Average Control Delay (sec/veh)	5.9								9.4				6.2				5.9	7.6
	Level of Service, LOS	A								A				A					
Approach Delay (sec/veh)	5.9								9.4				6.2				A	A	
Approach Level of Service, LOS	A								A				A						

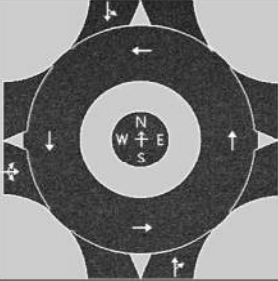
**WEEKDAY, PM PEAK HOUR | MITIGATION SUMMARY**

Analysis Scenario	Analysis Data	I-90 EB OFF-RAMP				I-90 EB ON-RAMP				DEMER STREET (S-263)				Minor Approach Totals	Intersection Totals				
		From the West (Eastbound)				From the East (Westbound)				From the South (Northbound)						From the North (Southbound)			
		U	L	T	R	U	L	T	R	U	L	T	R			U	L	T	R
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Roundabout				Roundabout				Roundabout				Roundabout					
	Minor or Major Approach?	Minor				Minor				Major				Major					
	Entry Volume, V (veh/hr)	57	0	57					0		231	80	0	123	275				
	Peak Hour Factor (PHF)	0.90								0.90				0.90					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	63	0	63					0		257	89	0	137	306				
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				0				0	0
	Lane Group	LTR								TR				LT					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	127								346				442				127	914
	Capacity, c (veh/hr)	835								1,096				1,357				835	3,288
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.15								0.32				0.33				0.15	0.28
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.5								1.4				1.4					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	13.0								35.7				35.0					
	Available Queue Storage, S <sub>Q</sub> (ft)	1,130								260				500					
	Average Control Delay (sec/veh)	5.8								6.4				5.6				5.8	5.9
	Level of Service, LOS	A								A				A					
Approach Delay (sec/veh)	5.8								6.4				5.6				A	A	
Approach Level of Service, LOS	A								A				A						

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LTR = Left-Through-Right; TR = Through-Right; and LT = Left-Through

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.

# HCS Roundabouts Report

General Information				Site Information				
Analyst	T. Eastwood				Intersection	Demer St & I-90 EB Ramps		
Agency or Co.	E5 Engineering, PLLC				E/W Street Name	I-90 Eastbound Off-Ramp		
Date Performed	2/11/2026				N/S Street Name	Demer Street (S-263)		
Analysis Year	2028				Analysis Time Period, hrs	0.25		
Time Analyzed	Weekday, AM Peak Hour				Peak Hour Factor	0.73		
Project Description	Est. Total Traffic Mitigation				Jurisdiction	MDT / Missoula County		

Volume Adjustments and Site Characteristics																
Approach	EB				WB				NB				SB			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Number of Lanes (N)	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0
Lane Assignment	LTR								TR				LT			
Volume (V), veh/h	0	64	0	112					0		221	217	0	287	294	
Percent Heavy Vehicles, %	0	6	0	2					0		7	3	0	1	6	
Flow Rate (v <sub>PCE</sub> ), pc/h	0	93	0	156					0		324	306	0	397	427	
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1								1				1			
Pedestrians Crossing, p/h	0								0				0			
Proportion of CAVs, %	0															

Critical and Follow-Up Headway Adjustment												
Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway, s		4.9763						4.9763			4.9763	
Follow-Up Headway, s		2.6087						2.6087			2.6087	

Flow Computations, Capacity and v/c Ratios												
Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v <sub>e</sub> ), pc/h		249						630			824	
Entry Volume, veh/h		241						600			796	
Circulating Flow (v <sub>c</sub> ), pc/h	824			417			490			0		
Exiting Flow (v <sub>ex</sub> ), pc/h	703			0			417			583		
Capacity (c <sub>PCE</sub> ), pc/h		595						837			1380	
Capacity (c), veh/h		576						797			1333	
v/c Ratio (x)		0.42						0.75			0.60	

Delay and Level of Service												
Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		12.8						20.6			9.6	
Lane LOS		B						C			A	
95% Queue Length, Q <sub>95</sub> (veh)		2.1						7.1			4.2	
95% Queue Length, Q <sub>95</sub> (ft)		54.0						184.6			105.0	
Approach Delay, s/veh   LOS	12.8		B				20.6		C	9.6		A
Intersection Delay, s/veh   LOS	14.1						B					

# HCS Roundabouts Report

General Information				Site Information				
Analyst	T. Eastwood				Intersection	Demer St & I-90 EB Ramps		
Agency or Co.	E5 Engineering, PLLC				E/W Street Name	I-90 Eastbound Off-Ramp		
Date Performed	2/11/2026				N/S Street Name	Demer Street (S-263)		
Analysis Year	2028				Analysis Time Period, hrs	0.25		
Time Analyzed	Weekday, School PM Peak				Peak Hour Factor	0.80		
Project Description	Est. Total Traffic Mitigation				Jurisdiction	MDT / Missoula County		

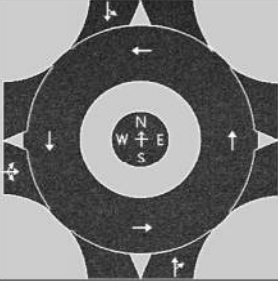
Volume Adjustments and Site Characteristics																
Approach	EB				WB				NB				SB			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Number of Lanes (N)	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0
Lane Assignment	LTR								TR				LT			
Volume (V), veh/h	0	47	0	44					0		270	124	0	164	227	
Percent Heavy Vehicles, %	0	1	0	3					0		5	0	0	5	5	
Flow Rate (v <sub>PCE</sub> ), pc/h	0	59	0	57					0		354	155	0	215	298	
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1								1				1			
Pedestrians Crossing, p/h	1								0				0			
Proportion of CAVs, %	0															

Critical and Follow-Up Headway Adjustment												
Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway, s		4.9763						4.9763			4.9763	
Follow-Up Headway, s		2.6087						2.6087			2.6087	

Flow Computations, Capacity and v/c Ratios												
Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v <sub>e</sub> ), pc/h		116						509			513	
Entry Volume, veh/h		114						492			489	
Circulating Flow (v <sub>c</sub> ), pc/h	513			413			274			0		
Exiting Flow (v <sub>ex</sub> ), pc/h	370			0			413			355		
Capacity (C <sub>PCE</sub> ), pc/h		818						1044			1380	
Capacity (c), veh/h		802						1009			1314	
v/c Ratio (x)		0.14						0.49			0.37	

Delay and Level of Service												
Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		5.9						9.4			6.2	
Lane LOS		A						A			A	
95% Queue Length, Q <sub>95</sub> (veh)		0.5						2.7			1.7	
95% Queue Length, Q <sub>95</sub> (ft)		12.7						69.4			42.5	
Approach Delay, s/veh   LOS	5.9		A				9.4		A	6.2		A
Intersection Delay, s/veh   LOS	7.6						A					

# HCS Roundabouts Report

General Information				Site Information				
Analyst	T. Eastwood				Intersection	Demer St & I-90 EB Ramps		
Agency or Co.	E5 Engineering, PLLC				E/W Street Name	I-90 Eastbound Off-Ramp		
Date Performed	2/11/2026				N/S Street Name	Demer Street (S-263)		
Analysis Year	2028				Analysis Time Period, hrs	0.25		
Time Analyzed	Weekday, PM Peak Hour				Peak Hour Factor	0.90		
Project Description	Est. Total Traffic Mitigation				Jurisdiction	MDT / Missoula County		

## Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Number of Lanes (N)	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0
Lane Assignment	LTR								TR				LT			
Volume (V), veh/h	0	57	0	57					0		231	80	0	123	275	
Percent Heavy Vehicles, %	0	1	0	8					0		2	4	0	1	2	
Flow Rate (v <sub>PCE</sub> ), pc/h	0	64	0	68					0		262	92	0	138	312	
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1								1				1			
Pedestrians Crossing, p/h	0								0				0			
Proportion of CAVs, %	0															

## Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway, s		4.9763						4.9763			4.9763	
Follow-Up Headway, s		2.6087						2.6087			2.6087	

## Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v <sub>e</sub> ), pc/h		132						354			450	
Entry Volume, veh/h		126						345			443	
Circulating Flow (v <sub>c</sub> ), pc/h	450			326			202			0		
Exiting Flow (v <sub>ex</sub> ), pc/h	230			0			326			380		
Capacity (c <sub>PCE</sub> ), pc/h		872						1123			1380	
Capacity (c), veh/h		835						1096			1357	
v/c Ratio (x)		0.15						0.32			0.33	

## Delay and Level of Service

Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		5.8						6.4			5.6	
Lane LOS		A						A			A	
95% Queue Length, Q <sub>95</sub> (veh)		0.5						1.4			1.4	
95% Queue Length, Q <sub>95</sub> (ft)		13.0						35.7			35.0	
Approach Delay, s/veh   LOS	5.8		A				6.4		A	5.6		A
Intersection Delay, s/veh   LOS	5.9						A					

# Appendix I

## IN THIS SECTION:

*Demer Street & the  
Interstate 90 (I-90)  
Westbound Ramps  
Intersection*

I-4





**WEEKDAY, AM PEAK HOUR | MITIGATION SUMMARY**

Analysis Scenario	Analysis Data	I-90 WESTBOUND ON-RAMP From the West (Eastbound)		I-90 WESTBOUND OFF-RAMP From the East (Westbound)				DEMER STREET From the South (Northbound)				DEMER STREET From the North (Southbound)				Minor Approach Totals	Intersection Totals		
		U	L	T	R	U	L	T	R	U	L	T	R	U	L			T	R
		<b>Traffic Control</b>	Roundabout	Roundabout		Roundabout				Roundabout				Roundabout					
<b>Minor or Major Approach?</b>	Minor	Minor		Minor				Major				Major							
<b>Entry Volume, V (veh/hr)</b>				114	0	136	0	36	249	0		467	38						
<b>Peak Hour Factor (PHF)</b>				0.77				0.77				0.77							
<b>Adjusted Volume, V<sub>A</sub> (veh/hr)</b>				148	0	177	0	47	323	0		606	49						
<b>Ped + Bike Volume, PBV (ped+bike/hr)</b>	0	0		0				0				0				0	0		
<b>Lane Group</b>				LTR				LT				TR							
<b>Lane Group Volume, V<sub>LG</sub> (veh/hr)</b>				325				370				656				148	1,351		
<b>Capacity, c (veh/hr)</b>				886				1,299				1,069				886	3,254		
<b>Volume-to-Capacity Ratio, V<sub>A</sub>/c</b>				0.37				0.28				0.61				0.17	0.42		
<b>HCM 95% Queue Length, Q<sub>95</sub> (veh)</b>				1.7				1.2				4.4							
<b>HCM 95% Queue Length, Q<sub>95</sub> (ft)</b>				44.0				30.0				113.3							
<b>Available Queue Storage, S<sub>q</sub> (ft)</b>				1,255				520				90							
<b>Average Control Delay (sec/veh)</b>				8.2				5.3				11.6				8.2	9.1		
<b>Level of Service, LOS</b>				A				A				B							
<b>Approach Delay (sec/veh)</b>				8.2				5.3				11.6				A	A		
<b>Approach Level of Service, LOS</b>				A				A				B							

