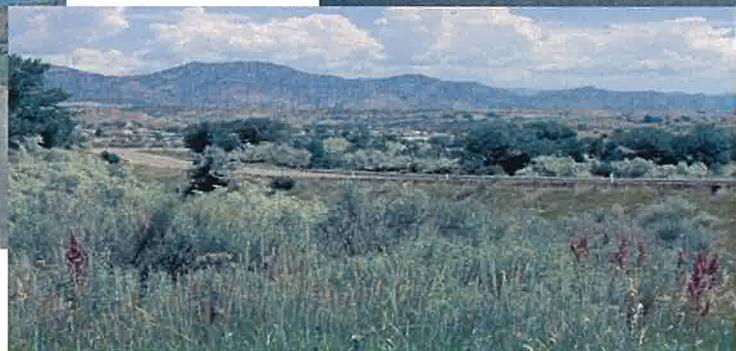
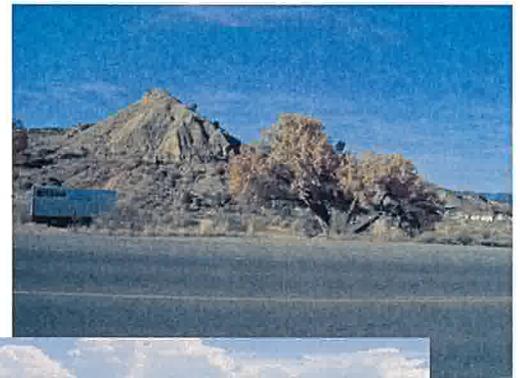


CITY OF RIFLE US HIGHWAY 6L & STATE HIGHWAY 13A ACCESS STUDY

US 6L: R.P. 88.56 (I-70 INTERCHANGE) TO R.P. 91.26 (SH 13 BYPASS)
SH 13A BYPASS: R.P. 0.97 (US 6) TO R.P. 2.93 (RAILROAD AVENUE)
SH 13A: R.P. 2.61(RAILROAD AVENUE) TO R.P. 4.90 (CR 292/JQS ROAD)

MAY 2009
DRAFT



**CITY OF RIFLE
US HIGHWAY 6L & STATE HIGHWAY 13A
ACCESS STUDY**

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ROAD)

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EXECUTIVE SUMMARY

Background and Purpose

US Highway 6 (US 6) and State Highway 13 (SH 13) are important regional and local transportation routes for Colorado's western slope. Paralleling I-70 through the Colorado River Valley, US 6 provides a strong local and inter-community route for Garfield County municipalities including Rifle, Silt, and New Castle. State Highway 13 begins in Rifle and extends through northwestern Colorado into Wyoming. A major hazardous materials route and freight route, SH 13 experiences a significant level of truck traffic. For this reason, in the 1980's, a bypass of SH 13 was constructed to remove truck traffic from Rifle's core downtown area and to provide a more convenient route for through traffic on SH 13. Recently, traffic in the Rifle area has increased due to oil and gas industry operations. US 6 and SH 13 carry a wide range of traffic types from semi-trucks to recreational vehicles to local and inter-community traffic. Residents, businesses, and tourists in Rifle and throughout Garfield County depend heavily on US 6 and SH 13 for local and regional travel.

The City of Rifle, Garfield County and Colorado Department of Transportation (CDOT) recognize that good mobility and safe access along US 6 and SH 13 are essential to the vitality of the City and the region. Based on the City of Rifle's Comprehensive Plan and the City of Rifle Community Case Study, significant urban growth in and around Rifle is anticipated over time due to the booming energy industry and the shortage of affordable housing in Garfield County. This development, along with potential redevelopment within the City limits, is expected to generate a substantial increase in travel demand along US 6 and SH 13 in the future. Additionally, the Intermountain Transportation Planning Region has identified SH 13 from Rifle to Meeker, as a high priority corridor in the 2035 Regional Transportation Plan (2035 RTP). In support of the goals from the 2035 RTP and to address anticipated growth in the area, the City and CDOT have partnered with cooperation of Garfield County to develop an Access Plan for US 6 between the I-70 interchange (RP 88.56) and the SH 13 Bypass (RP 91.26), for the SH 13 Bypass between US 6 (RP 0.97) and Railroad Avenue (RP 2.93), and for SH 13 between Railroad Avenue (RP 2.61) and CR 292/JQS Road (RP 4.90).

The purpose of this study effort is to coordinate development in the area with transportation needs of the local community and the traveling public. In consultation with the project partners, a series of goals were established for the project, including:

- Provide effective through travel for traffic on SH 13 and US 6.
- Provide safe and effective access to and from SH 13 and US 6 for businesses, residents, emergency responders, multi-modal users, and surface and subsurface property/mineral rights owners.
- Maintain compatibility with existing and proposed off-highway circulation routes.
- Provide a plan that can be implemented in phases.
- Support the economic viability of the project area.
- Maintain compatibility with the intent of previous local planning efforts.
- Endeavor to provide a plan that is adoptable by all entities.
- Provide a plan that accommodates traffic unique to the area including hazardous materials traffic and a high percentage of large vehicles specific to the area.

This report summarizes the study process, analyses, findings, and recommendations for access modifications within the US 6 corridor between the I-70 interchange (RP 88.56) and the SH 13 Bypass (RP 91.26), within the SH 13 Bypass corridor between US 6 (RP 0.97) and Railroad Avenue (RP 2.93), and within the SH 13 corridor between Railroad Avenue (RP 2.61) and CR 292/JQS Road (RP 4.90). Ultimately, the plan participants intend to implement an Access Control Plan. Execution of an intergovernmental agreement (IGA) between the City, County, and CDOT regarding the Access Control Plan will provide long-term commitment to the plan for all parties.

Study Area

The limits of the study area span approximately 7 miles of State Highway (2.7 miles on US 6, 2 miles on SH 13 Bypass, and 2.3 miles on SH 13). The three highway segments differ in land use. In general, land use within the city limits is predominantly urbanized residential and commercial, whereas land use in the county is typically rural in nature. Land uses in the county are predominantly agricultural and rural residential with some industrial uses.

The US 6 corridor from the I-70 interchange to the SH 13 Bypass is planned for continued industrial development in the form of a “Bio-Energy Corridor.” In addition, several mixed-use and residential developments are planned in and around the City of Rifle. A majority of these planned developments will be located north of Rifle’s city limit along SH 13. Annexation of new development is likely.

There are currently 24 access points on US 6, 20 access points on the SH 13 Bypass, and 37 access points on SH 13. The access points, currently full movement, can be classified as follows:

- 23 unsignalized public road intersections
- 2 unsignalized private road intersections
- 2 signalized public road intersections
- 22 business access points (2 are also residential access)
- 17 residential access points (2 are also business access)
- 13 field access points
- 2 A-line opening points (with no existing access)

Coordination and Public Involvement

Although the City of Rifle and CDOT Region 3 partnered to initiate this study, the process was a cooperative effort between the City of Rifle, Garfield County, and CDOT. In addition, the City developed a public involvement program to engage corridor stakeholders in the study process.

Public involvement with corridor stakeholders, including property owners, tenants, potential developers, and the general public was a critical element of the project. An advertised Public Open House, one-on-one meetings/phone calls with stakeholders, and multiple public presentations with the City Council and Board of County Commissioners were held to gather input, provide information, and answer questions as the project progressed. Exhibits presenting access management principles, the study process, and the recommended Access Plan were displayed at the Public Open House. Representatives from the City, CDOT, and consultant team were available for questions and discussion at one-on-one meetings and the Open House.

Development of the Plan

In preparation for this study, the existing physical and operational characteristics of US 6 and SH 13 were established. The project team also developed a compatibility index to evaluate how the plan met the objectives identified at the beginning of the project. Next, future physical and operational characteristics were projected for a 20-year planning period based on anticipated development in the area. Using this information, a draft Access Plan was developed and evaluated. The Access Plan considered access points in logical groupings, State Highway Access Code guidance, and alternative local routes. Based on input from the project team, government representatives, and the public, the draft plan was refined and evaluated using criteria identified in the compatibility index. The evaluation resulted in a favorable rating based on the project objectives; therefore, adoption of the Access Plan by the three entities is recommended. In addition, the proposed local alternate routes provide added benefit to the community. Adoption of these proposed routes by the City and County, through a separate resolution, is also recommended.

Access Plan

Figures 7a-7d, 8a-8c, and 9a-9c found in Section 6 of this report, graphically illustrate the recommended Access Plan improvements for the US 6 and SH 13 corridors. Technical Appendix G contains the specific recommendations for each individual access point. In general, the Access Plan limits full movement access to major intersections. Access for parcels between major intersections is either limited or relocated to an alternate route/cross street. In addition, highway access is reduced to one location per ownership. Traffic control measures that may be used to achieve proposed conditions include: raised medians, driveway channelizing islands at limited access points, directional median openings at $\frac{3}{4}$ movement access points, and signage and striping. To avoid turn movement violations and potential enforcement issues, eventual installation of a raised median or other positive traffic control measure is recommended.

Throughout the corridor, out-of-direction travel created by restricting movements at right-in/right-out access points is limited to a maximum distance of one mile. Out-of-direction travel was limited by providing full movement intersections at necessary intervals. The major intersections that are identified as full movement intersections with potential for warranting a traffic signal or other traffic control measure in the future are as follows:

US 6

- I-70 Ramps
- Access #72/73
- Access #74/75
- Access #17/76
(Realigned Swallow Lane)
- SH 13 Bypass
(Access #21/22)

SH 13 Bypass

- US 6
- Access #26/27
(Gentry Connection)
- Fairway Avenue
(Access #77/78)
- Railroad Avenue

SH 13

- Railroad Avenue
- 24th Street /
Whiteriver Avenue
- 33rd Street
- 36th Street
- SH 325 / 41st Street

In support of the recommended access modifications, development of several alternative local routes is also recommended. These alternative routes provide additional local connections, opportunities for relocation of access to cross streets, and internal circulation opportunities that will benefit operations on US 6 and SH 13 by reducing local dependence on the highway. In addition, formalization of pedestrian crossing locations at all major intersections is recommended in conjunction with installation of intersection improvements. Installation of sidewalk throughout the study area is also recommended.

Implementation

The improvements recommended in the Access Study represent a long-range plan to implement over time as traffic and safety needs arise and as funding becomes available. Construction of the improvements recommended may be completed using public and/or private funding. The following cases will trigger construction:

1. A property redevelops or changes use. In this case, limited improvements at the specific access point may be required by CDOT. As part of the City's development review process, additional transportation improvements may also be necessary to address specific traffic-related impacts created by the development. These improvements will be compatible with the Access Plan. If a property does not redevelop or change use, the property owner will not be required to construct access modifications. (Private Funding)
2. The City and/or County obtain funding to complete a segment of the US 6 or SH 13 corridors or an alternate local route. (Public Funding)
3. State and/or Federal Funding are obtained to complete a segment of the US 6 or SH 13 corridors. Typically, a project will be identified in the Statewide Transportation Improvement Program (STIP) to obtain funding. (Public Funding)
4. Any combination of 1, 2 or 3.

Under case 1, a property owner must follow the access permit process as defined by Section 2 of the *State of Colorado State Highway Access Code, latest edition*. CDOT will remain the issuing authority for both corridors. In short, the process requires property owners to submit an application for an access permit. Once the access permit is issued, construction plans for the permitted improvements must be developed and submitted to CDOT for review. A Notice to Proceed will be issued following acceptance of the Construction Documents by CDOT, thereby allowing the applicant to proceed with construction.

Under case 2, the City and/or County may obtain funds either through local government budgeting, application for grant monies, or other potential funding sources. Once funding is available, the City and/or County will work through the CDOT planning process to develop a highway improvement project. The project will follow the process and procedures for design, construction, and management detailed in CDOT's Local Agency Manual. If a City/County project is developed off of the State Highway System, for instance, completion of an alternate local route that does not intersect with US 6 or SH 13, CDOT will not be involved in the project. The City and/or County will administer the project according to City and/or County standards and procedures.

Under case 3, projects receiving State and/or Federal funds must be identified in the STIP. In Colorado, six years of transportation projects and their funding sources must be identified in the STIP. Colorado's STIP is updated every other year through a continuing, comprehensive, and cooperative process involving the CDOT, Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Metropolitan Planning Organizations (MPOs), Transportation Planning Regions (TPRs) and City and County Governments. Projects within the study area in Rifle and Garfield County are established in the STIP by the request of the Intermountain TPR. The current STIP was updated and adopted in March, 2008. The Intermountain TPR 2035 Regional Transportation Plan, adopted in January 2008, identifies SH 13 Rifle to Meeker as a high priority corridor indicating potential for future projects on SH 13 to be added to the STIP; however, State funding is extremely limited at this time and no future projects have been identified. Similar to case 2, when funding is available, a project will follow CDOT's relevant process and procedures.

Detailed engineering drawings of exact roadway alignments and access improvements will be required as project funding is identified. For access points on the SH 13 Bypass without A-line openings or for A-line openings with inadequate width, A-line opening modification requests consistent with the Access Plan must be submitted and approved by CDOT in order to obtain an Access Permit and Notice to Proceed.

To provide for continued commitment to the access modifications recommended by this study we recommend that the City, County and CDOT develop an Access Control Plan and adopt the Plan through the execution of an Intergovernmental Agreement (IGA). A draft agreement is provided in Technical Appendix F. In recognition of the plan's long-range nature and the potential for conditions to change over time, a critical element of the IGA is definition of a process for plan modifications. Typically, modification of an adopted Access Control Plan requires the concurrence of the IGA partners. In any case, this process will be in accordance with the *State of Colorado State Highway Access Code, latest edition*, and provide for continuing coordination between the agencies.

In addition to adoption of an IGA, we recommend that the City of Rifle and Garfield County adopt the proposed off-highway alternate local routes identified by this study via separate resolution. Adoption of the local routes supports City and County staff in implementation of important local connections. The connections are needed to support the proposed access modifications in the Access Control Plan as land use conditions change along US 6 and SH 13.

1.0 Introduction

1.1 Project Background

US Highway 6 (US 6) and State Highway 13 (SH 13) are important regional and local transportation routes for Colorado's western slope. In general, US 6 parallels I-70 through the western portion of Colorado. Although US 6 experiences some discontinuity within the state, the segment through the Colorado River Valley provides a strong local and inter-community route for Garfield County municipalities including Rifle, Silt, and New Castle.

Beginning in Rifle, SH 13 extends through northwestern Colorado into Wyoming. As a major hazardous materials route and freight route, SH 13 experiences significant truck traffic. For this reason, a bypass of SH 13 was constructed in the 1980's to remove truck traffic from Rifle's core downtown area and to provide a more convenient route for through traffic. As a result, the original SH 13, known as Railroad Avenue in Rifle, was reclassified as a City street. Today, SH 13 traffic is directed east along US 6 to the SH 13 Bypass. The SH 13 Bypass extends north from US 6 to join the original SH 13 alignment at the intersection of SH 13 and Railroad Avenue.

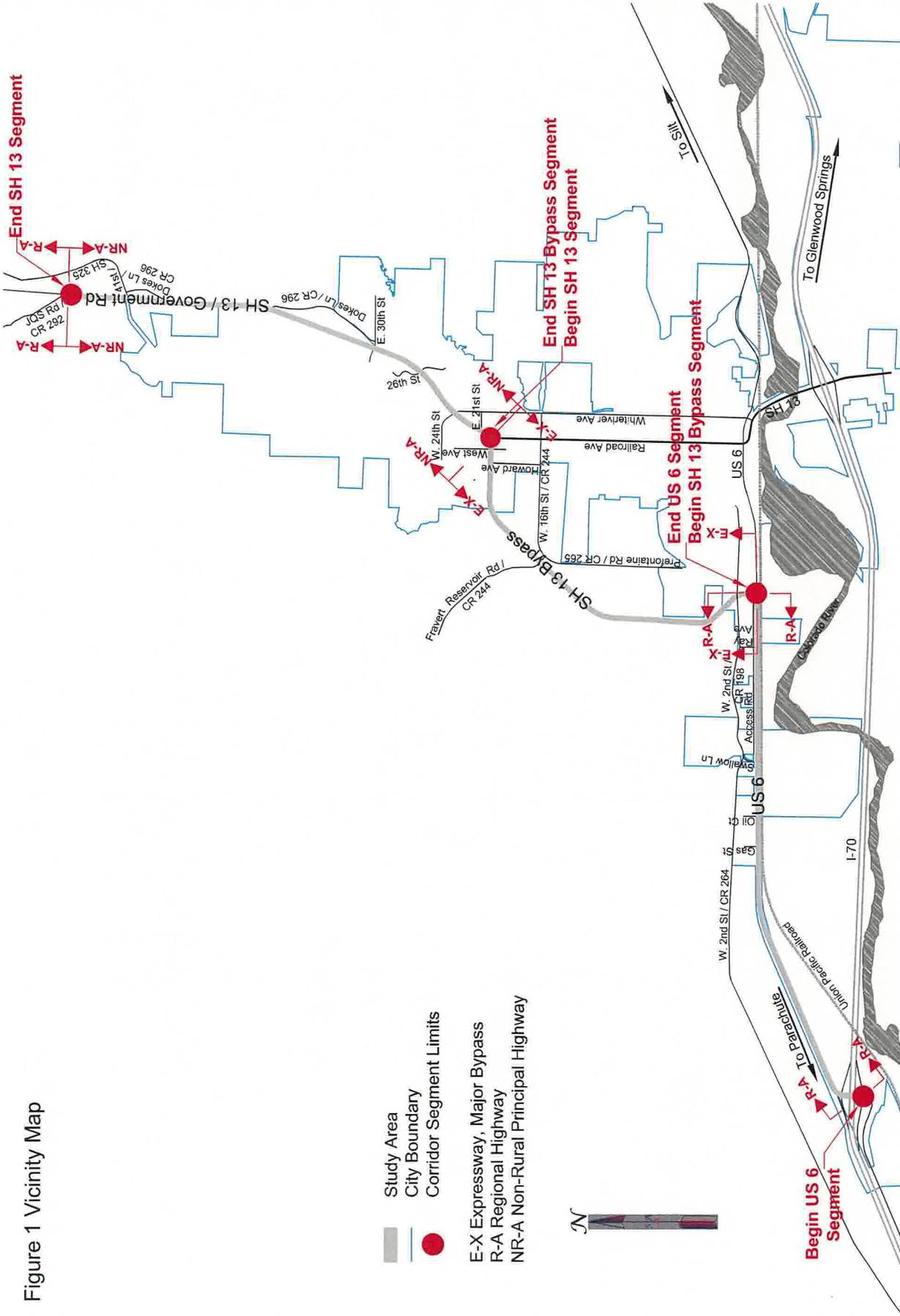
Residents and businesses in Rifle and throughout Garfield County depend heavily on US 6 and SH 13 for local and regional travel. Recently, area traffic volumes have increased due to oil and gas industry operations. In addition, outdoor recreational opportunities are a significant draw to the Rifle area for residents and tourists. US 6 and SH 13 carry a wide range of traffic types from semi-trucks to recreational vehicles to local and inter-community traffic.

The City of Rifle, the Colorado Department of Transportation (CDOT) and Garfield County recognize that good mobility and safe access along US 6 and SH 13 are essential to the on-going vitality of the City and the region. The City of Rifle's Comprehensive Plan and the City of Rifle Community Case Study anticipates significant urban growth in and around Rifle due to the booming energy industry and the shortage of affordable housing in Garfield County. The Comprehensive Plan identifies a three-tiered urban containment approach to growth. The majority of the area surrounding US 6 and SH 13 fall within Urban Containment – Tier 1 and Tier 2 growth areas. Both areas are expected to annex into the City upon redevelopment. This development, along with potential redevelopment within the City limits is expected to generate a substantial increase in travel demand along US 6 and SH 13 in the future. Additionally, the Intermountain Transportation Planning Region has identified SH 13 from Rifle to Meeker, as a high priority corridor in the 2035 Regional Transportation Plan (2035 RTP). Two of the major goals for SH 13 in the 2035 RTP are:

1. Reduce traffic congestion and improve traffic flow.
2. Reduce fatalities, injuries and property damage crash rate.

In support of the goals from the 2035 RTP and to address anticipated growth in the area, the City and CDOT have partnered to develop an Access Plan for US 6 between the I-70 interchange (RP 88.56) and the SH 13 Bypass (RP 91.26), for the SH 13 Bypass between US 6 (RP 0.97) and Railroad Avenue (RP 2.93), and for SH 13 between Railroad Avenue (RP 2.61) and CR 292/JQS Road (RP 4.90) in cooperation with Garfield County. The limits of the study area span approximately 7 miles of State Highway (2.7 miles on US 6, 2 miles on SH 13 Bypass, and 2.3 miles on SH 13). Due to discrepancies in highway mileposting created by implementing the SH 13 Bypass, limits of the project are defined by reference point rather than by milepost. The study limits are illustrated on the Vicinity Map in Figure 1.

Figure 1 Vicinity Map



The purpose of this study effort is to coordinate development and growth anticipated in the area with the transportation needs for the local community and the traveling public. The goals for the project are as follows:

- Provide effective through travel for traffic on SH 13 and US 6.
- Provide safe and effective access to and from SH 13 and US 6 for businesses, residents, emergency responders, multi-modal users, and surface and subsurface property/mineral rights owners.
- Maintain compatibility with existing and proposed off-highway circulation routes.
- Provide a plan that can be implemented in phases.
- Support the economic viability of the project area.
- Maintain compatibility with the intent of previous local planning efforts.
- Endeavor to provide a plan that is adoptable by all entities.
- Provide a plan that accommodates traffic unique to the area including hazardous materials traffic and a high percentage of large vehicles specific to the area.

This report summarizes the study process, analyses, findings, and recommendations for access modifications within the US 6 corridor, the SH 13 Bypass corridor, and the SH 13 corridor.

1.2 Project Coordination

The project area falls within the boundaries of both the City of Rifle and Garfield County with a majority of the project within the City's jurisdiction. In addition, based on the City's Comprehensive Plan, much of the area within the County's jurisdiction is anticipated to annex into the City as development occurs. Operations and maintenance of US 6 and SH 13 are managed by CDOT – Region 3. Although the City initiated this project in partnership with CDOT, the process was a cooperative effort between all three entities.

The primary project team for development of the Access Plan consisted of representatives from City Planning Staff, County Planning Staff, and CDOT – Region 3, Traffic and Safety Departments. Input from other departments within the City and County was collected by project team staff representatives. Coordination with project stakeholders, including property owners, tenants and developers, is described in the next section.

1.3 Public Involvement

An important element of the study was public involvement. The public, including corridor property owners, tenants, potential developers, and the general public, were engaged in the project using several techniques. A Public Open House was held on February 10, 2009 at the Rifle Fire Protection District in Rifle to present and discuss the recommended Draft Access Plan for US 6 and SH 13, review access management principles and techniques, and gather public input on the draft plan. Corridor property owners, local government representatives, and other interested individuals and potential developers who contacted the project prior to the Open House were invited to the Open House by mail. In addition, an invitation was included in the City of Rifle utility bill, on the City's website, on the City's Community Television station and a public notice was posted in two issues of the Citizen Telegram, the City's legal notice paper, to inform the general public of the meeting. Exhibits showing project goals, access management principles and techniques, corridor data, the recommended access plan, and implementation techniques were available for review at the Open House. City, CDOT, and consultant team representatives were available to discuss the project with meeting attendees. Approximately 28 people signed-in at the Public Open House. Public comments were accepted until February 24, 2009. Open House comment sheets can be found in Technical Appendix A.

Following the Public Open House, the project team held a series of one-on-one meetings with corridor property owners. Face-to-face meetings were held on February 23 and 24, 2009 and March 12, 2009 at Rifle City Hall. Approximately 18 property owners participated. City, CDOT, and consultant team representatives participated in these meetings. In addition, the project was discussed with several property owners via telephone at various times during the access plan development. Specifically, meetings, conference calls, and phone and e-mail correspondence with several potential developments including Queen's Crown, Rimrock, Black Lion, and the Brown property were held throughout the project. These meetings and telephone calls gathered data, discussed access issues for both individual properties and the entire corridor, and provided opportunities for participants to ask questions and to share input for plan development. A list of meeting participants can be found in Technical Appendix A.

The team updated and engaged the City Council and the Board of County Commissioners (BOCC) on project progress and development on multiple occasions. All of these meetings were open to the public. Presentations were made at the following meetings:

BOCC Meeting – August 18, 2008

City Council/ BOCC Joint Meeting – January 14, 2009

Final presentations to both City Council and BOCC are anticipated for plan adoption at separate regularly scheduled City Council and BOCC meetings.

2.0 Access Management – Benefits, Principles & Techniques

As defined by the *Access Management Manual, TRB, 2003*, “Access management is the systematic control of the location, spacing, design, and operation of driveway median openings, and street connections to a roadway.” Access management along Colorado State Highways is generally administered by CDOT on a case by case basis, as prescribed by the *State of Colorado State Highway Access Code, latest edition*. Per Section 2.12 of the Access Code, CDOT or a local authority may develop an Access Control Plan for a segment of highway that defines access locations, level of access and traffic control for future conditions. Developing an Access Control Plan provides CDOT and the local authorities with the opportunity to develop a single transportation plan that considers multiple access points along a segment of highway as a network rather than as individual access points. Issues such as intersection spacing, traffic movements, circulation, and alternative access opportunities may be considered in developing an Access Control Plan. The Plan does not define specific capacity improvements, off-network improvements, or specific funding sources for access improvements, although local governments often consider off-network improvements for their communities in conjunction with an Access Control Plan. The Plan is a long-range planning document that identifies access conditions that will be implemented as highway and land-use characteristics change. Access Control Plans for State Highways are adopted by CDOT and the local authorities.

