Access Control US 93 N&S
Lolo to Missoula

NH 0002(606), CN 4776

Final Access Control Report

Prepared for:

Montana Department of Transportation

serving you with pride

Prepared by:

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1.0 Introduction and Purpose

Historically, the Montana Department of Transportation (MDT) has adopted access control plans in conjunction with major highway improvement projects. However, this project is a stand-alone access control project along US Highway 93 (US 93) between Lolo and Missoula [National Highway (N) 7] not associated with a design or construction project along the study corridor. The physical modifications recommended by the Access Control Plan may not be implemented until the construction of future highway design projects or as redevelopment occurs, although the techniques recommended in the plan may be implemented at any time.

MDT currently operates this corridor under Limited Access Control. This means that any new access or change in access use may or may not be granted and will be subject to MDT's System Impact Action Process.

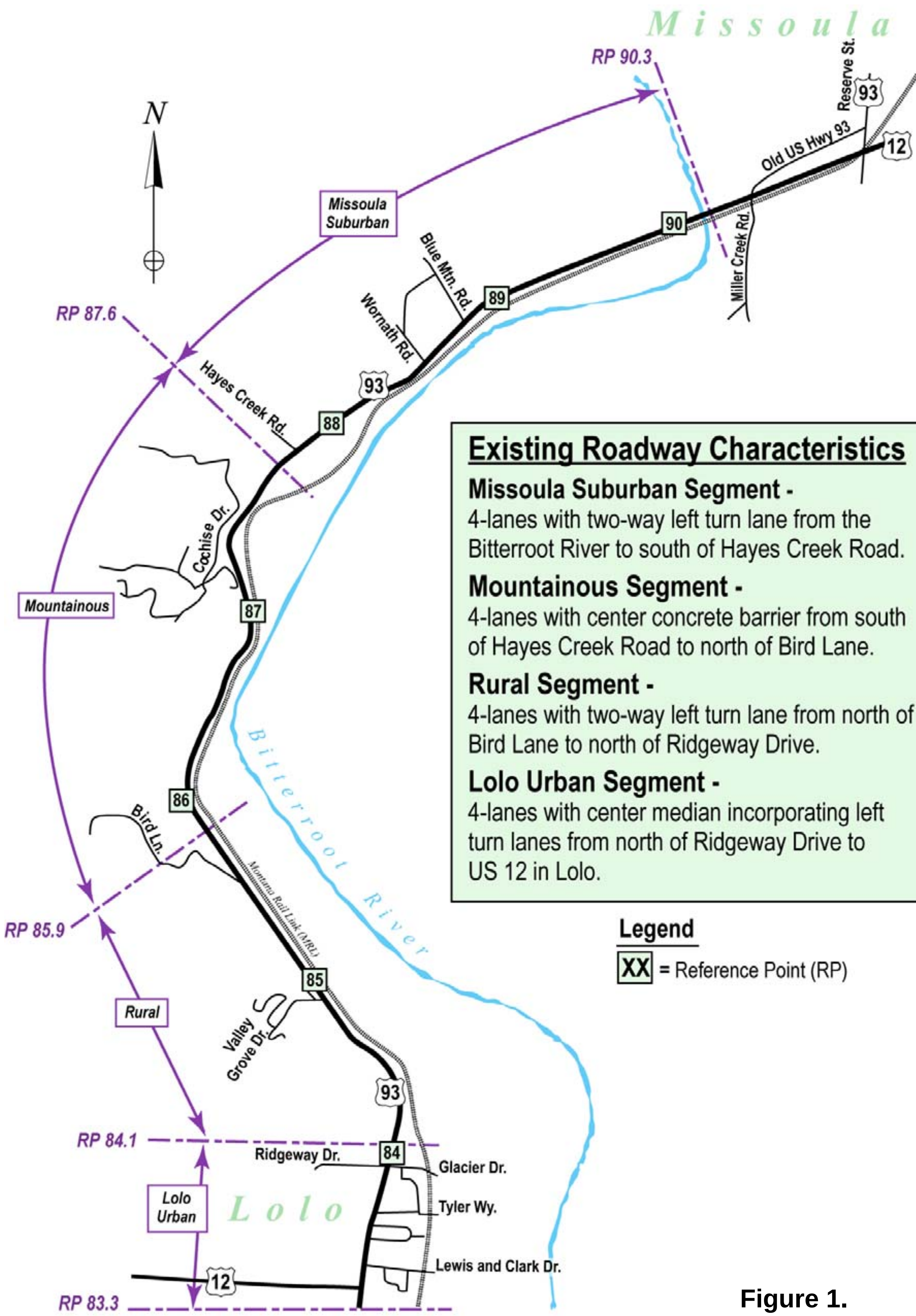
The *Access Classification Memo* (August 2, 2005) documents the existing accesses along the corridor and identifies the access management guidelines and concepts that are used in this report. This document comprises the Draft Access Control Report, which describes the access management techniques within the Access Control Plan. The purpose of this report is to document the guidelines and traffic analysis utilized for the recommendations shown in the Access Control Plan.

The Access Control Plan defines specific access locations consistent with the guidelines and techniques presented in this report. Access control options were analyzed for existing accesses with opportunities for modification and/or consolidation. Future access locations, configurations, and operational characteristics are identified for undeveloped properties and properties with redevelopment potential, and recommendations are documented in this final Access Control Plan for the US 93 highway segment from US 12 in Lolo to the Bitterroot River Bridge south of Missoula.

1.1 PROJECT LOCATION AND STUDY LIMITS

The project is located on US 93 in Missoula County. The study segment, from RP (MP) 83.26 to RP (MP) 90.33, initiates within the town of Lolo and terminates on the southern edge of Missoula. The limits of the study area extend from just south of the intersection of US 93 and US 12 in Lolo to south of the US 93 and Miller Creek Road intersection, on the northern edge of the bridge over the Bitterroot River.

The study corridor was broken into segments based on changes in the character of the roadway, existing adjacent land uses and existing access density. The southern section of the project is urban in nature. The northern section of the highway has a suburban character as the highway approaches Missoula. The middle sections of the corridor currently have a rural character, although that may change in the future with proposed development. **Figure 1** illustrates the limits of the project and the study segments of the corridor.



Existing Roadway Characteristics

Missoula Suburban Segment -
4-lanes with two-way left turn lane from the Bitterroot River to south of Hayes Creek Road.

Mountainous Segment -
4-lanes with center concrete barrier from south of Hayes Creek Road to north of Bird Lane.

Rural Segment -
4-lanes with two-way left turn lane from north of Bird Lane to north of Ridgeway Drive.

Lolo Urban Segment -
4-lanes with center median incorporating left turn lanes from north of Ridgeway Drive to US 12 in Lolo.

Legend

XX = Reference Point (RP)

Figure 1. Project Area and Study Segments

2.0 Traffic Volumes

The existing and future traffic volumes for the project were presented in the *Preliminary Traffic Engineering and Geometrics Report*, which was submitted to MDT in July, 2005. To maintain consistency with the major planning efforts within the study area, the future traffic volume projections for the US 93 corridor developed for the *Miller Creek Road Environmental Impact Statement* (EIS) were utilized for this project. Since the submittal of the traffic report, the traffic projections for the Miller Creek Road EIS have been modified to reflect expected growth south of the project in Ravalli County and consider the traffic forecasts presented in the *Missoula Long Range Transportation Plan - 2025*.

The 2025 traffic volume projections presented in this report supersede the traffic projections shown in the July 2005 *Preliminary Traffic Engineering and Geometrics Report*. The existing traffic volumes utilized in the traffic analysis, which have not been modified from the traffic engineering report, are also presented for reference.

2.1 EXISTING (2004) TRAFFIC VOLUMES

Traffic volumes along the US 93 corridor were collected for this project over several weekdays in October 2004. These volumes were multiplied by a seasonal factor to calculate the 2004 Average Annual Daily Traffic (AADT) volume at the various locations shown in **Figure 2**. The highest traffic volumes along US 93 were near the Bitterroot River Bridge with almost 26,000 vehicles per day (vpd). Large commercial vehicles (trucks) comprise approximately 6 percent of the daily traffic volume on US 93. The counts collected for this study are consistent with 2004 ADT volumes along the corridor provided by MDT.

The major roads accessing US 93 within the study area were also counted. These AADT volumes are also shown in Figure 2. AADT volumes on the intersecting roads range from approximately 3,500 vpd along US 12 to less than 100 vpd along Wornath Road west of US 93.

Intersection turning movement counts were collected at the ten major intersections within the study corridor and the Miller Creek Road intersection in October 2004 during the AM and PM peak weekday traffic periods. Morning counts were conducted from 7:00 to 9:00 AM and evening counts were conducted from 4:00 to 6:00 PM. Typically, these are the commuter travel time periods when daily traffic volumes on study area roads reach their highest levels. These intersection turning movement volumes are shown in **Figure 3**.

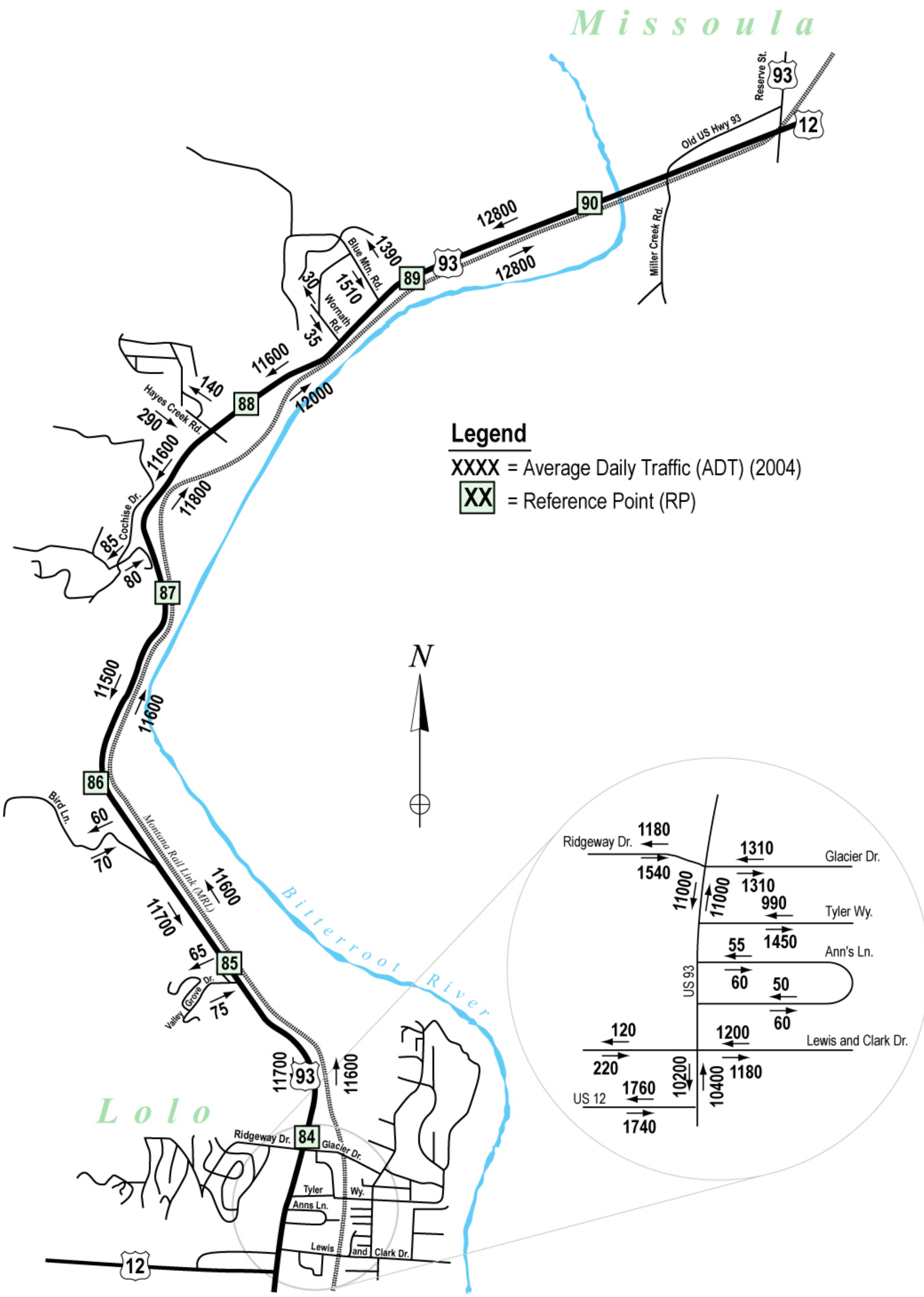


Figure 2.
Existing Average Daily Traffic

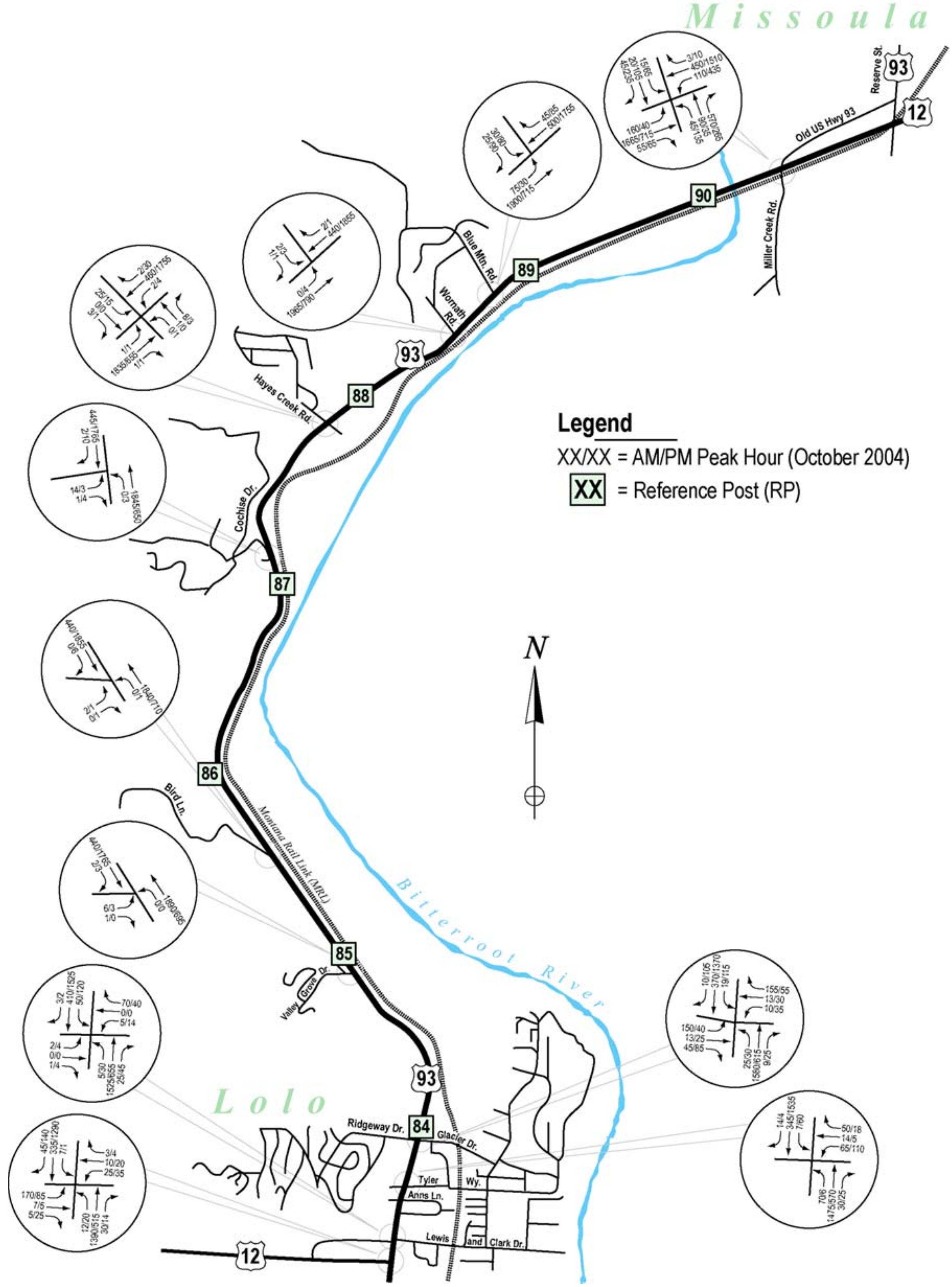


Figure 3.
Existing Peak Hour Traffic

2.2 2025 DAILY VOLUME PROJECTIONS

The future traffic volume projections for the US 93 corridor developed for the *Miller Creek Road Environmental Impact Statement* (EIS) were reviewed for this project. The traffic volumes reviewed for this project were for the No-Action Alternative of the Miller Creek Road EIS, meaning there are no dramatic changes to the existing roadway network. Traffic forecasts initially developed for the Miller Creek Road EIS were based on the Missoula urban area travel demand model utilized by MDT Urban Transportation Planning staff. The travel model was used to conduct the *Missoula Long Range Transportation Plan - 2025* and adjustments to the model for the Miller Creek Road project were coordinated with the Missoula Office of Planning and Grants (OPG) and consultant staff working on the Transportation Plan update. The initial traffic forecasts identified a traffic forecast on US 93 south of Miller Creek Road of 29,300 for the year 2025, which is an increase of approximately 20 percent over existing ADT volumes and would equal an average growth rate of approximately one (1) percent per year.

During the review of future traffic volumes for this Access Control Study, MDT expressed concern over the relatively low growth rate associated with the travel demand model. This concern resulted from the substantially higher growth rates that have been experienced along the corridor in recent years, including 2.9 percent in the last 15 years and 2.2 percent in the last 10 years. **Table 1** shows a comparative summary of existing and forecast AADT volumes on major study area roadway segments using the updated traffic forecasts for the US 93 corridor developed for the Miller Creek Road EIS.