**WEEKDAY, SCHOOL PM PEAK HOUR | MITIGATION SUMMARY**

Analysis Scenario	Analysis Data	I-90 WESTBOUND ON-RAMP From the West (Eastbound)		I-90 WESTBOUND OFF-RAMP From the East (Westbound)				DEMER STREET From the South (Northbound)				DEMER STREET From the North (Southbound)				Minor Approach Totals	Intersection Totals		
		U	L	T	R	U	L	T	R	U	L	T	R	U	L			T	R
		<b>Traffic Control</b>	Roundabout	Roundabout		Roundabout				Roundabout				Roundabout					
<b>Minor or Major Approach?</b>	Minor	Minor		Minor				Major				Major							
<b>Entry Volume, V (veh/hr)</b>				126	0	154	0	86	231	0		265	53						
<b>Peak Hour Factor (PHF)</b>				0.79				0.79				0.79							
<b>Adjusted Volume, V<sub>A</sub> (veh/hr)</b>				159	0	195	0	109	292	0		335	67						
<b>Ped + Bike Volume, PBV (ped+bike/hr)</b>	1	1		0				0				0				1	1		
<b>Lane Group</b>				LTR				LT				TR							
<b>Lane Group Volume, V<sub>LG</sub> (veh/hr)</b>				354				401				403				354	1,158		
<b>Capacity, c (veh/hr)</b>				871				1,305				993				871	3,169		
<b>Volume-to-Capacity Ratio, V<sub>A</sub>/c</b>				0.41				0.31				0.41				0.41	0.37		
<b>HCM 95% Queue Length, Q<sub>95</sub> (veh)</b>				2.0				1.3				2.0							
<b>HCM 95% Queue Length, Q<sub>95</sub> (ft)</b>				51.1				32.5				51.7							
<b>Available Queue Storage, S<sub>q</sub> (ft)</b>				1,255				520				90							
<b>Average Control Delay (sec/veh)</b>				9.0				5.5				8.1				9.0	7.5		
<b>Level of Service, LOS</b>				A				A				A							
<b>Approach Delay (sec/veh)</b>				9.0				5.5				8.1				A	A		
<b>Approach Level of Service, LOS</b>				A				A				A							

**WEEKDAY, PM PEAK HOUR | MITIGATION SUMMARY**

Analysis Scenario	Analysis Data	I-90 WESTBOUND ON-RAMP From the West (Eastbound)		I-90 WESTBOUND OFF-RAMP From the East (Westbound)				DEMER STREET From the South (Northbound)				DEMER STREET From the North (Southbound)				Minor Approach Totals	Intersection Totals		
		U	L	T	R	U	L	T	R	U	L	T	R	U	L			T	R
		<b>Traffic Control</b>	Roundabout	Roundabout		Roundabout				Roundabout				Roundabout					
<b>Minor or Major Approach?</b>	Minor	Minor		Minor				Major				Major							
<b>Entry Volume, V (veh/hr)</b>				184	1	240	0	80	208	0		214	57						
<b>Peak Hour Factor (PHF)</b>				0.86				0.86				0.86							
<b>Adjusted Volume, V<sub>A</sub> (veh/hr)</b>				214	1	279	0	93	242	0		249	66						
<b>Ped + Bike Volume, PBV (ped+bike/hr)</b>	0	0		0				0				0				0	0		
<b>Lane Group</b>				LTR				LT				TR							
<b>Lane Group Volume, V<sub>LG</sub> (veh/hr)</b>				494				335				315				494	1,144		
<b>Capacity, c (veh/hr)</b>				965				1,357				995				965	3,317		
<b>Volume-to-Capacity Ratio, V<sub>A</sub>/c</b>				0.51				0.25				0.32				0.51	0.34		
<b>HCM 95% Queue Length, Q<sub>95</sub> (veh)</b>				3.0				1.0				1.4							
<b>HCM 95% Queue Length, Q<sub>95</sub> (ft)</b>				75.6				25.0				35.3							
<b>Available Queue Storage, S<sub>q</sub> (ft)</b>				1,255				520				90							
<b>Average Control Delay (sec/veh)</b>				10.1				4.8				6.9				10.1	7.7		
<b>Level of Service, LOS</b>				B				A				A							
<b>Approach Delay (sec/veh)</b>				10.1				4.8				6.9				B	A		
<b>Approach Level of Service, LOS</b>				B				A				A							

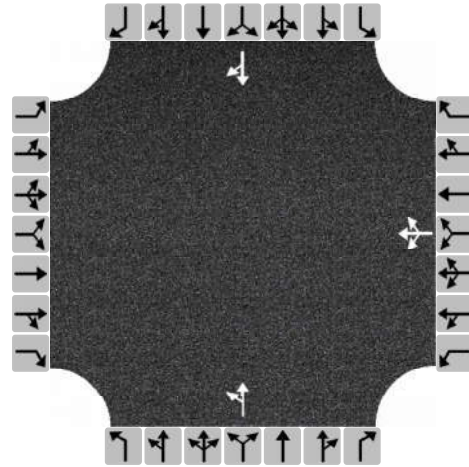
U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LTR = Left-Through-Right; LT = Left-Through; and TR = Through-Right  
Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes.

# HCS All-Way Stop Control Report

## General and Site Information

Analyst	T. Eastwood
Agency/Co.	E5 Engineering, PLLC
Date Performed	2/11/2026
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	Weekday, AM Peak Hour
Project Description	Est. Total Traffic Mitigation
Intersection	Demer St & I-90 WB Ramps
Jurisdiction	MDT / Missoula County
East/West Street	I-90 Westbound Ramps
North/South Street	Demer Street
Peak Hour Factor	0.77

## Lanes



## Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)				114	0	136	36	249			467	38
% Thrus in Shared Lane												

## Lane Flow Rate and Adjustments

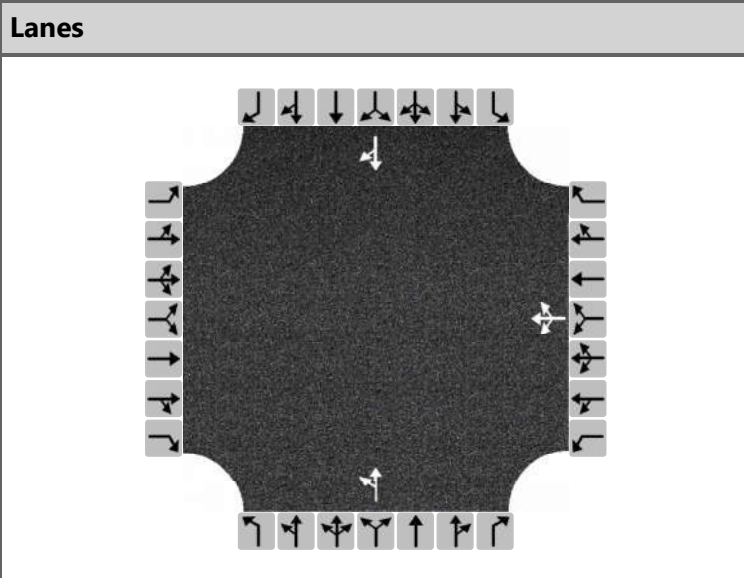
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration				LTR			LT			TR		
Flow Rate, v (veh/h)				325			370			656		
Percent Heavy Vehicles				4			7			3		
Initial Departure Headway, h <sub>d</sub> (s)				3.20			3.20			3.20		
Initial Degree of Utilization, x				0.289			0.329			0.583		
Final Departure Headway, h <sub>d</sub> (s)				6.38			6.18			5.73		
Final Degree of Utilization, x				0.576			0.635			1.045		
Move-Up Time, m (s)				2.0			2.0			2.0		
Service Time, t <sub>s</sub> (s)				4.38			4.18			3.73		

## Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration				LTR			LT			TR		
Flow Rate, v (veh/h)				325			370			656		
Capacity (veh/h)				564			583			628		
95% Queue Length, Q <sub>95</sub> (veh)				3.6			4.5			17.5		
95% Queue Length, Q <sub>95</sub> (ft)				92.9			118.8			448.0		
Control Delay (s/veh)				17.7			19.3			71.7		
Level of Service, LOS				C			C			F		
Approach Delay (s/veh)   LOS				17.7		C	19.3		C	71.7		F
Intersection Delay (s/veh)   LOS				44.4			E					

# HCS All-Way Stop Control Report

General and Site Information	
Analyst	T. Eastwood
Agency/Co.	E5 Engineering, PLLC
Date Performed	2/11/2026
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	Weekday, School PM Peak
Project Description	Est. Total Traffic Mitigation
Intersection	Demer St & I-90 WB Ramps
Jurisdiction	MDT / Missoula County
East/West Street	I-90 Westbound Ramps
North/South Street	Demer Street
Peak Hour Factor	0.79



## Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)				126	0	154	86	231			265	53
% Thrus in Shared Lane												

## Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration				LTR			LT			TR		
Flow Rate, v (veh/h)				354			401			403		
Percent Heavy Vehicles				3			5			5		
Initial Departure Headway, h <sub>d</sub> (s)				3.20			3.20			3.20		
Initial Degree of Utilization, x				0.315			0.357			0.358		
Final Departure Headway, h <sub>d</sub> (s)				5.91			5.85			5.71		
Final Degree of Utilization, x				0.581			0.653			0.639		
Move-Up Time, m (s)				2.0			2.0			2.0		
Service Time, t <sub>s</sub> (s)				3.91			3.85			3.71		