2.1 Access Management Benefits

Access management provides the means to balance good mobility along the highway with the local access needs of businesses and residents. Implementation of access management principles and techniques on State and local transportation networks can provide the following long-term benefits for highway users, communities, and businesses:

- Safety
 - Fewer decision points and potential for conflicts for motorists, cyclists, and pedestrians results in a reduced number of accidents.
 - Safe access to businesses is provided.
- Increased ability to accommodate traffic demands
 - Limiting full movement access within a corridor favors through movements and strategically identifies locations for vehicles to enter and exit the corridor.
- Preserves property values and the economic viability of abutting development
 - A more efficient roadway system captures a broader market area.
 - A more predictable and consistent development environment is created.
 - Well-defined driveways with suitable spacing make it easier for customers to enter and exit businesses safely, thereby encouraging customers to patronize corridor businesses.
- Encourages use and development of local streets
 - Alternative local routes allow traffic to access the local amenities conveniently without using the highway, thereby providing both convenient local access and reduced volumes on the highway.
- Enhanced Corridor Appearance
 - Businesses are easily located
 - Well-defined access points with suitable spacing provides more opportunities for streetscaping/landscaping.

2.2 Guiding Principles

The goals of access management center around limiting and consolidating access along major roadways and focusing access for development on a supporting local street network and circulation system. The following guiding principles to access management were applied in the development of the Access Control Plan for US 6 and SH 13:

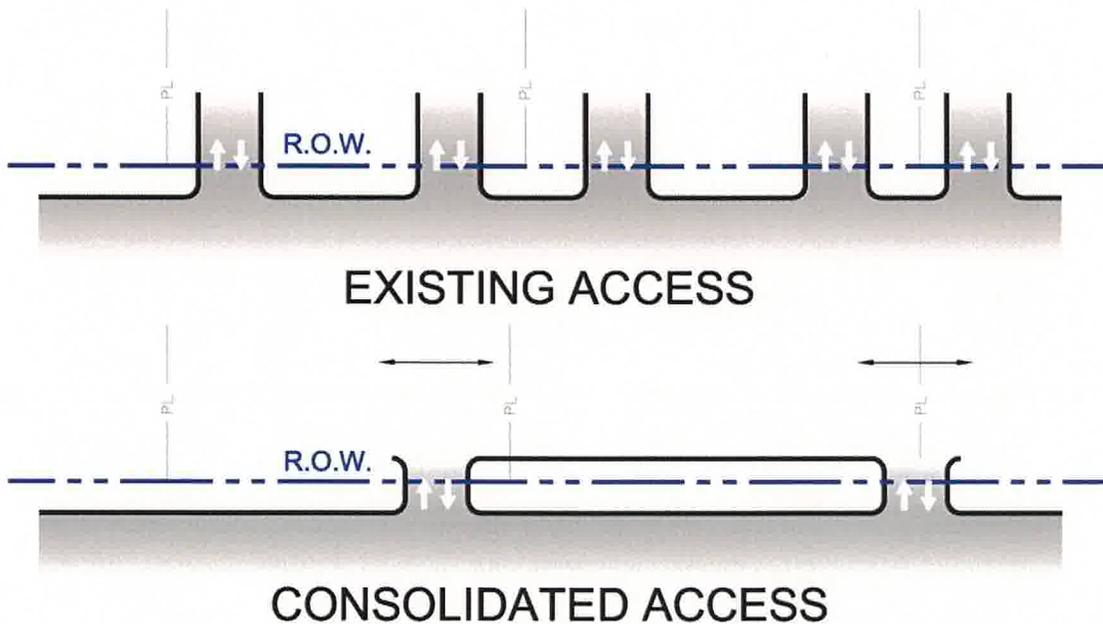
- Limit the number of direct access points to major roadways
- Locate signals and intersections to favor through movements
- Minimize the number of locations where vehicles merge, split, or cross
- Remove turning vehicles from through traffic lanes
- Provide a supporting local street network and circulation system

2.3 Techniques

Several access management techniques, illustrated below, may be used to achieve the principles outlined above and to realize the benefits of access management along the US 6 and SH 13 corridors.

Principle: Limit the number of direct access points to major roadways

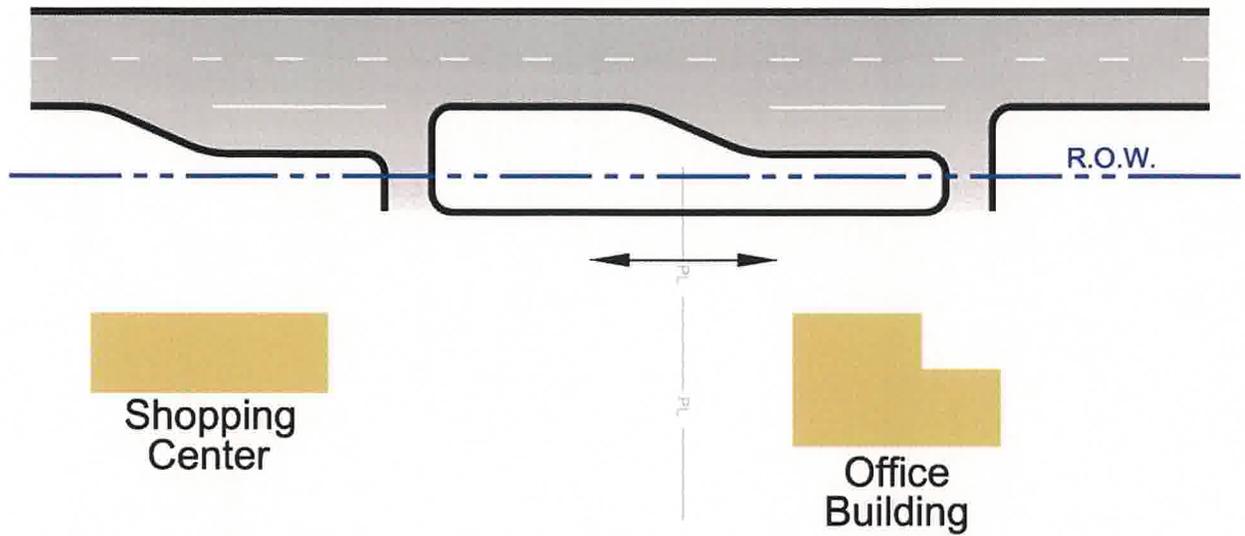
Technique: Consolidate Access



Consolidate access points by:

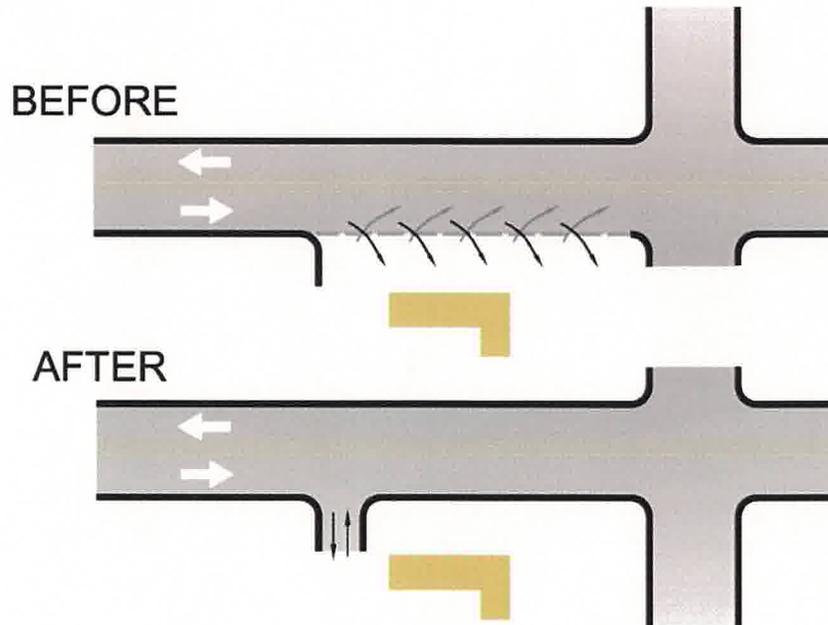
- Reducing the number of access points that serve a single property
- Providing joint access for multiple properties at or near a property line

Technique: Connect Adjacent Properties



Connect adjacent properties to provide circulation between properties and increase access opportunities for multiple properties.

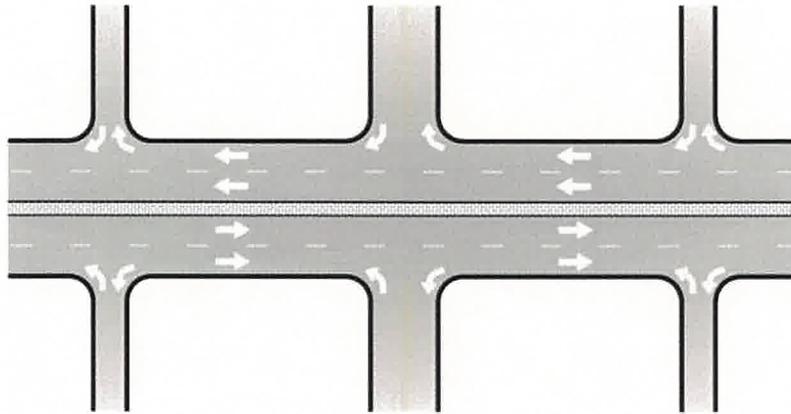
Technique: Define Driveways



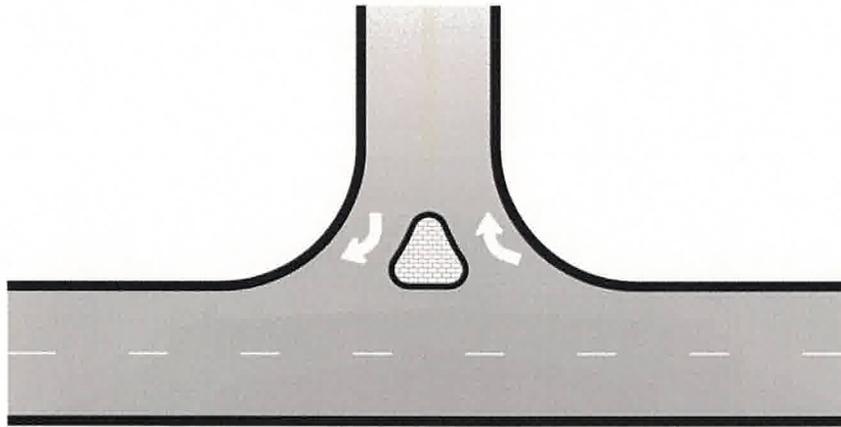
Define driveways to provide clear identification of entrance and exit locations.

Principle: Minimize the number of locations where vehicles merge, split, or cross

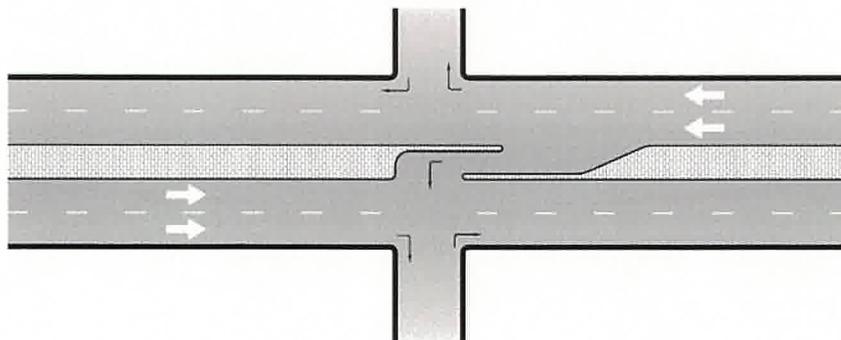
Technique: Install Medians and Islands



Right-in/right-out with raised median eliminates left turn movements between major intersections throughout a corridor.



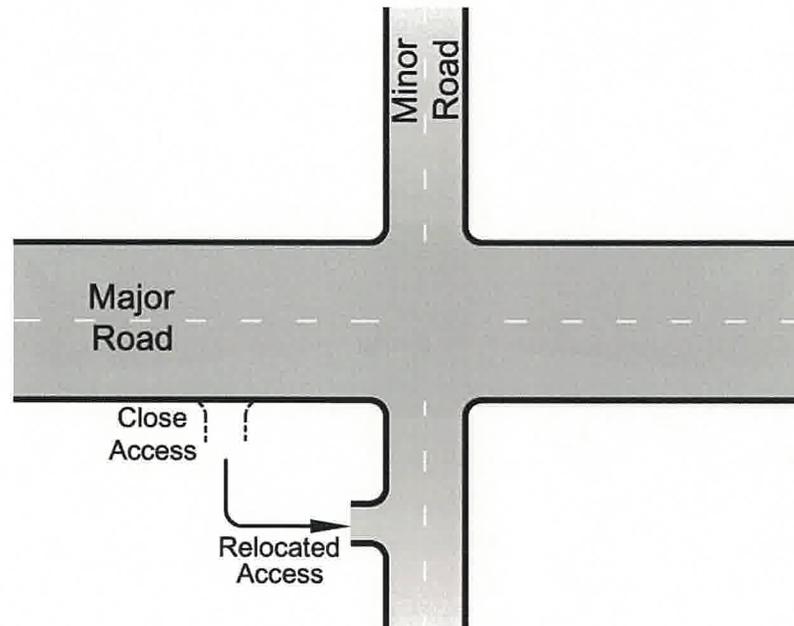
Right-in/right-out with channelizing island eliminates left turn movements at specific locations.



Directional median opening or a ¾ movement limits left turn movements to one direction at strategic locations where increased access is beneficial for safety or operational reasons.

Principle: Provide a supporting local street network and circulation system

Technique: Provide Cross Street Access



Relocate access to a side street to:

- Reduce the number of direct access points to the major roadway.
- Provide safe and easy access to a minor roadway intersection with the major roadway.
- Provide opportunities to use an alternate local route, thereby avoiding use of the major roadway completely.

3.0 Existing Conditions

3.1 Land Use Characteristics

The study area encompasses approximately 7 miles of State Highway (2.7 miles on US 6, 2 miles on SH 13 Bypass, and 2.3 miles on SH 13) in and surrounding Rifle, Colorado. The three highway segments differ in land use. In general, land use within the city limits is predominantly urbanized residential and commercial whereas land use in the county is typically rural in nature. Land uses in the county are predominantly agricultural and rural residential with some industrial uses.

Land use along US 6 is largely industrial in nature with some commercial and residential properties on the north side of the highway approaching the SH 13 Bypass. A majority of the SH 13 Bypass is located outside of the city limits and is surrounded by agricultural land. For the segments of SH 13 within City limits:

- SH 13 Bypass, northeast of Fravert Reservoir Road, and
- SH 13 south of 30th Street,

land use is urban residential and commercial on both sides of the highway. As the highway exits the City, north of 30th Street, land use returns to agricultural and residential uses.

The US 6 corridor from the I-70 interchange to the SH 13 Bypass is planned for continued industrial development in the form of a “Bio-Energy Corridor.” In addition, several mixed-use and residential developments are planned in and around the City of Rifle. A majority of these developments will be located north of Rifle along SH 13 and will annex to the City.

Interstate 70 runs in an east-west direction south of US 6 and central Rifle. Three diamond interchanges (Exits 87, 90, and 94 from west to east) access Rifle directly. SH 13 begins at Exit 90 and is the main entrance into the City.

Physical characteristics of the area include the Colorado River, the Union Pacific Railroad (UPRR), and Government Creek. The Colorado River and the UPRR are located between US 6 and I-70 and run primarily in an east-west direction. Both create challenging constraints for access to/from US 6 for properties located south of the highway. Government Creek is located on the west side of SH 13, crossing the highway between 24th Street and 26th Street. Much of the development planned north of the City must cross the creek to access SH 13.

3.2 Roadway Characteristics

For the purposes of identifying the location of access points for this plan, each highway segment is numbered uniquely, starting with a reference point defined per CDOT Highway Segment Descriptions and measuring along the highway centerline to define reference points of interest along each highway. US 6 is numbered beginning at the westbound ramps to/from I-70 at Reference Point (RP) 88.67; the SH 13 Bypass is numbered beginning at the intersection with US 6 at RP 0.97; and SH 13 is numbered beginning at the intersection with Railroad Avenue at RP 2.61. It is important to note which highway segment is , as some reference point values on the SH 13 Bypass and SH 13 overlap.

The posted speed limit on US 6 is generally 45 mph through the section adjacent to the frontage road and 55 mph west of Swallow Lane. Westbound, the speed limit reduces to 30 mph approaching the I-70 interchange and the eastbound speed limit reduces to 40 mph approaching the SH 13 Bypass.

A majority of the SH 13 Bypass has a posted speed limit of 45 mph. The speed limit for the north segment of highway, approaching Railroad Avenue, reduces to 30 mph for both directions.

SH 13 speed limits range from 30 mph approaching Railroad Avenue to 50 mph north of 30th Street.

The approximate locations of speed limit changes throughout the study area are summarized in Table 1 and Table 2 below.

Table 1 Eastbound/Northbound Speed Limits

Highway	Approximate Reference Point	Approximate Location	Eastbound/ Northbound Speed Limits
US 6	West - 89.9	West of Study Area to west of Gas Street	55
	89.9 - 90.7	West of Gas Street to east of Swallow Lane	45
	90.7 - 91.3	East of Swallow Lane to SH 13 Bypass	40
SH 13 Bypass	1.1 - 2.4	North of 2nd Avenue to north of Fravert Reservoir Road	45
	2.4 - 2.6	North of Fravert Reservoir Road to west of Xcel Energy	40
	2.6 - 2.9	West of Xcel Energy to Railroad Avenue	30
US 13	2.6 - 2.9	Railroad Avenue to north of Whiteriver Avenue	30
	2.9 - 3.1	North of Whiteriver Avenue to north of 26th Street	40
	3.1 - North	North of 26th Street to north of Study Area	50

Table 2 Westbound/Southbound Speed Limits

Highway	Approximate Reference Point	Approximate Location	Westbound/ Southbound Speed Limits
US 6	91.3 - 90.1	SH 13 Bypass to west of Oil Court	45
	90.1 - 88.8	West of Oil Court to east of Midway Supply	55
	88.8 - 88.7	East of Midway Supply to west of I-70 interchange	40
	88.7 - West	West of I-70 interchange to west of Study Area	30
SH 13 Bypass	2.9 - 2.7	Railroad Avenue to east of Xcel Driveway	30
	2.7 - 2.5	East of Xcel Driveway to west of Access 30a	40
	2.5 - 1.3	West of Access 30 to north of 2nd Street	
	1.3 - 1.0	North of 2nd Street to US 6	45
SH 13	North - 3.0	North of Study Area to south of 26th Street	50
	3.0 - 2.8	South of 26th Street to south of 24th Street	40
	2.8 - 2.6	South of 24th Street to Railroad Avenue	30

The horizontal alignments of US 6 and SH 13 generally consist of long tangents between large-radius curves with design speeds ranging from 70 mph to over 75 mph. Exceptions to this configuration include:

- Reverse curve segment (70-75 mph design) on SH 13 located just north of Railroad Avenue,
- Reverse curve segment (70-75 mph design) on SH 13 located just south of 41st Street / SH 325,
- 35 mph curve located on US 6 approaching the I-70 interchange, and
- 30 mph curve located on SH 13 at the intersection of Railroad Avenue where the SH 13 Bypass joins the SH 13 alignment.

There is some accident history related to the tight curvature on SH 13 at Railroad Avenue including a few large vehicles overturning due to elevated speeds.

The horizontal alignment of the SH 13 Bypass is curvilinear. Curve design speeds range from 40 mph to 55 mph. Accesses located along the curves, especially along the curve just north of Fravert Reservoir Road, experience intersection sight distance challenges.

The highway profile along US 6 is relatively gradual. The elevation of the highway is higher than the elevation of the UPRR track at the west end of the segment. As US 6 continues east, the highway elevation falls below the railroad elevation.

There is a notable profile grade on the SH 13 Bypass north of 2nd Street. This hill crests just south of Fravert Reservoir Road. The highway profile results in limited sight distance for the 2nd Street and Fravert Reservoir Road intersections.

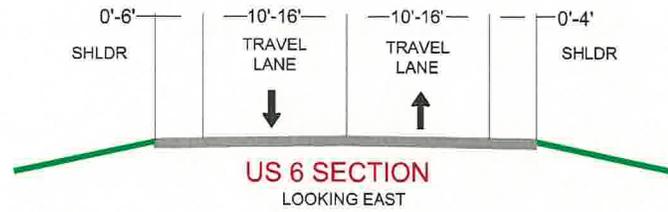
Like US 6, the highway profile along SH 13 is also relatively gradual; however, several intersecting roads have significant approach grades to SH 13. These approaches include SH 325 / 41st Street and JQS Road / CR 292. Significant approach grades create difficult stopping and starting conditions for vehicles accessing the highway during adverse weather conditions.

Figure 2 illustrates the five basic roadway cross-sections present within the study area. US 6 has a constant two lane cross section with lane widths varying from 10-ft to 16-ft, and shoulders varying from 0-ft to 6-ft. Left and right turn auxiliary lanes are developed at some intersections between Gas Street and the SH 13 Bypass; however, many of these auxiliary lanes do not meet current design standards due to their narrow width or short length.

The majority of the SH 13 Bypass consists of one through travel lane in each direction with a northbound climbing lane and 2-ft to 8-ft shoulders. A southbound climbing lane exists on either side of the Fravert Reservoir Road intersection. Along the east-west portion of the SH 13 Bypass alignment between Xcel Energy and Railroad Avenue, a second cross section exists. This cross-section includes two through travel lanes in each direction, a two-way left turn lane and 6-ft to 8-ft shoulders.

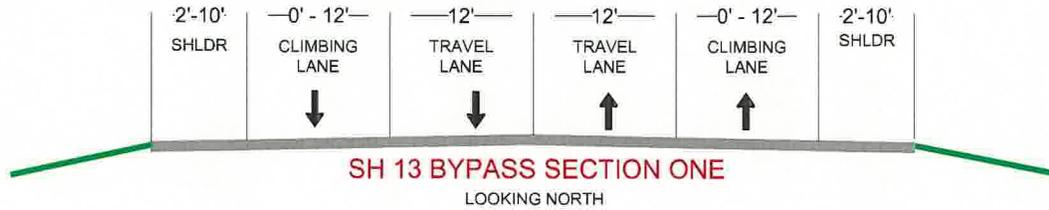
SH 13 is generally characterized by two typical cross sections. The first section occurs from Railroad Avenue to 30th Street and includes two through travel lanes in each direction, a two-way left turn lane, and curb, gutter and sidewalk on the east side. The second cross section, located north of 30th Street, includes one through travel lanes in each direction and 8-ft to 10-ft shoulders.

Figure 2 Existing Roadway Cross Sections

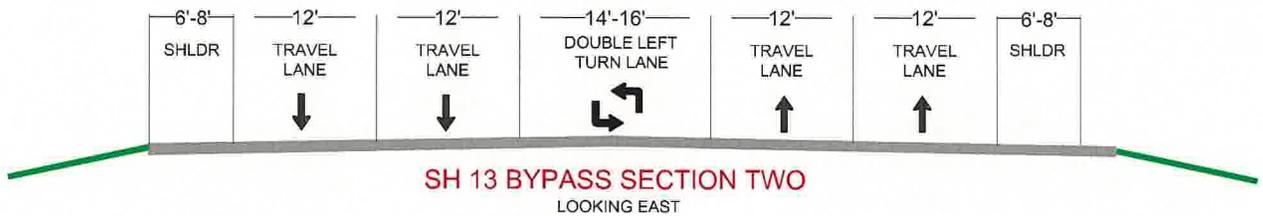


US 6 Sections

I-70 INTERCHANGE - SH 13 BYPASS
 AUXILIARY LANES DEVELOPED AT SOME INTERSECTIONS

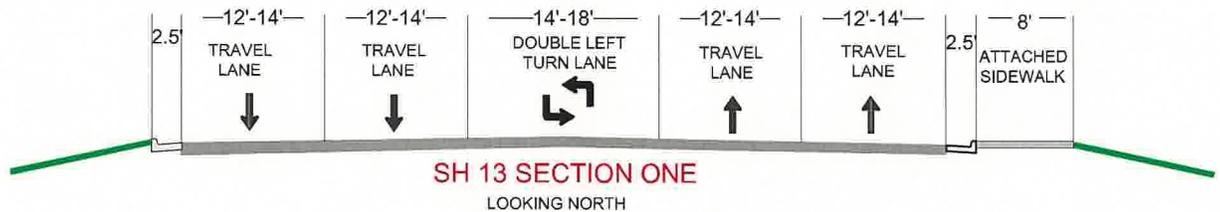


US 6 - XCEL ENERGY
 FOUR-LANE SECTION AT FRAVERT RESERVOIR ROAD
 THREE-LANE SECTION SOUTH OF FRAVERT RESERVOIR ROAD WITH N.B. CLIMBING LANE
 TWO-LANE SECTION NORTH OF FRAVERT RESERVOIR ROAD

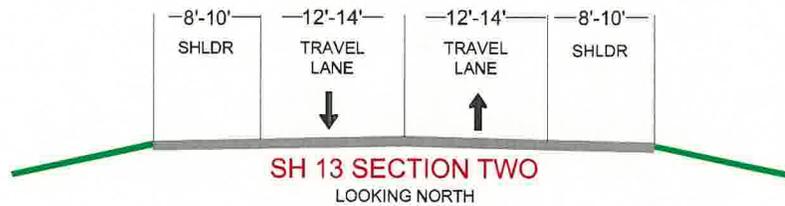


XCEL ENERGY - HOWARD AVE.