Future traffic volumes on the public roads accessing US 93 in the study area were calculated based on historic traffic volumes and potential development trends. Traffic volumes on the roadways that basically serve residential areas, such as Cochise Drive, are expected to experience limited traffic growth. The traffic volumes developed for Bird Lane and Valley Grove Drive considered the daily traffic forecasted from the proposed Liberty Cove Subdivision. Traffic on US 12 west of US 93 is expected to increase by about 2,300 vpd, which equals an average growth rate of approximately 2.4 percent per year.

A substantial increase in traffic is anticipated along the US 93 study corridor as a result of multiple factors, including:

- Increasing travel demand generated by planned growth in Missoula and Ravalli County southwest of Missoula;
- Current and planned development along US 93 within the study corridor, specifically within the Rural and Missoula Suburban study segments;
- Increasing use of recreational areas served by intersecting roadways within the study corridor.

Table 1. Future (2025) Annual Average Daily Traffic (AADT) Volumes

Roadway	Location	Existing ADT Volume (veh/day) (2)	Future AADT Volume (veh/day)
US 93	Lolo to Hayes Creek Rd	23,400	38,510
US 93	Hayes Creek Rd to Blue Mountain Rd	23,600	39,050
US 93	North of Blue Mountain Rd	25,600	39,870
Blue Mountain Rd	West of US 93	2,900	4,350
Hayes Creek Rd	West of US 93	430	680
Cochise Dr	West of US 93	165	185
Bird Lane	West of US 93	130	480(1)
Valley Grove Dr	West of US 93	140	495(1)
Ridgeway Dr	West of US 93	2,700	3,700
Glacier Dr	East of US 93	2,600	3,200
Tyler Way	East of US 93	2,400	3,000
US 12	West of US 93	3,500	5,800

Sources: *Miller Creek Road EIS Revised Alternatives Traffic Analysis Findings Memorandum* (March 16, 2006), DEA, Proposed Development Traffic Study and MDT

(1) Future AADT includes daily traffic expected from proposed Liberty Cove Subdivision as shown in the traffic impact study (August 2001)

(2) Existing ADT Volume calculated from traffic counts collected for this study in October 2004

The 2025 horizon year is consistent with the future transportation system planning year for the Missoula Transportation Plan update and represents the future design year for the Miller Creek Road EIS as well as this Access Control Study. Comparing existing ADT volumes with forecast 2025 AADT volumes reveals that traffic volumes are expected to increase on all major roadway segments within the study area.

The updated traffic forecasts developed for the Miller Creek Road EIS indicate that traffic volumes on the US 93 corridor will increase substantially south of Blue Mountain Road to approximately 39,050 vehicles per day (vpd). This represents an increase of about 65 percent over existing ADT volumes. This increase in traffic volume is based on the large increase in population and housing development expected in Ravalli County south of Lolo. It is anticipated that this development will result in a large increase in trips to Missoula along the study corridor for employment and services. Planning for this expected population growth is important to provide adequate capacity for the traveling public into the future. If the expected development south of Missoula County does not occur or, for some reason, future traffic volumes do not increase as anticipated, the highway corridor will simply operate at even better levels of service than planned.

3.0 Access Management Concepts

3.1 ACCESS MANAGEMENT GUIDELINES

Access management guidelines were developed for the roadway categories of the corridor and presented in the *Access Classification Memo*. These guidelines, shown in **Table 2**, are specific to this study corridor and are consistent with the recommended Montana access guidelines shown in the *MDT Access Management Project* report (April 1999) and the guidelines used in the US 93 Access Control and Corridor Preservation Project (Evaro to Polson).

The application of the access management guidelines for the US 93 study corridor should be flexible in order to achieve the safety and operational goals of the Access Control Plan. The spacing and design of accesses may differ slightly from the corridor guidelines due to topographic, property ownership and sight distance constraints and other issues. Sight distance is an issue at many locations along the corridor and should be checked at all proposed access locations. If the corridor guidelines are not met, a traffic study should be required to show negligible impacts of a proposed access on corridor and adjacent access operations. The use of existing accesses by a new development should also be examined.

These guidelines were used in the development of the Access Control Plan.

Table 2. US 93 Lolo to Missoula Access Management Guidelines

Access Category[4]	Minimum Signal Spacing	Minimum Median Opening Spacing	Unsignalized Access Spacing	Auxiliary Lane Volume Warrants		Denial of Direct Access if Other Access Available?
				Left Turn Decel	Right Turn Decel	
Rural	1.6 km (1 mile)	0.8 km (1/2 mile) – Full [1] 0.4 km (1/4 mile) – Directional [2]	400 m (1320 ft)	Required	See *Montana Traffic Engineering Manual* [3]	Yes
Intermediate	0.8 km (1/2 mile)	0.8 km (1/2 mile) – Full [1] 0.4 km (1/4 mile) – Directional [2]	400 m (1320 ft)	Required	See *Montana Traffic Engineering Manual* [3]	Yes
Developed	0.4 km (1/4 mile)	0.4 km (1/4 mile) – Full [1] 0.2 km (1/8 mile) – Directional [2]	200 m (660 ft)	Required	See *Montana Traffic Engineering Manual* [3]	Yes

Source: David Evans and Associates, Inc.
(1) F = Full Movement
(2) D = Directional Only
(3) See criteria in *Montana Traffic Engineering Manual*, Figure 28.4B
(4) Rural - Areas which are and will continue to be primarily undeveloped and which exhibit principally an agricultural or natural character
Intermediate - Areas that typically are located on the fringe of a community which represent large parcels and local street systems at less frequent spacing.
Developed - Highly developed areas through communities which have traditionally relied on highway access with small lots and streets at city block spacing.

3.2 ACCESS MANAGEMENT PRINCIPLES

MDT has a specific policy statement regarding access management. As stated in the MDT 1992 Access Management Plan:

> *"It is the policy of the Montana Department of Transportation to manage access to highway facilities on the state highway system. The purpose of access management is to maintain the flow of traffic and the functional integrity of the highway, enhance public safety, preserve the public's investment in the highway, reduce future maintenance costs, and permit highway expansion on existing locations."*

Each access along the US 93 study corridor was classified into one of four basic access types, as described below.

- Field - Access for field or property maintenance or low-volume recreational activities, such as fishing or hunting.
- Residential - Access serving residential property.
- Commercial - Relatively high-volume access with the potential for frequent use by unfamiliar drivers.
- Public - Intersection of a public roadway.

The accesses to the Lolo School were classified as Commercial accesses because, although it is a public school facility, the traffic conditions at the driveways are more similar to a commercial site than a public road intersection.

There are general principles of access management that will be employed during the development of the US 93 Lolo to Missoula Access Control Plan. These guiding principles are summarized below.

<u>New Accesses</u>

- To the extent possible, all new direct access to US 93 should be limited to public roads.
- New direct private access to US 93 generally would not be granted unless no other reasonable alternative access (e.g. rerouting, consolidation with another access, etc.) to the public road system is available.
- If reasonable alternative access is unavailable or if it can be shown to be beneficial to the safe operation of US 93, one direct access per parcel may be allowed. Additional access may be allowed if a traffic engineering study documents significant benefits to the safe operation of US 93.
- Whenever possible, new access should be shared with an adjacent property.
- New accesses may be limited to right-in/right-out movements unless the location meets spacing requirements and magnitude of use warrants a full-movement access.

- New accesses shall be subject to MDT's System Impact Action Process.

Existing Accesses

- Existing access should be eliminated if reasonable alternative access to the public road system can be provided.
- Whenever reasonable, existing multiple accesses to a single parcel should be combined.
- Adjacent property owners should be encouraged to share accesses.
- Existing non-standard accesses should be brought into compliance with current MDT access approach design standards.
- Existing accesses may be limited to right-in/right-out movements unless the location meets spacing requirements and magnitude of use warrants a full-movement access.

Land Use Changes

- A change in approach volumes of 20 percent or greater from the original access permit's stated volume or a new generator which produces 150 or more vehicle trips per day would be considered a land use change and will require a new approach permit. The determination of the new approach volume shall be based on the criteria and methodology contained in the current edition of the *ITE Trip Generation Manual*, or shall be taken from an approved traffic study.
- Any land use changes (i.e., from Residential to Commercial) would require that a new approach permit application be submitted to MDT and that the access be re-evaluated for safety, location and size. Based on this evaluation, mitigation measures may be required by MDT to maintain a safe and efficient highway.
- Re-evaluation may result in relocation or elimination of the approach, if alternate reasonable access is appropriate and available at the time of application.
- Parcels subdivided after the Access Control Plan is completed should not receive any additional direct access to US 93 and such action should require re-evaluation of the access permit.
- Agricultural changes in land use would not qualify as a land use change for the purpose of this discussion.
- Land use changes shall be subject to MDT's System Impact Action Process.

Field Accesses

- New field accesses should be discouraged.

- Every reasonable attempt should be made to eliminate existing field accesses by providing alternative access to the local public road system.
- Only one access should be recommended for each individual parcel/property that has no other access available.
- Consolidation of field accesses should be encouraged among adjoining property owners.
- Field access may be limited to right-in/right-out movements. Special consideration may be given to those farmers or ranchers having access to land on both sides of the highway.

4.0 Corridor Access Management

The following sections describe the access management techniques utilized within each segment. The Access Control Plan recommends the elimination of existing and future direct access to US 93 for many properties with access to other intersecting public roads. At these locations, the traffic accessing the properties will be directed through existing public road intersections.

Operational analyses of the public road intersections were performed to assess the impacts of the additional parcel traffic on intersection performance under existing and forecasted (2025) traffic conditions. The existing and future analyses used the traffic volumes collected and developed for the project as shown in the Traffic Volumes section of this report. Traffic signal timing was optimized in the operational analysis to maximize traffic operations along US 93 without adversely impacting the side roads.

This Access Control Plan documents the access control guidelines for the US 93 study corridor and identifies the major points of access along the highway. However, the traffic control infrastructure required for highway or intersection capacity improvements (i.e., traffic signal, junior interchange, additional through highway lanes) will be determined by a separate corridor study that is currently in the scoping process. Access recommendations are also subject to change depending on the final decision from the Miller Creek Road EIS.

Accesses serving properties across the railroad tracks east of the highway are permitted by the Montana Rail Link (MRL) railroad. MDT may grant access from the highway to the adjacent railroad property, but does not have the authority to grant access across the tracks. Therefore, any access changes across the railroad will need to be coordinated with MRL prior to implementation.

4.1 LOLO URBAN SEGMENT

This highway segment starts at the beginning of the project just south of the US 93 and US 12 intersection in Lolo and continues to north of the Ridgeway Drive/Glacier Drive intersection. The segment has a distinctly urban character with commercial development adjacent to the highway and many direct highway accesses. A curbed median divides the highway between the US 12 and Tyler Way intersections, which restricts many existing accesses to right-in, right-out movements. Median openings are provided for left turn lanes at public road intersections.

This segment is categorized as Developed. Access management guidelines would require a minimum 200-meter (660-foot) unsignalized access spacing. Although this spacing seems unattainable given the existing property configurations and number of accesses in the area, access closure and consolidation will remove conflict points along the highway and create a less-complex driving environment within Lolo. Access management techniques that are recommended within this study segment include access closure and consolidation and turn restrictions with median modifications.

Several parcels along the east side of the corridor between Lewis and Clark Drive and Tyler Way are currently undeveloped. The existing accesses to most of these properties are recommended for closure with access provided via the intersecting roads. When developed, no direct access to US 93 is recommended for most of these properties. In addition, several closely spaced accesses are recommended for consolidation between adjacent parcels.

Several parcels within the Lolo Urban area have multiple accesses and a few parcels have accesses that are currently unused. These unused and some multiple accesses are recommended for closure. Many of these properties have access to the intersecting public roads. Therefore, closing the direct accesses would add traffic volumes to the intersections of the public roads. The results of the Level of Service (LOS) analysis for the public road intersections with and without the Access Control Plan recommendations are shown in **Table 3**.

Table 3. Intersection PM Peak Hour Level of Service - Lolo Urban Segment

US 93 Intersection	Control	Without Access Control Plan				With Access Control Plan			
		Existing		Future (2025)		Existing		Future (2025)	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
US 12 [2]	Signal	B	10.8	B	13.3	B	10.8	B	13.3
Lewis and Clark Dr	Stop	F	160.3	F	370.2	F	214.0	F	814.6
Tyler Way	Signal	B	11.0	B	12.3	B	11.2	B	12.4
Ridgeway Dr/Glacier Dr	Signal	B	12.0	B	14.3	B	12.2	B	14.7

Source: Analysis by David Evans and Associates
[1] LOS for stop-controlled intersections reported as LOS of the critical movement
[2] No additional traffic volume on side road with access control recommendations

As shown, the recommended closures of direct access to US 93 and subsequent volume increases on the public roads will not have a notable detrimental effect on the signalized intersection Levels of Service within Lolo during the afternoon peak hours under existing or future traffic conditions. Increases in the delay experienced at the Lewis and Clark Drive unsignalized intersection may result from access volume being consolidated to the public road intersection.

4.2 RURAL SEGMENT

This segment of US 93 traverses through open farmland with only two public road accesses to residential developments at Valley Grove Drive and Bird Lane. Both intersections are unsignalized. A two-way left turn (TWLT) lane divides the highway for the entire distance of the segment. The Montana Rail Link and Bitterroot River parallel the segment, which limits the potential for development of the open land east of the highway. However, land along the west side of the highway has been identified as available for future development.

This segment is categorized as Intermediate. Although the area currently exhibits rural characteristics with principally agricultural land uses, this section of US 93 is located on the fringe of Lolo and many parcels are anticipated for development. Therefore, it is expected that some parcels may be subdivided and more frequent and/or larger-scale access management strategies (such as traffic signals, junior interchanges or frontage roads) may be needed in the future to maintain reasonable property access.

The access management techniques recommended for this area include access closure, access consolidation and service roads. A service road would be parallel to the highway in order to provide local circulation with minimal highway access. The specific location and design of the recommended service road is subject to future development plans and final design constraints.

The access to homes and fields on the east side of US 93 near Valley Grove Drive is recommended for closure/relocation across from the public road intersection to eliminate the overlap of left turns. The atypical configuration of the Bird Lane intersection approaches should be modified to enhance the safety and operation of vehicles turning into and out of the roadway.

The future operational analysis for the Bird Lane and Valley Grove intersections include traffic expected from the proposed Liberty Cove Subdivision as shown in the traffic impact study dated August 2001. The results of the Level of Service (LOS) analysis for the public road intersections with and without the access control plan recommendations are shown in **Table 4**.

Table 4. Intersection PM Peak Hour Level of Service - Rural Segment

US 93 Intersection	Control	Without Access Control Plan				With Access Control Plan			
		Existing		Future (2025)		Existing		Future (2025)	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Valley Grove Drive	Stop	F	151.6	F	1682.0	F	275.0	F	3144.0
Bird Lane	Stop	F	96.7	F	2345.0	F	96.7	F	2345.0

Source: Analysis by David Evans and Associates
(1) LOS for stop-controlled intersections reported as LOS of the critical movement

The unsignalized intersections at Bird Lane and Valley Grove Drive currently operate at LOS F during the afternoon peak hours and will continue to operate with high levels of delay in the future if they remain unsignalized. Although these intersections have relatively low volumes turning from the minor roads, the high volumes on the highway virtually prevent outbound left turns onto northbound US 93 during peak hours. No negative impacts will result from the access volume being consolidated at Bird Lane. Increases in the delay experienced at the Valley Grove Drive intersection may result from the residential access being relocated across from the public road intersection. If the driveway was not relocated, these delays would be experienced at the location of the driveway access with additional safety hazards caused by the overlap of left turns.

4.3 MOUNTAINOUS SEGMENT

This segment of US 93 is curvilinear as the highway passes through a relatively mountainous area with steep cuts in the terrain on the west side of the roadway. This terrain and the location of the Montana Rail Link and Bitterroot River on the east side of the roadway limit the amount of development within this segment, which is categorized as Rural.

A concrete barrier divides the highway with a narrow inside shoulder adjacent to the barrier. There is an opening in the barrier at Cochise Drive, which is the only major access to residential development along this segment. Guardrail is predominant in this segment with steep cuts in the terrain on the west side and downhill slopes on the east side of the highway.

Closure of the one direct residential access within the segment, located north of Bird Lane along a dangerous high-speed curve, will require new access for the two parcels via Bird Lane. Access closure is also recommended at the abandoned weigh station on the east side of the highway. One access south of the weigh station is recommended to remain open to provide recreational and maintenance access to the river.

No additional property traffic will access US 93 via Cochise Drive with the access control plan recommendations. Therefore, no negative impacts will result from access volume being consolidated to the intersection. As shown in **Table 5**, the intersection operates at LOS F during the afternoon peak hours and will continue to operate poorly in the future. However, closing two accesses at the old weigh station may improve the safety at the Cochise Drive intersection by reducing the number of conflict points at the barrier opening.

Table 5. Intersection PM Peak Hour Level of Service - Mountainous Segment

US 93 Intersection	Control	Without Access Control Plan				With Access Control Plan			
		Existing		Future (2025)		Existing		Future (2025)	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Cochise Drive [2]	Stop	F	70.2	F	280.7	F	70.2	F	280.7

Source: Analysis by David Evans and Associates
[1] LOS for stop-controlled intersections reported as LOS of the critical movement
[2] No additional traffic volume on side road with access control recommendations

4.4 MISSOULA SUBURBAN SEGMENT

This highway segment begins south of Hayes Creek Road and extends to the end of the project south of the Miller Creek Road intersection. This segment is suburban in nature with residential and commercial development and many direct highway accesses. A two-way left turn (TWLT) lane divides the highway for the entire distance of the segment. This segment is categorized as Intermediate.

This segment contains three public road accesses at Hayes Creek Road, Wornath Road and Blue Mountain Road. The Hayes Creek Road residential development relies on an unsignalized intersection as the sole access. The residential development accessed via Wornath Road is connected by a local roadway to Blue Mountain Road, which has a traffic signal on US 93. The traffic signal was installed at Blue Mountain Road in July 1999. The development along Blue Mountain Road adjacent to the US 93 intersection is mainly commercial.