## Capacity, Delay and Level of Service

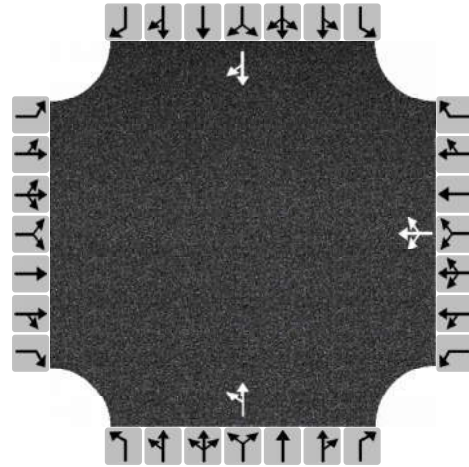
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration				LTR			LT			TR		
Flow Rate, v (veh/h)				354			401			403		
Capacity (veh/h)				610			615			630		
95% Queue Length, Q <sub>95</sub> (veh)				3.7			4.8			4.6		
95% Queue Length, Q <sub>95</sub> (ft)				94.7			124.8			119.6		
Control Delay (s/veh)				16.8			19.2			18.3		
Level of Service, LOS				C			C			C		
Approach Delay (s/veh)   LOS				16.8		C	19.2		C	18.3		C
Intersection Delay (s/veh)   LOS				18.1			C					

# HCS All-Way Stop Control Report

## General and Site Information

Analyst	T. Eastwood
Agency/Co.	E5 Engineering, PLLC
Date Performed	2/11/2026
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	Weekday, PM Peak Hour
Project Description	Est. Total Traffic Mitigation
Intersection	Demer St & I-90 WB Ramps
Jurisdiction	MDT / Missoula County
East/West Street	I-90 Westbound Ramps
North/South Street	Demer Street
Peak Hour Factor	0.86

## Lanes



## Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)				184	1	240	80	208			214	57
% Thrus in Shared Lane												

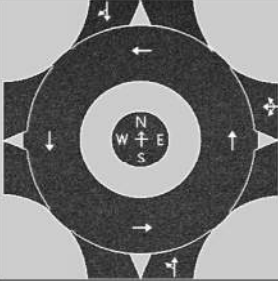
## Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration				LTR			LT			TR		
Flow Rate, v (veh/h)				494			335			315		
Percent Heavy Vehicles				1			2			1		
Initial Departure Headway, $h_d$ (s)				3.20			3.20			3.20		
Initial Degree of Utilization, x				0.439			0.298			0.280		
Final Departure Headway, $h_d$ (s)				5.53			6.06			5.91		
Final Degree of Utilization, x				0.760			0.564			0.517		
Move-Up Time, m (s)				2.0			2.0			2.0		
Service Time, $t_s$ (s)				3.53			4.06			3.91		

## Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration				LTR			LT			TR		
Flow Rate, v (veh/h)				494			335			315		
Capacity (veh/h)				651			594			609		
95% Queue Length, $Q_{95}$ (veh)				7.0			3.5			3.0		
95% Queue Length, $Q_{95}$ (ft)				176.4			88.9			75.6		
Control Delay (s/veh)				23.9			16.6			15.1		
Level of Service, LOS				C			C			C		
Approach Delay (s/veh)   LOS				23.9		C	16.6		C	15.1		C
Intersection Delay (s/veh)   LOS				19.3			C					

# HCS Roundabouts Report

General Information				Site Information				
Analyst	T. Eastwood				Intersection	Demer St & I-90 WB Ramps		
Agency or Co.	E5 Engineering, PLLC				E/W Street Name	I-90 Westbound Off-Ramp		
Date Performed	2/11/2026				N/S Street Name	Demer Street		
Analysis Year	2028				Analysis Time Period, hrs	0.25		
Time Analyzed	Weekday, AM Peak Hour				Peak Hour Factor	0.77		
Project Description	Est. Total Traffic Mitigation				Jurisdiction	MDT / Missoula County		

## Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment					LTR				LT				TR			
Volume (V), veh/h					0	114	0	136	0	36	249		0		467	38
Percent Heavy Vehicles, %					0	6	0	3	0	22	4		0		4	1
Flow Rate (v <sub>PCE</sub> ), pc/h					0	157	0	182	0	57	336		0		631	50
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes					1				1				1			
Pedestrians Crossing, p/h					0				0				0			
Proportion of CAVs, %	0															

## Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway, s					4.9763			4.9763			4.9763	
Follow-Up Headway, s					2.6087			2.6087			2.6087	

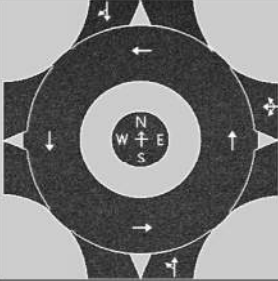
## Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v <sub>e</sub> ), pc/h					339			393			681	
Entry Volume, veh/h					325			370			656	
Circulating Flow (v <sub>c</sub> ), pc/h	788			393			0			214		
Exiting Flow (v <sub>ex</sub> ), pc/h	0			107			518			788		
Capacity (C <sub>PCE</sub> ), pc/h					924			1380			1109	
Capacity (c), veh/h					886			1299			1069	
v/c Ratio (x)					0.37			0.28			0.61	

## Delay and Level of Service

Approach	EB			WB			NB			SB			
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	
Lane Control Delay (d), s/veh					8.2			5.3			11.6		
Lane LOS					A			A			B		
95% Queue Length, Q <sub>95</sub> (veh)					1.7			1.2			4.4		
95% Queue Length, Q <sub>95</sub> (ft)					44.0			30.0			113.3		
Approach Delay, s/veh   LOS				8.2	A			5.3	A			11.6	B
Intersection Delay, s/veh   LOS	9.1						A						

# HCS Roundabouts Report

General Information				Site Information				
Analyst	T. Eastwood				Intersection	Demer St & I-90 WB Ramps		
Agency or Co.	E5 Engineering, PLLC				E/W Street Name	I-90 Westbound Off-Ramp		
Date Performed	2/11/2026				N/S Street Name	Demer Street		
Analysis Year	2028				Analysis Time Period, hrs	0.25		
Time Analyzed	Weekday, School PM Peak				Peak Hour Factor	0.79		
Project Description	Est. Total Traffic Mitigation				Jurisdiction	MDT / Missoula County		

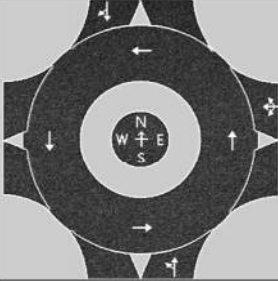
Volume Adjustments and Site Characteristics																
Approach	EB				WB				NB				SB			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment					LTR				LT				TR			
Volume (V), veh/h					0	126	0	154	0	86	231		0		265	53
Percent Heavy Vehicles, %					0	5	0	1	0	5	6		0		5	1
Flow Rate (v <sub>PCE</sub> ), pc/h					0	167	0	197	0	114	310		0		352	68
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes					1				1				1			
Pedestrians Crossing, p/h					0				0				0			
Proportion of CAVs, %	0															

Critical and Follow-Up Headway Adjustment												
Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway, s					4.9763			4.9763			4.9763	
Follow-Up Headway, s					2.6087			2.6087			2.6087	

Flow Computations, Capacity and v/c Ratios												
Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v <sub>e</sub> ), pc/h					364			424			420	
Entry Volume, veh/h					354			401			403	
Circulating Flow (v <sub>c</sub> ), pc/h	519			424			0			281		
Exiting Flow (v <sub>ex</sub> ), pc/h	0			182			507			519		
Capacity (C <sub>PCE</sub> ), pc/h					895			1380			1036	
Capacity (c), veh/h					871			1305			993	
v/c Ratio (x)					0.41			0.31			0.41	

Delay and Level of Service													
Approach	EB			WB			NB			SB			
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	
Lane Control Delay (d), s/veh					9.0			5.5			8.1		
Lane LOS					A			A			A		
95% Queue Length, Q <sub>95</sub> (veh)					2.0			1.3			2.0		
95% Queue Length, Q <sub>95</sub> (ft)					51.1			32.5			51.7		
Approach Delay, s/veh   LOS					9.0		A	5.5		A	8.1		A
Intersection Delay, s/veh   LOS	7.5						A						

# HCS Roundabouts Report

General Information				Site Information				
Analyst	T. Eastwood				Intersection	Demer St & I-90 WB Ramps		
Agency or Co.	E5 Engineering, PLLC				E/W Street Name	I-90 Westbound Off-Ramp		
Date Performed	2/11/2026				N/S Street Name	Demer Street		
Analysis Year	2028				Analysis Time Period, hrs	0.25		
Time Analyzed	Weekday, PM Peak Hour				Peak Hour Factor	0.86		
Project Description	Est. Total Traffic Mitigation				Jurisdiction	MDT / Missoula County		

Volume Adjustments and Site Characteristics																
Approach	EB				WB				NB				SB			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment					LTR				LT				TR			
Volume (V), veh/h					0	184	1	240	0	80	208		0		214	57
Percent Heavy Vehicles, %					0	1	0	1	0	1	2		0		1	1
Flow Rate (v <sub>PCE</sub> ), pc/h					0	216	1	282	0	94	247		0		251	67
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes					1				1				1			
Pedestrians Crossing, p/h					0				0				0			
Proportion of CAVs, %	0															

Critical and Follow-Up Headway Adjustment												
Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway, s					4.9763			4.9763			4.9763	
Follow-Up Headway, s					2.6087			2.6087			2.6087	

Flow Computations, Capacity and v/c Ratios												
Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v <sub>e</sub> ), pc/h					499			341			318	
Entry Volume, veh/h					494			335			315	
Circulating Flow (v <sub>c</sub> ), pc/h	467			341			0			311		
Exiting Flow (v <sub>ex</sub> ), pc/h	0			162			529			467		
Capacity (C <sub>PCE</sub> ), pc/h					975			1380			1005	
Capacity (c), veh/h					965			1357			995	
v/c Ratio (x)					0.51			0.25			0.32	

Delay and Level of Service												
Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh					10.1			4.8			6.9	
Lane LOS					B			A			A	
95% Queue Length, Q <sub>95</sub> (veh)					3.0			1.0			1.4	
95% Queue Length, Q <sub>95</sub> (ft)					75.6			25.0			35.3	
Approach Delay, s/veh   LOS				10.1   B			4.8   A			6.9   A		
Intersection Delay, s/veh   LOS	7.7						A					