SH 13 Bypass Sections



RAILROAD AVE. - 30TH ST.



30TH ST. - JQS RD.
 AUXILIARY LANES DEVELOPED FROM DOKES LN. TO 41ST ST.

SH 13 Sections

With the exception of the curbed segment of SH 13, roadside drainage for all highways is provided by roadside ditch. In general, this open ditch has slopes between 4:1 and 2:1 and exists on either side of the highways throughout the study area, as needed. Guardrail protects several steep slopes and drainage crossings along SH 13 and the SH 13 Bypass including:

- north of 2nd Street on the west side of the SH 13 Bypass,
- across Hubbard Gulch, on the north side of the Railroad Avenue intersection,
- across Government Creek north of Whiteriver Avenue, and
- on the west side of SH 13 north of 41st Street / SH 325 past JQS Road / CR 292.

All highway access points within the study area are full movement. The intersection of 24th Street/Whiteriver Avenue and SH 13 was recently signalized. All other intersections are unsignalized.

Several public roads accessing the study highways have skewed approaches including:

- 2nd Street at the SH 13 Bypass,
- Railroad Avenue at SH 13,
- Whiteriver Avenue at SH 13,
- 30th Street at SH 13,
- North and South Dokes Lane / CR 296 at SH 13,
- SH 325/41st Street at SH 13, and
- JQS Road at SH 13.

Offset intersection configurations are common on US 6 and SH 13. US 6 offset intersections include:

- Oil Court and the Umetco Minerals Corporation access and
- Swallow Lane and the City of Rifle access.

On SH 13, several driveways to private residences located north of 30th Street also have an offset configuration.

3.3 Right-of-Way

The right-of-way (ROW) width within the study area varies by highway segment. US 6 ROW generally varies between 150-ft to 200-ft in width. West of Swallow Lane, the highway ROW is generally centered on the US 6 centerline. From Swallow Lane to the SH 13 Bypass, the US 6 ROW includes a frontage road to the north called Access Road. Direct frontage road access was not evaluated and is not included in this study.

The ROW width for the SH 13 Bypass varies from random-width sections at the south end of the alignment to constant width sections of 110-ft to 200-ft at the north end. In general, the ROW is centered on the SH 13 Bypass centerline.

A majority of SH 13 ROW has a constant width of 100-ft north of 30th Street. This width is centered on the SH 13 centerline; however, there is considerable variation in ROW width from Railroad Avenue to 30th Street. A summary of ROW widths and features is shown in Table 3 on the following page.

Table 3 Right-of-Way (ROW) Summary

Highway	Approximate Reference Point	Width	Notable Features
US 6	88.56 - 88.70	Varies (110' - 470')	Approaching I-70 Interchange
	88.70 - 89.90	200'	
	89.90 - 90.59	150'	UPRR adjacent to US 6 on south side/Frontage Road adjacent to US 6 on north side (90.41-91.26)
	90.59 - 91.13	165'	UPRR adjacent to US 6 on south side/Frontage Road adjacent to US 6 on north side (90.41-91.26)
	91.13 - 91.26	150'	UPRR adjacent to US 6 on south side/Frontage Road adjacent to US 6 on north side (90.41-91.26)
SH 13 Bypass	0.97 - 2.09	Varies (140' - 315')	
	2.09 - 2.40	200'	
	2.40 - 2.66	150'	
	2.66 - 2.87	120'	Residential development to the north and commercial/industrial development to the south.
	2.87 - 2.93	110'	Approaching Railroad Avenue
SH 13	2.61 - 3.49	Varies (100' - 340')	Developed business area
	3.49 - 4.59	100'	Outside city limits
	4.59 - 4.90	Varies (100' - 150')	Steep fill slope to the west and steep cut slopes to the east.

In support of the Expressway classification of the SH 13 Bypass (see Section 3.4 for category descriptions), CDOT acquired access rights along the SH 13 Bypass during ROW acquisition for the highway. This was documented by placing an access control line (A-line) along the highway ROW. An A-line limits access to a highway to locations of defined A-line openings. These openings are defined by the ROW plans and through legal deeds recorded with the County at the time of ROW acquisition. An A-line opening describes the location where access may be permitted if an A-line exists; however, an Access Permit is required to legally gain access to the highway. Table 4, on the following page, summarizes the existing A-line Openings along the SH 13 Bypass.

Table 4 SH 13 Bypass Existing A-line Opening Summary

Access I.D.	Description	SH 13 Bypass Reference Number (Side)	CDOT STA* (side)	Width of Opening	Notes
21	US 6	0.97	100+00	263.3'	
23	W. 2nd Street - West / CR 198	1.07(Lt)	104+50 (Lt) +/-	100' +/-	
24	W. 2nd Street - East	1.07 (Rt)	104+50 (Rt) +/-	80' +/-	
25	Jay Gentry Field Access	1.22 (Rt)	113+30 (Rt)	16'	
26	Jay Gentry - Private Residence	1.49 (Rt)	127+50 (Lt)+/-	n/a	No A-Line opening.
27	Jay Gentry - Private Residence	1.67 (Lt)	137+00 (Lt)	n/a	No A-Line opening per Rule & Order. ROW plans show 35' opening
28a	W. F. Clough Field Access	2.19 (Lt)	164+00 (Lt)	24'	
28b	Fravert Reservoir Road / CR 244 - West	2.20 (Lt)	164+75 (Lt)	85'	
29	Fravert Reservoir Road / CR 244 - East	2.20 (Rt)	164+75 (Rt)	360'	
30a	Future Fairway Avenue - South	2.54 (Rt)	183+00 (Rt) +/-	60' +/-	Dedicated 60' ROW for Fairway Avenue
30b	Hubbard Gulch Development, LLC Field Access	2.55 (Rt)	182+99.4 (Lt)	24'	Located just south/west of Access 30c dedicated ROW opening
30c	Future Fairway Avenue - North	2.56 (Lt)	183+00 (Lt) +/-	100' +/-	Dedicated 60' ROW for Fairway Avenue
31a	Future Access	2.67 (Lt)	190+00 (Lt)	30'	
32a	Xcel Energy - West	2.73 (Rt)	192+62 (Rt)	24'	
32b	Xcel Energy -East	2.76 (Lt)	194+50 (Lt)	30'	
31b	Future Access	2.77 (Lt)	195+00 (Lt)	30'	
33	Howard Avenue	2.79 (Rt)	196+09.4 (Rt)	60'	Dedicated 60' ROW for Howard Avenue
34	Schmueser & Associates	2.86 (Rt)	199+70 (Rt)	24'	
35	West Avenue	2.86 (Lt)	199+73.0 (Lt)	40'	
36	Railroad Ave.	2.93 (Rt)	203+00 (Rt) +/-	261'	

*CDOT stationing according to *City of Rifle, Colorado Plan and Profile of Proposed Project No. CC 24-0013-22.*

3.4 Access Category

Section Three of the *State of Colorado State Highway Access Code, latest edition*, establishes a system of eight highway categories for the purpose of defining the level of access for a highway segment based on the intended function of that segment. The Colorado Transportation Commission assigns a category to each state highway segment throughout Colorado. US 6 from the I-70 interchange to the SH 13 Bypass (RP 88.56 to RP 91.26) is categorized as a Regional Highway (R-A); the SH 13 Bypass from US 6 to Railroad Avenue (RP 0.97 to RP 2.93) is classified as an Expressway (E-X); SH 13 from Railroad Avenue to 21st Street (RP 2.61 to RP 2.66) is classified as an Expressway (E-X); and SH 13 from 21st Street to JQS Road / CR 292 (RP 2.66 to RP 4.90) is classified as Non-Rural Principle Highway (NR-A). Access category limits are shown on Figure 1.

According to Section 3.7, the major access control characteristics for a highway segment under Category E-X are as follows:

- Through traffic movements take precedence over direct access needs
- Capacity for high speeds and relatively high traffic volumes
- “Direct access service to abutting land is subordinate to providing service to through traffic movements.”
- “No access to private property may be permitted unless reasonable access cannot be obtained from the general street system.”
- One mile spacing for full movement intersections

According to Sections 3.8 and 3.10 of the Access Code, the major access control characteristics of a highway segment under Category R-A and NR-A, respectively, are very similar. These major characteristics are listed below:

- Through traffic movements take precedence over direct access needs
- Capacity for medium to high speed and medium to high traffic volumes
- “One access shall be granted per parcel of land if reasonable access cannot be obtained from the local street or road system.”
- One-half mile spacing for full movement intersections or minimum 35% efficiency for signal progression

3.5 Existing Access Inventory

There are currently 24 access points on US 6, 20 access points on the SH 13 Bypass, and 37 access points on SH 13. Many access points were developed prior to the adoption of the *State Highway Access Code* in 1998 and do not have access permits filed with CDOT. Ten (10) access points on US 6 and nine (9) access points on SH 13 have permits on file with CDOT. There are no permits for access points on the SH 13 Bypass, however, most of the access points correspond to legal A-line openings as described by Access Deeds and ROW plans.

On US 6, about half of the access points provide direct business access or field access and the other half provide public/private road access. Along the SH 13 Bypass, the access classifications vary from residential, business and field access to public road access. On SH 13 within the city limits, a majority of access points are classified as business access or public/private road access. Within the County, a majority of SH 13 access points are residential or field access. A complete inventory of existing access points is provided in Technical Appendix B. An abbreviated summary of existing accesses is provided in Table 5, 6, and 7.

Table 5 Existing Access Inventory –US 6L

Reference Points (RP) based on CDOT Highway Segment Description Milepost for Westbound I-70 Ramps at US 6L RP 88.67. US6L RP 91.26 = SH 13A Bypass RP 0.97.

Access ID No.	Reference Point	Description	Existing Configuration	Permitted	Side	Type
1a	88.56	EB I-70 Off Ramp	Unsignalized Full Movement		LT	PRU
1b	88.56	EB I-70 On Ramp	Unsignalized Full Movement		RT	PRU
2a	88.67	WB I-70 Off Ramp	Unsignalized Full Movement		RT	PRU
2b	88.67	WB I-70 On Ramp	Unsignalized Full Movement		LT	PRU
3	88.70	W.F. Clough Field Access	Unsignalized Full Movement		RT	FA
4	88.74	Encana Oil & Gas - Field Access	Pull-out Area		LT	FA
5	88.77	Encana Gathering Services (Midway Supply)	Unsignalized Full Movement	x	LT	BA
6	88.93	W.F. Clough (Williams Productions RMT)	Unsignalized Full Movement	x	RT	BA
7	89.29	W.F. Clough - Gated Field Access	Unsignalized Full Movement	x	RT	FA
8	89.29	Encana Gathering Services (Mamm Creek Conditioning)	Unsignalized Full Movement	x	LT	BA
9	89.66	W.F. Clough - Field Access	Unsignalized Full Movement		LT	FA
10	89.90	Umetco Minerals Corporation	Unsignalized Full Movement		RT	BA
11	89.90	West Rifle Industrial Park Field Access	Unsignalized Full Movement	x	LT	FA
12	89.99	Gas Street/Clough Street (West Rifle Industrial Park)	Unsignalized Full Movement	x	LT	PVRU
13	90.11	Umetco Minerals Corporation (Western Oil Fields Supply Company)	Unsignalized Full Movement		RT	BA
14	90.14	Oil Court (Western Oil Fields Supply Company)	Unsignalized Full Movement	x	LT	PVRU
15	90.30	Gilstrap Enterprises, Inc. (Gilco Petroleum Park)	Unsignalized Full Movement	x	LT	BA
16	90.41	Swallow Lane/2nd St./CR 264	Unsignalized Full Movement		LT	PRU
17	90.49	City of Rifle	Unsignalized Full Movement	x	RT	BA
18	90.98	Ray Ave.	Unsignalized Full Movement		LT	PRU
19	90.98	City of Rifle (West access to waste water treatment facility)	Unsignalized Full Movement		RT	BA
20	91.01	City of Rifle (East access to waste water treatment facility)	Unsignalized Full Movement		RT	BA
21	91.26	SH 13A	Unsignalized Full Movement		LT	PRU
22	91.26	Central Aggregate, Inc.	Unsignalized Full Movement	x	RT	BA

Table 6 Existing Access Inventory – SH 13A Bypass

Reference Points (RP) based on CDOT Highway Segment Description Milepost for US 6L at SH 13A Bypass RP 0.97.

US6L RP 91.26 = SH 13A Bypass RP 0.97. SH 13A Bypass RP 2.93 = SH13A RP 2.61.

Access ID No.	Reference Point	Description	Existing Configuration	Permitted	Side	Type
21	0.97	US 6L	Unsignalized Full Movement			PRU
23	1.07	W. 2nd St. - West / CR 198	Unsignalized Full Movement		LT	PRU
24	1.07	W. 2nd St. - East	Unsignalized Full Movement		RT	PRU
25	1.22	Jay Gentry Field Access	Unsignalized Full Movement		RT	FA
26	1.49	Jay Gentry - Private Residence	Unsignalized Full Movement		RT	RA
27	1.67	Jay Gentry - Private Residence	Unsignalized Full Movement		LT	RA
28a	2.190	W.F. Clough Field Access	Unsignalized Full Movement		LT	FA
28b	2.20	Fravert Reservoir Road/ CR 244 - West	Unsignalized Full Movement		LT	PRU
29	2.20	Fravert Reservoir Road / CR 244 - East	Unsignalized Full Movement		RT	PRU
30a	2.54	Maurice & Eileen Brown Field Access	Unsignalized Full Movement		RT	FA
30b	2.55	Hubbard Gulch Development, LLC Field Access - West	Unsignalized Full Movement		LT	FA
30c	2.56	Hubbard Gulch Development, LLC Field Access - East	Unsignalized Full Movement		LT	FA
31a	2.68	King's Homes LLC A-Line Opening - West	None - A-line opening		LT	OP
32a	2.73	Xcel Energy - West	Unsignalized Full Movement		RT	BA
32b	2.76	Xcel Energy - East	Unsignalized Full Movement		RT	BA
31b	2.78	King's Homes LLC A-Line Opening - East	None - A-line opening		LT	OP
33	2.79	Howard Ave.	Unsignalized Full Movement		RT	PRU
34	2.86	Schmueser & Associates	Unsignalized Full Movement		RT	BA
35	2.86	West Ave.	Unsignalized Full Movement		LT	PRU
36	2.93	Railroad Ave.	Unsignalized Full Movement		RT	PRU

Table 7 Existing Access Inventory – SH 13A

Reference Points (RP) based on CDOT Highway Segment Description Milepost for Railroad Ave. at SH 13A RP 2.61.

SH 13A Bypass RP 2.93 = SH13A RP 2.61.

Access ID No.	Reference Point	Description	Existing Configuration	Permitted	Side	Type
36	2.61	Railroad Ave.	Unsignalized Full Movement		RT	PRU
37	2.66	E. 21st St.	Unsignalized Full Movement		RT	PRU
38	2.71	BP Investments, LLC (Gunbarrel Square)	Unsignalized Full Movement		RT	BA
39	2.76	Joseph T. Schwanebeck (Wing Nutz, Rifle Mini Storage)	Unsignalized Full Movement		RT	BA
40	2.82	Whiteriver Ave.	Signalized Full Movement		RT	PRS
41	2.82	W. 24th St.	Signalized Full Movement	x	LT	PRS
42a	2.89	Valley Lumber	Closed Access		LT	BA
42b	2.94	Valley Lumber	Unsignalized Full Movement	x	LT	BA
43	3.08	E. 26th St.	Unsignalized Full Movement		RT	PRU
44	3.08	W. 26th St.	Unsignalized Full Movement	x	LT	PRU
45	3.20	CF Partners (Columbine Ford - South)	Unsignalized Full Movement		RT	BA
46	3.26	CF Partners (Columbine Ford - North)	Unsignalized Full Movement		RT	BA
47	3.30	Brent G. Cose	Unsignalized Full Movement		LT	RA
48	3.35	E. 30th St.	Unsignalized Full Movement	x	RT	PRU
49	3.35	W. 30th St.	Unsignalized Full Movement		LT	PRU
50	3.70	Bryces Valley Holdings, LLC (Watts Welding/private residence)	Unsignalized Full Movement		RT	RA/BA
51	3.89	South Dokes Ln. / CR 296	Unsignalized Full Movement		RT	PRU
52	3.94	Lissett P. and Julissa O. Hoyos	Unsignalized Full Movement	x	RT	FA
53	3.96	Black Lion Properties, LTD - Private Residence	Unsignalized Full Movement		LT	RA
54	3.98	Family of Faith Church Outreach	Unsignalized Full Movement		RT	RA
55	4.04	Newby L. and Maria A. Sills - Private Residence	Unsignalized Full Movement	x	RT	RA
56	4.15	Mary Catherine and Larry Rohrig, Marsha Burske - Private Residence	Unsignalized Full Movement	x	LT	FA
57	4.24	Black Parcel 36, LLC - Private Residence	Unsignalized Full Movement	x	RT	RA
58	4.30	Sheldon R. and Linda J. Roush - Private Residence	Unsignalized Full Movement	x	LT	RA
59	4.33	W.R. Turner, Sr. - Private Residence	Unsignalized Full Movement		RT	RA
60	4.34	W.R. Turner, Sr. - Private Residence	Unsignalized Full Movement		RT	RA

Table 7 Existing Access Inventory – SH 13A Continued

Access ID No.	Reference Point	Description	Existing Configuration	Permitted	Side	Type
61	4.37	Erik K. and Carrie Kallstrom (C2K Ranch)	Unsignalized Full Movement		LT	RA/BA
62	4.39	Joseph E. and Velma Weinreis - Private Residence	Unsignalized Full Movement		LT	RA
63	4.41	North Dokes Ln. / CR 296	Unsignalized Full Movement		RT	PRU
64	4.48	Joseph E. and Velma Weinreis - Private Residence	Unsignalized Full Movement	x	LT	RA
65	4.51	Little Star Ranch, LLP and Linroc, LLP - Private Residence	Unsignalized Full Movement		LT	RA
66	4.61	41st St./SH 325	Unsignalized Full Movement		RT	PRU
67	4.66	J & A 38th Venture, LLC (Fireside Lanes Bowling Alley)	Unsignalized Full Movement		RT	BA
68	4.69	Cecil R. Waldron - Private Residence	Unsignalized Full Movement		RT	RA
69	4.70	Cecil R. Waldron - Private Residence	Unsignalized Full Movement		RT	RA
70	4.87	Carmen A. and Linda Crone	Unsignalized Full Movement		RT	FA
71	4.90	JQS Rd. / CR 292	Unsignalized Full Movement		LT	PRU

The following provides a description of the accesses by type:

Public Road Unsignalized (PRU) – Publicly owned, full movement, stop-controlled intersection. PRU accesses include highway to highway connections, county roads, and city streets. The PRU access points in the study area include:

US 6 PRU's

- I-70 Ramps EB and WB
- Swallow Lane/CR 264
- Ray Avenue
- SH 13 Bypass/US 6 intersection

SH 13 Bypass PRU's

- 2nd Street/CR 198
- Fravert Reservoir Road/CR 244
- Howard Avenue
- West Avenue
- Railroad Avenue

SH 13 PRU's

- E. 21st Street
- 26th Street
- 30th Street
- S Dokes Lane/CR 296
- N Dokes Lane/CR 296
- 41st Street/SH 325
- JQS Road/CR 292

Private Road Unsignalized (PVRU) – Privately owned, full movement, stop-controlled intersection. These access points are maintained privately. The PVRU access points in the study area include Gas Street (No. 12) and Oil Court (No. 14) on US 6.

Public Road Signalized (PRS) – Full movement, signal-controlled intersection. Whiteriver Avenue and 24th Street (No. 40 and 41) on SH 13 are the only existing PRS access points.

Business Access (BA) – Full or partial movement highway access points serving businesses within the study area. These types of access points are typically used multiple times daily by a variety of traffic types. There are a total of 22 BA points in all three corridors, two of which also act as residential access (Watt's Welding – No. 50 and C2K Ranch – No. 61).

Residential Access (RA) – Full or partial movement private highway access points used on a regular basis by limited traffic. These types of access points include single-family private driveways and are generally located north of the City limits on SH 13. A few RA accesses are located on the SH 13 Bypass. There are 17 RA points in total. Two also serve businesses (Watt’s Welding – No. 50 and C2K Ranch – No. 61).

Field Access (FA) – Full or partial movement access points that provide direct access from the highway to agricultural land. These types of access points are typically not well-defined and are used infrequently. There are 13 FA points in the study area.

A-Line Opening (OP) – For the purpose of the existing access inventory classifications, OP designates a location where a break in the A-line exists per legal deed, but no access exists today. A full list of existing A-line openings with and without existing access is located in Table 4. There are two OP’s along the SH 13 Bypass (No. 31.5 and 32.5).

According to these classifications, the access points are distributed as follows:

- 23 unsignalized public road intersections
- 2 unsignalized private road intersections
- 2 signalized public road intersections
- 22 business access points (2 are also a residential access)
- 17 residential access points (2 are also a business access)
- 13 field access points
- 2 A-line opening points

3.6 Existing Traffic Volumes

Existing traffic volume counts were collected throughout the study area. Traffic data collected included peak hour intersection turning movement counts, average daily traffic (ADT) counts and vehicle classification counts. Proposed traffic count locations were reviewed and approved by the City of Rifle and CDOT prior to collection of the data.

Peak hour intersection turning movement counts were collected at all public intersections within the study area and numerous private accesses. A total of 34 locations were counted and are listed on the following page. The counts were collected between 7:00 and 9:00 a.m. and between 4:00 and 6:00 p.m. on a typical weekday (Tuesday, June 17th, 2008 and Wednesday, June 18th, 2008). Based on the data, the a.m. peak hour occurs between 7:30 and 8:30 a.m. The p.m. peak hour occurs between 4:45 and 5:45 p.m.

SH 13

Peak Hour (AM and PM)

- | | |
|--|--|
| • US 6 | • West 24 th Street / Whiteriver Avenue |
| • West 2 nd Street | • East 26 th Street |
| • Private Access 3,250’+/- north of W. 2 nd St. | • Columbine Ford South Access |
| • Fravert Reservoir Road | • Columbine Ford North Access |
| • Xcel West Access | • East/West 30 th Street |
| • Xcel East Access | • South Dokes Lane (CR 296) |
| • Howard Avenue | • North Dokes Lane (CR 296) |
| • West Avenue | • 41 st Street (CR 325) |
| • Railroad Avenue | • Fireside Lanes Access |
| • East 21 st Street | • JQS Road |

US 6

Peak Hour (AM and PM)

- EB I-70 Ramps
- WB I-70 Ramps
- Midway Supply Access
- Encana Access
- Gas St
- Rifle Utility Access
- Oil Ct
- GILCO Petroleum Access
- 2nd St / Swallow Ln
- Ray Ave

Other locations

Peak Hour (AM and PM)

- Fravert Reservoir Rd / W 16th St (CR 265)
- E.30th St / Mor Storage Access
- South Dokes Ln (CR 296) / E. 30th St

ADT counts record the total volume of traffic over a 24-hour period on a typical weekday. ADT counts also provide hourly counts by direction of travel. At each location, three consecutive days of traffic data were collected (Tuesday, June 17th through Thursday, June 19th, 2008). A total of eight (8) locations were counted.

- US 6 west of I-70
- US 6 east of I-70
- US 6 west of SH 13 Bypass
- US 6 east of SH 13 Bypass
- SH 13 Bypass north of US 6
- SH 13 Bypass west of Railroad Avenue
- SH 13 south of 41st St (CR 325)
- SH 13 north of JQs Road

Existing traffic volumes along SH 13 and US 6 include a relatively large truck percentage (at some locations, more than 10% of all vehicles are trucks). In order to obtain a more accurate estimate of the number of trucks, additional vehicle classification counts were collected at the following eight (8) locations:

- US 6 east of I-70
- US 6 west of SH 13 Bypass
- US 6 east of SH 13 Bypass
- US 6 east of Whiteriver Ave
- SH 13 north of I-70
- SH 13 Bypass north of US 6
- SH 13 south of 41st St (CR 325)
- Railroad north of US 6

Vehicle classification counts are similar to ADT counts in that they provide a total traffic volume over an entire day. Vehicle classification counts also provide information related to the mix of traffic (e.g., motorcycles, autos, single-unit trucks and combination tractor-trailer trucks). The vehicle classification counts were collected between Tuesday, September 9, 2008 and Thursday, September 11, 2008. Based on the vehicle classification counts, trucks represent approximately 13% of all traffic on US 6 and 15% - 18% of all traffic along SH 13. A detailed summary of the vehicle classification data is provided in Table 8.