The Missoula Suburban study segment has several areas of limited sight distance, a relatively high number of closely spaced accesses and the potential for higher-density development. This segment will require the application of access management techniques ranging from access closure and consolidation to grade-separated interchanges. Due to the potential for higher-density development and the lack of existing accesses within the area, the access control along this segment of the corridor will be more restrictive for future accesses with longer access spacing requirements and the consideration of large-scale measures, such as traffic signals and grade-separation techniques.

This study segment has an area of limited sight distance immediately north of the concrete median barrier. Access consolidation with a service road is recommended for several residential properties on the west side of the highway to limit the locations of vehicles turning with limited sight distance. For the same reason, two of the three accesses to the Blue Mountain Trailer Park on the east side of the highway are recommended for closure.

Several small parcels on the east side of the highway at Blue Mountain Road are currently served with a service road accessed north and south of the Blue Mountain Road traffic signal. The south access to this service road should be limited to right-in, right-out movements to eliminate conflicts with the northbound US 93 left turn lane at the traffic signal.

Most accesses to the properties along US 93 north of Blue Mountain Road should be limited to right-in, right-out movements to maintain the capacity of the highway corridor. However, following the distances developed in the Access Control Guidelines, a major full-movement access may be located approximately halfway between the existing traffic signals at Blue Mountain Road and Miller Creek Road. Given that impacts are mitigated through the System Impact Process, this would allow the development of a roadway system for site access on the west side of the highway. This access should be encouraged to connect to the existing road leading to Blue Mountain Road from the veterinary clinic.

The results of the Level of Service (LOS) analysis for the public road intersections with and without the access control plan recommendations are shown in **Table 6**. The unsignalized intersections at Hayes Creek Road and Wornath Road currently operate at LOS F during the afternoon peak hours and will continue to operate with high levels of delay in the future due to the significant volumes on the highway. No additional property traffic will access US 93 via the public roads with the access control plan recommendations within this segment of the highway. Therefore, no negative impacts will result from access volume being consolidated to the public roads.

Table 6. Intersection PM Peak Hour Level of Service - Missoula Suburban Segment

US 93 Intersection	Control	Without Access Control Plan				With Access Control Plan			
		Existing		Future (2025)		Existing		Future (2025)	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Hayes Creek Road (2)	Stop	F	341.1	F	2886.0	F	341.1	F	2886.0
Wornath Road (2)	Stop	F	119.7	F	678.3	F	119.7	F	678.3
Blue Mountain Road (2)	Signal	A	9.8	B	19.6	A	9.8	B	19.6

Source: Analysis by David Evans and Associates
(1) LOS for stop-controlled intersections reported as LOS of the critical movement
(2) No additional traffic volume on side road with access control recommendations

Appendix A

Capacity Analysis Summary and Reports

US 93 Study Corridor Intersection PM Peak Hour Level of Service

US 93 Intersection	Control	Without Access Control Plan				With Access Control Plan			
		Existing		Future (2025)		Existing		Future (2025)	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
US 12 (2)	Signal	B	10.8	B	13.3	B	10.8	B	13.3
Lewis and Clark Dr	Stop	F	160.3	F	370.2	F	214.0	F	814.6
Tyler Way	Signal	B	11.0	B	12.3	B	11.2	B	12.4
Ridgeway Dr/Glacier Dr	Signal	B	12.0	B	14.3	B	12.2	B	14.7
Valley Grove Drive	Stop	F	151.6	F	1682.0	F	275.0	F	3144.0
Bird Lane	Stop	F	96.7	F	2345.0	F	96.7	F	2345.0
Cochise Drive (2)	Stop	F	70.2	F	280.7	F	70.2	F	280.7
Hayes Creek Road (2)	Stop	F	341.1	F	2886.0	F	341.1	F	2886.0
Wornath Road (2)	Stop	F	119.7	F	678.3	F	119.7	F	678.3
Blue Mountain Road (2)	Signal	A	9.8	B	19.6	A	9.8	B	19.6

Source: Analysis by David Evans and Associates
(1) LOS for stop-controlled intersections reported as LOS of the critical movement
(2) No additional traffic volume on side road with access control recommendations

Appendix B

Corridor Access Inventory

SHORT REPORT

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & US 12
Agency or Co.	MDT	Area Type	All other areas
Date Performed	11/20/2004	Jurisdiction	
Time Period	PM Peak Hour	Analysis Year	Existing - 2004

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	1	0	1	0	1	2	0	1	2	0
Lane group		LT	R		LTR		L	TR		L	TR	
Volume (vph)	85	5	25	35	20	4	20	515	14	1	1290	140
% Heavy veh	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.87	0.87	0.87	0.82	0.82	0.82	0.91	0.91	0.91	0.93	0.93	0.93
Actuated (P/A)	A	A	A	A	A	A	P	P	P	P	P	P
Startup lost time		2.0	2.0		2.0		2.0	2.0		2.0	2.0	
Ext. eff. green		2.0	2.0		2.0		2.0	2.0		2.0	2.0	
Arrival type		3	3		3		3	3		3	3	
Unit Extension		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width		12.0	12.0		12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0	0		0		0	0		0	0	
Unit Extension		3.0	3.0		3.0		3.0	3.0		3.0	3.0	

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = 20.0	G =	G =	G =	G = 60.0	G =	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		104	29		72		22	581		1	1538	
Lane group cap.		296	359		332		143	2403		539	2376	
v/c ratio		0.35	0.08		0.22		0.15	0.24		0.00	0.65	
Green ratio		0.22	0.22		0.22		0.67	0.67		0.67	0.67	
Unif. delay d1		29.5	27.7		28.6		5.6	6.0		5.0	8.8	
Delay factor k		0.11	0.11		0.11		0.50	0.50		0.50	0.50	
Increm. delay d2		0.7	0.1		0.3		2.3	0.2		0.0	1.4	
PF factor		1.000	1.000		1.000		1.000	1.000		1.000	1.000	
Control delay		30.3	27.8		28.9		7.8	6.2		5.0	10.2	
Lane group LOS		C	C		C		A	A		A	B	
Apprch. delay	29.7			28.9			6.3			10.2		
Approach LOS	C			C			A			B		
Intersec. delay	10.8			Intersection LOS						B		

SHORT REPORT

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & US 12
Agency or Co.	MDT	Area Type	All other areas
Date Performed	3/27/06	Jurisdiction	
Time Period	PM Peak Hour	Analysis Year	2025

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	1	0	1	0	1	2	0	1	2	0
Lane group		LT	R		LTR		L	TR		L	TR	
Volume (vph)	140	8	40	35	20	4	30	625	14	1	1715	230
% Heavy veh	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.87	0.87	0.87	0.82	0.82	0.82	0.91	0.91	0.91	0.93	0.93	0.93
Actuated (P/A)	A	A	A	A	A	A	P	P	P	P	P	P
Startup lost time		2.0	2.0		2.0		2.0	2.0		2.0	2.0	
Ext. eff. green		2.0	2.0		2.0		2.0	2.0		2.0	2.0	
Arrival type		3	3		3		3	3		3	3	
Unit Extension		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width		12.0	12.0		12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0	0		0		0	0		0	0	
Unit Extension		3.0	3.0		3.0		3.0	3.0		3.0	3.0	

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = 16.0	G =	G =	G =	G = 64.0	G =	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		170	46		72		33	702		1	2091	
Lane group cap.		240	287		162		85	2564		507	2527	
v/c ratio		0.71	0.16		0.44		0.39	0.27		0.00	0.83	
Green ratio		0.18	0.18		0.18		0.71	0.71		0.71	0.71	
Unif. delay d1		34.8	31.3		33.0		5.2	4.7		3.8	9.1	
Delay factor k		0.27	0.11		0.11		0.50	0.50		0.50	0.50	
Increm. delay d2		9.3	0.3		1.9		12.8	0.3		0.0	3.3	
PF factor		1.000	1.000		1.000		1.000	1.000		1.000	1.000	
Control delay		44.1	31.6		35.0		18.0	4.9		3.8	12.4	
Lane group LOS		D	C		C		B	A		A	B	
Apprch. delay	41.4			35.0			5.5			12.4		
Approach LOS	D			C			A			B		
Intersec. delay	13.3			Intersection LOS						B		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & Lewis & Clark Drive
Agency/Co.	MDT	Jurisdiction	
Date Performed	11/20/2004	Analysis Year	Existing - 2004
Analysis Time Period	PM Peak Hour		

Project Description

East/West Street:	Lewis and Clark Drive	North/South Street:	US 93
Intersection Orientation:	North-South	Study Period (hrs):	0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	30	655	45	120	1525	2
Peak-Hour Factor, PHF	0.93	0.93	0.93	0.96	0.96	0.96
Hourly Flow Rate, HFR	32	704	48	125	1588	2
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Raised curb					
RT Channelized			0			0
Lanes	1	2	0	1	2	0
Configuration	L	T	TR	L	T	TR
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	14	0	40	4	0	4
Peak-Hour Factor, PHF	0.85	0.85	0.85	0.66	0.66	0.66
Hourly Flow Rate, HFR	16	0	47	6	0	6
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (vph)	32	125		63			12	
C (m) (vph)	418	867		133			34	
v/c	0.08	0.14		0.47			0.35	
95% queue length	0.25	0.50		2.16			1.15	
Control Delay	14.3	9.9		54.3			160.3	
LOS	B	A		F			F	
Approach Delay	--	--	54.3			160.3		
Approach LOS	--	--	F			F		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & Lewis & Clark Drive
Agency/Co.	MDT	Jurisdiction	
Date Performed	8/25/05	Analysis Year	Existing - 2004 with Site
Analysis Time Period	PM Peak Hour		

Project Description

East/West Street:	Lewis and Clark Drive	North/South Street:	US 93
Intersection Orientation:	North-South	Study Period (hrs):	0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	30	655	55	145	1525	3
Peak-Hour Factor, PHF	0.93	0.93	0.93	0.96	0.96	0.96
Hourly Flow Rate, HFR	32	704	59	151	1588	3
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Raised curb					
RT Channelized			0			0
Lanes	1	2	0	1	2	0
Configuration	L	T	TR	L	T	TR
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	23	0	69	5	0	5
Peak-Hour Factor, PHF	0.85	0.85	0.85	0.66	0.66	0.66
Hourly Flow Rate, HFR	27	0	81	7	0	7
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (vph)	32	151		108			14	
C (m) (vph)	418	859		120			29	
v/c	0.08	0.18		0.90			0.48	
95% queue length	0.25	0.64		5.66			1.54	
Control Delay	14.3	10.1		125.0			214.0	
LOS	B	B		F			F	
Approach Delay	--	--	125.0			214.0		
Approach LOS	--	--	F			F		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & Lewis & Clark Drive
Agency/Co.	MDT	Jurisdiction	
Date Performed	3/27/06	Analysis Year	2025
Analysis Time Period	PM Peak Hour		

Project Description

East/West Street: Lewis and Clark Drive	North/South Street: US 93
Intersection Orientation: North-South	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	35	790	55	145	2030	2
Peak-Hour Factor, PHF	0.93	0.93	0.93	0.96	0.96	0.96
Hourly Flow Rate, HFR	37	849	59	151	2114	2
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Raised curb					
RT Channelized			0			0
Lanes	1	2	0	1	2	0
Configuration	L	T	TR	L	T	TR
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	17	0	50	5	0	5
Peak-Hour Factor, PHF	0.85	0.85	0.85	0.66	0.66	0.66
Hourly Flow Rate, HFR	19	0	58	7	0	7
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (vph)	37	151		77			14	
C (m) (vph)	262	758		56				
v/c	0.14	0.20		1.38				
95% queue length	0.48	0.74		6.84				
Control Delay	21.0	10.9		370.2				
LOS	C	B		F				
Approach Delay	--	--		370.2				
Approach LOS	--	--		F				

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & Lewis & Clark Drive
Agency/Co.	MDT	Jurisdiction	
Date Performed	3/27/06	Analysis Year	2025 with Site
Analysis Time Period	PM Peak Hour		

Project Description

East/West Street:	Lewis and Clark Drive	North/South Street:	US 93
Intersection Orientation:	North-South	Study Period (hrs):	0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	35	790	65	175	2030	3
Peak-Hour Factor, PHF	0.93	0.93	0.93	0.96	0.96	0.96
Hourly Flow Rate, HFR	37	849	69	182	2114	3
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Raised curb					
RT Channelized			0			0
Lanes	1	2	0	1	2	0
Configuration	L	T	TR	L	T	TR
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	25	0	80	6	0	6
Peak-Hour Factor, PHF	0.85	0.85	0.85	0.66	0.66	0.66
Hourly Flow Rate, HFR	29	0	94	9	0	9
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (vph)	37	182		123			18	
C (m) (vph)	262	752		51				
v/c	0.14	0.24		2.41				
95% queue length	0.48	0.95		12.65				
Control Delay	21.0	11.3		814.6				
LOS	C	B		F				
Approach Delay	--	--	814.6					
Approach LOS	--	--	F					

SHORT REPORT

General Information		Site Information	
Analyst	*DEA-SST*	Intersection	*US 93 & Tyler Way*
Agency or Co.	*MDT*	Area Type	*All other areas*
Date Performed	*11/20/2004*	Jurisdiction	
Time Period	*PM Peak Hour*	Analysis Year	*Existing - 2004*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	1	1	0	1	2	0	1	2	0
Lane group				L	TR		L	TR		L	TR	
Volume (vph)				110	5	18	6	570	25	60	1535	4
% Heavy veh				0	0	0	0	0	0	0	0	0
PHF				0.73	0.73	0.73	0.89	0.89	0.89	0.92	0.92	0.92
Actuated (P/A)				A	A	A	P	P	P	P	P	P
Startup lost time				2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green				2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type				3	3		3	3		3	3	
Unit Extension				3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0			0		0	0		0	0		0
Lane Width				12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0	0		0	0		0	0	
Unit Extension				3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	WB Only	02	03	04	NS Perm	06	07	08
Timing	G = 20.0	G =	G =	G =	G = 60.0	G =	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				151	32		7	668		65	1672	
Lane group cap.				401	373		112	2397		485	2411	
v/c ratio				0.38	0.09		0.06	0.28		0.13	0.69	
Green ratio				0.22	0.22		0.67	0.67		0.67	0.67	
Unif. delay d1				29.7	27.8		5.2	6.1		5.5	9.3	
Delay factor k				0.11	0.11		0.50	0.50		0.50	0.50	
Increm. delay d2				0.6	0.1		1.1	0.3		0.6	1.7	
PF factor				1.000	1.000		1.000	1.000		1.000	1.000	
Control delay				30.3	27.9		6.3	6.4		6.1	11.0	
Lane group LOS				C	C		A	A		A	B	
Apprch. delay				29.9			6.4			10.8		
Approach LOS				C			A			B		
Intersec. delay	11.0			Intersection LOS						B		

SHORT REPORT

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & Tyler Way
Agency or Co.	MDT	Area Type	All other areas
Date Performed	8/25/05	Jurisdiction	
Time Period	PM Peak Hour	Analysis Year	Existing - 2004 with Site

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	1	1	0	1	2	0	1	2	0
Lane group				L	TR		L	TR		L	TR	
Volume (vph)				120	6	25	6	570	30	70	1535	4
% Heavy veh				0	0	0	0	0	0	0	0	0
PHF				0.73	0.73	0.73	0.89	0.89	0.89	0.92	0.92	0.92
Actuated (P/A)				A	A	A	P	P	P	P	P	P
Startup lost time				2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green				2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type				3	3		3	3		3	3	
Unit Extension				3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0			0		0	0		0	0		0
Lane Width				12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0	0		0	0		0	0	
Unit Extension				3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	WB Only	02	03	04	NS Perm	06	07	08
Timing	G = 20.0	G =	G =	G =	G = 60.0	G =	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 90.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				164	42		7	674		76	1672	
Lane group cap.				401	371		112	2393		482	2411	
v/c ratio				0.41	0.11		0.06	0.28		0.16	0.69	
Green ratio				0.22	0.22		0.67	0.67		0.67	0.67	
Unif. delay d1				29.9	27.9		5.2	6.2		5.6	9.3	
Delay factor k				0.11	0.11		0.50	0.50		0.50	0.50	
Increm. delay d2				0.7	0.1		1.1	0.3		0.7	1.7	
PF factor				1.000	1.000		1.000	1.000		1.000	1.000	
Control delay				30.6	28.1		6.3	6.5		6.3	11.0	
Lane group LOS				C	C		A	A		A	B	
Apprch. delay				30.1			6.4			10.8		
Approach LOS				C			A			B		
Intersec. delay	11.2			Intersection LOS						B		

SHORT REPORT

General Information		Site Information	
Analyst	*DEA-SST*	Intersection	*US 93 & Tyler Way*
Agency or Co.	*MDT*	Area Type	*All other areas*
Date Performed	*3/27/06*	Jurisdiction	
Time Period	*PM Peak Hour*	Analysis Year	*2025*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	1	1	0	1	2	0	1	2	0
Lane group				L	TR		L	TR		L	TR	
Volume (vph)				140	5	20	6	690	30	75	2040	4
% Heavy veh				0	0	0	0	0	0	0	0	0
PHF				0.73	0.73	0.73	0.89	0.89	0.89	0.92	0.92	0.92
Actuated (P/A)				A	A	A	P	P	P	P	P	P
Startup lost time				2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green				2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type				3	3		3	3		3	3	
Unit Extension				3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0			0		0	0		0	0		0
Lane Width				12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0	0		0	0		0	0	
Unit Extension				3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	WB Only	02	03	04	NS Perm	06	07	08
Timing	G = 15.0	G =	G =	G =	G = 65.0	G =	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 — Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				192	34		7	809		82	2221	
Lane group cap.				301	279		84	2596		456	2612	
v/c ratio				0.64	0.12		0.08	0.31		0.18	0.85	
Green ratio				0.17	0.17		0.72	0.72		0.72	0.72	
Unif. delay d1				35.0	31.9		3.7	4.5		4.0	9.0	
Delay factor k				0.22	0.11		0.50	0.50		0.50	0.50	
Increm. delay d2				4.5	0.2		1.9	0.3		0.9	3.7	
PF factor				1.000	1.000		1.000	1.000		1.000	1.000	
Control delay				39.4	32.1		5.6	4.8		4.9	12.7	
Lane group LOS				D	C		A	A		A	B	
Apprch. delay				38.3			4.8			12.4		
Approach LOS				D			A			B		
Intersec. delay	12.3			Intersection LOS						B		