# Appendix I

## IN THIS SECTION:

*Frenchtown Frontage Road  
(S-574) &  
Demer Street  
Intersection*

I-5





**Traffic Operations Summary**  
Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

**Intersection:** Frenchtown Frontage Road (S-574) & Demer Street / Relocated Town Pump Site Access

**WEEKDAY, AM PEAK HOUR | MITIGATION SUMMARY**

Analysis Scenario	Analysis Data	FRENCHTOWN FRONTAGE ROAD From the West (Eastbound)		FRENCHTOWN FRONTAGE ROAD From the East (Westbound)				DEMER STREET From the South (Northbound)				TOWN PUMP SITE ACCESS From the North (Southbound)				Minor Approach Totals	Intersection Totals		
		U		L		T		R		U		L		T				R	
		U	L	T	R	U	L	T	R	U	L	T	R	U	L			T	R
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	4	51	277	0	130	120	7	0	216	92	72	0	5	93	0		
	Peak Hour Factor (PHF)	0.76				0.76				0.76				0.76					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	5	67	364	0	171	158	9	0	284	121	95	0	7	122	0		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				1				1	1
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	437				338				500				129				629	1,404
	Capacity, c (veh/hr)	1,420				1,123				162				179				341	2,884
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.31				0.30				3.09				0.72				1.84	0.49
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.5				46.3				4.5					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				12.5				1180.8				113.5					
	Available Queue Storage, S <sub>Q</sub> (ft)	850				400				90				300					
	Average Control Delay (sec/veh)	0.1				5.2				1000.2				64.6				808.4	363.4
Level of Service, LOS	A				A				F				F				F	F	
Approach Delay (sec/veh)	0.1				5.2				1000.2				64.6						
Approach Level of Service, LOS	A				A				F				F						
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Stop Controlled				Stop Controlled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Major				Minor				Major				Minor					
	Entry Volume, V (veh/hr)	0	4	51	277	0	130	120	7	0	216	92	72	0	5	93	0		
	Peak Hour Factor (PHF)	0.76				0.76				0.76				0.76					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	5	67	364	0	171	158	9	0	284	121	95	0	7	122	0		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				1				1	1
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	437				338				500				129				300	1,404
	Capacity, c (veh/hr)	524				471				499				424				895	1,918
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.83				0.72				1.00				0.30				0.34	0.73
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	8.5				5.7				13.8				1.3					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	217.6				145.9				353.3				32.8					
	Available Queue Storage, S <sub>Q</sub> (ft)	850				400				90				300					
	Average Control Delay (sec/veh)	35.5				27.7				67.8				15.2				22.3	43.3
Level of Service, LOS	E				D				F				C				C	E	
Approach Delay (sec/veh)	35.5				27.7				67.8				15.2						
Approach Level of Service, LOS	E				D				F				C						
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Roundabout				Roundabout				Roundabout				Roundabout					
	Minor or Major Approach?	Major				Minor				Major				Minor					
	Entry Volume, V (veh/hr)	0	4	51	277	0	130	120	7	0	216	92	72	0	5	93	0		
	Peak Hour Factor (PHF)	0.76				0.76				0.76				0.76					
	Adjusted Volume, V <sub>A</sub> (veh/hr)	0	5	67	364	0	171	158	9	0	284	121	95	0	7	122	0		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				1				1	1
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	437				338				500				129				300	1,404
	Capacity, c (veh/hr)	973				873				1,241				716				1,589	3,803
	Volume-to-Capacity Ratio, V <sub>A</sub> /c	0.45				0.39				0.40				0.18				0.19	0.37
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	2.4				1.8				2.0				0.7					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	61.7				46.1				51.0				17.7					
	Available Queue Storage, S <sub>Q</sub> (ft)	850				400				90				300					
	Average Control Delay (sec/veh)	8.9				8.6				6.9				7.0				7.9	7.9
Level of Service, LOS	A				A				A				A				A	A	
Approach Delay (sec/veh)	8.9				8.6				6.9				7.0						
Approach Level of Service, LOS	A				A				A				A						

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LTR = Left-Through-Right

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.



**Traffic Operations Summary**  
Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

**Intersection:** Frenchtown Frontage Road (S-574) & Demer Street / Relocated Town Pump Site Access

WEEKDAY, SCHOOL PM PEAK HOUR   MITIGATION SUMMARY																			
Analysis Scenario	Analysis Data	FRENCHTOWN FRONTAGE ROAD From the West (Eastbound)				FRENCHTOWN FRONTAGE ROAD From the East (Westbound)				DEMER STREET From the South (Northbound)				TOWN PUMP SITE ACCESS From the North (Southbound)				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	3	78	180	0	54	37	7	0	199	75	105	0	7	78	1		
	Peak Hour Factor (PHF)	0.76				0.76				0.76				0.76					
	Adjusted Volume, V <sub>a</sub> (veh/hr)	0	4	103	237	0	71	49	9	0	262	99	138	0	9	103	1		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				3				3	3
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	343				129				499				113				612	1,084
	Capacity, c (veh/hr)	1,551				1,198				550				371				921	3,670
	Volume-to-Capacity Ratio, V <sub>a</sub> /c	0.22				0.11				0.91				0.31				0.66	0.30
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.2				10.8				1.3					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				5.0				276.2				32.8					
	Available Queue Storage, S <sub>q</sub> (ft)	850				400				90				300					
	Average Control Delay (sec/veh)	0.1				4.7				46.2				18.9				41.2	23.8
	Level of Service, LOS	A				A				E				C				E	C
Approach Delay (sec/veh)	0.1				4.7				46.2				18.9						
Approach Level of Service, LOS	A				A				E				C						
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Stop Controlled				Stop Controlled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Major				Minor				Major				Minor					
	Entry Volume, V (veh/hr)	0	3	78	180	0	54	37	7	0	199	75	105	0	7	78	1		
	Peak Hour Factor (PHF)	0.76				0.76				0.76				0.76					
	Adjusted Volume, V <sub>a</sub> (veh/hr)	0	4	103	237	0	71	49	9	0	262	99	138	0	9	103	1		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				3				3	3
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	343				129				499				113				242	1,084
	Capacity, c (veh/hr)	640				549				651				572				1,121	2,412
	Volume-to-Capacity Ratio, V <sub>a</sub> /c	0.54				0.23				0.77				0.20				0.22	0.45
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	3.2				0.9				7.1				0.7					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	82.6				23.6				181.8				17.6					
	Available Queue Storage, S <sub>q</sub> (ft)	850				400				90				300					
	Average Control Delay (sec/veh)	14.9				11.6				24.3				10.8				11.2	18.4
	Level of Service, LOS	B				B				C				B				B	C
Approach Delay (sec/veh)	14.9				11.6				24.3				10.8						
Approach Level of Service, LOS	B				B				C				B						
ESTIMATED 2028 TOTAL TRAFFIC	Traffic Control	Roundabout				Roundabout				Roundabout				Roundabout					
	Minor or Major Approach?	Major				Minor				Major				Minor					
	Entry Volume, V (veh/hr)	0	3	78	180	0	54	37	7	0	199	75	105	0	7	78	1		
	Peak Hour Factor (PHF)	0.76				0.76				0.76				0.76					
	Adjusted Volume, V <sub>a</sub> (veh/hr)	0	4	103	237	0	71	49	9	0	262	99	138	0	9	103	1		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				3				3	3
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	343				129				499				113				242	1,084
	Capacity, c (veh/hr)	1,092				891				1,188				910				1,801	4,081
	Volume-to-Capacity Ratio, V <sub>a</sub> /c	0.31				0.14				0.42				0.12				0.13	0.27
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	1.4				0.5				2.1				0.4					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	36.2				13.1				53.7				10.1					
	Available Queue Storage, S <sub>q</sub> (ft)	850				400				90				300					
	Average Control Delay (sec/veh)	6.4				5.4				7.3				5.1				5.3	6.6
	Level of Service, LOS	A				A				A				A				A	A
Approach Delay (sec/veh)	6.4				5.4				7.3				5.1						
Approach Level of Service, LOS	A				A				A				A						

U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LTR = Left-Through-Right

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.



**Traffic Operations Summary**  
 Proposed Town Pump - Frenchtown | Independent Traffic Impact Study

**Intersection:** Frenchtown Frontage Road (S-574) & Demer Street / Relocated Town Pump Site Access

WEEKDAY, PM PEAK HOUR   MITIGATION SUMMARY																			
Analysis Scenario	Analysis Data	FRENCHTOWN FRONTAGE ROAD From the West (Eastbound)				FRENCHTOWN FRONTAGE ROAD From the East (Westbound)				DEMER STREET From the South (Northbound)				TOWN PUMP SITE ACCESS From the North (Southbound)				Minor Approach Totals	Intersection Totals
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
ESTIMATED 2028 TOTAL TRAFFIC  Two-Way Stop-Control (TWSC)	Traffic Control	Uncontrolled				Uncontrolled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Major				Major				Minor				Minor					
	Entry Volume, V (veh/hr)	0	5	39	97	0	66	39	9	0	234	98	107	0	9	99	2		
	Peak Hour Factor (PHF)	0.84				0.84				0.84				0.84					
	Adjusted Volume, V <sub>a</sub> (veh/hr)	0	6	46	115	0	79	46	11	0	279	117	127	0	11	118	2		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				2				2	2
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	168				136				523				131				654	957
	Capacity, c (veh/hr)	1,548				1,417				620				472				1,092	4,057
	Volume-to-Capacity Ratio, V <sub>a</sub> /c	0.11				0.10				0.84				0.28				0.60	0.24
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.0				0.2				9.2				1.1					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	0.0				5.0				232.7				27.7					
	Available Queue Storage, S <sub>q</sub> (ft)	850				400				90				300					
	Average Control Delay (sec/veh)	0.3				4.6				34.1				15.5				30.4	21.4
	Level of Service, LOS	A				A				D				C					
Approach Delay (sec/veh)	0.3				4.6				34.1				15.5				D	C	
Approach Level of Service, LOS	A				A				D				C						
ESTIMATED 2028 TOTAL TRAFFIC  All-Way Stop-Control (AWSC)	Traffic Control	Stop Controlled				Stop Controlled				Stop Controlled				Stop Controlled					
	Minor or Major Approach?	Major				Minor				Major				Minor					
	Entry Volume, V (veh/hr)	0	5	39	97	0	66	39	9	0	234	98	107	0	9	99	2		
	Peak Hour Factor (PHF)	0.84				0.84				0.84				0.84					
	Adjusted Volume, V <sub>a</sub> (veh/hr)	0	6	46	115	0	79	46	11	0	279	117	127	0	11	118	2		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				2				2	2
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	168				136				523				131				267	957
	Capacity, c (veh/hr)	653				594				721				642				1,236	2,610
	Volume-to-Capacity Ratio, V <sub>a</sub> /c	0.26				0.23				0.72				0.20				0.22	0.37
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	1.0				0.9				6.3				0.8					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	25.2				23.0				158.8				20.2					
	Available Queue Storage, S <sub>q</sub> (ft)	850				400				90				300					
	Average Control Delay (sec/veh)	10.4				10.9				20.0				10.0				10.5	15.7
	Level of Service, LOS	B				B				C				B					
Approach Delay (sec/veh)	10.4				10.9				20.0				10.0				B	C	
Approach Level of Service, LOS	B				B				C				B						
ESTIMATED 2028 TOTAL TRAFFIC  Roundabout Control	Traffic Control	Roundabout				Roundabout				Roundabout				Roundabout					
	Minor or Major Approach?	Major				Minor				Major				Minor					
	Entry Volume, V (veh/hr)	0	5	39	97	0	66	39	9	0	234	98	107	0	9	99	2		
	Peak Hour Factor (PHF)	0.84				0.84				0.84				0.84					
	Adjusted Volume, V <sub>a</sub> (veh/hr)	0	6	46	115	0	79	46	11	0	279	117	127	0	11	118	2		
	Ped + Bike Volume, PBV (ped+bike/hr)	0				0				0				2				2	2
	Lane Group	LTR				LTR				LTR				LTR					
	Lane Group Volume, V <sub>LG</sub> (veh/hr)	168				136				523				131				267	957
	Capacity, c (veh/hr)	1,106				886				1,275				898				1,784	4,165
	Volume-to-Capacity Ratio, V <sub>a</sub> /c	0.15				0.15				0.41				0.15				0.15	0.23
	HCM 95% Queue Length, Q <sub>95</sub> (veh)	0.5				0.5				2.0				0.5					
	HCM 95% Queue Length, Q <sub>95</sub> (ft)	12.6				12.8				50.6				12.6					
	Available Queue Storage, S <sub>q</sub> (ft)	850				400				90				300					
	Average Control Delay (sec/veh)	4.6				5.6				6.8				5.4				5.5	6.1
	Level of Service, LOS	A				A				A				A					
Approach Delay (sec/veh)	4.6				5.6				6.8				5.4				A	A	
Approach Level of Service, LOS	A				A				A				A						