Table 8: Vehicle Classification Data for US 6 and SH 13

Location	Vehicle Classification Category												
	Motorcycle	Auto	Pickups / Vans	Buses	2 Axle, 6 Tire Vehicles	3 Axle Single Unit	4 or More Axle Single Unit	4 or Less Axle Single Trailer	5 Axle Single Trailer	6 or More Axle Single Trailer	5 or Less Axle Multi-Trailer	6 Axle Multi-Trailer	7 or More Axle Multi-Trailer
US 6 west of SH 13 Bypass	1%	43%	32%	1%	10%	3%	0%	2%	7%	1%	0%	0%	0%
SH 13 Bypass	1%	42%	31%	1%	7%	4%	0%	2%	11%	1%	0%	0%	0%
SH 13	1%	33%	30%	1%	20%	2%	0%	4%	8%	1%	0%	0%	0%

The existing ADT volumes and the AM and PM peak hour turning movements for the corridor are summarized in Figures 3a and 3b. The ADT volumes along US 6 range from about 2,740 vehicles per day (vpd) west of I-70 to 8,490 vpd immediately west of the SH 13 Bypass. Along SH 13, ADT volumes range from approximately 8,900 vpd north of W. 30th Street to 6,550 vpd north of JQS Road.

Figure 3a Existing Traffic Volumes

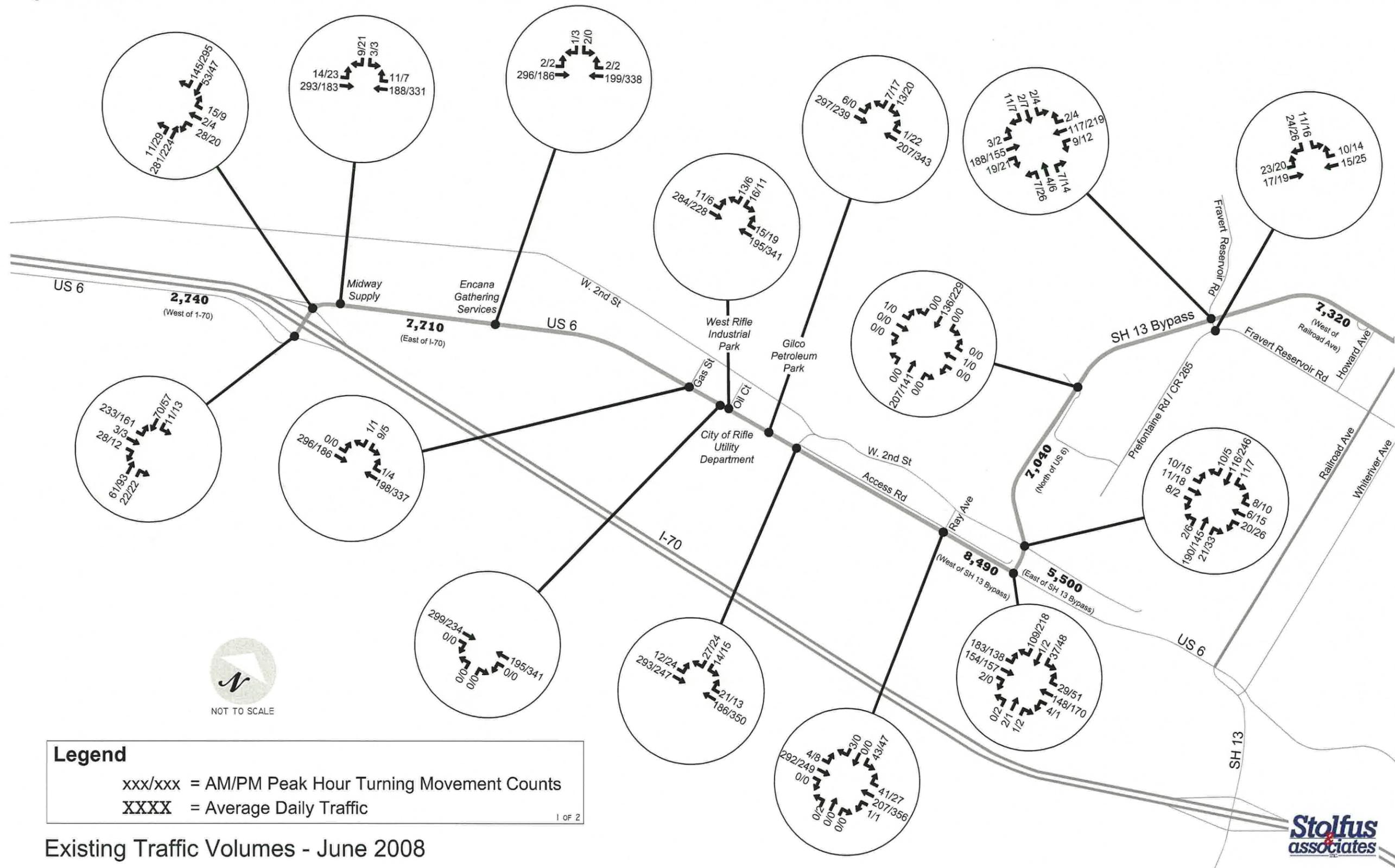
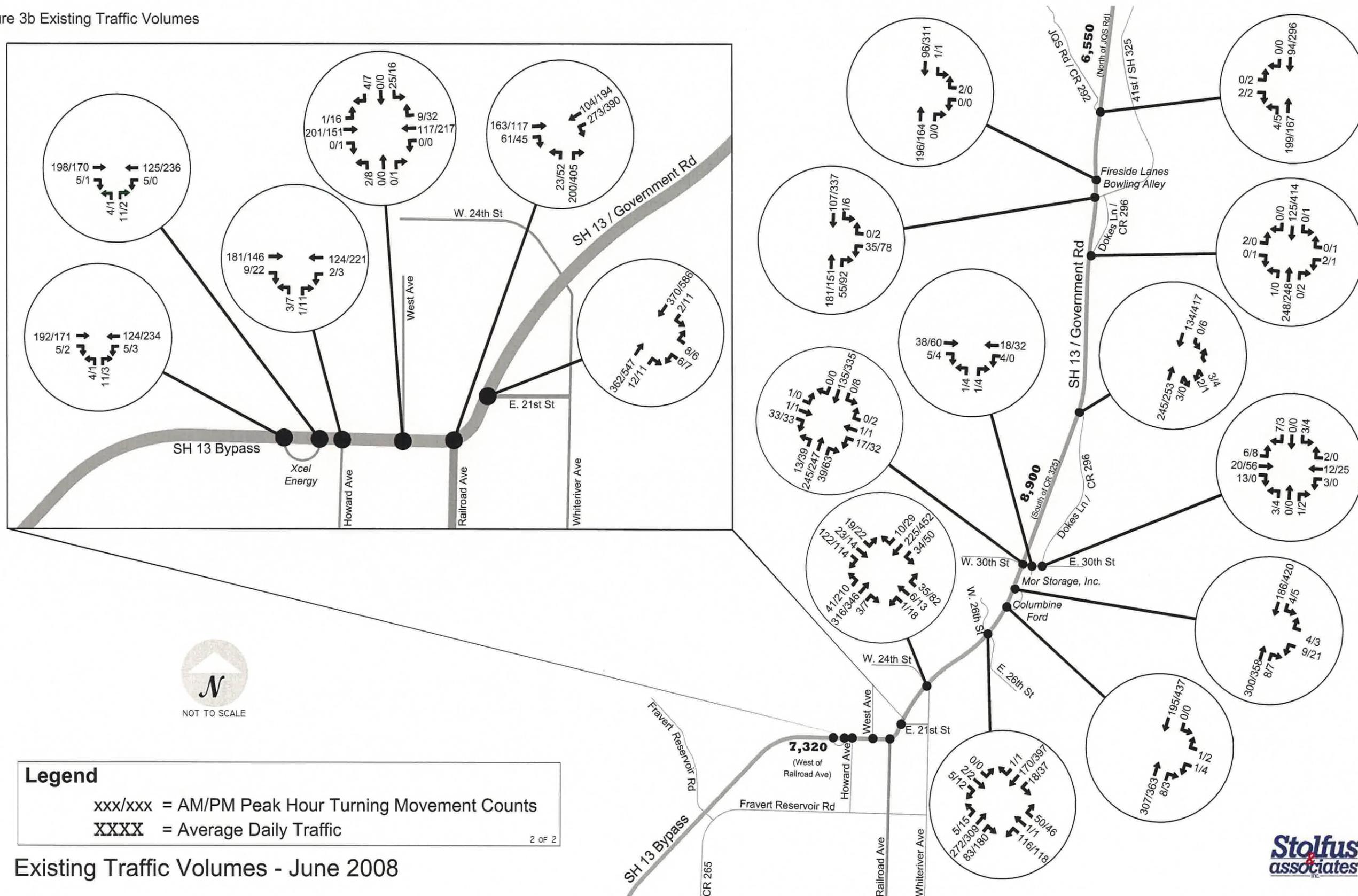


Figure 3b Existing Traffic Volumes



3.7 Operational Analysis

Level-of-service (LOS) analyses were conducted of all intersections within the study area. These analyses used existing traffic volumes, intersection geometries, and traffic controls. LOS is a measure of the quality of traffic flow and is defined by a letter grade ranging from A (uninterrupted flow) to F (heavily congested conditions). LOS D is generally considered acceptable for peak period conditions in urban areas. The LOS analyses were completed using methods documented in the *Highway Capacity Manual, 2000*. Table 9 provides LOS criteria for signalized intersections, unsignalized intersections, and arterials. Note that all of the intersections within the study area were unsignalized at the time of the existing conditions analysis, although a traffic signal was recently constructed and is now operational for the intersection of SH 13 and Whiteriver Avenue / 24th Street.

Table 9 LOS Criteria (Source: *Highway Capacity Manual, 2000*)

Level of Service (LOS)	Average Delay		Traffic Characteristics
	Signalized Intersection (seconds/vehicle)	Unsignalized Intersection (seconds/vehicle)	
A	<= 10	0 – 10	Free Flow / Insignificant Delays
B	> 10 – 20	> 10 - 15	Stable Flow / Minimal Delays
C	> 20 – 35	>15 - 25	Stable Flow / Acceptable Delays
D	> 35 – 55	>25 - 35	Approaching Unstable / Tolerable Delays
E	> 55 – 80	> 35 - 50	Unstable Flow / Significant Delays
F	> 80	> 50	Forced Flow / Excessive Delays

For signalized intersections, LOS and average delays are reported for the intersection as a whole. For unsignalized intersections, levels of service and average delays are only reported for the most critical movement (usually the left-turn or through movement from the stop-controlled approach).

The results summarized in Table 10 indicate that overall traffic conditions are good along US 6, the SH 13 Bypass, and on SH 13. Intersections currently experience LOS C conditions during peak hours and average vehicle speeds are typically close to posted limits.

Table 10: Existing Intersection Levels of Service

Corridor	Intersection	Level-of-Service (LOS)	
		AM Peak Hour	PM Peak Hour
US 6	I-70 South Ramps	B	B
	I-70 North Ramps	B	B
	Gas Ct	B	B
	Oil Ct	B	B
	2 nd St / Swallow Ln	B	B
	Ray St	B	C
	SH 13 Bypass	C	C
SH 13 Bypass	2 nd St	C	B
	Fravert Reservoir Rd	B	B
	Howard Ave	A	A
	West Ave	B	B
	Railroad Ave	C	C
SH 13	21 st St	B	B
	24 th St / Whiteriver Ave	B	C
	26 th St	B	C
	30 th St	B	C
	S Dokes Ln	B	B
	N Dokes Ln	B	B
	41 st St	B	B
	JQS Rd	A	B

Existing travel speeds were also evaluated along the US 6 and SH 13 corridors. As shown in Table 11, existing speeds are relatively close to the posted limits:

Table 11 Existing Peak Hour Travel Speeds

Corridor	Direction	Speed Limit	Travel Speeds	
			AM Peak Hour	PM Peak Hour
US 6 (I-70 to SH 13 Bypass)	Eastbound	45 – 55 (varies)	45	47
	Westbound	55	48	47
SH 13 (US 6 to JQS Rd)	Northbound	30 – 50 (varies)	44	45
	Southbound	30-50 (varies)	44	43

The results indicate that overall traffic conditions are good along US 6, the SH 13 Bypass, and on SH 13. The following summarizes some of the key points related to existing conditions:

- All existing intersections currently operate at a LOS C or better during peak hours.
- The most critical intersections are at US 6 / SH 13 Bypass and at SH 13 Bypass / Railroad Avenue.
- Existing travel times are good with vehicle speeds generally close to posted.

3.8 Crash History

Crash data for both US 6 and SH 13 was compiled from the CDOT data base. A summary of the crash data for each highway is presented below.

Accident data for US 6 was compiled for the period of January 1, 2002 to December 31, 2004 between Milepost (MP) 88.90 and MP 91.00, and also for the period of January 1, 2005 to August 31, 2006 between MP 88.90 and MP 91.24. A total of 22 accidents occurred on US 6 during both reported periods, including 3 access-related accidents. Of these reported crashes, 3 (13.6%) had at least one injury, none were fatal, and the remaining 19 crashes (86.4%) resulted in property damage only. The access related crashes make-up 13.6% of all the crashes. One of the three access-related crashes resulted in injury, two of the access-related crashes were related to left-turning movements (overtaking turn and broadside), and two of the access-related crashes were located at the I-70 ramps.

Accident data for SH 13 was compiled for the period of January 1, 2002 to December 31, 2004 from MP 0.97 to MP 4.11. A total of 52 accidents were reported on SH 13, including 39 access-related accidents. Of these reported crashes, 6 (11.5%) had at least one injury, none were fatal, and the remaining 46 crashes (88.5%) resulted in property damage only. An average of 75% of the accidents occurring along SH 13 during this period were access-related. In addition, all 6 injury crashes were access-related.

Table 12 presents a summary of access-related crash types along SH 13 between 2002 and 2004. As shown in the table, a majority of crashes fell into three categories: broadside crashes (38.5%) rear end crashes (17.9%), and approach turn crashes (15.4%). Approximately 2/3 of the crashes occurred during daylight hours and adverse weather conditions were generally not a factor.

Table 12 SH 13 Access-Related Crashes by Type (1/02 to 12/04)

Crash Type	Number of Crashes	Percentage
Overtaking	2	5.1%
Other Non Collision	1	2.6%
Broadside	15	38.5%
Head On	1	2.6%
Rear End	7	17.9%
Sideswipe (Same)	2	5.1%
Approach Turn	6	15.4%
Overtaking Turn	1	2.6%
Curb	2	5.1%
Wild Animal	1	2.6%
Embankment	1	2.5%
Total	39	100.0%

In addition, CDOT determined the Weighted Hazard Index (WHI) for both corridors. The WHI is a statistic that provides a comparison of crash data from a particular section of highway to crash data from other sections of highway with similar characteristics in the state. It is computed by considering crash frequency, crash severity, traffic volumes within a section, length of a section, and crash history of similar highways. A positive WHI value indicates that a highway section has a higher crash frequency/severity history than the statewide average. A WHI value of zero indicates that a highway section has an crash frequency/severity history equal to the statewide average. A negative WHI value indicates that a highway section has a lower crash

frequency/severity history than the statewide average. The average WHI for US 6 between 2002 and 2004 is -3.05 indicating fewer crashes occur on US 6 between MP 88.9 and MP 91.00 than on similar highways in Colorado. The average WHI for SH 13 between 2002 and 2004 is 0.81 indicating the more crashes occur on SH 13 between MP 0.97 and MP 4.11 than on similar highways in Colorado.

In reviewing the access-related crash data for SH 13 in more detail, several access points along SH 13 experienced some crash recurrence during this period. Locations with crash recurrence include Fravert Reservoir Road/CR 244, Railroad Avenue, and 24th Street. The higher crash locations at major intersections within the corridor correlate to high traffic locations. In addition, a majority of these accidents are left-turn related. Other factors may include sight-distance at Fravert Reservoir Road and highway alignment at Railroad Avenue. Implementing access management techniques will reduce the number of conflict points in the study area, thereby increasing the potential to reduce crashes between. A full summary report and a detailed list of crashes by milepost are included in Technical Appendix C.

4.0 Projected Conditions

In large part due to the booming energy industry and the shortage of affordable housing available throughout the Western Slope, significant growth is anticipated in the vicinity of Rifle. At this time, there are several potential developments in various stages of the local planning process. A 350 acre mixed-use development known as Rim Rock, is currently planned for an area north of the city limits and immediately west of SH 13. Across SH 13 from Rim Rock, another large, mixed-use development known as Bryce's Valley is planned. Other potential developments include: the 56 acre Black Lion development along SH 13 north of the city; the 57 acre Queen's Crown development located off the SH 13 Bypass near Fravert Reservoir; and the future Bio Corridor planned along US 6 near the junction with I-70. All told, these projects are expected to increase travel demand along US 6 and SH 13 over the next several years.

The Rifle Access Plan considers the transportation effects of planned area developments as well as the mobility needs of the community and the region over the next twenty or so years. By applying access management techniques, the Plan seeks to enhance the transportation network and its ability to accommodate realistic levels of traffic growth.

4.1 Future Planned Development

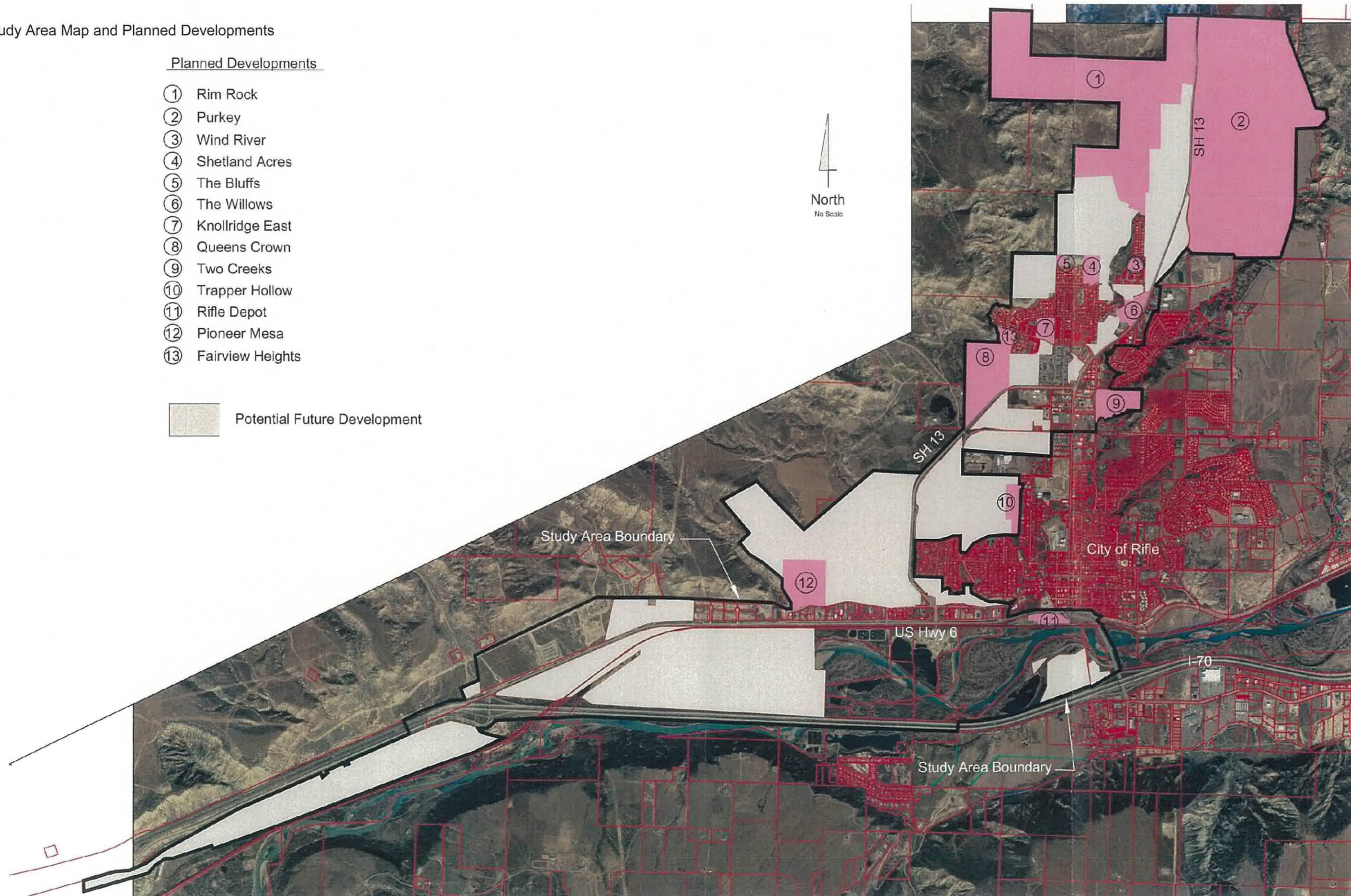
The Rifle Access Plan utilizes a two-step approach to develop the future traffic projections which were later analyzed in support of the Plan's development. First, the traffic generated by planned developments within the study area was determined. The specific planned developments that were considered are shown on Figure 4. Next, an annual background traffic growth rate was applied to existing traffic volumes to reflect the general traffic volume increases that occur over time. The traffic generated by planned developments was then combined with factored background volumes to develop the total traffic projections for Year 2030.

The study area for the Rifle Access Plan includes SH 13 between US Hwy 6 and Garfield County Road 292 (JQS Road) and US Hwy 6 between the US 6/I-70 interchange and the SH 13 Bypass. The study area is shown on Figure 4 and includes approximately one-half of the City's Comprehensive Plan Tier 2 Boundary. The City's Tier 2 Boundary represents that area which is anticipated to develop by Year 2025.

The amount of traffic generated by planned development was estimated using traffic impact studies (e.g., Rim Rock, Queen's Crown) where available or the ITE Trip Generation Manual. The trip generation estimates for mixed-use developments include an internal capture rate that reflects the fact that a portion of the traffic generated by mixed-use developments will occur internally within the development (for example, a trip between a residential use and a commercial use). Internal capture rates were selected in accordance with the State Highway Access Code and are 8% for the p.m. peak hour and 2% during the a.m. peak hour. Internal capture rates were only applied to mixed-use developments. A 10% daily internal capture rate was also applied to mixed use developments.

It is also common to deduct a small percentage of trips to account for transit, bicycle, and pedestrian usage. Typically, this reduction is on the order of 0% to 5% of the total traffic generation. Based upon feedback from the project team, a 1% multi-modal trip reduction was applied to reflect transit, pedestrian, and bicyclist traffic.

Figure 4 Study Area Map and Planned Developments



The trip generation estimates for planned development within the City's Tier 2 boundary is provided in Table 13.

Table 13: Trip Generation for Planned Developments

ID	Planned Development	ITE Code	Land Use	Size	Unit	Daily	Trip Generation						
							AM Total	AM In	AM Out	PM Total	PM In	PM Out	
1	Rim Rock (Mixed-Use)	210	Single Family Residential	346	DUs	3,311	260	65	195	350	220	130	
			Condominium / Townhome	1002	DUs	5,872	440	75	365	498	334	164	
			Commercial Shopping Center	125.13	1,000 s.f.	5,373	129	79	50	469	225	244	
			High School	40.859	1,000 s.f.	527	125	89	36	40	22	18	
			Community Center / Park	26.31	1,000 s.f.	602	43	26	17	43	12	31	
2	Bryce's Valley (Mixed-Use)	210	Single Family Residential	600	DUs	5,742	450	113	338	606	382	224	
			Condominium / Townhome	900	DUs	5,274	396	67	329	468	314	154	
			Commercial Shopping Center	120	1,000 s.f.	5,153	124	76	48	450	216	234	
3	Wind River	230	Condominium / Townhome	84	DUs	492	37	6	31	44	29	15	
4	Shetland Acres	210	Single Family Residential	21	DUs	201	16	4	12	21	13	8	
5	The Bluffs	230	Condominium / Townhome	24	DUs	141	11	2	9	12	8	4	
6	The Willows	230	Condominium / Townhome	60	DUs	352	26	4	22	31	21	10	
7	Knollridge East	230	Condominium / Townhome	45	DUs	264	20	3	17	23	15	8	
8	Queen's Crown	210	Single Family Residential	5	DUs	48	4	1	3	5	3	2	
			210	Single Family Residential	7	DUs	66	5	1	4	7	4	3
			230	Condominium / Townhome	10	DUs	58	5	1	4	5	3	2
9	Two Creeks	130	Industrial Park	24.96	Acre	1,576	213	175	38	220	46	174	
			210	Single Family Residential	184	DUs	1,761	138	35	104	186	117	69
10	Trapper Hollow	210	Single Family Residential	120	DUs	1,148	90	23	68	121	76	45	
11	Black Lion (Mixed-Use)	230	Condominium / Townhome	350	DUs	2,051	154	26	128	182	122	60	
			820	Commercial Shopping Center	200	1,000 s.f.	8,588	206	126	80	750	360	390
12	Pioneer Mesa	210	Single Family Residential	78	DUs	746	59	15	44	79	50	29	
13	Fairview Heights ¹	230	Condominium / Townhome	14	DUs	82	6	1	5	5	2	2	
14	Bio Corridor	130	Industrial Park	200	Acre	12,822	1,710	1,419	291	1,768	37*	1,397	
			Internal Trips (Mixed-Use Developments) ²			5,532	81	43	38	450	206	244	
						Multi-Modal Trip Reduction ³	47	24	22	64	30	34	
						TOTAL	56,096	4,540	2,363	2,177	5,871	2,734	3,137

¹Estimates assume Fairview Heights is completed and that 14 of the 47 units remain available

²Internal trip reductions applied include 10% of daily, 2% of a.m. peak, and 8% of p.m. peak

³Multi-modal trip reduction of 1%

4.2 Traffic Volume Forecasts

Background Traffic Growth

For the purposes of the Rifle Access Plan, background traffic is defined as all traffic that is not generated by planned developments located within the study area. Typically, background traffic is estimated by applying a growth factor to existing traffic volumes. The growth factor is usually based on historical trends and assumes that traffic volumes grow linearly over time. In absence of good historical data, a growth rate of 2% per year is the industry-standard.