HCS2000™ — — Version 4.1

SHORT REPORT

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & Tyler Way
Agency or Co.	MDT	Area Type	All other areas
Date Performed	3/27/06	Jurisdiction	
Time Period	PM Peak Hour	Analysis Year	2025 with Site Traffic

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	1	1	0	1	2	0	1	2	0
Lane group				L	TR		L	TR		L	TR	
Volume (vph)				140	6	25	6	690	35	80	2040	4
% Heavy veh				0	0	0	0	0	0	0	0	0
PHF				0.73	0.73	0.73	0.89	0.89	0.89	0.92	0.92	0.92
Actuated (P/A)				A	A	A	P	P	P	P	P	P
Startup lost time				2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green				2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type				3	3		3	3		3	3	
Unit Extension				3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0			0		0	0		0	0		0
Lane Width				12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0	0		0	0		0	0	
Unit Extension				3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	WB Only	02	03	04	NS Perm	06	07	08
Timing	G = 15.0	G =	G =	G =	G = 65.0	G =	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 90.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				192	42		7	814		87	2221	
Lane group cap.				301	278		84	2594		454	2612	
v/c ratio				0.64	0.15		0.08	0.31		0.19	0.85	
Green ratio				0.17	0.17		0.72	0.72		0.72	0.72	
Unif. delay d1				35.0	32.1		3.7	4.5		4.0	9.0	
Delay factor k				0.22	0.11		0.50	0.50		0.50	0.50	
Increm. delay d2				4.5	0.3		1.9	0.3		0.9	3.7	
PF factor				1.000	1.000		1.000	1.000		1.000	1.000	
Control delay				39.4	32.3		5.6	4.8		5.0	12.7	
Lane group LOS				D	C		A	A		A	B	
Apprch. delay				38.2			4.8			12.4		
Approach LOS				D			A			B		
Intersec. delay	12.4			Intersection LOS						B		

SHORT REPORT

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & Glacier/Ridgeway
Agency or Co.	MDT	Area Type	All other areas
Date Performed	11/20/2004	Jurisdiction	
Time Period	PM Peak Hour	Analysis Year	Existing - 2004

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	40	25	85	35	30	55	30	615	25	115	1370	105
% Heavy veh	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.93	0.93	0.93	0.82	0.82	0.82	0.87	0.87	0.87	0.86	0.86	0.86
Actuated (P/A)	A	A	A	A	A	A	P	P	P	P	P	P
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = 20.0	G =	G =	G =	G = 60.0	G =	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	43	118		43	104		34	736		134	1715	
Lane group cap.	291	373		288	381		103	2397		447	2386	
v/c ratio	0.15	0.32		0.15	0.27		0.33	0.31		0.30	0.72	
Green ratio	0.22	0.22		0.22	0.22		0.67	0.67		0.67	0.67	
Unif. delay d1	28.1	29.3		28.2	29.0		6.4	6.3		6.2	9.6	
Delay factor k	0.11	0.11		0.11	0.11		0.50	0.50		0.50	0.50	
Increm. delay d2	0.2	0.5		0.2	0.4		8.4	0.3		1.7	1.9	
PF factor	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Control delay	28.4	29.8		28.4	29.4		14.8	6.6		8.0	11.5	
Lane group LOS	C	C		C	C		B	A		A	B	
Apprch. delay	29.4			29.1			7.0			11.2		
Approach LOS	C			C			A			B		
Intersec. delay	12.0			Intersection LOS						B		

SHORT REPORT

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & Glacier/Ridgeway
Agency or Co.	MDT	Area Type	All other areas
Date Performed	8/25/05	Jurisdiction	
Time Period	PM Peak Hour	Analysis Year	Existing - 2004 with Site

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	45	30	90	35	30	55	35	615	25	115	1370	115
% Heavy veh	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.93	0.93	0.93	0.82	0.82	0.82	0.87	0.87	0.87	0.86	0.86	0.86
Actuated (P/A)	A	A	A	A	A	A	P	P	P	P	P	P
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = 20.0	G =	G =	G =	G = 60.0	G =	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 90.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	48	129		43	104		40	736		134	1727	
Lane group cap.	291	375		279	381		101	2397		447	2383	
v/c ratio	0.16	0.34		0.15	0.27		0.40	0.31		0.30	0.72	
Green ratio	0.22	0.22		0.22	0.22		0.67	0.67		0.67	0.67	
Unif. delay d1	28.3	29.5		28.2	29.0		6.8	6.3		6.2	9.7	
Delay factor k	0.11	0.11		0.11	0.11		0.50	0.50		0.50	0.50	
Increm. delay d2	0.3	0.6		0.3	0.4		11.2	0.3		1.7	2.0	
PF factor	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Control delay	28.5	30.0		28.4	29.4		18.0	6.6		8.0	11.6	
Lane group LOS	C	C		C	C		B	A		A	B	
Apprch. delay	29.6			29.1			7.2			11.4		
Approach LOS	C			C			A			B		
Intersec. delay	12.2			Intersection LOS						B		

SHORT REPORT

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & Glacier/Ridgeway
Agency or Co.	MDT	Area Type	All other areas
Date Performed	3/27/06	Jurisdiction	
Time Period	PM Peak Hour	Analysis Year	2025

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	55	35	115	45	40	65	40	740	30	140	1820	140
% Heavy veh	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.93	0.93	0.93	0.82	0.82	0.82	0.87	0.87	0.87	0.86	0.86	0.86
Actuated (P/A)	A	A	A	A	A	A	P	P	P	P	P	P
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = 15.0	G =	G =	G =	G = 65.0	G =	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	59	162		55	128		46	885		163	2279	
Lane group cap.	203	280		174	287		84	2598		417	2585	
v/c ratio	0.29	0.58		0.32	0.45		0.55	0.34		0.39	0.88	
Green ratio	0.17	0.17		0.17	0.17		0.72	0.72		0.72	0.72	
Unif. delay d1	32.8	34.6		33.0	33.8		5.7	4.6		4.8	9.6	
Delay factor k	0.11	0.17		0.11	0.11		0.50	0.50		0.50	0.50	
Increm. delay d2	0.8	3.0		1.0	1.1		23.3	0.4		2.7	4.8	
PF factor	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Control delay	33.6	37.6		34.0	34.9		29.0	5.0		7.6	14.3	
Lane group LOS	C	D		C	C		C	A		A	B	
Apprch. delay	36.5			34.6			6.2			13.9		
Approach LOS	D			C			A			B		
Intersec. delay	14.3			Intersection LOS						B		

SHORT REPORT

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & Glacier/Ridgeway
Agency or Co.	MDT	Area Type	All other areas
Date Performed	3/27/06	Jurisdiction	
Time Period	PM Peak Hour	Analysis Year	2025 with Site

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	60	35	120	45	40	70	45	740	30	140	1820	150
% Heavy veh	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.93	0.93	0.93	0.82	0.82	0.82	0.87	0.87	0.87	0.86	0.86	0.86
Actuated (P/A)	A	A	A	A	A	A	P	P	P	P	P	P
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = 15.0	G =	G =	G =	G = 65.0	G =	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 90.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	65	167		55	134		52	885		163	2290	
Lane group cap.	198	280		170	287		84	2598		417	2583	
v/c ratio	0.33	0.60		0.32	0.47		0.62	0.34		0.39	0.89	
Green ratio	0.17	0.17		0.17	0.17		0.72	0.72		0.72	0.72	
Unif. delay d1	33.1	34.7		33.0	33.9		6.3	4.6		4.8	9.7	
Delay factor k	0.11	0.19		0.11	0.11		0.50	0.50		0.50	0.50	
Increm. delay d2	1.0	3.5		1.1	1.2		29.7	0.4		2.7	5.0	
PF factor	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Control delay	34.0	38.2		34.1	35.1		36.0	5.0		7.6	14.6	
Lane group LOS	C	D		C	D		D	A		A	B	
Apprch. delay	37.0			34.8			6.7			14.1		
Approach LOS	D			C			A			B		
Intersec. delay	14.7			Intersection LOS						B		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*DEA-SST*	Intersection	*US 93 & Valley Grove Drive*
Agency/Co.	*MDT*	Jurisdiction	
Date Performed	*11/20/2004*	Analysis Year	*Existing - 2004*
Analysis Time Period	*PM Peak Hour*		

Project Description

East/West Street: *Valley Grove Drive*	North/South Street: *US 93*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	*0*	*695*	*0*	*0*	*1765*	*3*
Peak-Hour Factor, PHF	*0.94*	*0.94*	*1.00*	*1.00*	*0.90*	*0.90*
Hourly Flow Rate, HFR	*0*	*739*	*0*	*0*	*1961*	*3*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Two Way Left Turn Lane*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*0*	*2*	*0*
Configuration	*L*	*T*			*T*	*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*3*	*0*	*0*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.37*	*1.00*	*0.37*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*8*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*						*LR*	
v (vph)	*0*						*8*	
C (m) (vph)	*300*						*32*	
v/c	*0.00*						*0.25*	
95% queue length	*0.00*						*0.79*	
Control Delay	*17.0*						*151.6*	
LOS	*C*						*F*	
Approach Delay	--	--					*151.6*	
Approach LOS	--	--					*F*	

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & Valley Grove Drive
Agency/Co.	MDT	Jurisdiction	
Date Performed	3/27/06	Analysis Year	Existing - 2004 with Site
Analysis Time Period	PM Peak Hour		

Project Description

East/West Street:	Valley Grove Drive	North/South Street:	US 93
Intersection Orientation:	North-South	Study Period (hrs):	0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	695	2	1	1765	3
Peak-Hour Factor, PHF	0.94	0.94	1.00	1.00	0.90	0.90
Hourly Flow Rate, HFR	0	739	2	1	1961	3
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Two Way Left Turn Lane					
RT Channelized			0			0
Lanes	1	2	0	1	2	0
Configuration	L	T	TR	L	T	TR
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	1	3	0	0
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.37	1.00	0.37
Hourly Flow Rate, HFR	0	0	1	8	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR			LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LR			LR	
v (vph)	0	1		1			8	
C (m) (vph)	300	875		633			20	
v/c	0.00	0.00		0.00			0.40	
95% queue length	0.00	0.00		0.00			1.14	
Control Delay	17.0	9.1		10.7			275.0	
LOS	C	A		B			F	
Approach Delay	--	--	10.7			275.0		
Approach LOS	--	--	B			F		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & Valley Grove Drive
Agency/Co.	MDT	Jurisdiction	
Date Performed	3/27/06	Analysis Year	2025
Analysis Time Period	PM Peak Hour		

Project Description

East/West Street: Valley Grove Drive	North/South Street: US 93
Intersection Orientation: North-South	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	9	840	0	0	2375	16
Peak-Hour Factor, PHF	0.94	0.94	1.00	1.00	0.90	0.90
Hourly Flow Rate, HFR	9	893	0	0	2638	17
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Two Way Left Turn Lane					
RT Channelized			0			0
Lanes	1	2	0	0	2	0
Configuration	L	T			T	TR
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	10	0	5
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.37	1.00	0.37
Hourly Flow Rate, HFR	0	0	0	27	0	13
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L						LR	
v (vph)	9						40	
C (m) (vph)	161						12	
v/c	0.06						3.33	
95% queue length	0.18						6.00	
Control Delay	28.7						1682	
LOS	D						F	
Approach Delay	--	--				1682		
Approach LOS	--	--				F		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & Valley Grove Drive
Agency/Co.	MDT	Jurisdiction	
Date Performed	3/27/06	Analysis Year	2025 with Site
Analysis Time Period	PM Peak Hour		

Project Description

East/West Street:	Valley Grove Drive	North/South Street:	US 93
Intersection Orientation:	North-South	Study Period (hrs):	0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	9	840	2	1	2375	16
Peak-Hour Factor, PHF	0.94	0.94	1.00	1.00	0.90	0.90
Hourly Flow Rate, HFR	9	893	2	1	2638	17
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Two Way Left Turn Lane					
RT Channelized			0			0
Lanes	1	2	0	1	2	0
Configuration	L	T	TR	L	T	TR
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	1	10	0	5
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.37	1.00	0.37
Hourly Flow Rate, HFR	0	0	1	27	0	13
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR			LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LR			LR	
v (vph)	9	1		1			40	
C (m) (vph)	161	767		564			7	
v/c	0.06	0.00		0.00			5.71	
95% queue length	0.18	0.00		0.01			6.45	
Control Delay	28.7	9.7		11.4			3144	
LOS	D	A		B			F	
Approach Delay	--	--		11.4			3144	
Approach LOS	--	--		B			F	

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & Bird Lane
Agency/Co.	MDT	Jurisdiction	
Date Performed	11/20/2004	Analysis Year	Existing - 2004
Analysis Time Period	PM Peak Hour		

Project Description

East/West Street:	Bird Lane	North/South Street:	US 93
Intersection Orientation:	North-South	Study Period (hrs):	0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	1	710	0	0	1855	6
Peak-Hour Factor, PHF	0.92	0.92	1.00	1.00	0.90	0.90
Hourly Flow Rate, HFR	1	771	0	0	2061	6
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Two Way Left Turn Lane					
RT Channelized			0			0
Lanes	1	2	0	0	2	0
Configuration	L	T			T	TR
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	1	0	1
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.25	1.00	0.25
Hourly Flow Rate, HFR	0	0	0	4	0	4
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L						LR	
v (vph)	1						8	
C (m) (vph)	274						47	
v/c	0.00						0.17	
95% queue length	0.01						0.55	
Control Delay	18.2						96.7	
LOS	C						F	
Approach Delay	--	--				96.7		
Approach LOS	--	--				F		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & Bird Lane
Agency/Co.	MDT	Jurisdiction	
Date Performed	8/25/05	Analysis Year	Existing - 2004 with Site
Analysis Time Period	PM Peak Hour		

Project Description

East/West Street:	Bird Lane	North/South Street:	US 93
Intersection Orientation:	North-South	Study Period (hrs):	0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	1	710	0	0	1855	8
Peak-Hour Factor, PHF	0.92	0.92	1.00	1.00	0.90	0.90
Hourly Flow Rate, HFR	1	771	0	0	2061	8
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Two Way Left Turn Lane					
RT Channelized			0			0
Lanes	1	2	0	0	2	0
Configuration	L	T			T	TR
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	1	0	1
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.25	1.00	0.25
Hourly Flow Rate, HFR	0	0	0	4	0	4
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L						LR	
v (vph)	1						8	
C (m) (vph)	273						47	
v/c	0.00						0.17	
95% queue length	0.01						0.55	
Control Delay	18.2						96.7	
LOS	C						F	
Approach Delay	--	--				96.7		
Approach LOS	--	--				F		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & Bird Lane
Agency/Co.	MDT	Jurisdiction	
Date Performed	3/27/06	Analysis Year	2025
Analysis Time Period	PM Peak Hour		

Project Description

East/West Street:	Bird Lane	North/South Street:	US 93
Intersection Orientation:	North-South	Study Period (hrs):	0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	12	785	0	0	2345	19
Peak-Hour Factor, PHF	0.92	0.92	1.00	1.00	0.90	0.90
Hourly Flow Rate, HFR	13	853	0	0	2605	21
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Two Way Left Turn Lane					
RT Channelized			0			0
Lanes	1	2	0	0	2	0
Configuration	L	T			T	TR
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	11	0	5
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.25	1.00	0.25
Hourly Flow Rate, HFR	0	0	0	44	0	20
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L						LR	
v (vph)	13						64	
C (m) (vph)	165						13	
v/c	0.08						4.92	
95% queue length	0.25						9.03	
Control Delay	28.7						2345	
LOS	D						F	
Approach Delay	--	--				2345		
Approach LOS	--	--				F		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & Bird Lane
Agency/Co.	MDT	Jurisdiction	
Date Performed	3/27/06	Analysis Year	2025 with Site
Analysis Time Period	PM Peak Hour		

Project Description

East/West Street: Bird Lane	North/South Street: US 93
Intersection Orientation: North-South	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	12	785	0	0	2345	21
Peak-Hour Factor, PHF	0.92	0.92	1.00	1.00	0.90	0.90
Hourly Flow Rate, HFR	13	853	0	0	2605	23
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Two Way Left Turn Lane					
RT Channelized			0			0
Lanes	1	2	0	0	2	0
Configuration	L	T			T	TR
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	11	0	5
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.25	1.00	0.25
Hourly Flow Rate, HFR	0	0	0	44	0	20
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L						LR	
v (vph)	13						64	
C (m) (vph)	165						13	
v/c	0.08						4.92	
95% queue length	0.25						9.03	
Control Delay	28.7						2345	
LOS	D						F	
Approach Delay	--	--				2345		
Approach LOS	--	--				F		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & Cochise Drive
Agency/Co.	MDT	Jurisdiction	
Date Performed	11/20/2004	Analysis Year	Existing - 2004
Analysis Time Period	PM Peak Hour		