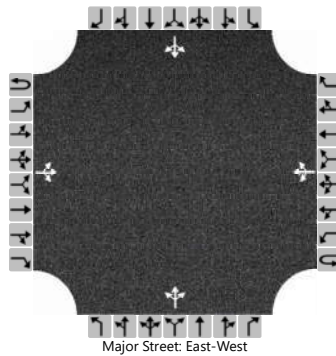
U = U-Turns; L = Left Turns; T = Through; R = Right Turns | Lane Groups: LTR = Left-Through-Right

Average intersection delay and volume-to-capacity ratio for minor approach(es) is a weighted average provided for reference purposes. The Highway Capacity Manual, 7th Edition: A Guide for Multimodal Mobility Analysis does not define overall average delay for the intersection as a whole for two-way or single approach stop-controlled intersections.

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Frontage Rd & Demer St		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Frenchtown Frontage Road (S-574)		
Analysis Year	2028			North/South Street	Demer Street (S-263)		
Time Analyzed	Weekday, AM Peak Hour			Peak Hour Factor	0.76		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Est. Total Traffic Mitigation						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		4	51	277		130	120	7		216	92	72		5	93	0
Percent Heavy Vehicles (%)		0				3				3	1	3		3	1	0
Proportion Time Blocked																
Percent Grade (%)										-3				3		
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.13				6.53	5.91	5.93		7.73	7.11	6.50
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.23				3.53	4.01	3.33		3.53	4.01	3.30

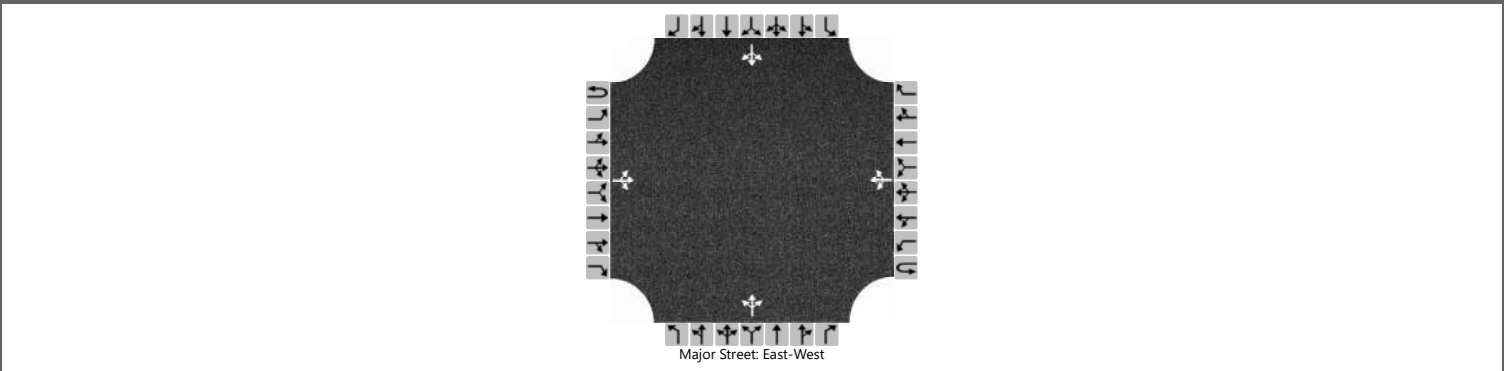
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		5				171					500					129
Capacity, c (veh/h)		1420				1123					162					179
v/c Ratio		0.00				0.15					3.09					0.72
95% Queue Length, Q <sub>95</sub> (veh)		0.0				0.5					46.3					4.5
95% Queue Length, Q <sub>95</sub> (ft)		0.0				12.5					1180.8					113.5
Control Delay (s/veh)		7.5	0.0	0.0		8.8	1.5	1.5			1000.2					64.6
Level of Service (LOS)		A	A	A		A	A	A			F					F
Approach Delay (s/veh)		0.1				5.2				1000.2				64.6		
Approach LOS		A				A				F				F		

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Frontage Rd & Demer St		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Frenchtown Frontage Road (S-574)		
Analysis Year	2028			North/South Street	Demer Street (S-263)		
Time Analyzed	Weekday, School PM Peak			Peak Hour Factor	0.76		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Est. Total Traffic Mitigation						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Priority																	
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		3	78	180		54	37	7		199	75	105		7	78	1	
Percent Heavy Vehicles (%)		0				6				3	1	4		2	1	0	
Proportion Time Blocked																	
Percent Grade (%)										-3				3			
Right Turn Channelized																	
Median Type   Storage	Undivided																

## Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.16				6.53	5.91	5.94		7.72	7.11	6.50
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.25				3.53	4.01	3.34		3.52	4.01	3.30

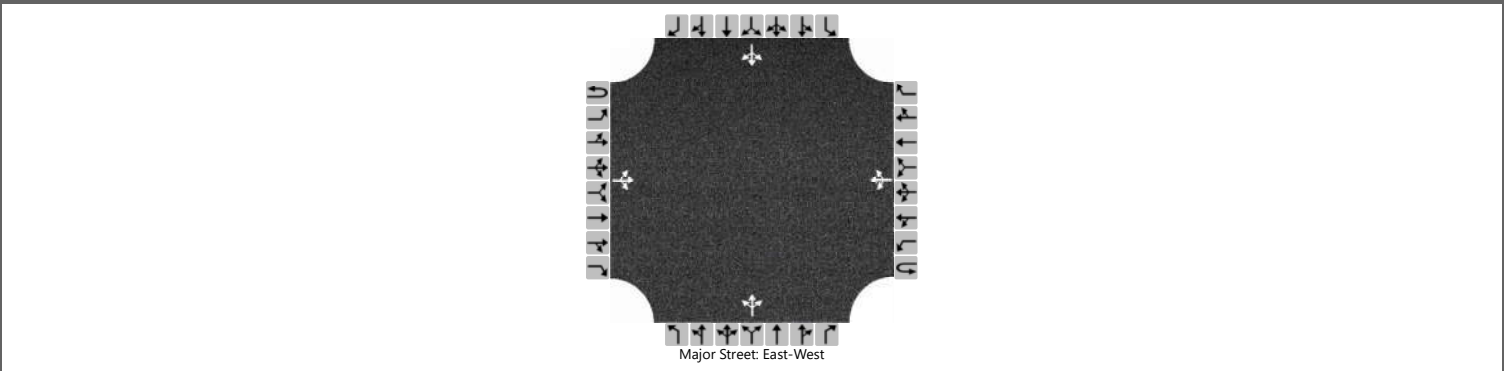
## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		4				71					499					113	
Capacity, c (veh/h)		1551				1198					550					371	
v/c Ratio		0.00				0.06					0.91					0.30	
95% Queue Length, Q <sub>95</sub> (veh)		0.0				0.2					10.8					1.3	
95% Queue Length, Q <sub>95</sub> (ft)		0.0				5.0					276.2					32.8	
Control Delay (s/veh)		7.3	0.0	0.0		8.2	0.5	0.5			46.2					18.9	
Level of Service (LOS)		A	A	A		A	A	A			E					C	
Approach Delay (s/veh)		0.1				4.7				46.2					18.9		
Approach LOS		A				A				E					C		

# HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	T. Eastwood			Intersection	Frontage Rd & Demer St		
Agency/Co.	E5 Engineering, PLLC			Jurisdiction	MDT / Missoula County		
Date Performed	2/11/2026			East/West Street	Frenchtown Frontage Road (S-574)		
Analysis Year	2028			North/South Street	Demer Street (S-263)		
Time Analyzed	Weekday, PM Peak Hour			Peak Hour Factor	0.84		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Est. Total Traffic Mitigation						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		5	39	97		66	39	9		234	98	107		9	99	2
Percent Heavy Vehicles (%)		1				2				1	1	3		2	1	3
Proportion Time Blocked																
Percent Grade (%)										-3				3		
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