Since the Rifle Access Plan explicitly considers planned developments within the study area, it is worth noting that the industry-standard 2% per year growth rate typically reflects the combined effect of local development traffic as well as the general growth of traffic that occurs over time. As mentioned previously, the study area that has been defined for the Rifle Access Control Plan encompasses roughly one-half of the area expected to develop in an around the City by 2025. Therefore, if too large of a background growth rate is used, “double counting” of trips could result when combined with the study area’s trip generation.

Selection of a background traffic growth rate also has the potential for profound effects on the Rifle Access Plan traffic analysis results. The following table illustrates the compounding effect that growth rates have over time:

Table 14: Importance of Background Traffic Growth Rate (Example)

Highway	Location	Existing (2008) ADT	2030 ADT For Growth Factor			
			2.0%	3.0%	4.0%	5.0%
SH 13	North of SH 6	7,040	10,900	13,500	16,700	20,600

A number of recent studies, socio-economic projections, and historical traffic data were reviewed in order to determine a “reasonable” background traffic growth rate for the Rifle Access Plan. Based upon this data, and input from the project team, a total annual growth rate (including traffic from planned developments and background growth) of between 5% and 8% per year was considered reasonable.

Initial traffic volume projections for the study area were developed by combining the trip generation from planned developments (Table 13) with year 2030 background traffic volumes. The initial 2030 background traffic volumes were developed by growing existing traffic volumes at a rate of 3% per year. When the initial projections were complete, it was observed that the actual growth rates ended up well outside of the range that was considered reasonable by the project team. The annual growth rates corresponding to the initial estimates ranged from approximately 5% to 9.5% along US 6 and the SH 13 Bypass; and from 6% to 12.5% along SH 13. As a result, the background traffic growth rate was adjusted downward to 0.5% per year, reflecting the large traffic contribution from planned developments.

Once the growth rates were adjusted and the future traffic projections re-evaluated, the overall annual growth rates along US 6 ranged from 4% to 9% along US 6 and the SH 13 Bypass and from 5% to 12% along SH 13. The majority of locations fell within the 5% to 8% criteria. Although some isolated locations have growth rates that are considerably above the range, further reductions to the background growth rate (i.e., assuming no growth) were not considered.

Future Traffic Projections (Year 2030)

Daily and peak hour traffic volume forecasts were developed for two future scenarios identified by the project team. The first scenario, known as the 2030 No ACP (without access control plan recommendations), reflects future traffic volumes developed by applying the background traffic growth factor to existing volumes shown in Figures 3a and 3b and adding the traffic from planned developments. The 2030 No ACP traffic volumes are provided in Figures 5a and 5b.

The second scenario, known as the 2030 ACP, modifies the 2030 No ACP to include the proposed access control measures for US 6 and SH 13 that are identified in the Plan. The proposed access closures, intersection turn restrictions, and alternate local routes identified in the Plan will result in some changes in local traffic patterns. Where necessary, u-turns were distributed to the nearest full movement intersection. These traffic pattern changes are reflected in the 2030 ACP traffic volumes shown on Figures 6a and 6b.

Technical Appendix D provides a detailed summary of the methodology and assumptions used in developing the 2030 No ACP and 2030 ACP traffic forecasts.

A comparison of the existing and future traffic projections suggests that traffic volumes will increase significantly over the next 20 years. For example, average daily traffic volumes along US 6 range from 8,510 to 12,500 vehicles per day by 2030. Along SH 13, average daily traffic ranges from 5,630 to 31,300. Daily traffic volumes at most locations are projected to increase by more than 100% over existing levels.

Although it is not the intent of the Rifle Access Plan to identify future capacity needs along US 6 and SH 13, the volume results and the LOS results presented later in this report suggest that capacity improvements may be required in the future to accommodate future traffic demands; particularly along existing segments of two-lane highway.

Transportation System

The future transportation networks (No-ACP and ACP) include planned and programmed improvements within the study area. The following changes to the transportation network were assumed to occur by 2030 (from the City's Transportation Master Plan and Comprehensive Plan):

- Extension of Acacia Avenue to Whiteriver Avenue

A number of access-related transportation improvements were identified in the City's Transportation Master Plan. The Access Control Plan also considered these improvements in the context of the corridor's overall access plan:

- Signalization of the intersections of SH 13/Railroad and SH 13/Whiteriver/24th
- Fairway Avenue extension to the SH 13 Bypass
- "Gentry" Connection to the SH 13 Bypass

The future transportation networks were identified based upon input from the City of Rifle, Garfield County, and the Colorado Department of Transportation.

Figure 5a 2030 No ACP Traffic Volumes

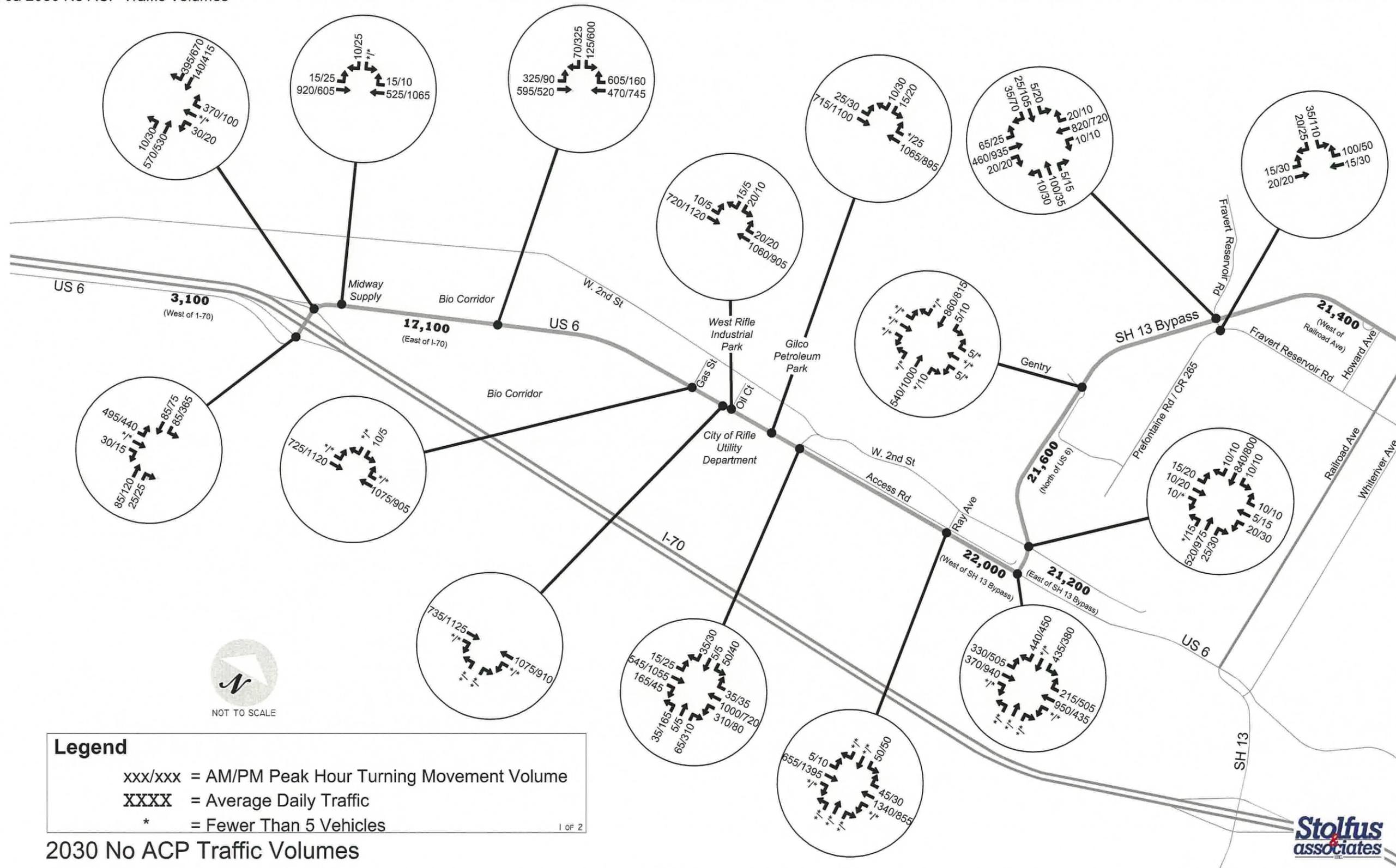


Figure 5b 2030 No ACP Traffic Volumes

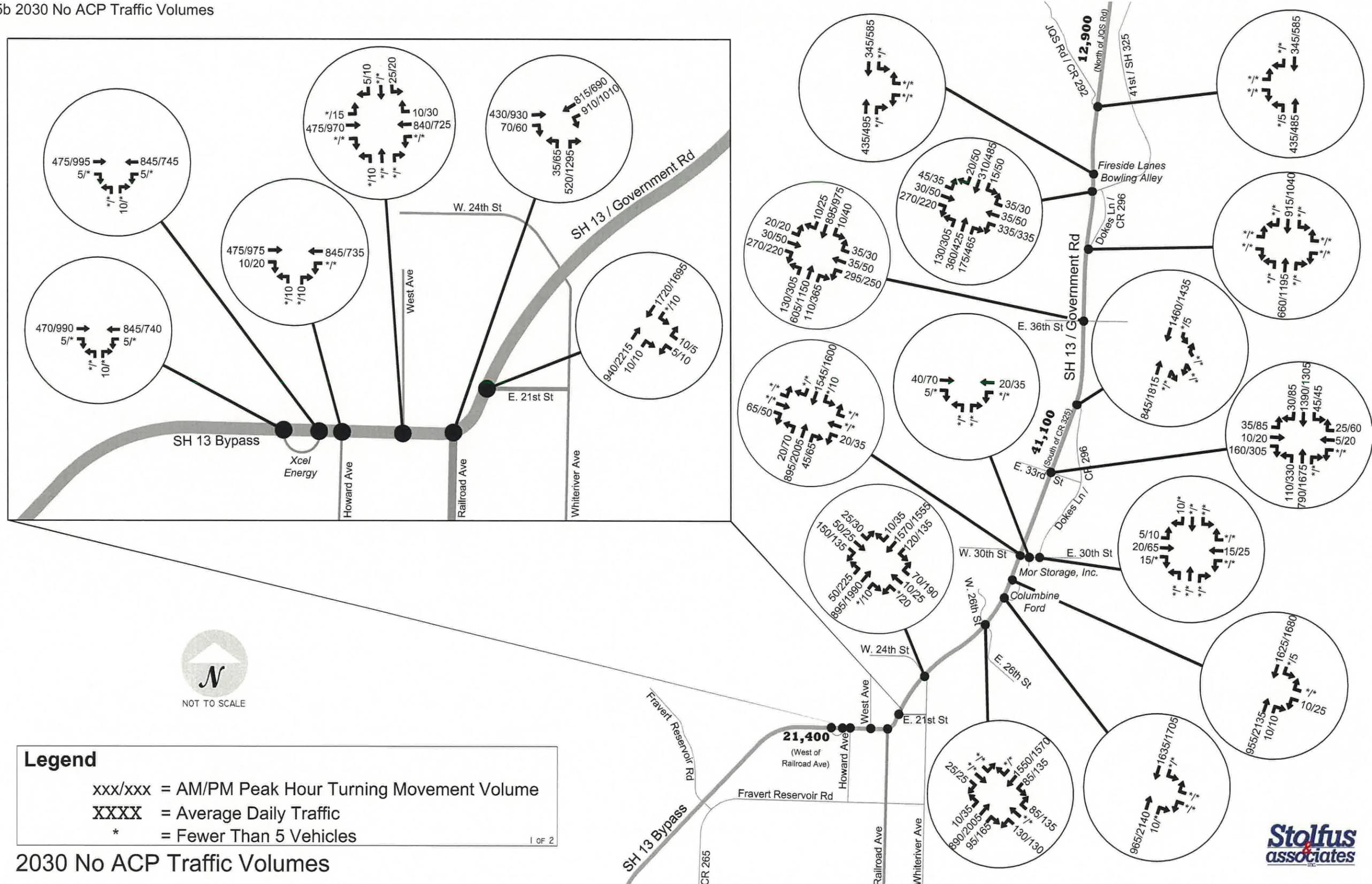
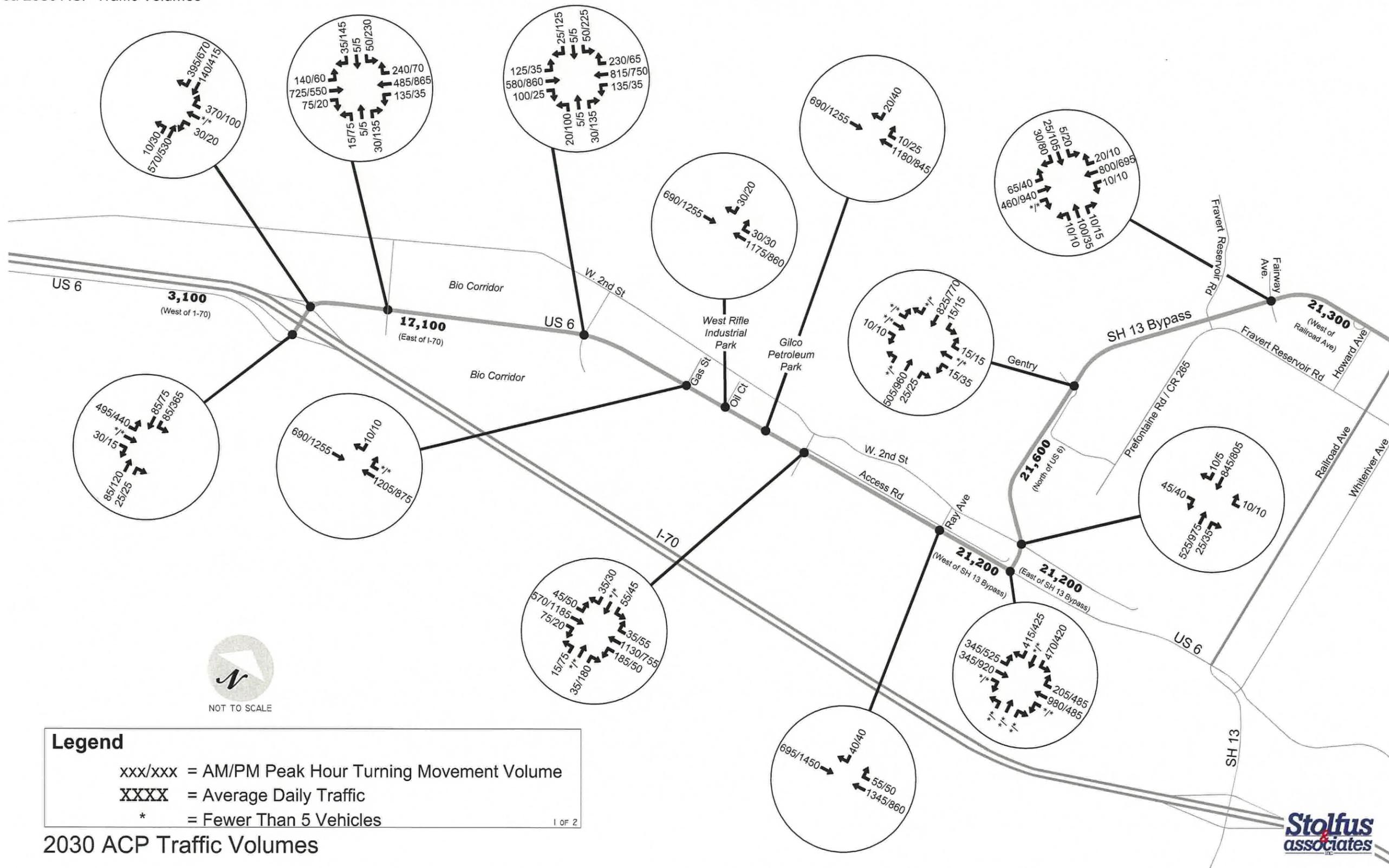


Figure 6a 2030 ACP Traffic Volumes



The traffic volume projections also suggest the likelihood that many of the full movement intersections identified in the Access Plan will meet traffic signal warrants in the future. The following unsignalized intersections have been identified as potentially warranting a future traffic signal or other type of traffic control recognized by the MUTCD within 20 years under the No ACP scenario:

- US 6 / 2nd St / Swallow Ln
- US 6 / Ray Ave
- US 6 / SH 13 Bypass
- SH 13 Bypass / Fravert Reservoir Rd
- SH 13 Bypass / Railroad Ave
- SH 13 / 24th St / Whiteriver Ave (recently signalized)
- SH 13 / 26th St
- SH 13 / 30th St
- SH 13 / 41st St

The type of traffic control for full movement intersections is not specified in the Plan. Intersection traffic control will be evaluated in the future on a case-by-case basis and may include stop signs, traffic signals, roundabouts, interchanges, or other traffic control recognized by the MUTCD. Traffic signals may be installed if and when warranted per current MUTCD standards and when funding is available. For the purpose of evaluating intersection levels-of-service (LOS) for the 2030 scenarios, traffic signals were assumed at the intersections listed above and at new intersections as deemed appropriate.

4.3 Operational Analyses

In addition to the existing conditions analyses, the traffic analyses conducted for the Rifle Access Plan included the following future year scenarios:

1. 2030 No ACP (Without Access Plan Recommendations)
2. 2030 ACP (With Access Plan Recommendations)

Traffic operations for each intersection and major access along SH 13 and US 6 were evaluated using methods described in the 2000 Highway Capacity Manual. Corridor traffic models were prepared for each of the scenarios under typical weekday a.m. and p.m. peak hour conditions. The models reflected projected traffic, geometric, and access conditions, as appropriate, and were used to evaluate the effects that the proposed access control measures have on traffic operations throughout the study area.

No widespread capacity enhancements were assumed (such as widening for additional through lanes). However, it was assumed that minor auxiliary lane improvements would be constructed at signalized intersections and/or at new access intersections.

Level-of-Service (LOS)

Table 15 contains a comparison of the level-of-service results for the 2030 No ACP and the 2030 ACP scenarios. The following provides a summary of the key points:

- Intersection LOS results are similar between the 2030 No ACP and the 2030 ACP scenarios with the following exceptions:
 - a) The 2030 ACP scenario results in improved LOS at the following intersections:
 - i. US 6 & Gas Court
 - ii. US 6 & Oil Court
 - iii. SH 13 Bypass & 2nd Street
 - iv. SH 13 Bypass & Howard Avenue
 - v. US 6 & 2nd / Swallow Lane
 - vi. SH 13 Bypass & Railroad Avenue
 - b) The 2030 No ACP scenario results in improved LOS at the following intersections:
 - i. SH 13 & 26th Street
 - ii. US 6 & Ray Street
- The intersection of SH 13 & 33rd Street is projected to operate at a LOS F under either scenario (due to inadequate capacity along SH 13)
- The No ACP scenario has nine (9) intersections at LOS F while the ACP scenario has three (3)

With a few minor exceptions, the ACP scenario results in better intersection performance than does the No ACP scenario.

Table 15: Intersection Levels of Service (Future)

Corridor	Intersection	Traffic Control	2030 No ACP		2030 ACP	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
US 6	I-70 South Ramps	Stop	E	F	E	F
	I-70 North Ramps	Stop	E	D	E	D
	Bio Corridor West Access	Signal			A	C
	Bio Corridor Central Access	Signal			A	C
	Encana	Signal	A	C	Closed	
	Gas Ct	Stop	F	F	D RIRO	C RIRO
	Oil Ct	Stop	F	F	D RIRO	C RIRO
	2 nd St / Swallow Ln	Signal	A	C	A	B
	Ray St	Stop			E RIRO	C RIRO
		Signal	B	B		
	SH 13 Bypass	Signal	E	C	E	C
SH 13 Bypass	2 nd St	Stop	F	F	C RIRO	C RIRO
	Gentry	Signal	A	A	A	A
	Fravert Reservoir Rd	Signal	A	A	Closed	
	Fairway	Signal			A	B
	Howard Ave	Stop	B	C		
		Stop			B 3/4 Move	B 3/4 Move
	West Ave	Stop	C	C	Closed	
Railroad Ave	Signal	C	F	B	E	
SH 13	21 st St	Stop	C	F	Closed	
	24 th St / Whiteriver Ave	Signal	A	B	A	B
	26 th St	Stop			C 3/4 Move	F 3/4 Move
		Signal	A	B		
	30 th St	Stop			C RIRO	C RIRO
		Signal	A	A		
	33 rd St	Signal	E	F	E	F
	S Dokes Ln	Stop	F	F	Closed	
	36 th St	Signal	C	D	C	D
	N Dokes Ln	Stop	F	F	Closed	
41 st St	Signal	C	C	C	C	
JQS Rd	Stop	B	C	Closed		

Arterial Progression

Arterial progression measures the ability for vehicles to travel through a corridor of traffic signals without stopping. In part due to more optimal intersection spacing and fewer traffic signals, the 2030 ACP scenario generally results in better arterial progression than the 2030 No ACP scenario.

Table 16: Arterial Progression (seconds)

Corridor	Direction	Time Period	Scenario	
			2030 No ACP	2030 ACP
US 6	Eastbound	A.M. Peak	46	71
		P.M. Peak	58	54
	Westbound	A.M. Peak	68	78
		P.M. Peak	46	58
SH 13	Northbound	A.M. Peak	21	41
		P.M. Peak	25	56
	Southbound	A.M. Peak	17	28
		P.M. Peak	36	33

Corridor Travel Speeds

Travel speeds are generally comparable between the ACP and No ACP scenarios. Along US 6, both scenarios show a decrease in average travel speed when compared to existing (approximately 47 MPH to 33 MPH). Along SH 13, the decrease is more evident (approximately 44 MPH to 23 MPH). The main reason for the decline along SH 13 appears to be insufficient capacity in the two lane section between 30th Street and 41st Street.

In summary, the LOS, arterial progression, and travel speed results suggest that the Future ACP scenario will result in comparable or better traffic conditions along US 6 & SH 13 within the study area.

5.0 Access Plan Development and Evaluation

Using the traffic volume forecasts from Section 4.2, input from the City, County, and CDOT, input from the public involvement process, and guidance from the SHAC, an Access Plan was developed for the project. This Plan considers access points in logical groupings, as well as potential alternative local route access, where feasible.

5.1 Process

The Access Plan was developed using a 4-step process:

Step One – Methodology & Compatibility Index

A traffic methodology and access plan methodology were established at the beginning of the project to define the purpose, approach, and assumptions used to develop the Plan. In addition, a compatibility index was developed to provide a logical means for determining whether the Access Plan meets the established project goals. The index identified a set of evaluation criteria that correspond with each project objective defined by the project team at the beginning of the project, as listed in Section 1.1. A simple rating system that identifies the plan as favorable, neutral or unfavorable with respect to each criterion was defined. Each of the three ratings under each criterion was then given a definition specific to the criteria to assist in the evaluation. The traffic methodology memo can be found in Technical Appendix D and the access plan methodology memo and compatibility index can be found in Technical Appendix E.

Step Two – Development of the Access Plan

The existing inventory of access points was reviewed with existing parcel and ownership information. This review determined which parcels adjacent to US 40 lacked access to the highway, which parcels had multiple accesses to consider for consolidation, and which parcels had access or potential access to an existing or proposed local road.

Access solutions were developed by applying access management principles and techniques discussed in Section 2. Within the City limits, major full movement intersections were located based on traffic projections, previously completed City planning, and anticipated growth patterns. Half-mile intersection spacing, as defined by the SHAC, was adhered to wherever feasible and quarter-mile intersection spacing was maintained as a minimum. Total out-of-direction travel was limited to one-mile. The Plan assumes accommodation for u-turns will be provided at the nearest full movement intersection.