Project Description

East/West Street:	Cochise Drive	North/South Street:	US 93
Intersection Orientation:	North-South	Study Period (hrs):	0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	3	650	0	0	1765	10
Peak-Hour Factor, PHF	0.88	0.88	1.00	1.00	0.93	0.93
Hourly Flow Rate, HFR	3	738	0	0	1897	10
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Raised curb					
RT Channelized			0			0
Lanes	1	2	0	0	2	1
Configuration	L	T			T	R
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	3	0	4
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.58	1.00	0.58
Hourly Flow Rate, HFR	0	0	0	5	0	6
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L						LR	
v (vph)	3						11	
C (m) (vph)	316						66	
v/c	0.01						0.17	
95% queue length	0.03						0.56	
Control Delay	16.5						70.2	
LOS	C						F	
Approach Delay	--	--				70.2		
Approach LOS	--	--				F		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & Cochise Drive
Agency/Co.	MDT	Jurisdiction	
Date Performed	3/27/06	Analysis Year	2025
Analysis Time Period	PM Peak Hour		
Project Description			
East/West Street: Cochise Drive		North/South Street: US 93	
Intersection Orientation: North-South		Study Period (hrs): 0.25	

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	4	785	0	0	2345	12
Peak-Hour Factor, PHF	0.88	0.88	1.00	1.00	0.93	0.93
Hourly Flow Rate, HFR	4	892	0	0	2521	12
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Raised curb					
RT Channelized			0			0
Lanes	1	2	0	0	2	1
Configuration	L	T			T	R
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	4	0	5
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.58	1.00	0.58
Hourly Flow Rate, HFR	0	0	0	6	0	8
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L						LR	
v (vph)	4						14	
C (m) (vph)	180						24	
v/c	0.02						0.58	
95% queue length	0.07						1.75	
Control Delay	25.5						280.7	
LOS	D						F	
Approach Delay	--	--				280.7		
Approach LOS	--	--				F		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & Wornath Road
Agency/Co.	MDT	Jurisdiction	
Date Performed	11/20/2004	Analysis Year	Existing - 2004
Analysis Time Period	PM Peak Hour		

Project Description

East/West Street:	Wornath Road	North/South Street:	US 93
Intersection Orientation:	North-South	Study Period (hrs):	0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	4	790	0	0	1855	1
Peak-Hour Factor, PHF	0.92	0.92	1.00	1.00	0.96	0.96
Hourly Flow Rate, HFR	4	858	0	0	1932	1
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Two Way Left Turn Lane					
RT Channelized			0			0
Lanes	1	2	0	0	2	0
Configuration	L	T			T	TR
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	3	0	1
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.50	1.00	0.50
Hourly Flow Rate, HFR	0	0	0	6	0	2
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L						LR	
v (vph)	4						8	
C (m) (vph)	309						39	
v/c	0.01						0.21	
95% queue length	0.04						0.66	
Control Delay	16.8						119.7	
LOS	C						F	
Approach Delay	--	--				119.7		
Approach LOS	--	--				F		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & Wornath Road
Agency/Co.	MDT	Jurisdiction	
Date Performed	3/27/06	Analysis Year	2025
Analysis Time Period	PM Peak Hour		

Project Description

East/West Street: Wornath Road	North/South Street: US 93
Intersection Orientation: North-South	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	5	955	0	0	2465	1
Peak-Hour Factor, PHF	0.92	0.92	1.00	1.00	0.96	0.96
Hourly Flow Rate, HFR	5	1038	0	0	2567	1
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Two Way Left Turn Lane					
RT Channelized			0			0
Lanes	1	2	0	0	2	0
Configuration	L	T			T	TR
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	4	0	1
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.50	1.00	0.50
Hourly Flow Rate, HFR	0	0	0	8	0	2
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L						LR	
v (vph)	5						10	
C (m) (vph)	174						11	
v/c	0.03						0.91	
95% queue length	0.09						1.88	
Control Delay	26.3						678.3	
LOS	D						F	
Approach Delay	--	--				678.3		
Approach LOS	--	--				F		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & Hayes Creek Road
Agency/Co.	MDT	Jurisdiction	
Date Performed	11/20/2004	Analysis Year	Existing - 2004
Analysis Time Period	PM Peak Hour		

Project Description

East/West Street: Hayes Creek Road	North/South Street: US 93
Intersection Orientation: North-South	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	1	655	1	4	1755	30
Peak-Hour Factor, PHF	0.91	0.91	0.91	0.96	0.96	0.96
Hourly Flow Rate, HFR	1	719	1	4	1828	31
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Two Way Left Turn Lane					
RT Channelized			0			0
Lanes	1	2	0	1	2	0
Configuration	L	T	TR	L	T	TR
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	1	0	3	15	0	1
Peak-Hour Factor, PHF	0.50	0.50	0.50	0.70	0.70	0.70
Hourly Flow Rate, HFR	2	0	6	21	0	1
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (vph)	1	4		8			22	
C (m) (vph)	330	891		202			26	
v/c	0.00	0.00		0.04			0.85	
95% queue length	0.01	0.01		0.12			2.63	
Control Delay	15.9	9.1		23.6			341.1	
LOS	C	A		C			F	
Approach Delay	--	--	23.6			341.1		
Approach LOS	--	--	C			F		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & Hayes Creek Road
Agency/Co.	MDT	Jurisdiction	
Date Performed	3/27/06	Analysis Year	2025
Analysis Time Period	PM Peak Hour		

Project Description			
East/West Street:	Hayes Creek Road	North/South Street:	US 93
Intersection Orientation:	North-South	Study Period (hrs):	0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	1	790	1	6	2335	45
Peak-Hour Factor, PHF	0.91	0.91	0.91	0.96	0.96	0.96
Hourly Flow Rate, HFR	1	868	1	6	2432	46
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Two Way Left Turn Lane					
RT Channelized			0			0
Lanes	1	2	0	1	2	0
Configuration	L	T	TR	L	T	TR
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	1	0	5	25	0	1
Peak-Hour Factor, PHF	0.50	0.50	0.50	0.70	0.70	0.70
Hourly Flow Rate, HFR	2	0	10	35	0	1
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (vph)	1	6		12			36	
C (m) (vph)	189	784		143			7	
v/c	0.01	0.01		0.08			5.14	
95% queue length	0.02	0.02		0.27			5.91	
Control Delay	24.1	9.6		32.5			2886	
LOS	C	A		D			F	
Approach Delay	--	--	32.5			2886		
Approach LOS	--	--	D			F		

SHORT REPORT

General Information		Site Information	
Analyst	DEA-SST	Intersection	US 93 & Blue Mountain Road
Agency or Co.	MDT	Area Type	All other areas
Date Performed	11/20/2004	Jurisdiction	
Time Period	PM Peak Hour	Analysis Year	Existing - 2004

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	0	1	0	0	0	1	2	0	0	2	1
Lane group	L		R				L	T			T	R
Volume (vph)	80		90				30	715			1755	85
% Heavy veh	0		0				0	0			0	0
PHF	0.82		0.82				0.96	0.96			0.92	0.92
Actuated (P/A)	A		A				P	P			P	P
Startup lost time	2.0		2.0				2.0	2.0			2.0	2.0
Ext. eff. green	3.0		3.0				3.0	3.0			3.0	3.0
Arrival type	3		3				3	3			3	3
Unit Extension	2.0		2.0				2.0	2.0			2.0	2.0
Ped/Bike/RTOR Volume	0		0	0						0		0
Lane Width	12.0		12.0				12.0	12.0			12.0	12.0
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0		0				0	0			0	0
Unit Extension	2.0		2.0				2.0	2.0			2.0	2.0

Phasing	EB Only	02	03	04	NS Perm	06	07	08
Timing	G = 12.0	G =	G =	G =	G = 55.0	G =	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 8	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 80.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	98		110				31	745			1908	92
Lane group cap.	293		262				95	2533			2533	1130
v/c ratio	0.33		0.42				0.33	0.29			0.75	0.08
Green ratio	0.16		0.16				0.70	0.70			0.70	0.70
Unif. delay d1	29.7		30.1				4.7	4.5			7.6	3.8
Delay factor k	0.04		0.04				0.50	0.50			0.50	0.50
Increm. delay d2	0.2		0.4				8.9	0.3			2.1	0.1
PF factor	1.000		1.000				1.000	1.000			1.000	1.000
Control delay	29.9		30.5				13.6	4.8			9.7	4.0
Lane group LOS	C		C				B	A			A	A
Apprch. delay	30.2						5.2			9.5		
Approach LOS	C						A			A		
Intersec. delay	9.8			Intersection LOS						A		

SHORT REPORT

General Information		Site Information	
Analyst	*DEA-SST*	Intersection	*US 93 & Blue Mountain Road*
Agency or Co.	*MDT*	Area Type	*All other areas*
Date Performed	*6/27/06*	Jurisdiction	
Time Period	*PM Peak Hour*	Analysis Year	*2025*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	0	1	0	0	0	1	2	0	0	2	1
Lane group	L		R				L	T			T	R
Volume (vph)	115		155				65	865			2335	130
% Heavy veh	0		0				0	0			0	0
PHF	0.82		0.82				0.96	0.96			0.92	0.92
Actuated (P/A)	A		A				P	P			P	P
Startup lost time	2.0		2.0				2.0	2.0			2.0	2.0
Ext. eff. green	3.0		3.0				3.0	3.0			3.0	3.0
Arrival type	3		3				3	3			3	3
Unit Extension	2.0		2.0				2.0	2.0			2.0	2.0
Ped/Bike/RTOR Volume	0		0	0						0		0
Lane Width	12.0		12.0				12.0	12.0			12.0	12.0
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0		0				0	0			0	0
Unit Extension	2.0		2.0				2.0	2.0			2.0	2.0

Phasing	EB Only	02	03	04	NS Perm	06	07	08
Timing	G = 10.0	G =	G =	G =	G = 57.0	G =	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 8	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 80.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	140		189				68	901			2538	141
Lane group cap.	248		222				95	2623			2623	1171
v/c ratio	0.56		0.85				0.72	0.34			0.97	0.12
Green ratio	0.14		0.14				0.73	0.73			0.73	0.73
Unif. delay d1	32.3		33.7				6.3	4.0			10.1	3.3
Delay factor k	0.10		0.36				0.50	0.50			0.50	0.50
Increm. delay d2	1.9		24.7				37.0	0.4			11.5	0.2
PF factor	1.000		1.000				1.000	1.000			1.000	1.000
Control delay	34.1		58.4				43.3	4.4			21.6	3.5
Lane group LOS	C		E				D	A			C	A
Apprch. delay	48.0						7.1			20.7		
Approach LOS	D						A			C		
Intersec. delay	19.6			Intersection LOS						B		