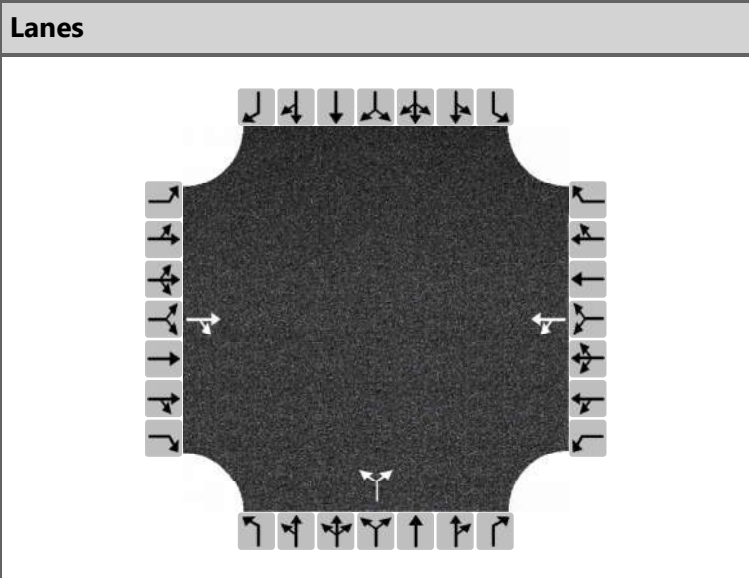
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.11				4.12				6.51	5.91	5.93		7.72	7.11	6.53
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.21				2.22				3.51	4.01	3.33		3.52	4.01	3.33

## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		6				79					523					131
Capacity, c (veh/h)		1548				1417					620					472
v/c Ratio		0.00				0.06					0.84					0.28
95% Queue Length, Q <sub>95</sub> (veh)		0.0				0.2					9.2					1.1
95% Queue Length, Q <sub>95</sub> (ft)		0.0				5.0					232.7					27.7
Control Delay (s/veh)		7.3	0.0	0.0		7.7	0.4	0.4			34.1					15.5
Level of Service (LOS)		A	A	A		A	A	A			D					C
Approach Delay (s/veh)		0.3				4.6				34.1				15.5		
Approach LOS		A				A				D				C		

# HCS All-Way Stop Control Report

General and Site Information	
Analyst	T. Eastwood
Agency/Co.	E5 Engineering, PLLC
Date Performed	2/11/2026
Analysis Year	2026
Analysis Time Period (hrs)	0.25
Time Analyzed	Weekday, AM Peak Hour
Project Description	Existing Conditions Mitigation
Intersection	Frontage Rd & Demer St
Jurisdiction	MDT / Missoula County
East/West Street	Frenchtown Frontage Road (S-574)
North/South Street	Demer Street
Peak Hour Factor	0.76



## Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)		48	259	119	112		200		66			
% Thrus in Shared Lane												

## Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	TR			LT			LR					
Flow Rate, $v$ (veh/h)	404			304			350					
Percent Heavy Vehicles	3			3			3					
Initial Departure Headway, $h_d$ (s)	3.20			3.20			3.20					
Initial Degree of Utilization, $x$	0.359			0.270			0.311					
Final Departure Headway, $h_d$ (s)	5.05			5.76			5.79					
Final Degree of Utilization, $x$	0.567			0.486			0.563					
Move-Up Time, $m$ (s)	2.0			2.0			2.0					
Service Time, $t_s$ (s)	3.05			3.76			3.79					

## Capacity, Delay and Level of Service

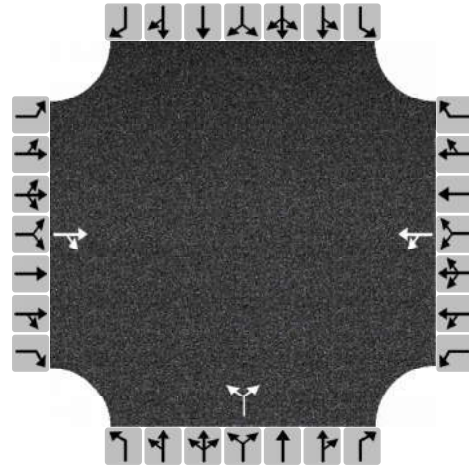
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	TR			LT			LR					
Flow Rate, $v$ (veh/h)	404			304			350					
Capacity (veh/h)	713			625			622					
95% Queue Length, $Q_{95}$ (veh)	3.6			2.7			3.5					
95% Queue Length, $Q_{95}$ (ft)	92.2			69.1			89.6					
Control Delay (s/veh)	14.5			14.1			16.0					
Level of Service, LOS	B			B			C					
Approach Delay (s/veh)   LOS	14.5		B	14.1		B	16.0		C			
Intersection Delay (s/veh)   LOS	14.8						B					

# HCS All-Way Stop Control Report

## General and Site Information

Analyst	T. Eastwood
Agency/Co.	E5 Engineering, PLLC
Date Performed	2/11/2026
Analysis Year	2026
Analysis Time Period (hrs)	0.25
Time Analyzed	Weekday, School PM Peak
Project Description	Existing Conditions Mitigation
Intersection	Frontage Rd & Demer St
Jurisdiction	MDT / Missoula County
East/West Street	Frenchtown Frontage Road (S-574)
North/South Street	Demer Street
Peak Hour Factor	0.76

## Lanes



## Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)		74	169	51	35		185		96			
% Thrus in Shared Lane												

## Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	TR			LT			LR					
Flow Rate, v (veh/h)	320			113			370					
Percent Heavy Vehicles	4			6			4					
Initial Departure Headway, h <sub>d</sub> (s)	3.20			3.20			3.20					
Initial Degree of Utilization, x	0.284			0.101			0.329					
Final Departure Headway, h <sub>d</sub> (s)	4.71			5.54			4.97					
Final Degree of Utilization, x	0.419			0.174			0.511					
Move-Up Time, m (s)	2.0			2.0			2.0					
Service Time, t <sub>s</sub> (s)	2.71			3.54			2.97					

## Capacity, Delay and Level of Service

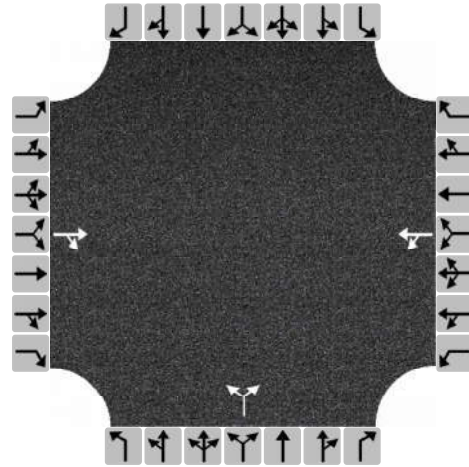
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	TR			LT			LR					
Flow Rate, v (veh/h)	320			113			370					
Capacity (veh/h)	764			649			724					
95% Queue Length, Q <sub>95</sub> (veh)	2.1			0.6			2.9					
95% Queue Length, Q <sub>95</sub> (ft)	54.2			15.7			74.8					
Control Delay (s/veh)	11.1			9.7			13.0					
Level of Service, LOS	B			A			B					
Approach Delay (s/veh)   LOS	11.1		B	9.7		A	13.0		B			
Intersection Delay (s/veh)   LOS	11.8						B					

# HCS All-Way Stop Control Report

## General and Site Information

Analyst	T. Eastwood
Agency/Co.	E5 Engineering, PLLC
Date Performed	2/11/2026
Analysis Year	2026
Analysis Time Period (hrs)	0.25
Time Analyzed	Weekday, PM Peak Hour
Project Description	Existing Conditions Mitigation
Intersection	Frontage Rd & Demer St
Jurisdiction	MDT / Missoula County
East/West Street	Frenchtown Frontage Road (S-574)
North/South Street	Demer Street
Peak Hour Factor	0.84

## Lanes



## Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)		38	91	63	37		218		99			
% Thrus in Shared Lane												

## Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	TR			LT			LR					
Flow Rate, v (veh/h)	154			119			377					
Percent Heavy Vehicles	0			3			2					
Initial Departure Headway, h <sub>d</sub> (s)	3.20			3.20			3.20					
Initial Degree of Utilization, x	0.137			0.106			0.335					
Final Departure Headway, h <sub>d</sub> (s)	4.58			5.21			4.56					
Final Degree of Utilization, x	0.195			0.172			0.478					
Move-Up Time, m (s)	2.0			2.0			2.0					
Service Time, t <sub>s</sub> (s)	2.58			3.21			2.56					

## Capacity, Delay and Level of Service

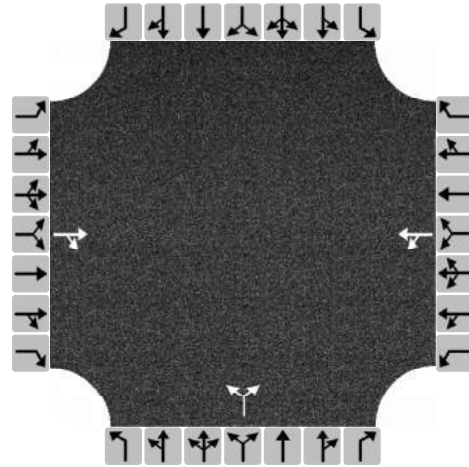
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	TR			LT			LR					
Flow Rate, v (veh/h)	154			119			377					
Capacity (veh/h)	786			691			789					
95% Queue Length, Q <sub>95</sub> (veh)	0.7			0.6			2.6					
95% Queue Length, Q <sub>95</sub> (ft)	17.5			15.4			66.0					
Control Delay (s/veh)	8.7			9.3			11.7					
Level of Service, LOS	A			A			B					
Approach Delay (s/veh)   LOS	8.7		A	9.3		A	11.7		B			
Intersection Delay (s/veh)   LOS	10.5						B					

# HCS All-Way Stop Control Report

## General and Site Information

Analyst	T. Eastwood
Agency/Co.	E5 Engineering, PLLC
Date Performed	2/11/2026
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	Weekday, AM Peak Hour
Project Description	Est. Background Traffic Mitigation
Intersection	Frontage Rd & Demer St
Jurisdiction	MDT / Missoula County
East/West Street	Frenchtown Frontage Road (S-574)
North/South Street	Demer Street
Peak Hour Factor	0.76

## Lanes



## Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)		52	279	133	121		215		73			
% Thrus in Shared Lane												

## Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	TR			LT			LR					
Flow Rate, v (veh/h)	436			334			379					
Percent Heavy Vehicles	3			3			3					
Initial Departure Headway, h <sub>d</sub> (s)	3.20			3.20			3.20					
Initial Degree of Utilization, x	0.387			0.297			0.337					
Final Departure Headway, h <sub>d</sub> (s)	5.27			5.98			6.00					
Final Degree of Utilization, x	0.638			0.555			0.631					
Move-Up Time, m (s)	2.0			2.0			2.0					
Service Time, t <sub>s</sub> (s)	3.27			3.98			4.00					