Access for each parcel in between major intersections was either limited (right-in/right-out or $\frac{3}{4}$ movement) or provided via a local road. In cases where multiple access points served a single ownership, access was reduced to one per ownership. Joint access between parcels was developed, wherever feasible. In addition local access routes were identified to provide:

- Opportunities to relocate access from US 6 or SH 13 to cross streets
- Alternate routes for short local trips
- A reduction in the number of access and conflict points along US 6 and SH 13
- Additional access to developing areas

Step Three – Refine the Access Plan

A draft access plan was presented to an internal review team consisting of City, County, and CDOT representatives. Based on comments received from the team, the draft plan was refined and presented at a Public Open House. Public comment was reviewed and the Plan was

modified, as appropriate. Improvements considered cost prohibitive, had unmanageable physical constraints, had significant traffic operational deficiencies, did not meet with overall community expectations, or did not appear to provide a reasonable level of access, were revised. In some cases, access conditions were defined to allow phased implementation of long-term solutions.

Step Four – Evaluation

Following the public involvement process, the refined Access Plan was evaluated using the compatibility index described in Step One to determine whether project objectives were met.

5.2 Evaluation Results

The results of the evaluation by objective are listed in Table 17. Overall, the Access Plan rates favorably. Plan adoption by the three entities is recommended. In addition, the alternate routes identified by the plan also rate favorably. Adoption of these routes by the City and County via separate resolution is also recommended. Details of the Plan evaluation can be found in Technical Appendix E. A graphical representation of the Access Plan is located in Section 6.

Table 17 Compatibility Evaluation Summary

Project Goal	Evaluation Criteria	Rating
Provide effective through travel for traffic on SH 13 and US 6	Corridor Travel Time	Neutral
	Signal Progression	Favorable
	Number of Access Points	Favorable
Provide safe and effective access to and from SH 13 and US 6 for businesses, residents, emergency responders, multi-modal users, and surface and subsurface property/mineral rights owners	Intersection Sight Distance	Favorable
	Intersection Level of Service (LOS)	Favorable
	Conformance with State Highway Access Code Auxiliary Lane Requirements	Favorable
	Out of Direction Travel Distance	Unfavorable
	Intersection Crash Risk	Favorable
	Access for Multi-modal Users (Cyclists, Pedestrians, Transit)	Favorable
	Access for subsurface property/ mineral rights owners	Neutral
Maintain compatibility with existing and proposed off-highway circulation routes	Local Route Connectivity	Favorable
	Serviceability of Local Routes to Developments and Properties within the Study Area (Tier 2)	Favorable
Provide a plan that can be implemented in phases	Public Support	Neutral
	Phasing Opportunities	Favorable
Support the economic viability of the project area	Business Access	Neutral
Maintain compatibility with the intent of previous local planning efforts	Compatibility with Local Planning	Favorable
Endeavor to provide a plan that is adoptable by all entities	Physical Constraints	Neutral
	Funding Opportunities	Neutral
Provide a plan that accommodates traffic unique to the area including hazardous materials traffic and a high percentage of large vehicles specific to the area	Reliable Travel Times for Hazardous Materials Traffic	Favorable
	Accommodation of large vehicles	Favorable
Overall Plan Rating		Favorable

6.0 Plan Recommendations

This section presents details of the recommended Access Plan for US 6 and SH 13. The Plan has been developed with considerable participation from the City of Rifle, CDOT, Garfield County, and the public. After evaluating both existing and future conditions, the Plan defines how each access will function in the future. In general, the Access Plan limits full movement access to major intersections spaced 1/2-mile apart with 1/4-mile spacing as a minimum. Otherwise, highway access between major intersections is either limited or relocated to an alternate route/cross street. In addition, access is reduced to one location per ownership and where feasible, access is shared between adjacent properties. Throughout the corridor, out-of-direction travel resulting from restricted movement access points is limited to one mile. Accommodation for u-turns at the major intersections is necessary to achieve this objective.

Traffic control measures that may be used to achieve proposed conditions include raised medians, driveway channelizing islands at limited access points, directional median openings at 3/4 movement access points, and signage and striping. To avoid turn movement violations and potential enforcement issues, eventual installation of a raised median or other positive traffic control measure is recommended.

The narratives in this section are intended to serve as a summary of the key features of the Access Plan. The figures are intended to provide a graphical representation of the Access Plan. A detailed explanation of each access in the study area, by reference point, is presented in the Draft Access Control Plan Tables, Exhibits A, B, and C, of the Draft Intergovernmental Agreement (IGA). Reference these exhibits for specific access configurations and conditions.

Recognizing that this plan is a long-term planning document and not a detailed engineering design, reference point designations are intended to be approximate. As more detailed information is available, these designations may be modified (generally within 0.05 miles of the specified reference point designation). The Draft IGA and Draft Access Control Plan Tables are located in Technical Appendix F and Technical Appendix G, respectively.

6.1 Access Plan

The key features of the Access Plan are summarized by major intersection for each highway segment on the following pages. Auxiliary lanes shall be provided at access points as prescribed by the State Highway Access Code. Full movement intersections with potential for future signalization or other traffic control have been identified as part of the Access Plan; however, the type of traffic control is not specified. Traffic control will be evaluated on a case-by-case basis as future conditions warrant. Potential traffic control may include stop signs, traffic signals, roundabouts, interchanges, or other traffic control recognized by the MUTCD. Traffic signals may be implemented at intersections if and when warranted per current MUTCD standards and when funding is available.

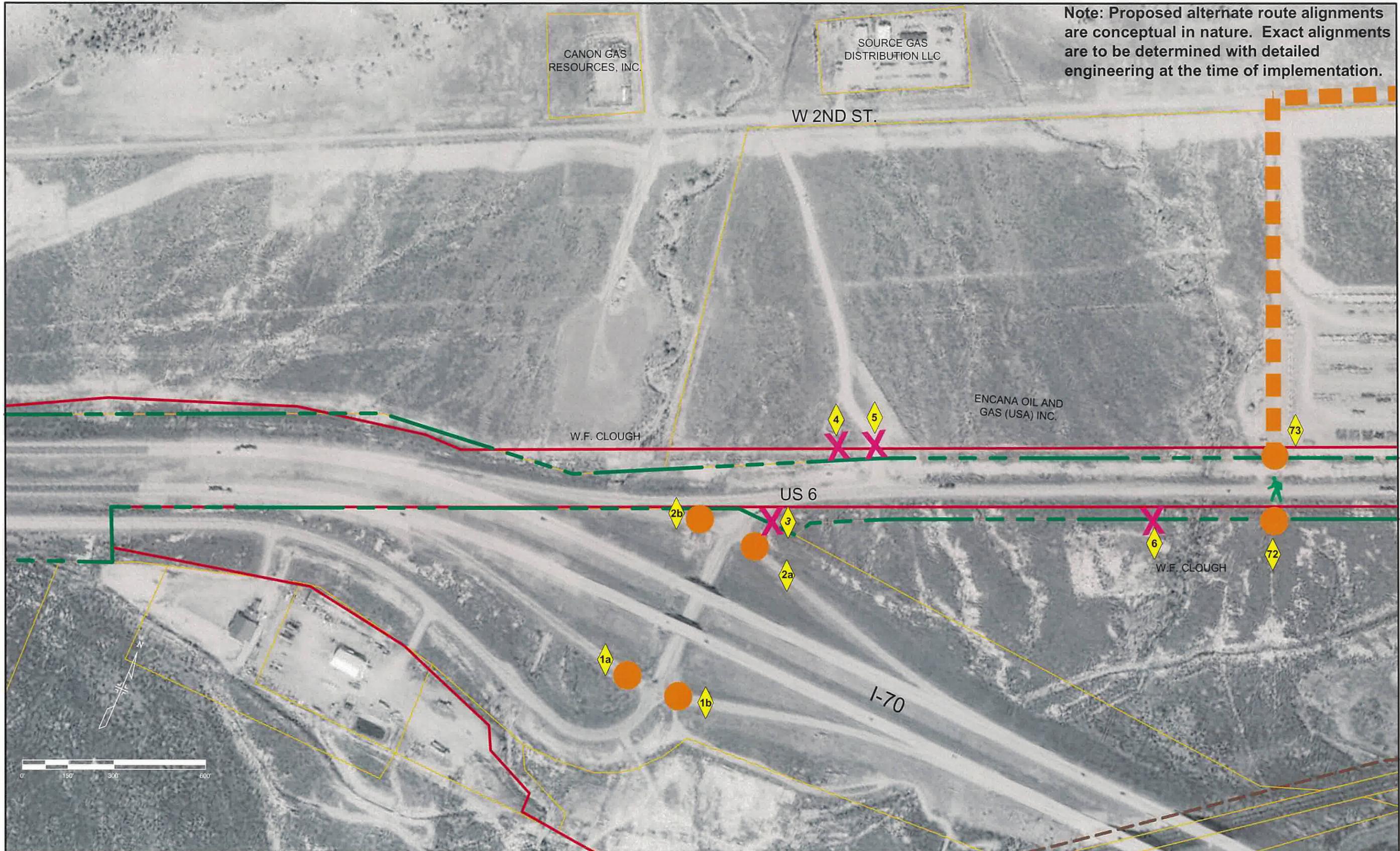
US 6

The key features of the Access Plan for US 6 are illustrated in Figures 7a-7d.

- I-70 to Access #72/73 – Full movement access to the I-70 ramps will remain with the potential for signalization or other traffic control, if warranted. To address out-of-direction travel and spacing of full movement intersections for US 6, a 4-way full movement intersection with potential for signalization has been identified approximately 1800' east of the I-70 ramps at Access #72/73. Based on single ownership existing on both sides of the highway, existing access points between these full movement intersections will be closed upon redevelopment.
- Access #72/73 to Access #74/75 (Potential grade-separated railroad crossing access) – A 4-way full movement intersection with potential for signalization or other traffic control will be provided approximately ½ mile east of Access #72/73. The exact location of this access point should be determined through further engineering study, considering the potential for a grade-separated railroad crossing south of US 6 and the location of the existing ditch north of US 6. The highway grade is several feet higher than the existing railroad tracks at this location and provides a good opportunity for a future grade-separated railroad crossing. Based on single ownership existing on both sides of the highway, existing access points between full movement intersections in this area will be closed upon redevelopment.
- Access #74/75 to Access #17/76 (Realigned Swallow Lane) – A 4-way full movement intersection with potential for signalization or other traffic control will be provided at the existing at-grade railroad crossing at Access #17. The existing Swallow Lane access (Access # 16) will be closed and relocated across from Access #17 to eliminate an offset intersection configuration. The location of this full movement intersection was selected based on the existing grades of the highway and railroad. Long-term recommendations to address safety, operations, and circulation for the area north of US 6 are as follows:
 1. Construct a roadway connection between US 6 and 2nd Street/CR 198 at the new intersection location.
 2. Implement cul-de-sacs on Access Road at the new intersection to resolve inadequate spacing between the frontage road (Access Road) and US 6 resulting from increased level of projected traffic at the new intersection location.
 3. Provide one or more alternative routes between Access Road and 2nd Street/ CR 198 between Swallow Lane and Ray Avenue to address circulation for those properties that obtain access via Access Road today.

To address out-of-direction travel between Access #74/75 and Access #17/76, a conditional unsignalized 4-way full-movement intersection has been provided at Access #10/11. This location was selected based on the existing at-grade railroad crossing to access the Umetco Mineral Corporation property. When alternate access to Umetco is provided, closure of Access 13 is recommended. This access closure reduces the number of railroad crossings. U-turn accommodation should be preserved for both directions of US 6 at this location regardless of access conditions. Access for other locations within this section shall be reduced to one location per ownership, shared where feasible, and limited to right-in/right-out. Right-in/right-out access points include Gas Street, Oil Court, and Gilco Petroleum Park.

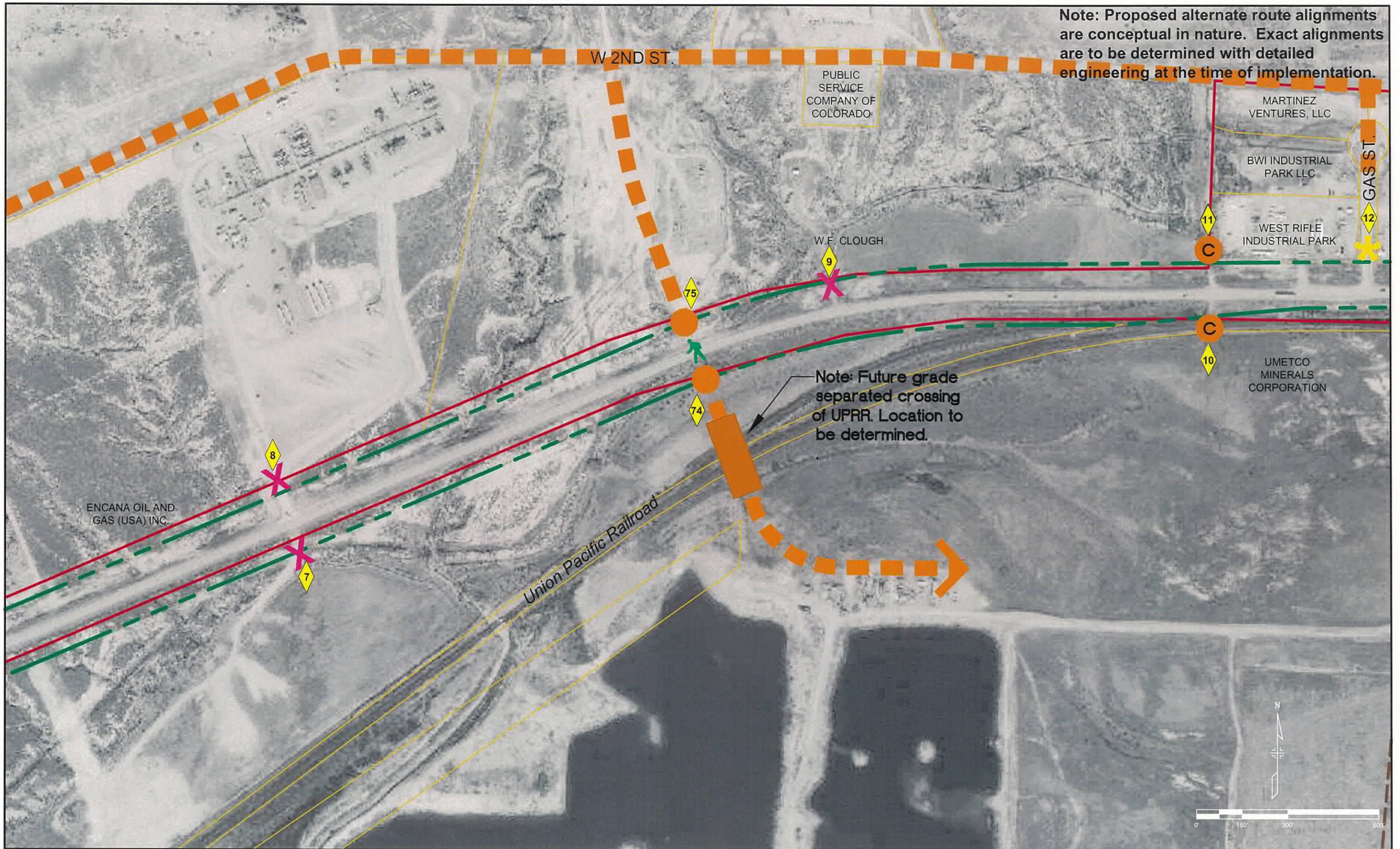
Note: Proposed alternate route alignments are conceptual in nature. Exact alignments are to be determined with detailed engineering at the time of implementation.



Legend:	
	Property Line
	Access Control Line (A-Line)
	Right of Way
	City Boundary
	Trail System
	Access Point
	Full Movement Intersection
	3/4 Movement Left - In
	3/4 Movement Left - Out
	Right-In, Right-Out
	Closed Access
	Conditional Access
	U-Turns Permitted
	Alternative Route
	Cross Access Required
	Pedestrian Crossing
	Transit Stop
	Cul de Sac



Note: Proposed alternate route alignments are conceptual in nature. Exact alignments are to be determined with detailed engineering at the time of implementation.



Legend:	
	Property Line
	Access Control Line (A-Line)
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	Access Point
	Full Movement Intersection
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	3/4 Movement Left - Out
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	Closed Access
	Conditional Access
	Alternative Route
	Cross Access Required
	Pedestrian Crossing
	Transit Stop
	U-Turns Permitted
	Cul de Sac

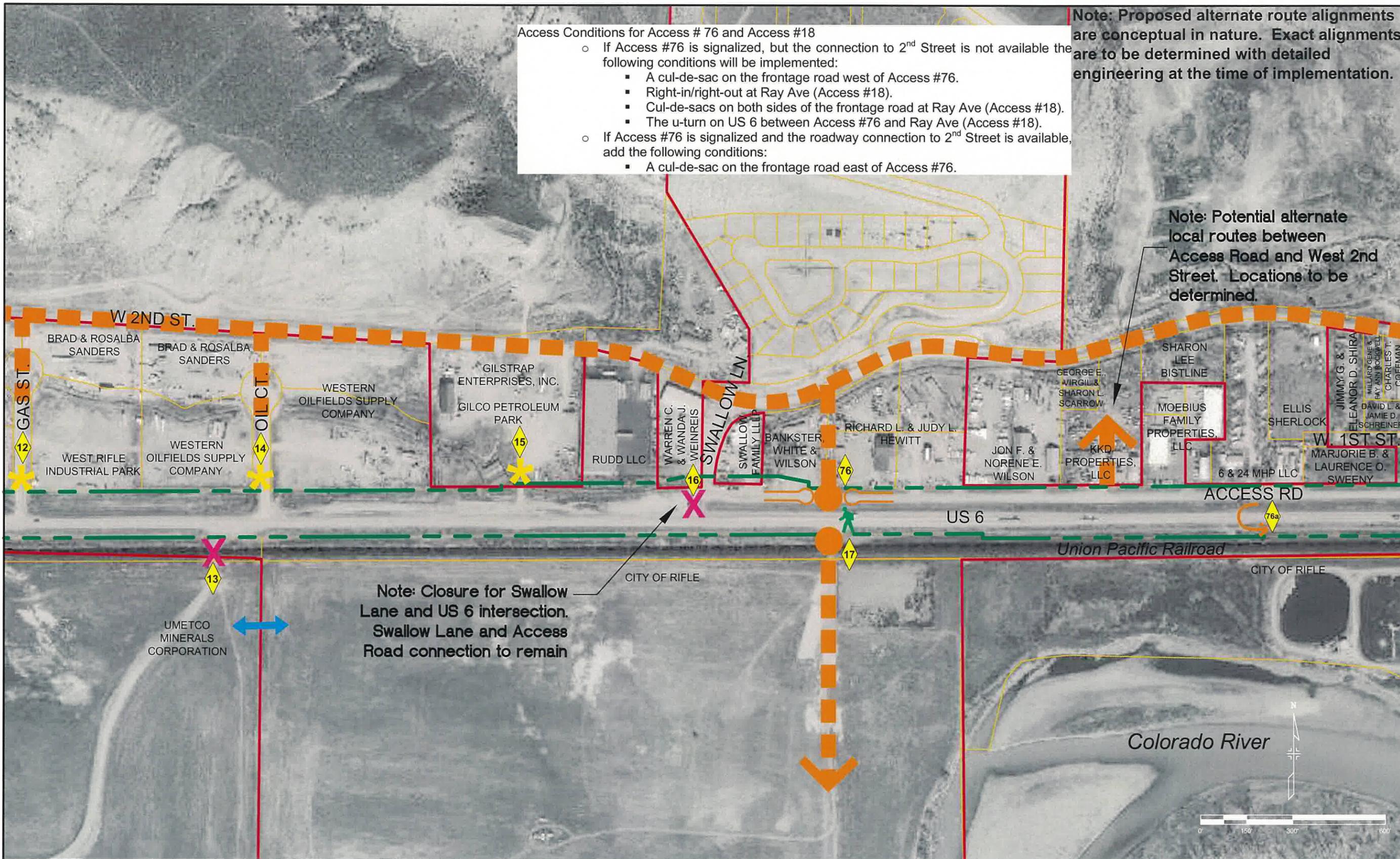
Access Conditions for Access # 76 and Access #18

- If Access #76 is signalized, but the connection to 2nd Street is not available the following conditions will be implemented:
 - A cul-de-sac on the frontage road west of Access #76.
 - Right-in/right-out at Ray Ave (Access #18).
 - Cul-de-sacs on both sides of the frontage road at Ray Ave (Access #18).
 - The u-turn on US 6 between Access #76 and Ray Ave (Access #18).
- If Access #76 is signalized and the roadway connection to 2nd Street is available, add the following conditions:
 - A cul-de-sac on the frontage road east of Access #76.

Note: Proposed alternate route alignments are conceptual in nature. Exact alignments are to be determined with detailed engineering at the time of implementation.

Note: Potential alternate local routes between Access Road and West 2nd Street. Locations to be determined.

Note: Closure for Swallow Lane and US 6 intersection. Swallow Lane and Access Road connection to remain



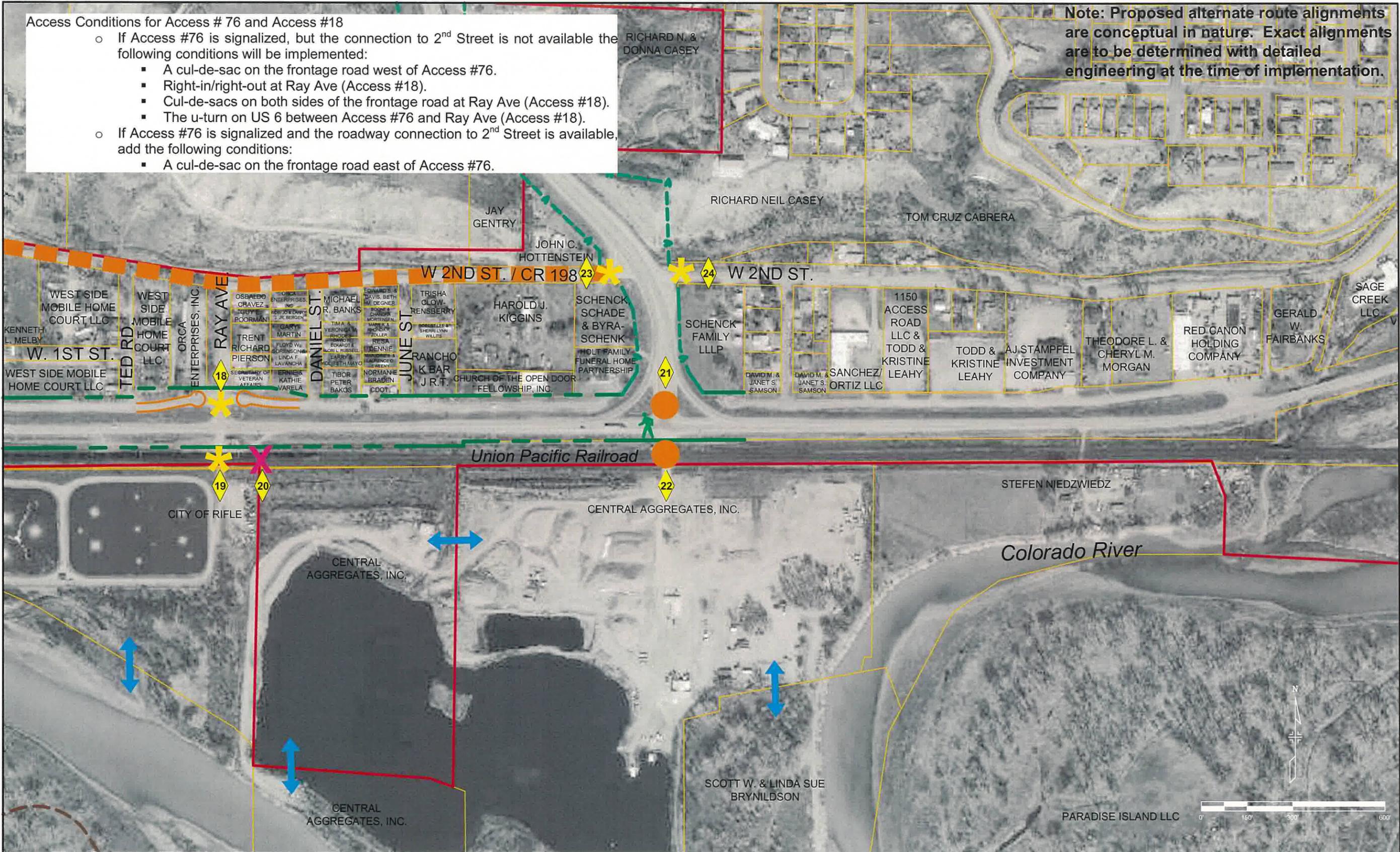
Legend:	
	Property Line
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	U-Turns Permitted
	Alternative Route
	Cross Access Required
	Pedestrian Crossing
	Transit Stop
	Cul de Sac



Access Conditions for Access # 76 and Access #18

- If Access #76 is signalized, but the connection to 2nd Street is not available the following conditions will be implemented:
 - A cul-de-sac on the frontage road west of Access #76.
 - Right-in/right-out at Ray Ave (Access #18).
 - Cul-de-sacs on both sides of the frontage road at Ray Ave (Access #18).
 - The u-turn on US 6 between Access #76 and Ray Ave (Access #18).
- If Access #76 is signalized and the roadway connection to 2nd Street is available, add the following conditions:
 - A cul-de-sac on the frontage road east of Access #76.