HCS2000™ Version 4.1

GPS_TIME	MILE MARKER	SIDE	PARCEL ID	GEOCODE	ACCESS USE	ID	AREA (SQ METERS)	PERIMETER (METERS)	PARCEL ADDRESS	OWNER	MAILING ADDRESS	MAIL CITY	MAIL STATE	MAIL ZIPCODE	COMMENTS
10:42:48am	83.4	Lt.	N/A		Public Road										
10:41:45am	83.4	Lt.	1-2,1-3	209235209100000	Commercial	(1-2)	64542	1539	HWY 93 SO-LOLO 59847	FRANK B MILLER	PO BOX 730	LOLO	MT	598470730	
10:40:36am	83.4	Lt.	1-3	209235209090000	Commercial		20620	576	11885 HWY 93 SO-LOLO 59847	FRANK B MILLER	PO BOX 730	LOLO	MT	598470730	
10:39:55am	83.4	Lt.	1-3	209235209090000	Commercial		20620	576	11885 HWY 93 SO-LOLO 59847	FRANK B MILLER	PO BOX 730	LOLO	MT	598470730	
	83.4	Lt.	1-4	209235209080000	Commercial		13295	465	11875 HWY 93 SO-LOLO 59847	FRANK B MILLER JR	PO BOX 730	LOLO	MT	598470730	
09:28:30am	83.4	Lt.	1-5	209235209070000	Commercial				11865 US HWY 93 59847	DOROTHY M PETERS	5230 W BROKEN TEE RD	RATHDRUM	ID	83858	
08:17:54am	83.4	Rt.	1-1	209235202030000	Commercial		322887	2401	11880 US HIGHWAY 93 59847	LOLO TOWN PUMP HOLDINGS LLC	600 S MAIN ST	BUTTE	MT	597012534	
08:19:56am	83.4	Rt.	1-1	209235202030000	Commercial		322887	2401	11880 US HIGHWAY 93 59847	LOLO TOWN PUMP HOLDINGS LLC	600 S MAIN ST	BUTTE	MT	597012534	
08:21:57am	83.4	Rt.	1-1	209235202030000	Commercial		322887	2401	11880 US HIGHWAY 93 59847	LOLO TOWN PUMP HOLDINGS LLC	600 S MAIN ST	BUTTE	MT	597012534	
09:25:41am	83.5	Lt.	1-6	209235208160000	Commercial		12602	452	11725 US HIGHWAY 93 59847	L M HUGHES TRUSTEE	MAIL TO: DAVIDSON TRUST CO 283 W. FRONT ST., STE. 103	MISSOULA	MT	598024328	
09:27:06am	83.5	Lt.	N/A		Public Road										
	83.5	Lt.	1-8	209235208140000	Commercial		87331	1610	US HIGHWAY 93 59847	L M & ELIZABETH C HUGHES TRUST	MAIL TO: DAVIDSON TRUST CO	MISSOULA	MT	598024328	
09:24:35am	83.5	Lt.	1-10	209235208100000	Commercial		18611	546	11705 US HIGHWAY 93 59847	FRANK B MILLER JR	PO BOX 730	LOLO	MT	598470730	
09:23:41am	83.5	Lt.	1-10	209235208100000	Commercial		18611	546	11705 US HIGHWAY 93 59847	FRANK B MILLER JR	PO BOX 730	LOLO	MT	598470730	
09:22:10am	83.5	Lt.	1-11	209235208090000	Commercial		15913	510	US HIGHWAY 93 LOLO 59847	L M HUGHES TRUSTEE	MAIL TO: DAVIDSON TRUST CO 283 W. FRONT ST., STE. 103	MISSOULA	MT	598024328	
09:21:13am	83.5	Lt.	1-11	209235208090000	Commercial		15913	510	US HIGHWAY 93 LOLO 59847	L M HUGHES TRUSTEE	MAIL TO: DAVIDSON TRUST CO 283 W. FRONT ST., STE. 103	MISSOULA	MT	598024328	
08:24:45am	83.5	Rt.	N/A		Public Road										
08:26:17am	83.5	Rt.	1-7	209235204010000	Commercial		9891	399	11700 LEWIS & CLARK DR 59847	LLOYD M HUGHES TRUSTEE	MAIL TO: DAVIDSON TRUST CO 283 W. FRONT ST., STE. 103	MISSOULA	MT	598024328	
08:27:37am	83.5	Rt.	1-9	209235204050000	Field Access		334654	2969	US HIGHWAY 93 LOLO 59847	JACQUELINE A JOHNSON	PO BOX 265	LOLO	MT	598470265	
08:28:38am	83.5	Rt.	1-9	209235204050000	Field Access		334654	2969	US HIGHWAY 93 LOLO 59847	JACQUELINE A JOHNSON	PO BOX 265	LOLO	MT	598470265	
08:29:23am	83.5	Rt.	1-9	209235204050000	Field Access		334654	2969	US HIGHWAY 93 LOLO 59847	JACQUELINE A JOHNSON	PO BOX 265	LOLO	MT	598470265	
09:19:58am	83.6	Lt.	1-12	209235208080000	Commercial		19646	609	US HIGHWAY 93 59847	FRANK B MILLER JR	PO BOX 723	LOLO	MT	598470723	
09:17:28am	83.6	Lt.	1-14	209235208060000	Commercial		51139	1168	11625 US HIGHWAY 93 59847	J E & MARION E MCHATTON	PO BOX 746	LOLO	MT	598470746	
09:19:02am	83.6	Lt.	1-14	209235208060000	Commercial		51139	1168	11625 US HIGHWAY 93 59847	J E & MARION E MCHATTON	PO BOX 746	LOLO	MT	598470746	
09:16:11am	83.6	Lt.	1-15	209235208050000	Commercial		43543	838	11555 US HIGHWAY 93 59847	CHRISTOPHER M & DEBBIE SLATER	5205 GOODAN LN	MISSOULA	MT	598088653	
08:30:51am	83.6	Rt.	N/A		Public Road										
08:32:06am	83.6	Rt.	1-16,1-17	209235207010000	Field Access	(1-16)	16182	517	102 ANN'S LN 59847	RANDY MOCK	1308 FOOTHILL RD	KALISPELL	MT	59901	
				209235207140000		(1-17)	13802	485	197 ANN'S LN 59847	RANDY MOCK	1308 FOOTHILL RD	KALISPELL	MT	59901	
09:12:14am	83.7	Lt.	1-23	209226301080000	Other		345144	2526	US HIGHWAY 93 59847	LOLO SCHOOL DISTRICT #7	11395 US HIGHWAY 93 S	LOLO	MT	598479616	SCHOOL ACCESS
09:13:28am	83.7	Lt.	1-23	209226301080000	Other		345144	2526	US HIGHWAY 93 59847	LOLO SCHOOL DISTRICT #7	11395 US HIGHWAY 93 S	LOLO	MT	598479616	SCHOOL ACCESS
09:14:25am	83.7	Lt.	1-18	209235208120000	Commercial		3869	255							UTILITY STATION
08:33:41am	83.7	Rt.	N/A		Public Road										
08:34:46am	83.7	Rt.	1-22	209226228010000	Commercial		34338	749	11400 US HIGHWAY 93 59847	JOHN & CINDY MANDELL	11400 US 93 HIGHWAY	LOLO	MT	598471282	
09:08:43am	83.8	Lt.	1-27	209226301010000	Commercial		56234	967	11225 US HIGHWAY 93 59847	PRAMUKH INC	2600 FAIRVIEW AVE	BOISE	ID	837026720	
09:10:10am	83.8	Lt.	1-21	209226301080000	Other		345144	2526	US HIGHWAY 93 59847	LOLO SCHOOL DISTRICT #7	11395 US HIGHWAY 93 S	LOLO	MT	598479616	SCHOOL ACCESS
08:36:14am	83.8	Rt.	1-22	209226228010000	Commercial		34338	749	11400 US HIGHWAY 93 59847	JOHN & CINDY MANDELL	11400 US 93 HIGHWAY	LOLO	MT	598471282	
08:37:10am	83.8	Rt.	N/A		Public Road										
08:38:17am	83.8	Rt.	1-26	209226227030000	Commercial		215571	4219	LOLO SHOPPING CTR 59847	CONDO MASTERS	APPRAISAL/ASSESSMENT OFFICE	MISSOULA	MT	598024216	
09:04:31am	83.9	Lt.	1-31	209226301030000	Commercial		20574	622	US HIGHWAY 93 59847	POWER WASH CORP	PO BOX 386	LOLO	MT	598470386	
09:05:23am	83.9	Lt.	1-29	209226301020000	Commercial		55921	965	US HIGHWAY 93 59847	GRIZZLY DEVELOPMENT CO	4527 RIO VISTA DR	MISSOULA	MT	598031038	
09:07:09am	83.9	Lt.	1-29	209226301020000	Commercial		55921	965	US HIGHWAY 93 59847	GRIZZLY DEVELOPMENT CO	4527 RIO VISTA DR	MISSOULA	MT	598031038	
08:41:18am	83.9	Rt.	1-30	209226227020000	Commercial		21790	595	11100 US HIGHWAY 93 59847	VERNON F & JANIS L STIRM	15600 EDDY LN	CLINTON	MT	598259707	
08:43:28am	83.9	Rt.	N/A		Public Road										
09:01:23am	84.0	Lt.	1-34,1-35	209226302020000	Commercial	(1-34)	46766	873	US HIGHWAY 93 59847	TOWN PUMP O MAT OF CUTBANK INC	600 S MAIN ST	BUTTE	MT	597012534	
				209226302030000		(1-35)	52701	1224	10905 US HIGHWAY 93 59847	RUTH A & SUSAN G DENNSION	PO BOX 1660	MISSOULA	MT	598061660	
09:03:13am	84.0	Lt.	N/A		Public Road										
08:44:50am	84.0	Rt.	1-32	209226201010000	Commercial		20264	583	100 GLACIER DR 59847	LEONARD O & PHYLLIS M SENECHAL	MAIL TO: BIRDSONG MALCOLM W 100 GLACIER DRIVE	LOLO	MT	59847	
08:46:38am	84.0	Rt.	1-33	209226102060000	Commercial		82583	1178	US HIGHWAY 93 59847	FARMERS STATE BANK	PO BOX 190	VICTOR	MT	598750190	
08:51:08am	84.1	Lt.	1-39	209226302040000	Commercial		908101	4257	10805 US HWY 93 59847	NORMA ROSSIGNOL	PO BOX 128	LOLO	MT	598470128	
08:53:46am	84.1	Lt.	1-38	209226302070000	Commercial		42199	1052	US HIGHWAY 93 59847	TOWN PUMP O MAT OF CUTBANK INC	600 S MAIN ST	BUTTE	MT	597012534	
08:57:06am	84.1	Lt.	1-36	209226302050000	Commercial		42215	1071	10915 US HIGHWAY 93 59847	TOWN PUMP O MAT OF CUTBANK INC	600 S MAIN ST	BUTTE	MT	597012534	
08:48:31am	84.1	Rt.	1-33,1-37	209226102060000	Commercial	(1-33)	82583	1178	US HIGHWAY 93 59847	FARMERS STATE BANK	PO BOX 190	VICTOR	MT	598750190	
				209226102040000		(1-37)	302835	4285	10870 US HIGHWAY 93 59847	RICHARD & ROBERTA SU ROSSIGNOL	PO BOX 369	LOLO	MT	598470369	
12:57:56pm	84.3	Rt.	1-37, 1-40	209226102040000	Field Access	(1-37)	302835	4285	10870 US HIGHWAY 93 59847	RICHARD & ROBERTA SU ROSSIGNOL	PO BOX 369	LOLO	MT	598470369	
				209226102020000		(1-40)	2729160	7561	NONE	PAUL ROSSIGNOL	PO BOX 23	LOLO	MT	598470023	
12:59:54pm	84.8	Rt.	1-42,1-44	209226102010000	Residential	(1-42)	1001300	4506	10250 US HWY 93 59847	J E & MARION E MCHATTON	PO BOX 746	LOLO	MT	598470746	
				209223101030000		(1-44)	1360770	4589	9900 US HWY 93 59847	BONNIE J FORD	9450 BUTLER CREEK RD	MISSOULA	MT	598089080	
04:31:51pm	84.9	Lt.	N/A		Public Road										
04:29:29pm	85.3	Lt.	1-49,1-50	209222203040000	Residential	(1-49)	731661	4084	NONE	KENNETH W & SUSAN K ALLEN	PO BOX 819	MISSOULA	MT	598060819	
				209222204070000		(1-50)	927434	4513	9325 BIRD LN 59847	LIBERTY COVE INC	2725 CONTOUR RD	MISSOULA	MT	598023374	
01:06:35pm	85.3	Rt.	1-51	209222301030000	Field Access		8769050	12950	NONE	EARL M & BERTHA PRUYN	4527 RIO VISTA DR	MISSOULA	MT	598031038	
01:10:42pm	85.4	Rt.	1-51	209222301030000	Field Access		8769050	12950	NONE	EARL M & BERTHA PRUYN	4527 RIO VISTA DR	MISSOULA	MT	598031038	
04:23:18pm	85.6	Lt.	N/A		Public Road										
04:27:48pm	85.6	Lt.	N/A		Public Road										
04:20:32pm	86.1	Lt.	1-60, 1-60A	209222101190000	Residential		1755540	6565	BITTERROOT RD 59847	DAVID GLENN KIRKALDIE	HC 63 BOX 5035	DODSON	MT	595249701	
					Residential				BITTERROOT RD 59847	RICHARD & YVON GAY					
04:16:34pm	86.3	Lt.	1-62, 1-63	209215201010000	Other		1764230	5283	NONE	NATURAL RESOURCES & CONSERVATION	PO BOX 201601	HELENA	MT	596201601	
				209215401020000			275429	2818	NONE	NATURAL RESOURCES & CONSERVATION	PO BOX 201601	HELENA	MT	596201601	
01:18:40pm	87.1	Rt.	N/A	209215901980000	Other					MONTANA LINK RAIL					MONTANA RAIL LINK ACCESS
01:23:53pm	87.1	Rt.	N/A		Other					MONTANA DEPARTMENT OF TRANSPORTATION					ABANDONED WEIGH STATION
04:13:32pm	87.2	Lt.	N/A		Public Road										
01:27:25pm	87.2	Rt.	N/A		Other					MONTANA DEPARTMENT OF TRANSPORTATION					ABANDONED WEIGH STATION
01:28:32pm	87.5	Rt.	N/A		Other					MONTANA DEPARTMENT OF TRANSPORTATION					
04:11:00pm	87.7	Lt.	1-75	209210107110000	Residential		73381	1118	BITTERROOT RD 59804	D & D RENTALS	900 MARSHALL ST	MISSOULA	MT	598013612	
04:09:43pm	87.7	Lt.	1-77	209210107100000	Residential		100261	1511	7009 BITTERROOT RD 59804	DARRYL B & DEBRA R WATSON	7009 BITTERROOT ROAD	MISSOULA	MT	598030000	
	87.7	Rt.	1-76	209210401050000	Field Access		26066	1070	US HIGHWAY 93 59804	BLUE MOUNTAIN WATER DEV ASSOC	7300 COCHISE DR	MISSOULA	MT	598049708	
04:03:49pm	87.8	Lt.	N/A		Public Road										
04:07:55pm	87.8	Lt.	1-78	209210107090000	Residential		95381	1543	7001 BITTERROOT RD 59804	WILLIAM E & GARNET R KINNEY	289 COURVILLE TRL	POLSON	MT	598609016	
04:05:57pm	87.8	Lt.	1-80	209210107080000	Residential		437481	3170	6055 BITTERROOT RD 59804	KEITH R & MARIE SWINGER	6055 BITTERROOT ROAD	MISSOULA	MT	598040000	
01:34:13pm	87.8	Rt.	1-79	209210401020000	Commercial		171883	2446	6150 US HIGHWAY 93 59804	K W S LLP	6150 US HIGHWAY 93 S	MISSOULA	MT	598049711	
01:37:02pm	87.8	Rt.	1-82	209210401040000	Residential		180829	1724	6000 US HIGHWAY 93 59804	NORMAN E & EVA A CARLSON	6000 US HIGHWAY 93 S	MISSOULA	MT	598049762	
04:01:09pm	87.9	Lt.	1-83	209210101090000	Residential		140404	1607	6000 HAYES CREEK RD 59804	GARY EDWARD COLLINS	6000 HAYES CREEK RD	MISSOULA	MT	598049738	
01:39:26pm	87.9	Rt.	1-82	209210401040000	Residential		180829	1724	6000 US HIGHWAY 93 59804	NORMAN E & EVA A CARLSON	6000 US HIGHWAY 93 S	MISSOULA	MT	598049762	
01:41:26pm	87.9	Rt.	1-82	209210401040000	Residential		180829	1724	6000 US HIGHWAY 93 59804	NORMAN E & EVA A CARLSON	6000 US HIGHWAY 93 S	MISSOULA	MT	598049762	
01:43:19pm	87.9	Rt.	1-84	209210401060000	Commercial		87995	1368	5990 US HIGHWAY 93 59804	ORA WAYNE JOHNSON	PO BOX 658	RIRIE	ID	834430658	
03:56:43pm	88.0	Lt.	1-91,1-92	209210101070000	Residential	(1-91)	34216	854	5835 US HIGHWAY 93 59804	DANIEL L & DARCY A ERMATINGER	401 E BECKWITH AVE	MISSOULA	MT	598014426	
				209210101060000		(1-92)	18331	568	6719 BITTERROOT RD 59804	JOHN D REEVES	5805 US HIGHWAY 93 S	MISSOULA	MT	598049290	
03:59:12pm	88.0	Lt.	1-87	209210101080000	Residential		55985	1042	5875 US HWY 93 59804	DAVID R & SANDRA R JOHNSON	5875 US HIGHWAY 93 S	MISSOULA	MT	598049290	
01:45:24pm	88.0	Rt.	1-88,1-89,1-90	209210401110000	Commercial	(1-88)	43918	848	5970 HWY 93 S 59804	MICHAEL L & MONICA L CASSIDY	5950 US HIGHWAY 93 S	MISSOULA	MT	598049291	
				209210401090000		(1-89)	43690	846	NONE	MICHAEL L & MONICA L CASSIDY	5950 US HIGHWAY 93 S	MISSOULA	MT	598049291	
				209210401130000		(1-90)	161520	2178	5930 US HWY 93 59803	MISSOULA HUMANE SOCIETY	1105 CLARK FORK DR	MISSOULA	MT	598085113	
03:53:11pm	88.1	Lt.	1-95	209210101050000	Commercial		119274	1821	5795 US HIGHWAY 93 59804	NORDIC PINES A MONTANA CORP	PO BOX 3421	MISSOULA	MT	598063421	
03:54:35pm	88.1	Lt.	1-95	209210101050000	Commercial		119274	1821	5795 US HIGHWAY 93 59804	NORDIC PINES A MONTANA CORP	PO BOX 3421	MISSOULA	MT	598063421	
01:46:58pm	88.1	Rt.	1-93	209210401080000	Commercial		73514	1118	5900 US HWY 93 59803	LLOYDE & JOY ECKLEY	10370 LAKEWOOD PL	LOLO	MT	598479729	
01:48:43pm	88.1	Rt.	1-94	209210401100000	Commercial		94279	1656	5850 US HIGHWAY 93 59804	STEVEN D & JANINE PETERS	5850 US HIGHWAY 93 S	MISSOULA	MT	598049289	
	88.1	Rt.	1-94, 1-96	209210401100000			94279	1656	5850 US HIGHWAY 93 59804	STEVEN D & JANINE PETERS	5850 US HIGHWAY 93 S	MISSOULA	MT	598049289	
01:49:55pm	88.1	Rt.		209210401120000	Residential		116878	1546	5810 US HWY 93 59801	J E & MARION E MCHATTON	PO BOX 746	LOLO	MT	598470746	
01:51:21pm	88.1	Rt.	1-97	209210401160000	Residential		80435	1370	5800 US HIGHWAY 93 59804	MICHAEL G & DEBORAH L CRAVEN	5800 US HIGHWAY 93 S	MISSOULA	MT	598049289	
03:51:02pm	88.2	Lt.	1-98,1-99,1-100	209210101040000	Residential	(1-98)	79947	1391	5725 US HIGHWAY 93 59804	ROBERT W KEYSER JR	MAIL TO: CARLSON DAN E BITTERROOT ROAD	MISSOULA	MT	598049288	
				209210101030000		(1-99)	26910	650	5705 US HIGHWAY 93 59804	JAMES R SCHLEHUBER	840 17TH ST, APT. 312	SAN DIEGO	CA	921016667	
				209210101020000		(1-100)	484538	3533	5655 US HIGHWAY 93 59804	DAVID K & DIANA LEE CLARK	5655 US HIGHWAY 93 S	MISSOULA	MT	598049285	
03:47:48pm	88.2	Lt.	1-98,1-99,1-100,1-101	209210101040000	Residential	(1-98)	79947	1391	5725 US HIGHWAY 93 59804	ROBERT W KEYSER JR	MAIL TO: CARLSON DAN E BITTERROOT ROAD	MISSOULA	MT	598049288	

				209210101030000		(1-99)	26910	650	5705 US HIGHWAY 93 59804	JAMES R SCHLEHUBER	840 17TH ST, APT. 312	SAN DIEGO	CA	921016667
				209210101020000		(1-100)	484538	3533	5655 US HIGHWAY 93 59804	DAVID K & DIANA LEE CLARK	5655 US HIGHWAY 93 S	MISSOULA	MT	598049285
				209210101010000		(1-101)	43521	843	5605 US HIGHWAY 93 59804	ELOISE A SHAFFNER	5605 US HIGHWAY 93 S	MISSOULA	MT	598049285
03:45:40pm	88.6	Lt.	N/A		Public Road									
03:43:06pm	88.7	Lt.	1-107	209202306100000	Commercial		37613	869	5275 HIGHWAY 93 59804	DAVID & HEIDI GJEFLE	MAIL TO: 1ST INTERSTATE BANK	MISSOULA	MT	598081314
03:41:36pm	88.7	Lt.	1-108	209202306080000	Commercial		43349	965	5175 US HIGHWAY 93 59804	PHILLIP G & BETTY L CROMWELL	5175 HWY 93 SOUTH	MISSOULA	MT	598040000
03:38:26pm	88.7	Lt.	1-109	209202306070000	Commercial		73778	1164	5145 US HIGHWAY 93 59804	DANIEL L & DEBRA S TUDAHL	5165 US HIGHWAY 93 S	MISSOULA	MT	598049283
03:36:55pm	88.8	Lt.	1-110	209202306060000	Commercial		153276	2205	5185 US HIGHWAY 93 59804	MICHIGAN MOBILE HOME PARKS LLC	720 WEST BLUE EAGLE LANE	PHOENIX	AZ	850860000
03:35:13pm	88.8	Lt.	1-111	209202306050000	Commercial		130448	1841	US HIGHWAY 93 59804	BLUE MOUNTAIN BUSINESS CENTER	259 MARIANPARK WAY	HAMILTON	MT	598403415
03:33:19pm	88.8	Lt.	1-111,1-115,1-116	209202306050000	Commercial	(1-111)	130448	1841	US HIGHWAY 93 59804	BLUE MOUNTAIN BUSINESS CENTER	259 MARIANPARK WAY	HAMILTON	MT	598403415
				209202306040000		(1-115)	94377	1336	5055 HIGHWAY 93 59804	JAMES M MCDONALD	9250 MILLER CREEK RD	MISSOULA	MT	598039764
				209202306030000		(1-116)	24529	755	5055 HIGHWAY 93 59804	JAMES M MCDONALD	9250 MILLER CREEK RD	MISSOULA	MT	598039764
01:53:08pm	88.8	Rt.	1-112,1-113,1-114,1-117,1-118,1-119	209202401010000	Commercial	(1-112)	152460	2319	NONE	FISH WILDLIFE & PARKS DEPARTMENT	PO BOX 200701	HELENA	MT	596200701
				209202401020000		(1-113)	19300	583	5250 HIWAY 93 SO 59804	CHARLES D & BETTY JUNE BRISTOW	5180 US HIGHWAY 93 S	MISSOULA	MT	598049725
				209202401030000		(1-114)	29110	699	5150 HIWAY 93 SO 59804	RANDALL K & GARY D BRAY	4270 EDGEWOOD DR	MISSOULA	MT	598029621
				209202401040000		(1-117)	97219	1297	5120 HIGHWAY 93 SOUTH 59804	RITA L MEDLINGER TRUSTEE	PO BOX 4731	MISSOULA	MT	598064731
				209202401050000		(1-118)	93165	1558	5050 US HIGHWAY 93 59804	MICHAEL & SANDRA ZARBOLIAS	PO BOX 1886	MISSOULA	MT	598061886
				209202401060000		(1-119)	208901	2016	5000 US HIGHWAY 93 59804	DIAMOND S INC (THE)	PO BOX 2015	MISSOULA	MT	598062015
02:03:53pm	89.0	Rt.	1-112,1-113,1-114,1-117,1-118,1-119	209202401010000	Commercial	(1-112)	152460	2319	NONE	FISH WILDLIFE & PARKS DEPARTMENT	PO BOX 200701	HELENA	MT	596200701
				209202401020000		(1-113)	19300	583	5250 HIWAY 93 SO 59804	CHARLES D & BETTY JUNE BRISTOW	5180 US HIGHWAY 93 S	MISSOULA	MT	598049725
				209202401030000		(1-114)	29110	699	5150 HIWAY 93 SO 59804	RANDALL K & GARY D BRAY	4270 EDGEWOOD DR	MISSOULA	MT	598029621
				209202401040000		(1-117)	97219	1297	5120 HIGHWAY 93 SOUTH 59804	RITA L MEDLINGER TRUSTEE	PO BOX 4731	MISSOULA	MT	598064731
				209202401050000		(1-118)	93165	1558	5050 US HIGHWAY 93 59804	MICHAEL & SANDRA ZARBOLIAS	PO BOX 1886	MISSOULA	MT	598061886
				209202401060000		(1-119)	208901	2016	5000 US HIGHWAY 93 59804	DIAMOND S INC (THE)	PO BOX 2015	MISSOULA	MT	598062015
03:26:13pm	89.1	Lt.	1-122, 1-123	209202201080000	Commercial		155716	3546	NONE	NEIL R & VIRGINIA MILLER	3841 BROOKS ST	MISSOULA	MT	598047332
				209202201040000			345059	2474	NONE	PB & J INVESTMENT LLC - WES & CATHY JO FINCH	PO BOX 757	MISSOULA	MT	59806
03:23:01pm	89.2	Lt.	1-126,1-127,1-128,1-129	209202101010000	Commercial	(1-126)	174097	1714	4805 US HIGHWAY 93 59804	BOYD & CAROL SODERMAN	1761 PARK GARDEN RD	GREAT FALLS	MT	59404
				209202101020000		(1-127)	141427	1505	NONE	BOYD & CAROL SODERMAN	1761 PARK GARDEN RD	GREAT FALLS	MT	59404
				209202101030000		(1-128)	87022	1322	4425 BITTERROOT RD 59804	CHRIS C & PEGGY E GERBER	4500 TRANSOLTIONS LANE	MISSOULA	MT	59804
				209202101040000		(1-129)	236349	2452	4425 BITTERROOT RD 59801	TIMOTHY N STONE	4425 BITTERROOT RD	MISSOULA	MT	598040000
02:05:35pm	89.2	Rt.	1-124,1-125	209202401070000	Commercial	(1-124)	151599	1594	4810 HIGHWAY 93 59804	KEVIN & LYNDA GARDNER	PO BOX 3941	MISSOULA	MT	598063941
				209202401080000		(1-125)	151584	1576	4810 HIGHWAY 93 59804	KEVIN & LYNDA GARDNER	PO BOX 3941	MISSOULA	MT	598063941
03:17:30pm	89.3	Lt.	1-131	209202101060000	Commercial		9467740	19292	NONE	MARY QUINN YUHAS	4301 US HIGHWAY 93 S	MISSOULA	MT	598049275
02:08:37pm	89.3	Rt.	1-130	209202401090000	Residential		1649720	6520	4700 US HIGHWAY 93 59804	THEODORE W BROSAM	4700 US HIGHWAY 93 S	MISSOULA	MT	598049794
03:11:48pm	89.8	Lt.	1-134	209201210020000	Commercial		2734570	6868	NONE	STERLING PROPERTIES LLC	1729 ELDON LN #1	MISSOULA	MT	598049274
03:14:24pm	89.8	Lt.	1-134	209201210020000	Commerical		2734570	6868	NONE	STERLING PROPERTIES LLC	1729 ELDON LN #1	MISSOULA	MT	598049274
02:11:23pm	89.8	Rt.	1-135, 1-136	209201211010000	Residential	(1-135)	1503880	5958	NONE	ARTHUR G CRUM	PO BOX 1660	MISSOULA	MT	598061660
				209201211020000		(1-136)	42764	842	NONE	O'DEANE JR & EVELYN J MUIR	4320 US HIGHWAY 93 S	MISSOULA	MT	598049717
03:29:19pm	88.9	Lt.	N/A		Public Road		2734570	6868						
03:08:47pm	90.0	Lt.	1-134	209201210020000	Field Access		2734570	6868	NONE	STERLING PROPERTIES LLC	1729 ELDON LN #1	MISSOULA	MT	598049274
03:06:33pm	90.2	Lt.	1-138	209201201010000	Commercial		370244	2628	HIGHWAY 93 59804	MCCUE MANAGEMENT LLP	PO BOX 18185	MISSOULA	MT	598088185