## Capacity, Delay and Level of Service

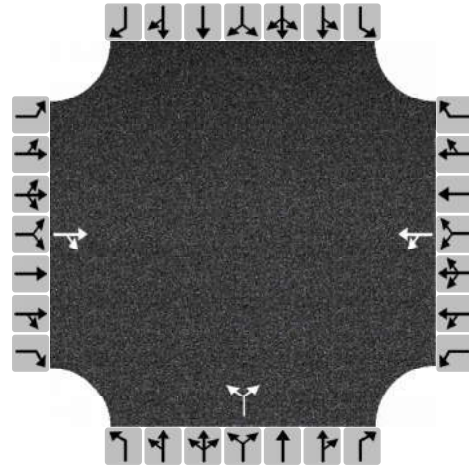
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	TR			LT			LR					
Flow Rate, v (veh/h)	436			334			379					
Capacity (veh/h)	683			602			600					
95% Queue Length, Q <sub>95</sub> (veh)	4.6			3.4			4.4					
95% Queue Length, Q <sub>95</sub> (ft)	117.8			87.0			112.6					
Control Delay (s/veh)	17.1			16.2			18.7					
Level of Service, LOS	C			C			C					
Approach Delay (s/veh)   LOS	17.1		C	16.2		C	18.7		C			
Intersection Delay (s/veh)   LOS	17.4						C					

# HCS All-Way Stop Control Report

## General and Site Information

Analyst	T. Eastwood
Agency/Co.	E5 Engineering, PLLC
Date Performed	2/11/2026
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	Weekday, School PM Peak
Project Description	Est. Background Traffic Mitigation
Intersection	Frontage Rd & Demer St
Jurisdiction	MDT / Missoula County
East/West Street	Frenchtown Frontage Road (S-574)
North/South Street	Demer Street
Peak Hour Factor	0.76

## Lanes



## Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)		80	182	57	38		199		107			
% Thrus in Shared Lane												

## Lane Flow Rate and Adjustments

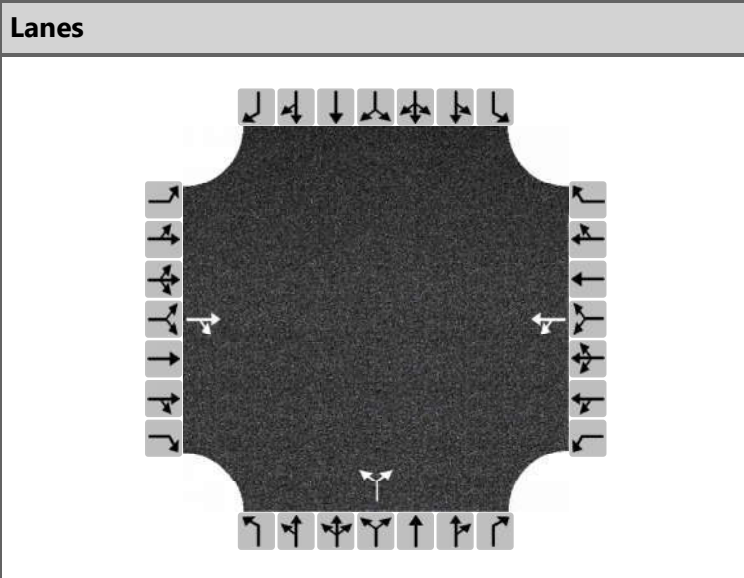
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	TR			LT			LR					
Flow Rate, v (veh/h)	345			125			403					
Percent Heavy Vehicles	4			6			4					
Initial Departure Headway, h <sub>d</sub> (s)	3.20			3.20			3.20					
Initial Degree of Utilization, x	0.306			0.111			0.358					
Final Departure Headway, h <sub>d</sub> (s)	4.86			5.71			5.09					
Final Degree of Utilization, x	0.465			0.198			0.569					
Move-Up Time, m (s)	2.0			2.0			2.0					
Service Time, t <sub>s</sub> (s)	2.86			3.71			3.09					

## Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	TR			LT			LR					
Flow Rate, v (veh/h)	345			125			403					
Capacity (veh/h)	741			630			707					
95% Queue Length, Q <sub>95</sub> (veh)	2.5			0.7			3.6					
95% Queue Length, Q <sub>95</sub> (ft)	64.5			18.3			92.9					
Control Delay (s/veh)	12.0			10.1			14.6					
Level of Service, LOS	B			B			B					
Approach Delay (s/veh)   LOS	12.0		B	10.1		B	14.6		B			
Intersection Delay (s/veh)   LOS	12.9						B					

# HCS All-Way Stop Control Report

General and Site Information	
Analyst	T. Eastwood
Agency/Co.	E5 Engineering, PLLC
Date Performed	2/11/2026
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	Weekday, PM Peak Hour
Project Description	Est. Background Traffic Mitigation
Intersection	Frontage Rd & Demer St
Jurisdiction	MDT / Missoula County
East/West Street	Frenchtown Frontage Road (S-574)
North/South Street	Demer Street
Peak Hour Factor	0.84



## Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)		41	98	70	40		235		110			
% Thrus in Shared Lane												

## Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	TR			LT			LR					
Flow Rate, v (veh/h)	165			131			411					
Percent Heavy Vehicles	0			3			2					
Initial Departure Headway, $h_d$ (s)	3.20			3.20			3.20					
Initial Degree of Utilization, x	0.147			0.116			0.365					
Final Departure Headway, $h_d$ (s)	4.70			5.33			4.63					
Final Degree of Utilization, x	0.216			0.194			0.528					
Move-Up Time, m (s)	2.0			2.0			2.0					
Service Time, $t_s$ (s)	2.70			3.33			2.63					

## Capacity, Delay and Level of Service

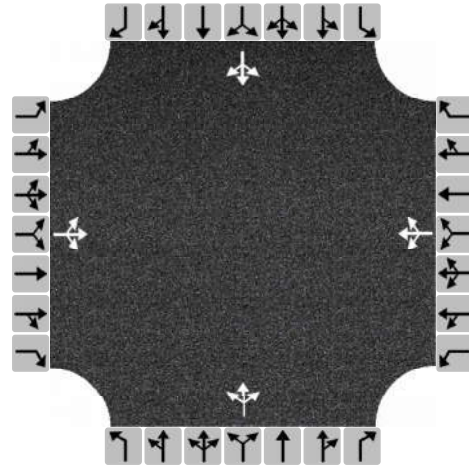
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	TR			LT			LR					
Flow Rate, v (veh/h)	165			131			411					
Capacity (veh/h)	766			675			777					
95% Queue Length, $Q_{95}$ (veh)	0.8			0.7			3.1					
95% Queue Length, $Q_{95}$ (ft)	20.0			17.9			78.7					
Control Delay (s/veh)	9.0			9.6			12.7					
Level of Service, LOS	A			A			B					
Approach Delay (s/veh)   LOS	9.0		A	9.6		A	12.7		B			
Intersection Delay (s/veh)   LOS	11.3						B					

# HCS All-Way Stop Control Report

## General and Site Information

Analyst	T. Eastwood
Agency/Co.	E5 Engineering, PLLC
Date Performed	2/11/2026
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	Weekday, AM Peak Hour
Project Description	Est. Total Traffic Mitigation
Intersection	Frontage Rd & Demer St
Jurisdiction	MDT / Missoula County
East/West Street	Frenchtown Frontage Road (S-574)
North/South Street	Demer Street
Peak Hour Factor	0.76

## Lanes



## Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	4	51	277	130	120	7	216	92	72	5	93	0
% Thrus in Shared Lane												

## Lane Flow Rate and Adjustments

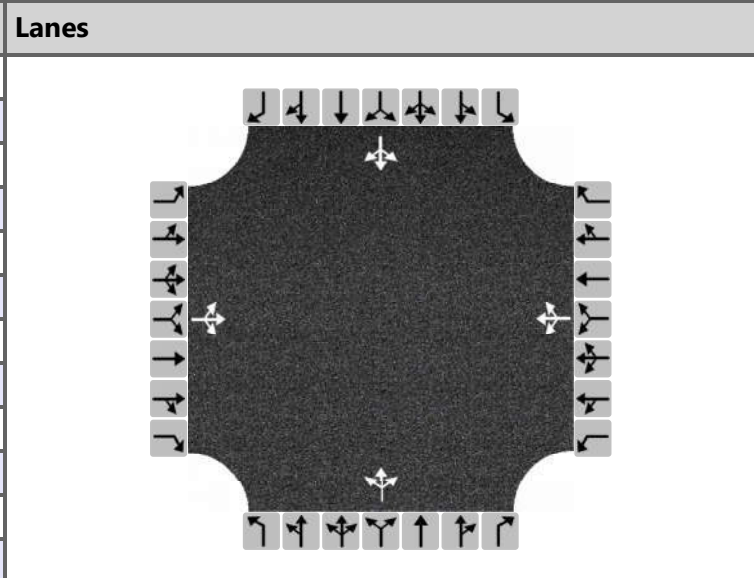
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	437			338			500			129		
Percent Heavy Vehicles	3			3			3			1		
Initial Departure Headway, h <sub>d</sub> (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.388			0.301			0.444			0.115		
Final Departure Headway, h <sub>d</sub> (s)	6.87			7.64			7.22			8.50		
Final Degree of Utilization, x	0.834			0.718			1.002			0.304		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, t <sub>s</sub> (s)	4.87			5.64			5.22			6.50		

## Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	437			338			500			129		
Capacity (veh/h)	524			471			499			424		
95% Queue Length, Q <sub>95</sub> (veh)	8.5			5.7			13.8			1.3		
95% Queue Length, Q <sub>95</sub> (ft)	217.6			145.9			353.3			32.8		
Control Delay (s/veh)	35.5			27.7			67.8			15.2		
Level of Service, LOS	E			D			F			C		
Approach Delay (s/veh)   LOS	35.5		E	27.7		D	67.8		F	15.2		C
Intersection Delay (s/veh)   LOS	43.3						E					

# HCS All-Way Stop Control Report

General and Site Information	
Analyst	T. Eastwood
Agency/Co.	E5 Engineering, PLLC
Date Performed	2/11/2026
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	Weekday, School PM Peak
Project Description	Est. Total Traffic Mitigation
Intersection	Frontage Rd & Demer St
Jurisdiction	MDT / Missoula County
East/West Street	Frenchtown Frontage Road (S-574)
North/South Street	Demer Street
Peak Hour Factor	0.76



Turning Movement Demand Volumes												
Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	3	78	180	54	37	7	199	75	105	7	78	1
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments												
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	343			129			499			113		
Percent Heavy Vehicles	4			6			3			1		
Initial Departure Headway, h <sub>d</sub> (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.305			0.115			0.443			0.101		
Final Departure Headway, h <sub>d</sub> (s)	5.62			6.56			5.53			6.30		
Final Degree of Utilization, x	0.536			0.235			0.766			0.198		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, t <sub>s</sub> (s)	3.62			4.56			3.53			4.30		