Note: Proposed alternate route alignments are conceptual in nature. Exact alignments are to be determined with detailed engineering at the time of implementation.



Legend:	Property Line	Access Point	Right-In, Right-Out	Alternative Route	Cul de Sac
Access Control Line (A-Line)	Full Movement Intersection	Closed Access	Cross Access Required	Pedestrian Crossing	
Right of Way	3/4 Movement Left - In	Conditional Access	Transit Stop		
City Boundary	3/4 Movement Left - Out	U-Turns Permitted			
Trail System					

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Figure 7d Page 51

- Access #17/76 (Realigned Swallow Lane) to SH 13 Bypass (Access #21/22) – A 4-way full movement intersection with potential for signalization or other traffic control will remain at the SH 13 Bypass and entrance to Central Aggregates at Access #21/22. Ray Ave and Access #19 will be limited to right-in/right-out. Similar to Access #76, cul-de-sacs on Access Road at Ray Avenue are recommended to resolve inadequate spacing between Access Road and US 6. In addition, a u-turn location on US 6 approximately half-way between Access #17/76 and Ray Avenue is planned to address out-of-direction travel. This u-turn location is specifically provided for northbound movements to the SH 13 Bypass from properties east of Ray Avenue and north of US 6. The u-turn location should be designed to provide adequate acceleration and deceleration length, as well as adequate width to complete a u-turn for the highway design vehicle. All other access points through this section shall be closed.

Recommendations for the implementation of Access #76, Ray Avenue, and Access Road improvements are as follows:

- If Access #76 is signalized, but the connection to 2nd Street is not available the following conditions will be implemented:
 - A cul-de-sac on the frontage road west of Access #76.
 - Right-in/right-out at Ray Ave.
 - Cul-de-sacs on both sides of the frontage road at Ray Ave.
 - U-turn on US 6 between Access #76 and Ray Ave.
- If Access #76 is signalized and the roadway connection to 2nd Street is available, implement the conditions above and the following condition:
 - A cul-de-sac on the frontage road east of Access #76.

Due to the proximity of the UPRR tracks to US 6, several access points along US 6 correspond to existing private crossings or proposed crossings of the railroad. If a railroad crossing will be used as a public access, an application with the Public Utility Commission (PUC) to change the crossing from private to public is required. Grade-separated crossings and reduction of the total number of crossings in the area are preferred by the PUC and the UPRR. In addition, the PUC may limit the number of railroad crossings allowed in the area, therefore, cross-access is indicated between properties south of the UPRR to provide reasonable access for all properties.

SH 13 Bypass

The key features of the Access Plan for the SH 13 Bypass are illustrated in Figures 8a-8c.

- US 6 to Access #86/27 (Gentry Connection) – A 4-way full movement intersection with potential for signalization or other traffic control will remain at US 6. Due to intersection spacing and limited sight-distance, the 2nd Street/CR 198 access will be limited to right-in/right-out. The existing access to the Gentry parcel (Access #25) may remain full movement until the land-use changes at which time access may be limited. Long-term access to Moki Avenue is desirable. Cross-access between the Gentry and Casey properties is required upon redevelopment. Expansion of the existing A-line opening at Access # 25 is not recommended.
- Access #86/27 (Gentry Connection) to Fairway Avenue (Access #77/78) – Options for full-movement intersection locations were evaluated for the SH 13 Bypass. Based solely on intersection spacing requirements for the Expressway classification (1 mile spacing), one full movement intersection between US 6 and Railroad Avenue would result. This intersection would be located approximately at Fravert Reservoir Road. Evaluation of this location revealed:
 - limited intersection sight distance,
 - poor operations resulting from lack of stacking length between the SH 13 Bypass and 16th Street/CR 244/CR 265, and
 - limited opportunities for realigning 16th Street/CR 244/CR 265 to provide for adequate stacking length to the SH 13 Bypass.

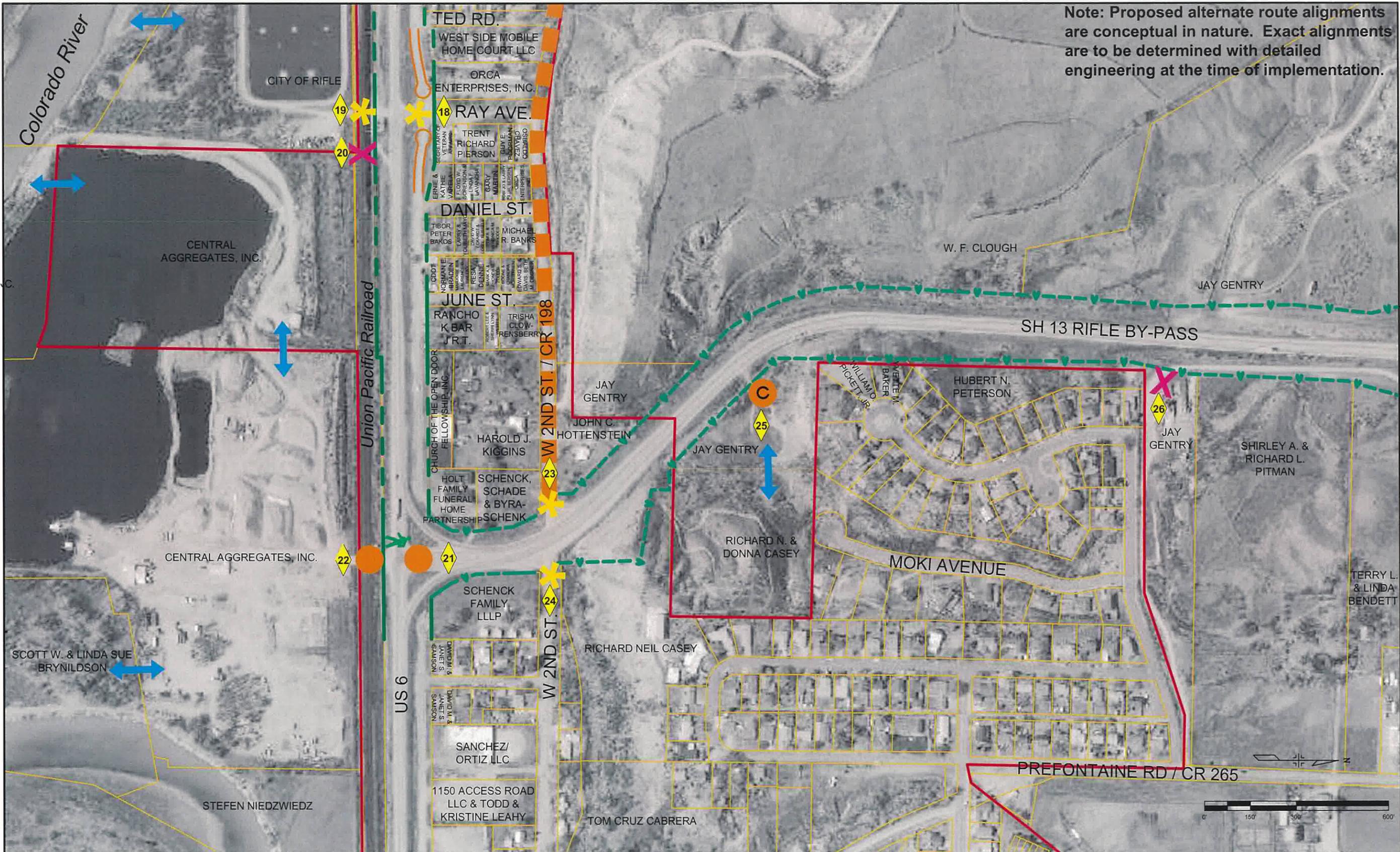
Based on these findings, an option with two full movement intersections spaced approximately ½ mile apart was considered. This option allowed for selection of intersection locations that provide adequate sight distance, serviceability of local routes to area properties, consistency with Rifle’s Master Transportation Plan, and good signal progression for the highway. As a result, the Access Plan includes the following conditions:

- A 4-way full movement intersection with potential for signalization or other traffic control will be provided at Access #86/27 (Gentry Connection). This location was selected based on intersection spacing, sight distance, property lines, and historic access conditions. The location is compatible with the Rifle Master Transportation Plan and with proposed local routes recommended by this Plan. A-line modifications will be required and are described in Section 6.2.
- Both sides of Fravert Reservoir Road will be closed when alternate local routes are provided. Closure of the intersection may be phased to accommodate progression of development on either side of the highway. In addition, gated access for the ditch rider may be provided for maintenance purposes related to the Grand Tunnel. This access will be removed when ditch operations cease.
- A 4-way full movement intersection with potential for signalization or other traffic control will be provided at Access #77/78 (Fairway Avenue). This location was selected based on intersection spacing, sight distance, relationship to Hubbard Gulch, and public input. The connection is compatible with the Rifle Master Transportation Plan. The proposed Fairway Avenue intersection was relocated south of the existing Fairway Avenue A-line opening to address intersection spacing and sight distance concerns created by the horizontal curvature of the highway. Obstacles should be removed from the highway ROW and intersection

sight triangles to maximize the sight distance for the southern approach of Fairway Avenue. Vegetation within the highway ROW requires on-going maintenance to preserve visibility. In addition, the final location of the intersection, as determined by further engineering study, should not be shifted north in order to improve sight distance due to operational implications. A-line modifications will be required, as described in Section 6.2.

- Fairway Avenue (Access #77/78) to Railroad Avenue – With Fairway Avenue relocated to Access #77/78, the existing A-line openings and access points for and adjacent to Fairway Avenue will be closed. A $\frac{3}{4}$ left-in movement will be provided at Howard Avenue. A full movement intersection with potential for signalization or other traffic control will remain at Railroad Avenue. Access and A-line openings for other locations in this area shall be closed. Access will be relocated to alternative routes/cross streets.

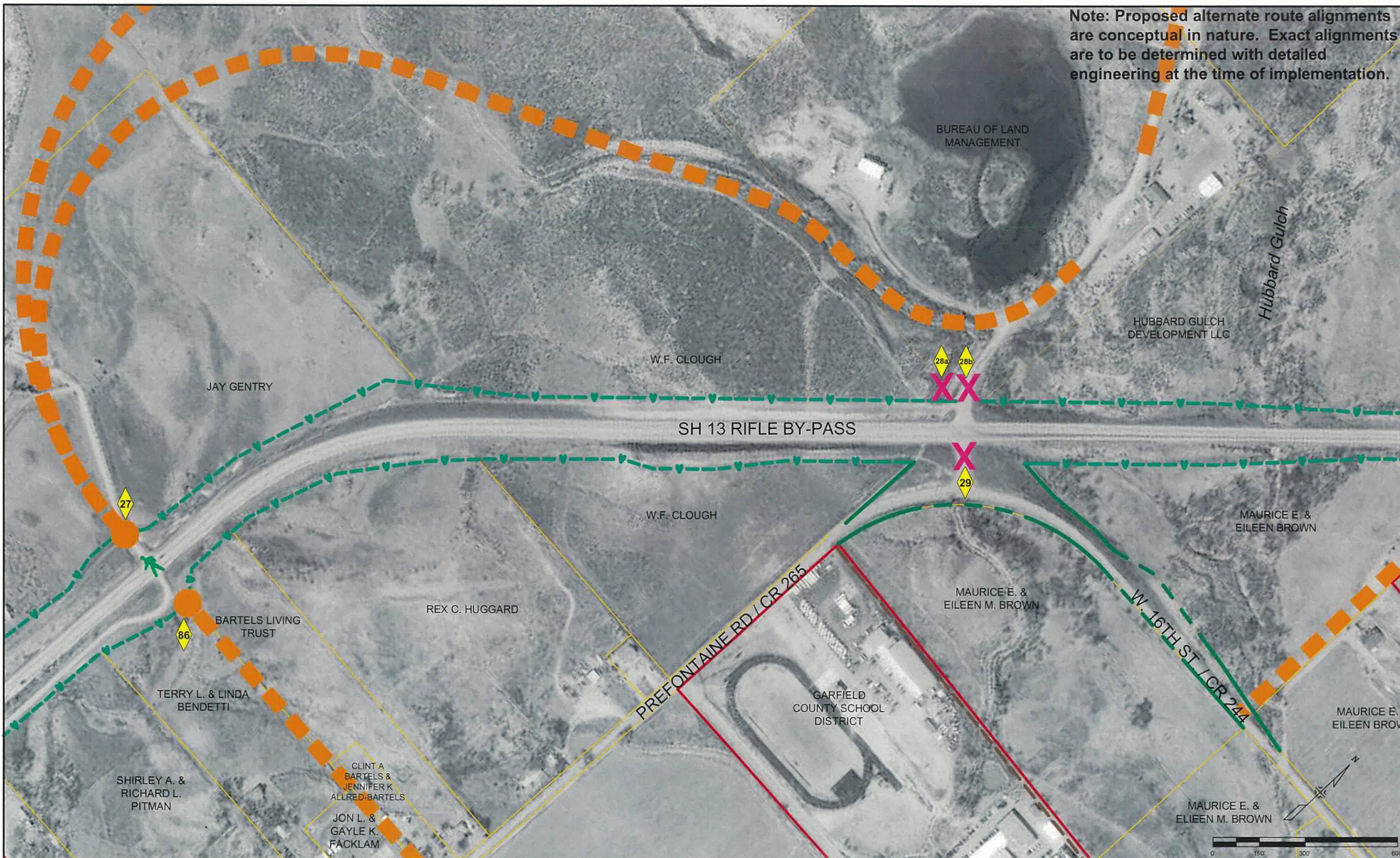
Note: Proposed alternate route alignments are conceptual in nature. Exact alignments are to be determined with detailed engineering at the time of implementation.



Legend:	
	Property Line
	Access Control Line (A-Line)
	Right of Way
	City Boundary
	Trail System
	Access Point
	Full Movement Intersection
	3/4 Movement Left - In
	3/4 Movement Left - Out
	Right-In, Right-Out
	Closed Access
	Conditional Access
	U-Turns Permitted
	Alternative Route
	Cross Access Required
	Pedestrian Crossing
	Transit Stop
	Cul de Sac

**SH 13A Bypass
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Figure 8a Page 55

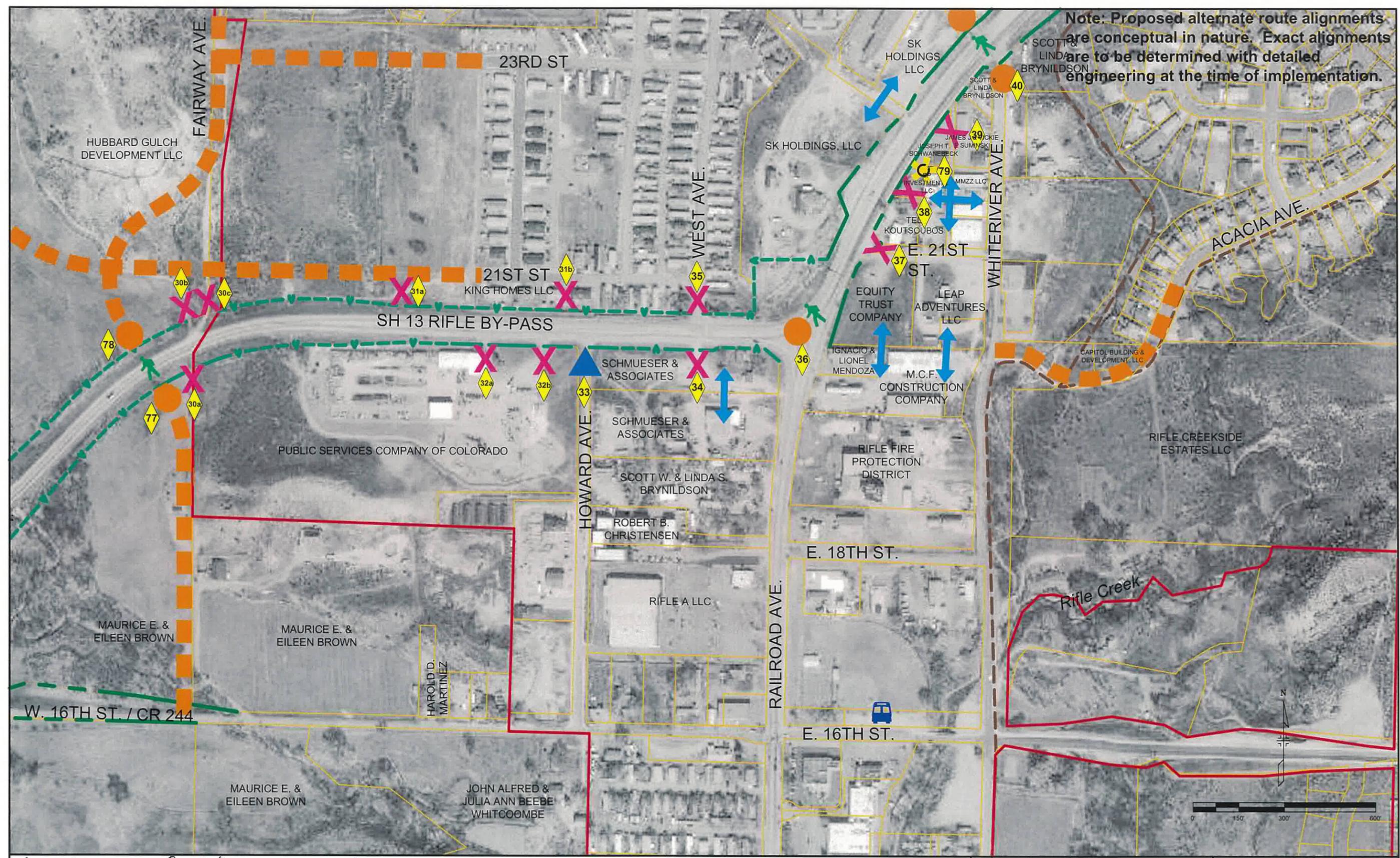
Note: Proposed alternate route alignments are conceptual in nature. Exact alignments are to be determined with detailed engineering at the time of implementation.



Legend:	
	Property Line
	Access Control Line (A-Line)
	Right of Way
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	Full Movement Intersection
	3/4 Movement Left - In
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	Right-In, Right-Out
	Closed Access
	Conditional Access
	U-Turns Permitted
	Alternative Route
	Cross Access Required
	Pedestrian Crossing
	Transit Stop
	Cul de Sac



Note: Proposed alternate route alignments are conceptual in nature. Exact alignments are to be determined with detailed engineering at the time of implementation.



Legend:

Property Line	Access Point	Right-In, Right-Out	Alternative Route	Cul de Sac
Access Control Line (A-Line)	Full Movement Intersection	Closed Access	Cross Access Required	
Right of Way	3/4 Movement Left - In	Conditional Access	Pedestrian Crossing	
City Boundary	3/4 Movement Left - Out	U-Turns Permitted	Transit Stop	
Trail System				

**SH 13A Bypass
ACCESS EXHIBIT
3 of 3**

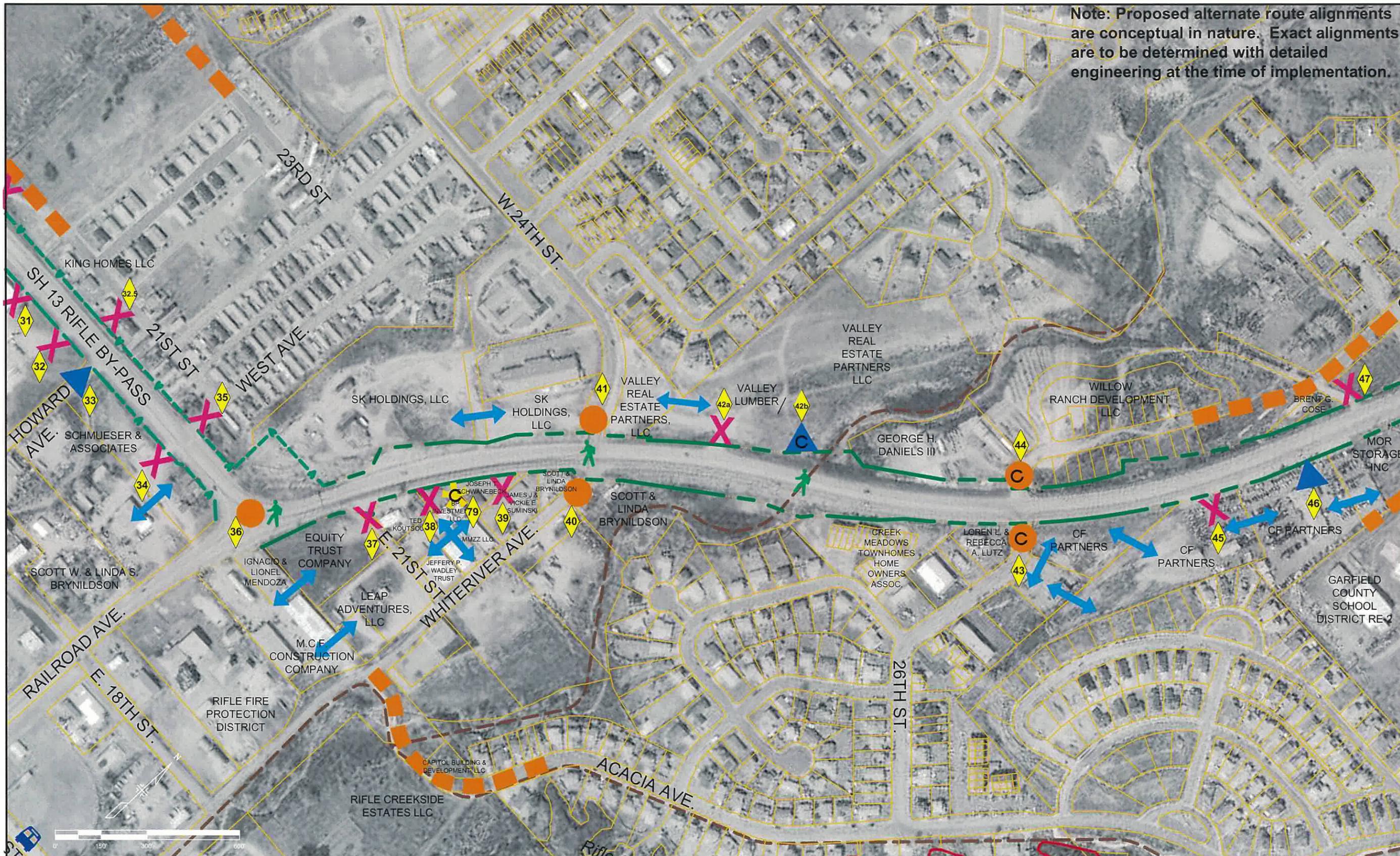
Figure 8c Page 57

SH 13

The key features of the Access Plan for the SH 13 are illustrated in Figures 9a-9c.

- Railroad Avenue to 24th Street/Whiteriver Avenue – A full movement intersection with potential for signalization or other traffic control will be provided at Railroad Avenue. Additional engineering study to identify a long-term intersection configuration for Railroad Avenue and SH 13 is recommended to address future operational deficiencies and accident occurrence at this intersection. Due to operational and safety concerns resulting from the close spacing of 21st Street and Railroad Avenue, 21st Street will be closed. Access for this area will be provided via Whiteriver Avenue. Access for other parcels in this area shall be reduced to one location per ownership, shared where feasible, and shall be limited or relocated to alternative routes/cross streets. Cross-access for properties on the east side of SH 13 is required as properties redevelop. Improved cross-access in this area will increase opportunities to limit access to SH 13 and focus access onto Whiteriver Avenue. Future improvements of Whiteriver Avenue, to accommodate increased traffic volumes, may be necessary.
- 24th Street/Whiteriver Avenue to 26th Street – A 4-way full movement signalized intersection will remain at 24th Street/Whiteriver Avenue. A conditional $\frac{3}{4}$ left-in movement will be provided for Valley Lumber (Access #42b) with possible limitation to right-in/right-out. Conditions for access modifications at Valley Lumber are specified in the Access Control Plan Table in Appendix G.
- 26th Street to 33rd Street – A conditional 4-way full movement unsignalized intersection will remain at 26th Street. Due to inadequate intersection spacing and signal progression, 26th Street will remain unsignalized. If operational or safety concerns arise, access at the intersection will be limited to $\frac{3}{4}$ left-in. Access to the CF Partners parcels will be reduced to one location where a $\frac{3}{4}$ left-in access will be provided. Cross-access between all parcels from 26th Street to 30th Street is required. In order to accommodate increased traffic demand created by development to the east, along Stephans Hill/CR 291, and to separate school and park traffic from general peak hour traffic, 33rd Street is proposed as a major 4-way full movement intersection with the potential for signalization or other traffic control. 33rd Street is compatible with development plans on both sides of SH 13. Due to inadequate intersection spacing and signal progression between 30th Street and proposed 33rd Street, 30th Street access will be limited to right-in/right-out when access to 33rd Street is available. Left-turns to South Dokes Lane from 30th Street should be limited to avoid stacking back onto SH 13. All other access points shall be closed and relocated to alternative routes/cross streets.
- 33rd Street to 36th Street – A 4-way full movement intersection with potential for signalization or other traffic control will be provided south of the property line between the Roush and Rhorig/Burke properties for the proposed 36th Street. The proposed location of 36th Street is compatible with development plans on both sides of SH 13. Access for other properties in this area shall be reduced to one location per ownership, shared where feasible, and shall be limited or relocated to alternative routes/cross streets. In addition, the conditional right-in/right-out accesses on the east side of SH 13 shall be closed when alternate access to the Dokes Lane extension is available. The South Dokes Lane access will be closed.