ACCESS CONTROL PLAN

NH 0002(606), CN 4776 US 93 N&S LOLO TO MISSOULA

* From the Institute of Traffic Engineers (ITE) Trip Generation Manual - 7th Edition, where applicable.
** Assumed legal easement or access agreement

Access locations are subject to engineering feasibility review and design.

Parcel ID	RP (MP)	Side	Access Type	ITE Land Use Code *	Quantity	Unit *	Estimated Traffic Volume* (Trips per Day)	Parcel Address	Access Classification	Recommendation	Comments
N/A	83.40	Lt.	Public	---	---	---	---	US 12	Developed	Open	Paved approach with signal
1-1	83.41	Rt.	Commercial	946 Gas Station w/Market and Car Wash	12.0	Positions	1834	11880 US HIGHWAY 93 59847	Developed	Open	Access to gas station
1-1	83.43	Rt.	Commercial	946 Gas Station w/Market and Car Wash	12.0	Positions	1834	11880 US HIGHWAY 93 59847	Developed	Open	Access to gas station
1-1	83.47	Rt.	Commercial	---	---	---	---	11880 US HIGHWAY 93 59847	Developed	Close	Multiple access with access via Lewis & Clark Dr
1-2	83.43	Lt.	Commercial	932 High-Turnover Restaurant	5.0	KSF	636	11885 HWY 93 SO-LOLO 59847	Developed	Open	Access to adjacent property (1-3) parking **
1-3	83.44	Lt.	Commercial	---	---	---	---	11885 HWY 93 SO-LOLO 59847	Developed	Close	Access via approach for Property 1-2 **
1-3	83.45	Lt.	Commercial	---	---	---	---	11885 HWY 93 SO-LOLO 59847	Developed	Close	Access via approach for Property 1-4 **
1-4	83.46	Lt.	Commercial	932 High-Turnover Restaurant 817 Nursery	5.0 0.5	KSF KSF	654	11875 HWY 93 SO-LOLO 59847	Developed	Open	Access to flower shop & parking for Property 1-3 **
1-5	83.48	Lt.	Commercial	---	---	---	---	11865 US HWY 93 59847	Developed	Close	Access via Lewis & Clark Dr
N/A	83.50	Lt.	Public	---	---	---	---	Lewis and Clark Dr	Developed	Open	Paved approach with stop sign
N/A	83.51	Rt.	Public	---	---	---	---	Lewis and Clark Dr	Developed	Open	Paved approach with stop sign
1-6	83.52	Lt.	Commercial	---	---	---	---	11725 US HIGHWAY 93 59847	Developed	Close	Access via Lewis & Clark Dr
1-7	83.53	Rt.	Commercial	---	---	---	---	11700 LEWIS & CLARK DR 59847	Developed	Close	Access via Lewis & Clark Dr
1-8	83.54	Lt.	Residential	240 Mobile Home Park	15.0	DU	75	US HIGHWAY 93 59847	Developed	Open	Access to mobile home park
1-9	83.55	Rt.	Field	---	---	---	---	US HIGHWAY 93 LOLO 59847	Developed	Close	Multiple accesses
1-9	83.56	Rt.	Field	---	---	---	---	US HIGHWAY 93 LOLO 59847	Developed	Close	Multiple accesses
1-9	83.58	Rt.	Field	---	---	---	< 10	US HIGHWAY 93 LOLO 59847	Developed	Open	Access to field
1-10	83.54	Lt.	Commercial	942 Automobile Care Center	1.0	KSF	16	11705 US HIGHWAY 93 59847	Developed	Open	Access to auto shop
1-10	83.55	Lt.	Commercial	---	---	---	---	11705 US HIGHWAY 93 59847	Developed	Close	Multiple accesses
1-11	83.57	Lt.	Commercial	---	---	---	---	US HIGHWAY 93 LOLO 59847	Developed	Close	Multiple accesses
1-11	83.58	Lt.	Commercial	843 Automobile Parts Sales	1.0	KSF	62	US HIGHWAY 93 LOLO 59847	Developed	Open	Access to equipment repair shop
1-12	83.60	Lt.	Commercial	814 Specialty Retail Center	0.2	KSF	9	US HIGHWAY 93 59847	Developed	Open	Access to print shop
1-13	83.61	Rt.	Field	---	---	---	---	101 ANN'S LN 59847	Developed	No Direct Access	Access via Ann's Lane
N/A	83.64	Rt.	Public	---	---	---	---	Anns Ln	Developed	Open	Paved approach with stop sign
1-14	83.61	Lt.	Commercial	---	---	---	---	11625 US HIGHWAY 93 59847	Developed	Close	Multiple access with access via new shared access
1-14	83.64	Lt.	Commercial	560 Church 941 Quick Lubrication Vehicle Shop	2.0 3.0	KSF Positions	193	11625 US HIGHWAY 93 59847	Developed	Open	New shared access with Property 1-15
1-15	83.65	Lt.	Commercial	---	---	---	---	11555 US HIGHWAY 93 59847	Developed	Close	Access via new shared access with Property 1-14
1-16,1-17	83.68	Rt.	Field	---	---	---	---	102 ANN'S LN 59847	Developed	Close	Access via Ann's Lane South
			Field	---	---	---	---	197 ANN'S LN 59847			Access via Ann's Lane North
1-18	83.69	Lt.	Commercial	---	---	---	< 10	US HIGHWAY 93 59847	Developed	Open	Access to utility station
1-19	83.71	Lt.	Commercial	---	---	---	---	US HIGHWAY 93 LOLO 59847	Developed	No Direct Access	Access via approach for Property 1-21 **
N/A	83.71	Rt.	Public	---	---	---	---	Anns Ln	Developed	Open	Paved approach with stop sign
1-20	83.72	Rt.	Commercial	---	---	---	< 10	US HIGHWAY 93 LOLO 59847	Developed	Open	Access to future development
1-21	83.74	Lt.	Commercial	522 Middle School	500.0	Students	810	US HIGHWAY 93 59847	Developed	Open	Access to school and Property 1-19
1-22	83.77	Rt.	Commercial	933 Fast Food Restaurant	0.5	KSF	358	11400 US HIGHWAY 93 59847	Developed	Open	Access to ice cream shop
1-22	83.79	Rt.	Commercial	---	---	---	---	11400 US HIGHWAY 93 59847	Developed	Close	Multiple access with access via Tyler Way
1-23	83.75	Lt.	Commercial	---	---	---	---	US HIGHWAY 93 59847	Developed	Close	Multiple access with access via new access
1-23	83.79	Lt.	Commercial	520 Elementary School	500.0	Students	645	US HIGHWAY 93 59847	Developed	Open	Access to school
1-23	83.83	Lt.	Commercial	520 Elementary School	500.0	Students	645	US HIGHWAY 93 59847	Developed	New	Recommended right-in, right-out access to school
N/A	83.78	Rt.	Public	---	---	---	---	Tyler Way	Developed	Open	Paved approach with signal
1-24	83.81	Rt.	Commercial	---	---	---	---	US HIGHWAY 93 59847	Developed	No Direct Access	Access via Tyler Way
1-25	83.84	Rt.	Commercial	---	---	---	---	11350 US HIGHWAY 93 59847	Developed	No Direct Access	Access through shopping center **
1-26	83.85	Rt.	Commercial	820 Shopping Center	50.0	KSF	2147	LOLO SHOPPING CTR 59847	Developed	Open	Access to shopping center and Properties 1-25 and 1-28 **
1-27	83.86	Lt.	Commercial	310 Hotel	60.0	Rooms	490	11225 US HIGHWAY 93 59847	Developed	Open	Access to hotel
1-28	83.89	Rt.	Commercial	---	---	---	---	LOLO SHOPPING CTR 59847	Developed	No Direct Access	Access through shopping center **
1-29	83.90	Lt.	Commercial	---	---	---	< 10	US HIGHWAY 93 59847	Developed	Open	Access to parking
1-29	83.94	Lt.	Commercial	---	---	---	---	US HIGHWAY 93 59847	Developed	Close	Multiple access
1-30	83.94	Rt.	Commercial	932 High-Turnover Restaurant	5.0	KSF	636	11100 US HIGHWAY 93 59847	Developed	Open	Access to restaurants and bank **
1-31	83.93	Lt.	Commercial	---	---	---	---	US HIGHWAY 93 59847	Developed	Close	Access via Ridgeway Dr
N/A	83.95	Rt.	Public	---	---	---	---	Glacier Drive	Developed	Open	Paved approach with signal
N/A	83.96	Lt.	Public	---	---	---	---	Ridgeway Drive	Developed	Open	Paved approach with signal
1-32	83.98	Rt.	Commercial	---	---	---	---	100 GLACIER DR 59847	Developed	Close	Access via Glacier Dr and new shared access with Property 1-33
1-32,1-33	83.99	Rt.	Commercial	720 Medical-Dental Office	2.0	KSF	72	100 GLACIER DR 59847	Developed	New	Shared access to business
			Commercial	912 Drive-In Bank	3.0	KSF	739	US HIGHWAY 93 59847			Shared access to bank
1-33	84.00	Rt.	Commercial	---	---	---	---	US HIGHWAY 93 59847	Developed	Close	Access via new shared access with Property 1-32
1-34,1-35	84.01	Lt.	Commercial	946 Gas Station w/Market and Car Wash	12.0	Positions	1834	US HIGHWAY 93 59847	Developed	Open	Access to gas station
			Residential	210 Single Family Detached Housing	1.0	DU	10	10905 US HIGHWAY 93 59847			Access to residence
1-36	84.06	Lt.	Commercial	---	---	---	---	10915 US HIGHWAY 93 59847	Developed	Close	Access via new shared access with Property 1-38
1-33,1-37	84.06	Rt.	Commercial	912 Drive-In Bank	3.0	KSF	739	US HIGHWAY 93 59847	Developed	Open	Access to bank
			Commercial	814 Specialty Retail Center	0.5	KSF	22	10870 US HIGHWAY 93 59847			Access to shopping center
1-36,1-38	84.07	Lt.	Commercial	---	---	---	< 10	10915 US HIGHWAY 93 59847	Developed	New	Access to open lot
			Commercial	---	---	---	< 10	US HIGHWAY 93 59847			Access to open lot
1-38	84.08	Lt.	Commercial	---	---	---	---	US HIGHWAY 93 59847	Developed	Close	Access via new shared access with Property 1-36
1-39	84.11	Lt.	Residential	210 Single Family Detached Housing	1.0	DU	10	10805 US HWY 93 59847	Developed	Open	Future emergency access only
1-37, 1-40	84.31	Rt.	Field	---	---	---	< 10	10870 US HIGHWAY 93 59847	Intermediate	Open	Access to field
			Field	---	---	---	< 10	NONE			Access to field
1-41	84.50	Lt.	Residential	---	---	---	---	NONE	Intermediate	No Direct Access	Access via Ridgeway Drive
1-42,1-44	84.86	Rt.	Residential	---	---	---	---	10250 US HWY 93 59847	Intermediate	Close	Access via new shared access across from Valley Grove Drive
			Residential	---	---	---	---	9900 US HWY 93 59847			Access via new shared access across from Valley Grove Drive
1-42,1-44	84.89	Rt.	Residential	210 Single Family Detached Housing	1.0	DU	10	10250 US HWY 93 59847	Intermediate	New	Access to residence

Project ID: NH 0002(606)
Designation: US 93 - Lolo to Missoula
Missoula County, Montana

ACCESS CONTROL PLAN
NH 0002(606), CN 4776 US 93 N&S LOLO TO MISSOULA

* From the Institute of Traffic Engineers (ITE) Trip Generation Manual - 7th Edition, where applicable.
** Assumed legal easement or access agreement

Access locations are subject to engineering feasibility review and design.