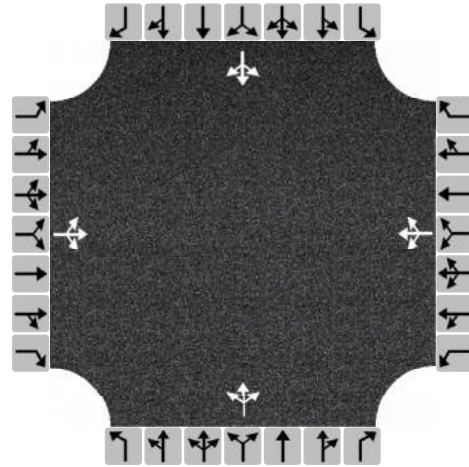
Capacity, Delay and Level of Service												
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	343			129			499			113		
Capacity (veh/h)	640			549			651			572		
95% Queue Length, Q <sub>95</sub> (veh)	3.2			0.9			7.1			0.7		
95% Queue Length, Q <sub>95</sub> (ft)	82.6			23.6			181.8			17.6		
Control Delay (s/veh)	14.9			11.6			24.3			10.8		
Level of Service, LOS	B			B			C			B		
Approach Delay (s/veh)   LOS	14.9		B	11.6		B	24.3		C	10.8		B
Intersection Delay (s/veh)   LOS	18.4						C					

# HCS All-Way Stop Control Report

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Analyst	T. Eastwood
Agency/Co.	E5 Engineering, PLLC
Date Performed	2/11/2026
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	Weekday, PM Peak Hour
Project Description	Est. Total Traffic Mitigation
Intersection	Frontage Rd & Demer St
Jurisdiction	MDT / Missoula County
East/West Street	Frenchtown Frontage Road (S-574)
North/South Street	Demer Street
Peak Hour Factor	0.84

## Lanes



## Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	5	39	97	66	39	9	234	98	107	9	99	2
% Thrus in Shared Lane												

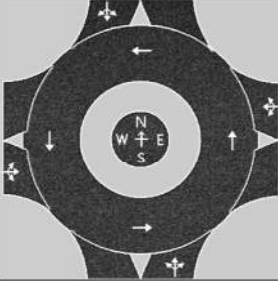
## Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	168			136			523			131		
Percent Heavy Vehicles	1			3			1			1		
Initial Departure Headway, h <sub>d</sub> (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.149			0.121			0.465			0.116		
Final Departure Headway, h <sub>d</sub> (s)	5.51			6.07			4.99			5.61		
Final Degree of Utilization, x	0.257			0.229			0.725			0.204		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, t <sub>s</sub> (s)	3.51			4.07			2.99			3.61		

## Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	168			136			523			131		
Capacity (veh/h)	653			594			721			642		
95% Queue Length, Q <sub>95</sub> (veh)	1.0			0.9			6.3			0.8		
95% Queue Length, Q <sub>95</sub> (ft)	25.2			23.0			158.8			20.2		
Control Delay (s/veh)	10.4			10.9			20.0			10.0		
Level of Service, LOS	B			B			C			B		
Approach Delay (s/veh)   LOS	10.4		B	10.9		B	20.0		C	10.0		B
Intersection Delay (s/veh)   LOS	15.7						C					

# HCS Roundabouts Report

General Information				Site Information				
Analyst	T. Eastwood				Intersection	Frontage Rd & Demer st		
Agency or Co.	E5 Engineering, PLLC				E/W Street Name	Frenchtown Frontage Road (...)		
Date Performed	2/11/2026				N/S Street Name	Demer Street		
Analysis Year	2028				Analysis Time Period, hrs	0.25		
Time Analyzed	Weekday, AM Peak Hour				Peak Hour Factor	0.76		
Project Description	Est. Total Traffic Mitigation				Jurisdiction	MDT / Missoula County		

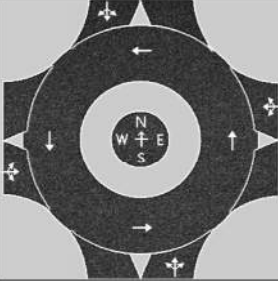
Volume Adjustments and Site Characteristics																
Approach	EB				WB				NB				SB			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment	LTR				LTR				LTR				LTR			
Volume (V), veh/h	0	4	51	277	0	130	120	7	0	216	92	72	0	5	93	0
Percent Heavy Vehicles, %	0	0	2	4	0	3	3	2	0	3	1	3	0	3	1	0
Flow Rate (v <sub>PCE</sub> ), pc/h	0	5	68	379	0	176	163	9	0	293	122	98	0	7	124	0
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				1			
Proportion of CAVs, %	0															

Critical and Follow-Up Headway Adjustment												
Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway, s		4.9763			4.9763			4.9763			4.9763	
Follow-Up Headway, s		2.6087			2.6087			2.6087			2.6087	

Flow Computations, Capacity and v/c Ratios												
Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v <sub>e</sub> ), pc/h		452			348			513			131	
Entry Volume, veh/h		436			338			500			130	
Circulating Flow (v <sub>c</sub> ), pc/h	307			420			80			632		
Exiting Flow (v <sub>ex</sub> ), pc/h	173			456			136			679		
Capacity (C <sub>PCE</sub> ), pc/h		1009			899			1272			724	
Capacity (c), veh/h		973			873			1241			716	
v/c Ratio (x)		0.45			0.39			0.40			0.18	

Delay and Level of Service												
Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		8.9			8.6			6.9			7.0	
Lane LOS		A			A			A			A	
95% Queue Length, Q <sub>95</sub> (veh)		2.4			1.8			2.0			0.7	
95% Queue Length, Q <sub>95</sub> (ft)		61.7			46.1			51.0			17.7	
Approach Delay, s/veh   LOS	8.9	A		8.6	A		6.9	A		7.0	A	
Intersection Delay, s/veh   LOS	7.9						A					

# HCS Roundabouts Report

General Information				Site Information				
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Agency or Co.	E5 Engineering, PLLC				E/W Street Name	Frenchtown Frontage Road (...)		
Date Performed	2/11/2026				N/S Street Name	Demer Street		
Analysis Year	2028				Analysis Time Period, hrs	0.25		
Time Analyzed	Weekday, School PM Peak				Peak Hour Factor	0.76		
Project Description	Est. Total Traffic Mitigation				Jurisdiction	MDT / Missoula County		

## Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment	LTR				LTR				LTR				LTR			
Volume (V), veh/h	0	3	78	180	0	54	37	7	0	199	75	105	0	7	78	1
Percent Heavy Vehicles, %	0	0	3	5	0	6	6	2	0	3	1	4	0	2	1	0
Flow Rate (v <sub>PCE</sub> ), pc/h	0	4	106	249	0	75	52	9	0	270	100	144	0	9	104	1
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				3			
Proportion of CAVs, %	0															

## Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway, s		4.9763			4.9763			4.9763			4.9763	
Follow-Up Headway, s		2.6087			2.6087			2.6087			2.6087	

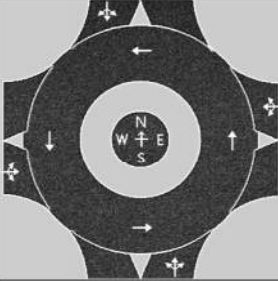
## Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v <sub>e</sub> ), pc/h		359			136			514			114	
Entry Volume, veh/h		344			129			500			113	
Circulating Flow (v <sub>c</sub> ), pc/h	188			374			119			397		
Exiting Flow (v <sub>ex</sub> ), pc/h	259			323			113			428		
Capacity (c <sub>PCE</sub> ), pc/h		1139			942			1222			920	
Capacity (c), veh/h		1092			891			1188			910	
v/c Ratio (x)		0.32			0.14			0.42			0.12	

## Delay and Level of Service

Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		6.4			5.4			7.3			5.1	
Lane LOS		A			A			A			A	
95% Queue Length, Q <sub>95</sub> (veh)		1.4			0.5			2.1			0.4	
95% Queue Length, Q <sub>95</sub> (ft)		36.2			13.1			53.7			10.1	
Approach Delay, s/veh   LOS	6.4		A	5.4		A	7.3		A	5.1		A
Intersection Delay, s/veh   LOS	6.6						A					

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General Information				Site Information				
Analyst	T. Eastwood				Intersection	Frontage Rd & Demer st		
Agency or Co.	E5 Engineering, PLLC				E/W Street Name	Frenchtown Frontage Road (...)		
Date Performed	2/11/2026				N/S Street Name	Demer Street		
Analysis Year	2028				Analysis Time Period, hrs	0.25		
Time Analyzed	Weekday, PM Peak Hour				Peak Hour Factor	0.84		
Project Description	Est. Total Traffic Mitigation				Jurisdiction	MDT / Missoula County		

Volume Adjustments and Site Characteristics																
Approach	EB				WB				NB				SB			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment	LTR				LTR				LTR				LTR			
Volume (V), veh/h	0	5	39	97	0	66	39	9	0	234	98	107	0	9	99	2
Percent Heavy Vehicles, %	0	1	0	1	0	2	5	2	0	1	1	3	0	2	1	3
Flow Rate (v <sub>PCE</sub> ), pc/h	0	6	46	117	0	80	49	11	0	281	118	131	0	11	119	2
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				2			
Proportion of CAVs, %	0															

Critical and Follow-Up Headway Adjustment												
Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway, s		4.9763			4.9763			4.9763			4.9763	
Follow-Up Headway, s		2.6087			2.6087			2.6087			2.6087	

Flow Computations, Capacity and v/c Ratios												
Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v <sub>e</sub> ), pc/h		169			140			530			132	
Entry Volume, veh/h		168			136			522			131	
Circulating Flow (v <sub>c</sub> ), pc/h	210			405			63			410		
Exiting Flow (v <sub>ex</sub> ), pc/h	188			332			135			316		
Capacity (C <sub>PCE</sub> ), pc/h		1114			913			1294			908	
Capacity (c), veh/h		1106			886			1275			898	
v/c Ratio (x)		0.15			0.15			0.41			0.15	

Delay and Level of Service												
Approach	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		4.6			5.6			6.8			5.4	
Lane LOS		A			A			A			A	
95% Queue Length, Q <sub>95</sub> (veh)		0.5			0.5			2.0			0.5	
95% Queue Length, Q <sub>95</sub> (ft)		12.6			12.8			50.6			12.6	
Approach Delay, s/veh   LOS	4.6	A		5.6	A		6.8	A		5.4	A	
Intersection Delay, s/veh   LOS	6.1						A					