Parcel ID	RP (MP)	Side	Access Type	ITE Land Use Code *	Quantity	Unit *	Estimated Traffic Volume* (Trips per Day)	Parcel Address	Access Classification	Recommendation	Comments
1-42,1-44	84.89	Rt.	Residential	210 Single Family Detached Housing	2.0	DU	19	9900 US HWY 93 59847	Intermediate	New	Access to residence
1-43	84.80	Lt.	Commercial	---	---	---	---	10225 US HIGHWAY 93 59847	Intermediate	No Direct Access	Access via Valley Grove Drive
N/A	84.90	Lt.	Public	---	---	---	---	Valley Grove Dr	Intermediate	Open	Paved approach with stop sign
1-45	84.93	Lt.	Commercial	---	---	---	---	US HIGHWAY 93 59847	Intermediate	No Direct Access	Access via Valley Grove Drive
1-46	84.97	Lt.	Commercial	---	---	---	---	9825 US HIGHWAY 93 59847	Intermediate	No Direct Access	Access via Valley Grove Drive through Property 1-45 **
1-47	85.02	Lt.	Field	---	---	---	---	NONE	Intermediate	No Direct Access	Specific access control and design to be determined
1-48	85.07	Lt.	Field	---	---	---	---	NONE	Intermediate	No Direct Access	Specific access control and design to be determined
1-49,1-50	85.28	Lt.	Residential	210 Single Family Detached Housing	1.0	DU	10	NONE	Intermediate	Open	Specific access control and design to be determined
			Residential	210 Single Family Detached Housing	1.0	DU	10	9325 BIRD LN 59847			Specific access control and design to be determined
1-51	85.29	Rt.	Field	---	---	---	---	NONE	Intermediate	Close	Multiple access to field
1-51	85.45	Rt.	Field	---	---	---	< 10	NONE	Intermediate	Open	Access to field
1-52	85.48	Lt.	Field	---	---	---	---	9325 BIRD LN 59847	Intermediate	No Direct Access	Specific access control and design to be determined
N/A	85.60	Lt.	Public	---	---	---	---	Bird Lane	Intermediate	Close	Duplicate intersection approach
N/A	85.62	Lt.	Public	---	---	---	---	Bird Lane	Intermediate	Open	Recommended right-in, right-out access/Paved approach with stop sign
1-53	85.63	Lt.	Residential	---	---	---	---	9325 BIRD LN 59847	Intermediate	No Direct Access	Specific access control and design to be determined
1-54	85.60	Lt.	Residential	---	---	---	---	9100 BIRD LN 59847	Intermediate	No Direct Access	Access via Bird Lane
1-55	85.69	Lt.	Residential	---	---	---	---	9050 BIRD LN 59847	Intermediate	No Direct Access	Access via Bird Lane
1-56	85.73	Lt.	Residential	---	---	---	---	9000 BIRD LN 59847	Intermediate	No Direct Access	Access via Bird Lane
1-57	85.79	Lt.	Residential	---	---	---	---	8950 BIRD LN 59847	Intermediate	No Direct Access	Access via Bird Lane
1-58	85.83	Lt.	Residential	---	---	---	---	8900 BIRD LN 59847	Intermediate	No Direct Access	Access via Bird Lane
1-59	85.96	Lt.	Residential	---	---	---	---	8900 BIRD LN 59847	Intermediate	No Direct Access	Access via Bird Lane
1-60, 1-60A	86.09	Lt.	Residential	---	---	---	---	BITTERROOT RD 59847	Rural	Close	New access via Bird Lane
			Residential	---	---	---	---	BITTERROOT RD 59847			New access via Bird Lane
1-61	86.32	Rt.	Field	---	---	---	---	NONE	Rural	No Direct Access	Other side of railroad
1-62, 1-63	86.25	Lt.	Field	---	---	---	< 10	NONE	Rural	Open	Access to conservation area
			Field	---	---	---	< 10	NONE			Access to conservation area
1-64	86.53	Lt.	Field	---	---	---	---	NONE	Rural	No Direct Access	Access to conservation area
1-65	87.03	Lt.	Field	---	---	---	---	NONE	Rural	No Direct Access	Access via Property 1-68 (same owner) **
1-66	87.02	Lt.	Field	---	---	---	---	NONE	Rural	No Direct Access	Access to conservation area
1-67	87.10	Rt.	Field	---	---	---	< 10	NONE	Rural	Open	Access to railroad & river - Specific access control and design to be determined
N/A	87.13	Rt.	Field	---	---	---	---	NONE	Rural	Close	Abandoned weigh station - Specific access control and design to be determined
N/A	87.19	Lt.	Public	---	---	---	---	Cochise Drive	Rural	Open	Paved approach with stop sign - Specific access control and design to be determined
N/A	87.22	Rt.	Field	---	---	---	---	NONE	Rural	Close	Abandoned weigh station - Specific access control and design to be determined
N/A	87.55	Rt.	Field	---	---	---	---	NONE	Rural	Close	Informal pull-out
1-68	87.13	Lt.	Residential	---	---	---	---	7125 US HIGHWAY 93 59804	Rural	No Direct Access	Access via Cochise Drive
1-69	87.23	Lt.	Residential	---	---	---	---	7300 COCHISE DR 59804	Rural	No Direct Access	Access via Cochise Drive
1-70	87.29	Lt.	Residential	---	---	---	---	7300 COCHISE DR 59804	Rural	No Direct Access	Access via Cochise Drive
1-71	87.36	Lt.	Residential	---	---	---	---	7080 COCHISE DR 59804	Rural	No Direct Access	Access via Cochise Drive
1-72	87.46	Rt.	Field	---	---	---	---	NONE	Rural	No Direct Access	Other side of railroad
1-73	87.51	Lt.	Residential	---	---	---	---	COCHISE DR 59804	Rural	No Direct Access	Access via Cochise Drive
1-74	87.61	Lt.	Residential	---	---	---	---	NONE	Rural	No Direct Access	Access via Cochise Drive
1-75	87.70	Lt.	Residential	---	---	---	---	BITTERROOT RD 59804	Intermediate	Close	Access via new service road to Property 1-78
1-76	87.71	Rt.	Field	---	---	---	< 10	US HIGHWAY 93 59804	Intermediate	Open	Access to field
1-77	87.74	Lt.	Residential	---	---	---	---	7009 BITTERROOT RD 59804	Intermediate	Close	Access via new service road to Property 1-78
1-78	87.77	Lt.	Commercial	843 Automobile Parts Sales 210 Single Family Detached Housinc	0.5 4	KSF DU	71	7001 BITTERROOT RD 59804	Intermediate	Open	Access to residences with new service road
1-79	87.78	Rt.	Commercial	710 General Office Building	2.0	KSF	22	6150 US HIGHWAY 93 59804	Intermediate	Open	Access to business center
1-80	87.79	Lt.	Residential	---	---	---	---	6055 BITTERROOT RD 59804	Intermediate	Close	Access via new service road to Property 1-78
N/A	87.84	Lt.	Public	---	---	---	---	Hayes Creek Road	Intermediate	Open	Paved approach with stop sign
1-82	87.85	Rt.	Residential	---	---	---	---	6000 US HIGHWAY 93 59804	Intermediate	Close	Multiple access with poor sight distance
1-82	87.87	Rt.	Residential	---	---	---	---	6000 US HIGHWAY 93 59804	Intermediate	Close	Multiple access with poor sight distance
1-82	87.90	Rt.	Residential	240 Mobile Home Park	15.0	DU	75	6000 US HIGHWAY 93 59804	Intermediate	Open	Access to mobile home park
1-83	87.89	Lt.	Residential	---	---	---	---	6000 HAYES CREEK RD 59804	Intermediate	Close	Access via Hayes Creek Road
1-84	87.92	Rt.	Commercial	151 Mini Warehouse	5.0	KSF	13	5990 US HIGHWAY 93 59804	Intermediate	Open	Access to storage facility
1-85	87.85	Lt.	Residential	---	---	---	---	6000 HAYES CREEK RD 59804	Intermediate	No Direct Access	Access via Hayes Creek Road
1-86, 1-87	87.98	Lt.	Field	---	---	---	< 10	NONE	Intermediate	New	Access to field
			Residential	210 Single Family Detached Housing	1.0	DU	10	5875 US HWY 93 59804			Access to residence
1-87	87.99	Lt.	Residential	---	---	---	---	5875 US HWY 93 59804	Intermediate	Close	Access via new shared access with Property 1-86
1-88,1-89, 1-90, 1-93	87.98	Rt.	Commercial	110 General Light Industrial	2.0	KSF	14	5970 HWY 93 S 59804	Intermediate	Open	Access to business
			Commercial	710 General Office Building	2.0	KSF	22	5970 HWY 93 S 59804			Access to business center
			Commercial	630 Clinic	2.0	KSF	63	5930 US HWY 93 59803			Access to vet clinic
			Commercial	943 Automobile Parts & Service	3.0	KSF	48	5900 US HWY 93 59803			Access to business
1-91,1-92	88.03	Lt.	Commercial Residential	814 Specialty Retail Center 210 Single Family Detached Housinc	0.3 1	KSF DU	23	5835 US HIGHWAY 93 59804	Intermediate	Open	Access to gift shop
			Residential	210 Single Family Detached Housing	1.0	DU	10	6719 BITTERROOT RD 59804			Access to residence
1-93	88.03	Rt.	Commercial	---	---	---	---	5900 US HWY 93 59803	Intermediate	Close	Access via new shared access with Property 1-94
1-93, 1-94	88.05	Rt.	Commercial	943 Automobile Parts & Service	3.0	KSF	48	5900 US HWY 93 59803	Intermediate	New	Access to business
			Commercial	890 Furniture Store	5.0	KSF	25	5850 US HIGHWAY 93 59804			Access to business
1-94	88.06	Rt.	Commercial	---	---	---	---	5850 US HIGHWAY 93 59804	Intermediate	Close	Access via new shared access with Property 1-93
1-95	88.07	Lt.	Commercial	591 Lodge/Fraternal Organization	250.0	Members	73	5795 US HIGHWAY 93 59804	Intermediate	Open	Access to lodge
1-95	88.12	Lt.	Commercial	---	---	---	---	5795 US HIGHWAY 93 59804	Intermediate	Close	Multiple access
1-94, 1-96	88.08	Rt.	Commercial	890 Furniture Store	5.0	KSF	25	5850 US HIGHWAY 93 59804	Intermediate	Open	Access to business
			Residential	210 Single Family Detached Housing	1.0	DU	10	5810 US HWY 93 59801			Access to residence
1-97	88.13	Rt.	Residential	210 Single Family Detached Housing	1.0	DU	10	5800 US HIGHWAY 93 59804	Intermediate	Open	Access to residence

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1-98,1-99, 1-100, 1-101	88.16	Lt.	Residential	210 Single Family Detached Housing	1.0	DU	10	5725 US HIGHWAY 93 59804	Intermediate	Open	Access to residence **
			Residential	210 Single Family Detached Housing	1.0	DU	10	5705 US HIGHWAY 93 59804			Access to residence **
			Residential	210 Single Family Detached Housing	1.0	DU	10	5655 US HIGHWAY 93 59804			Access to residence **
			Residential	210 Single Family Detached Housing	1.0	DU	10	5605 US HIGHWAY 93 59804			Access to residence **
1-98,1-99, 1-100,1-101	88.23	Lt.	Residential	210 Single Family Detached Housing	1.0	DU	10	5725 US HIGHWAY 93 59804	Intermediate	Open	Access to residence **
			Residential	210 Single Family Detached Housing	1.0	DU	10	5705 US HIGHWAY 93 59804			Access to residence **
			Residential	210 Single Family Detached Housing	1.0	DU	10	5655 US HIGHWAY 93 59804			Access to residence **
			Residential	210 Single Family Detached Housing	1.0	DU	10	5605 US HIGHWAY 93 59804			Access to residence **
N/A	88.56	Lt.	Public	---	---	---	---	Wornath Road	Intermediate	Open	Paved approach with stop sign
1-102	88.35	Rt.	Field	---	---	---	---	NONE	Intermediate	No Direct Access	Other side of railroad
1-103	88.38	Lt.	Field	---	---	---	---	NONE	Intermediate	No Direct Access	Access through Property 1-105 to Wornath Road **
1-104	88.56	Rt.	Field	---	---	---	---	NONE	Intermediate	No Direct Access	Other side of railroad
1-105	88.55	Lt.	Residential	---	---	---	---	NONE	Intermediate	No Direct Access	Access via Wornath Road
1-106	88.58	Lt.	Residential	---	---	---	---	5300 WORNATH RD 59804	Intermediate	No Direct Access	Access via Wornath Road
1-107	88.64	Lt.	Commercial	843 Automobile Parts Sales	1.0	KSF	62	5275 HIGHWAY 93 59804	Intermediate	Open	Access to business
1-108	88.67	Lt.	Commercial	814 Specialty Retail Center	1.0	KSF	44	5175 US HIGHWAY 93 59804	Intermediate	Open	Access to business
1-109	88.69	Lt.	Commercial	110 General Light Industrial	2.0	KSF	14	5145 US HIGHWAY 93 59804	Intermediate	Open	Access to business
1-110	88.75	Lt.	Commercial	151 Mini Warehouse	5.0	KSF	13	5185 US HIGHWAY 93 59804	Intermediate	Open	New shared access with Property 1-111
1-111	88.77	Lt.	Commercial	---	---	---	---	US HIGHWAY 93 59804	Intermediate	Close	Access via new shared access with Property 1-110
1-111,1-115, 1-116	88.82	Lt.	Commercial	710 General Office Building	2.0	KSF	22	US HIGHWAY 93 59804	Intermediate	Open	Access to business
			Commercial	110 General Light Industrial	2.0	KSF	14	5055 HIGHWAY 93 59804			Access to business
			Commercial	110 General Light Industrial	2.0	KSF	14	5055 HIGHWAY 93 59804			Access to business
1-112, 1-113, 1-114, 1-117, 1-118, 1-119	88.76	Rt.	Field	---	---	---	< 10	NONE	Intermediate	Open	Recommended right-in, right-out access
			Residential	210 Single Family Detached Housing	1.0	DU	10	5250 HIGHWAY 93 SO 59804			Recommended right-in, right-out access
			Residential	210 Single Family Detached Housing	1.0	DU	10	5150 HIGHWAY 93 SO 59804			Recommended right-in, right-out access
			Commercial	890 Furniture Store	8.0	KSF	40	5120 HIGHWAY 93 SOUTH 59804			Recommended right-in, right-out access
			Commercial	---	---	---	< 10	5050 US HIGHWAY 93 59804			Recommended right-in, right-out access
			Commercial	943 Automobile Parts & Service	3.0	KSF	48	5000 US HIGHWAY 93 59804			Recommended right-in, right-out access
N/A	88.88	Lt.	Public	---	---	---	---	Blue Mountain Road	Intermediate	Open	Paved approach with signal
1-112,1-113, 1-114,1-117, 1-118,1-119	89.02	Rt.	Field	---	---	---	---	NONE	Intermediate	Open	Access to field
			Residential	210 Single Family Detached Housing	1.0	DU	10	5250 HIGHWAY 93 SO 59804			Access to residence
			Residential	210 Single Family Detached Housing	1.0	DU	10	5150 HIGHWAY 93 SO 59804			Access to residence
			Commercial	890 Furniture Store	8.0	KSF	40	5120 HIGHWAY 93 SOUTH 59804			Access to business
			Commercial	---	---	---	---	5050 US HIGHWAY 93 59804			Access to business
			Commercial	943 Automobile Parts & Service	3.0	KSF	48	5000 US HIGHWAY 93 59804			Access to business
1-120	88.93	Lt.	Commercial	---	---	---	---	5000 BLUE MTN RD 59804	Intermediate	No Direct Access	Access via Blue Mountain Road
1-121	89.04	Lt.	Commercial	---	---	---	---	NONE	Intermediate	No Direct Access	Access via Blue Mountain Road
1-122	89.10	Lt.	Field	---	---	---	< 10	US HIGHWAY 93 59804	Intermediate	Open	Access for ditch maintenance
1-124,1-125	89.17	Rt.	Commercial	942 Automobile Care Center	1.0	KSF	16	4810 HIGHWAY 93 59804	Intermediate	Open	Access to business
			Commercial	942 Automobile Care Center	1.0	KSF	16	4810 HIGHWAY 93 59804			Access to business
1-123,1-126, 1-127,1-128, 1-129	89.19	Lt.	Commercial	---	---	---	< 10	US HIGHWAY 93 59804	Intermediate	New	Recommended right-in, right-out shared access
			Commercial	---	---	---	< 10	4805 US HIGHWAY 93 59804			Recommended right-in, right-out shared access
			Residential	210 Single Family Detached Housing	1.0	DU	10	4805 US HIGHWAY 93 59804			Recommended right-in, right-out shared access
			Commercial	942 Automobile Care Center	1.0	KSF	16	4425 BITTERROOT RD 59804			Recommended right-in, right-out shared access
			Residential	210 Single Family Detached Housing	1.0	DU	10	4425 BITTERROOT RD 59804			Recommended right-in, right-out shared access
1-126,1-127, 1-128,1-129	89.23	Lt.	Commercial	---	---	---	---	4805 US HIGHWAY 93 59804	Intermediate	Close	Access via new access
			Residential	---	---	---	---	4805 US HIGHWAY 93 59804			Access via new access
			Commercial	---	---	---	---	4425 BITTERROOT RD 59804			Access via new access
			Residential	---	---	---	---	4425 BITTERROOT RD 59804			Access via new access
1-130	89.26	Rt.	Residential	210 Single Family Detached Housing	1.0	DU	10	4700 US HIGHWAY 93 59804	Intermediate	Open	Access to residence - Specific access control and design to be determined
1-131	89.27	Lt.	Commercial	---	---	---	< 10	US HIGHWAY 93 59804	Intermediate	Open	Access to gravel pit - Specific access control and design to be determined
1-133	89.66	Rt.	Field	---	---	---	---		Intermediate	No Direct Access	Other side of railroad
1-132,1-134	89.79	Lt.	Field	---	---	---	---	US HIGHWAY 93 59804	Intermediate	New	Shared access to fields - Specific access control and design to be determined
1-134	89.83	Lt.	Commerical	---	---	---	---	US HIGHWAY 93 59804	Intermediate	Close	Access via new shared access - Specific access control and design to be determined
1-134	89.98	Lt.	Field	---	---	---	---	NONE	Intermediate	Close	Access via new shared access - Specific access control and design to be determined
1-135, 1-136	89.81	Rt.	Commercial	---	---	---	< 10	US HIGHWAY 93 59804	Intermediate	Open	Access to gravel pit - Specific access control and design to be determined
			Residential	210 Single Family Detached Housing	1.0	DU	10	US HIGHWAY 93 59804			Access to residence - Specific access control and design to be determined
1-137	90.21	Lt.	Commercial	151 Mini Warehouse	10.0	KSF	25	US HIGHWAY 93 59804	Intermediate	Open	Access to storage facility
1-138	90.30	Lt.	Commercial	---	---	---	---	3850 OLD HIGHWAY 93 59804	Intermediate	No Direct Access	Access via Old Highway 93
1-139	83.26	Rt.	Residential	210 Single Family Detached Housing	20.0	DU	191	US HIGHWAY 93 59847	Intermediate	Open	Access to residences
1-139	83.30	Rt.	Residential	210 Single Family Detached Housing	20.0	DU	191	US HIGHWAY 93 59847	Intermediate	Open	Access to residences
1-140	83.29	Lt.	Commercial	140 Manufacturing	2.0	KSF	8	US HIGHWAY 93 59847	Intermediate	Open	Access to business
1-141	83.33	Lt.	Residential	240 Mobile Home Park	8.0	DU	40	US HIGHWAY 93 59847	Intermediate	Open	Access to residences
1-142	83.34	Lt.	Commercial	946 Gas Station w/Market and Car Wash	12.0	Positions	1834	US HIGHWAY 93 59847	Intermediate	Open	Access to gas station
1-142	83.38	Lt.	Commercial	---	---	---	---	US HIGHWAY 93 59847	Intermediate	Close	Multiple accesses with access via US 12
1-143	83.34	Rt.	Commercial	---	---	---	< 10	US HIGHWAY 93 59847	Intermediate	Open	Access to future MDT weigh station