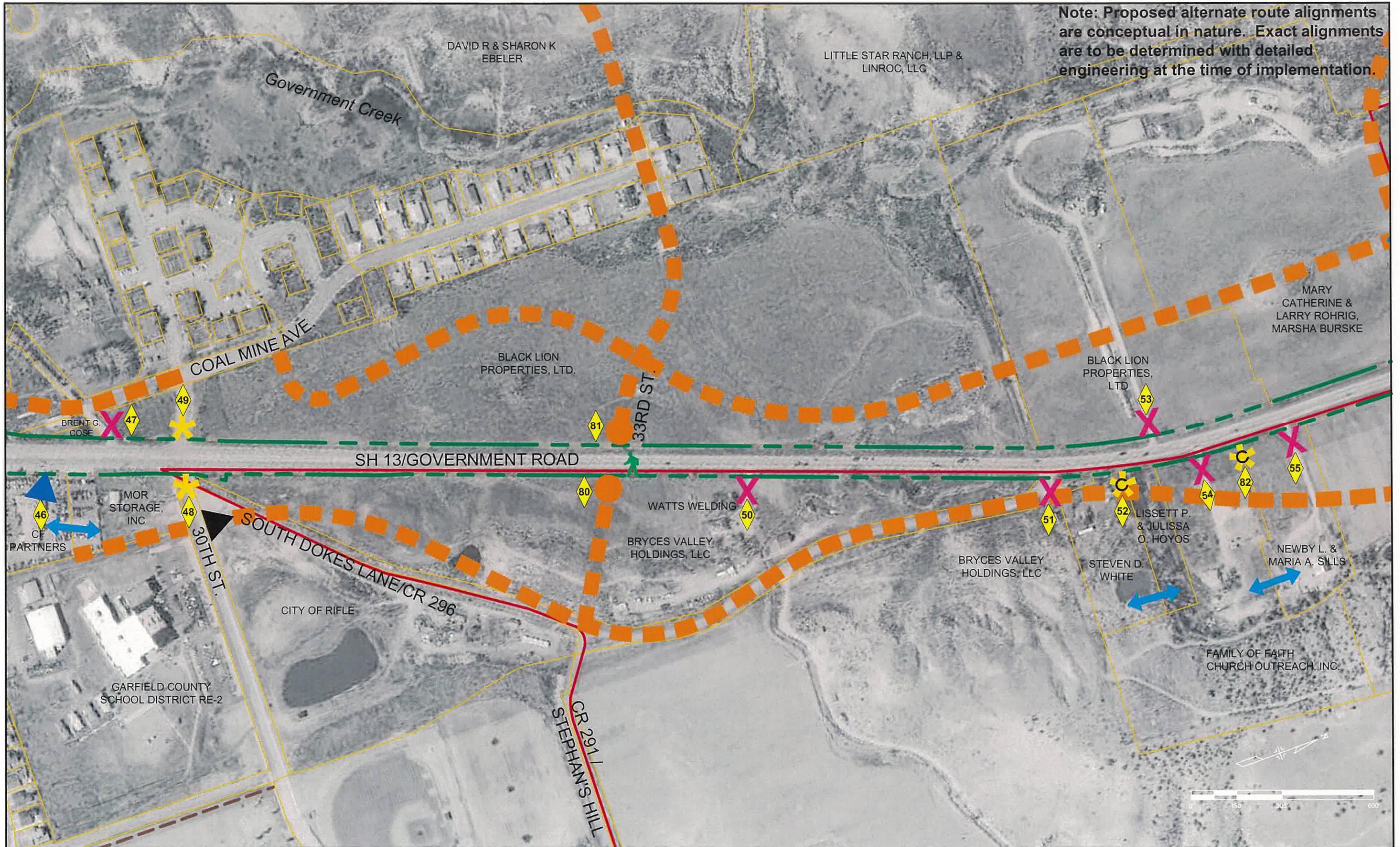
Note: Proposed alternate route alignments are conceptual in nature. Exact alignments are to be determined with detailed engineering at the time of implementation.



Legend:	
	Property Line
	Access Control Line (A-Line)
	Right of Way
	City Boundary
	Trail System
	Access Point
	Full Movement Intersection
	3/4 Movement Left - In
	3/4 Movement Left - Out
	Right-In, Right-Out
	Closed Access
	Cross Access Required
	Pedestrian Crossing
	Transit Stop
	Conditional Access
	U-Turns Permitted
	Alternative Route
	Cross Access Required
	Pedestrian Crossing
	Transit Stop
	Cul de Sac



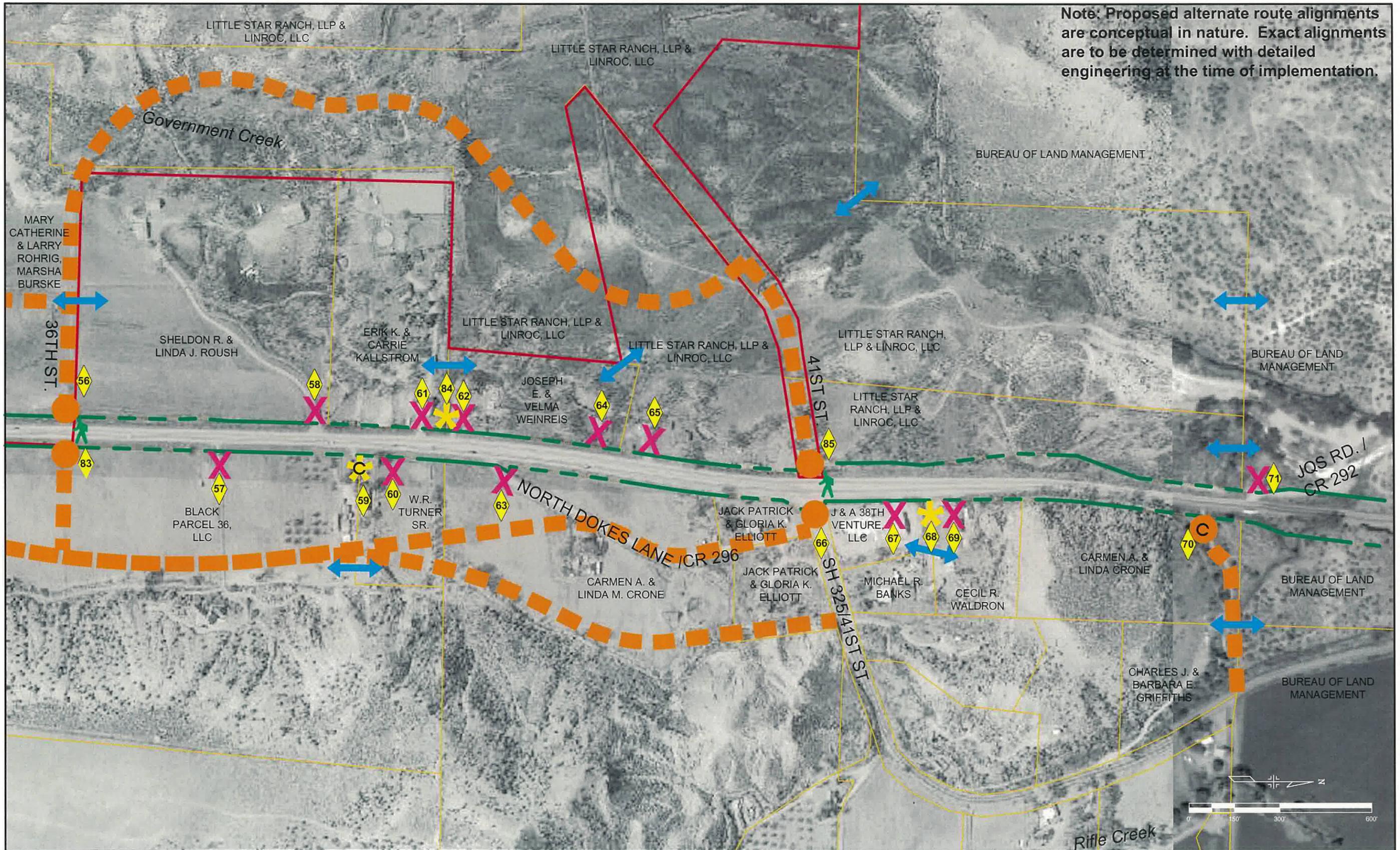
Note: Proposed alternate route alignments are conceptual in nature. Exact alignments are to be determined with detailed engineering at the time of implementation.



Legend:	
	Property Line
	Access Control Line (A-Line)
	Right of Way
	City Boundary
	Trail System
	Access Point
	Full Movement Intersection
	3/4 Movement Left - In
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	Right-In, Right-Out
	Closed Access
	Conditional Access
	Alternative Route
	Cross Access Required
	Pedestrian Crossing
	Transit Stop
	U-Turns Permitted
	Cul de Sac



Note: Proposed alternate route alignments are conceptual in nature. Exact alignments are to be determined with detailed engineering at the time of implementation.



Legend:	
	Property Line
	Access Control Line (A-Line)
	Right of Way
	City Boundary
	Trail System
	Access Point
	Full Movement Intersection
	3/4 Movement Left - In
	3/4 Movement Left - Out
	Right-In, Right-Out
	Closed Access
	Conditional Access
	U-Turns Permitted
	Alternative Route
	Cross Access Required
	Pedestrian Crossing
	Transit Stop
	Cul de Sac

- 36th Street to SH 325/41st Street - Access for properties between 36th Street and SH 325/41st Street shall be reduced to one location per ownership, shared where feasible, and shall be limited or relocated to alternative routes/cross streets. In addition, the conditional right-in/right-out accesses on the east side of SH 13 shall be closed when alternate access to the Dokes Lane extension is available. The North Dokes Lane access will be closed.
- SH 325/41st Street to JQS Road/CR 292 – A 4-way full movement intersection with potential for signalization of other traffic control will be provided at SH 325/41st Street. Access for properties between 36th Street and SH 325/41st Street shall be reduced to one location per ownership, shared where feasible, and shall be limited or relocated to alternative routes/cross streets. A conditional full movement intersection will remain at Access #70. Access may be limited if safety or operational concerns arise. In support of plans to re-route JQS Road/CR 292 traffic in the future, JQS/CR 292 will be closed when alternate access for interior properties is available.

6.2 SH 13 Bypass A-line Openings

A-line openings are required for all access points on the SH 13 Bypass. For those access points identified in the Access Plan that are not located at an existing A-line opening or are not wide enough to accommodate the type of traffic anticipated, an application to modify the A-line must be submitted to CDOT for approval and FHWA consent. It is recommended that the City of Rifle initiate all A-line modification requests to simplify the procedure.

A-line modifications can be completed in phases as properties develop. It is preferable to process modifications grouped as one for one trades or overall reduction in total openings. In cases where a trade is feasible, A-line modifications may be completed simultaneously with the City's Final Plat process.

It is desirable to close A-line openings where access is prohibited in the Access Control Plan. Showing a closure of an existing A-line opening in an Access Control Plan does not cause an A-line modification.

A-line modification requests include the following elements, at a minimum:

- A request letter to CDOT from the City or County including supporting documentation for the request. Highlight trades or overall reductions in access in the letter.
- Preliminary intersection layout and traffic data to support A-line opening width request. A-line opening widths should accommodate the laneage required to accommodate 20-year projected traffic volumes, including highway auxiliary lanes. The opening width should also include width necessary to accommodate the design vehicle turning movements, pedestrian and bicycle facilities, and any other proposed roadway design elements.
- Legal descriptions including a written description and a sketch for each A-line opening and closure.

CDOT may require additional information to process the request. Coordination with the CDOT ROW and Traffic and Safety Departments is recommended prior to submitting the request.

Existing A-line openings are summarized in Table 4 in Section 3.3. A summary of proposed A-line openings is provided in Table 18 on the following page.

Table 18 SH 13 Bypass Proposed A-line Opening Summary with Access Control Plan

Access I.D.	Description	SH 13 Bypass Reference Number (Side)	A-line Opening Status with ACP	Width of Opening	Implementation Conditions
21	US 6	0.97 (Lt/Rt)	Remain	263.3'	
23	W. 2nd Street - West / CR 198	1.07(Lt)	Remain	100' +/-	
24	W. 2nd Street - East	1.07 (Rt)	Remain	80' +/-	
25	Jay Gentry Field Access	1.22 (Rt)	Remain	16'	No width change. A-line opening may be closed if alternate access is provided.
26	Jay Gentry - Private Residence	1.49 (Rt)	Close		
86	Gentry Connection	1.67 (Rt)	Open	TBD	
27	Jay Gentry - Private Residence	1.67 (Lt)	Open	TBD	Widen and formalize in deed.
28a	W. F. Clough Field Access	2.19 (Lt)	Close	24'	Close when 28b closes
28b	Fravert Reservoir Road / CR 244 - West	2.20 (Lt)	Close	85'	Close when 27 opens and alternate route is provided.
29	Fravert Reservoir Road / CR 244 - East	2.20 (Rt)	Close	360'	Close when 86 opens and alternate route is provided.
77	Fairway Avenue - East	2.51 (Rt)	Open	TBD	Open when 30a closes
78	Fairway Avenue - West	2.51 (Lt)	Open	TBD	Open when 30b and 30c close
30a	Future Fairway Avenue - South	2.54 (Rt)	Close	60' +/-	Close when 77 opens
30b	Hubbard Gulch Development, LLC Field Access	2.55 (Lt)	Close	24'	Close when 78 opens
30c	Future Fairway Avenue - North	2.56 (Lt)	Close	100' +/-	Close when 78 opens
31a	Future Access	2.67 (Lt)	Close	30'	Close when property redevelops
32a	Xcel Energy - West	2.73 (Rt)	Close	24'	Close when property redevelops
32b	Xcel Energy -East	2.76 (Lt)	Close	30'	Close when property redevelops
31b	Future Access	2.77 (Lt)	Close	30'	Close when property redevelops
33	Howard Avenue	2.79 (Rt)	Remain	60'	
34	Schmueser & Associates	2.86 (Rt)	Close	24'	Close when property redevelops
35	West Avenue	2.86 (Lt)	Close	40'	Close when property redevelops
36	Railroad Ave.	2.93 (Rt)	Remain	261'	

6.3 Alternate Local Routes

In support of the access improvements recommended by the Access Plan and to relieve local traffic demand along US 6 and SH 13, development of several alternative local routes in the study area is also recommended. These alternative routes provide additional local connections, opportunities for relocation of access to cross streets, and internal circulation opportunities that benefit operations on US 6 and SH 13 by reducing local dependence on the highways.

Alternative routes consistent with the Rifle Master Transportation Plan have been included in the Plan as follows:

- extension of Park Avenue south to US 6 combined with realignment of 2nd Street at Park Avenue provides an alternate route for 2nd Street traffic to access US 6 when 2nd Street is limited to a right-in/right-out at the SH 13 Bypass;
- the Gentry Connection or extension from Access #86 to the east and the Fairway Avenue connection to SH 13 provide alternate access for the corresponding neighborhoods to access the SH 13 Bypass;
- extension of Acacia provides alternate circulation for the neighborhoods east of SH 13 to access downtown Rifle, avoiding SH 13 and the SH 13 Bypass/Railroad Avenue intersection completely; and
- the 33rd Street alignment is consistent with the Eastern Bypass option in the Transportation Plan and accommodates development generated traffic anticipated on both sides of SH 13.

A number of additional alternative routes not included in the Rifle Transportation Master Plan have been identified by the Plan to provide for increased off-highway access to businesses and neighborhoods experiencing a reduction in direct access on US 6 and SH 13. Of particular note on US 6, while not a new route, 2nd Street has been highlighted as a local parallel route to US 6. As development occurs, and properties annex to the City, upgrades to 2nd Street will be required. In addition, several north south connectors consistent with access points identified in the Access Plan for US 6 are identified including:

- Access #73,
- Access #75,
- extension of Gas Street,
- extension of Oil Court,
- the realigned Swallow Lane access at Access #76, and
- one or more connections between Access Road and 2nd Street.

South of US 6, there are two primary access points identified to cross the railroad tracks. These are Access #74 and Access #17. Construction of local routes connecting properties south of the railroad is recommended. The access point at Access #74 is planned as a grade-separated railroad crossing. Suggested local route alignments have not been identified to preserve flexibility in planning for development of the area related to the railroad crossings.

On the SH 13 Bypass, three alternate route options have been identified to accommodate the closure of Fravert Reservoir Road west of the SH 13 Bypass. One or more of these options should be pursued with development of the area west of the highway. Similarly, extension of Fairway Avenue south of the SH 13 Bypass to 16th Street is recommended to address closure of Fravert Reservoir east of the SH 13 Bypass. In addition, two parallel east-west routes, extending 21st Street and 23rd Street, to Fairway Avenue are also recommended to improve circulation and access for the King Homes property.

Along SH 13, several east-west local routes are identified. These proposed routes are compatible with access points in the Access Plan and development anticipated in the area. Routes include:

- 36th Street,
- extension of 41st Street to the west, and
- a new connection between SH 13 and SH 325 at Access #70.

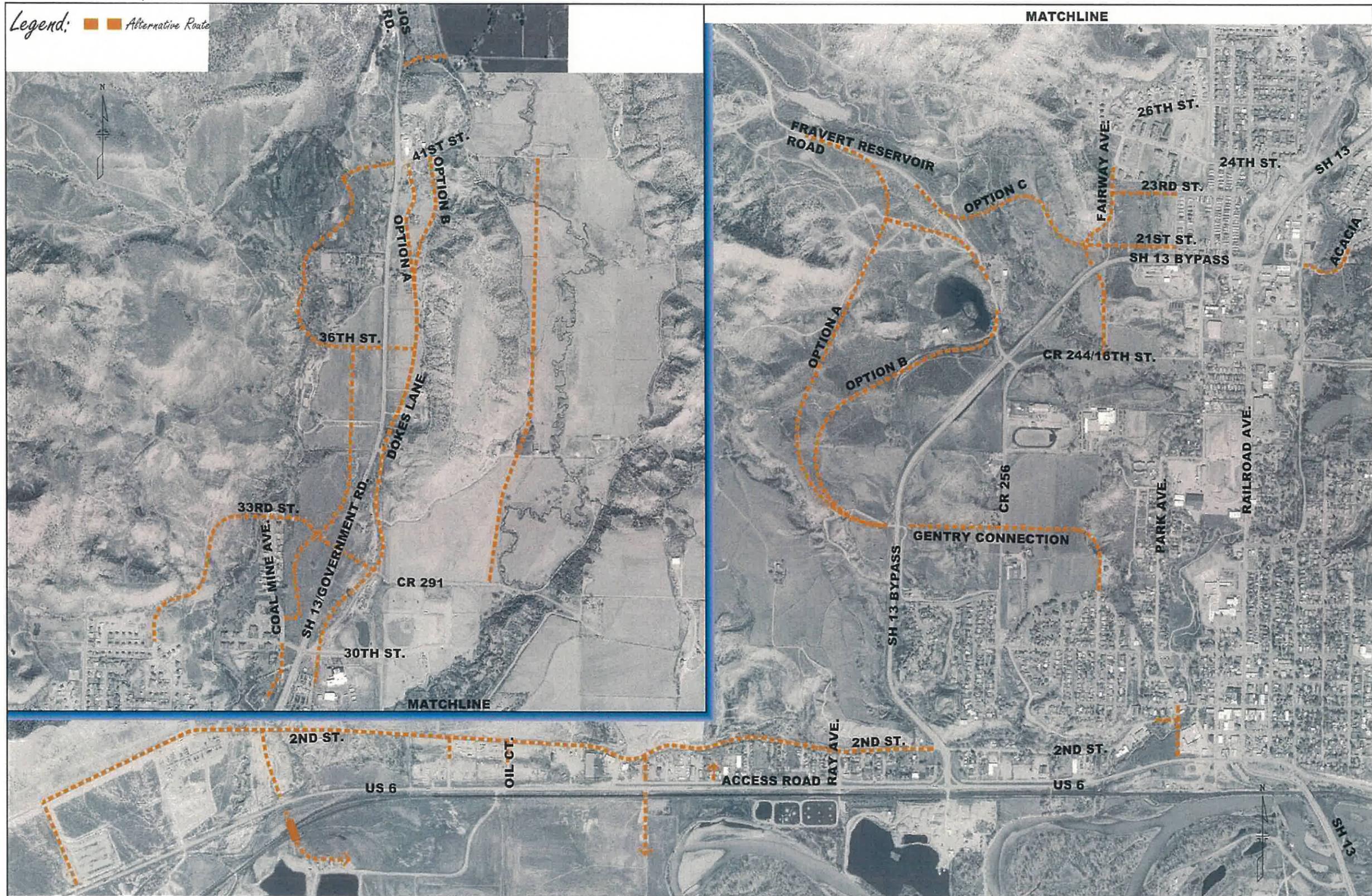
In addition, several north-south local routes have been identified to support SH 13 and local circulation in the area. In general, a route that connects 30th Street to 41st Street on the west side of SH 13 is identified to support the Black Lion and Rimrock developments. On the east side of SH 13, extension of Dokes Lane provides a continuous north-south route between 30th Street and 41st Street. Two potential options for connecting Dokes Lane to SH 325/41st Street are shown: one follows the existing alignment and the other improves intersection spacing between the SH 13 and the Dokes Lane intersection. The eastern option is preferred upon development of the Crone and Elliot properties; however, the existing alignment is a reasonable interim option. A second north-south route is identified by the Plan to provide local circulation for the Bryce's Valley development. This connection, between 26th Street and Coal Mine Avenue, is recommended to provide alternate access if 26th Street is limited in the future. A connection between the CF Partners property and 30th Street is also recommended for circulation purposes.

Figure 10 presents the alternative local routes proposed to complete the local street network. The routes illustrated in the Plan are conceptual in nature, and will require detailed engineering to establish exact alignments at the time of implementation. It should be noted that some access improvements require development of alternative routes prior to implementation.

In support of alternate modes, the Plan also considered transit stop locations and pedestrian/bicycle crossing locations. A regional transit route currently services the area with a stop near the SH 13 I-70 exit and a stop near Railroad Avenue and 16th Street. There are currently no plans to expand transit service in the area; however, the Access Plan does not preclude development of a local transit service.

One trail crossing, consistent with the City's trail plans, is shown at the Government Creek Crossing on SH 13. A grade-separated crossing is recommended at this location. Pedestrian crossing locations are also identified at major intersections throughout the study area. At-grade pedestrian crossings should be included with intersection improvements constructed in the study area. Additionally, addition of sidewalk throughout the study area will improve pedestrian accessibility.

Figure 10 Alternative Local Routes Map



7.0 Implementation

The improvements recommended in the Access Study represent a long-range plan that will be implemented over time as traffic and safety needs arise and as funding becomes available. Construction of the improvements recommended may be completed using public and/or private funding. The following cases will trigger construction.

1. A property redevelops or changes use. In this case, limited improvements at the specific access point may be required by CDOT. As part of the City's development review process, additional transportation improvements may also be necessary to address specific traffic-related impacts created by the development. These improvements will be compatible with the Access Plan. If a property does not redevelop, the property owner will not be required to construct access modifications. (Private Funding).
2. The City and/or County obtain funding to complete improvements to a segment of the US 6 or SH 13 corridors or an alternate local route. (Public Funding)
3. State and/or Federal Funding are obtained to complete improvements to a segment of the US 6 or SH 13 corridors. Typically, a project will be identified in the Statewide Transportation Improvement Program (STIP) to obtain funding. (Public Funding)
4. Any combination of 1, 2 or 3.

Under case 1, a property owner must follow the access permit process as defined by Section 2 of the *State of Colorado State Highway Access Code, latest edition*. CDOT will remain the issuing authority for both corridors. In short, the process requires property owners to submit an application for an access permit. Once the access permit is issued, construction plans for permitted improvements must be developed and submitted to CDOT for review. A Notice to Proceed will be issued following acceptance of the Construction Documents by CDOT, thereby allowing the applicant to proceed with construction.

Under case 2, the City and/or County may obtain funds either through local government budgeting, application for grant monies, or other potential funding sources. Once funding is available the City and/or County will work through the CDOT planning process to develop a highway improvement project. The project will follow the process and procedures for design, construction, and management detailed in CDOT's Local Agency Manual. If a City/County project is developed off of the State Highway System, for instance, completion of an alternate local route that does not intersect with US 6 or SH 13, CDOT will not be involved in the project. The City and/or County will administer the project according to City and/or County standards and procedures.

Under case 3, a project receiving State and/or Federal funds must be identified in the STIP. In Colorado, six years of transportation projects and their funding sources must be identified in the STIP. The STIP is updated every other year through a continuing, comprehensive and cooperative process involving the CDOT, Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Metropolitan Planning Organizations (MPOs), Transportation Planning Regions (TPRs), and City and County Governments. Projects within the study area in Rifle and Garfield County are established in the STIP by the request of the Intermountain TPR. The STIP was most recently updated and adopted in March, 2008. The Intermountain TPR 2035 Regional Transportation Plan, adopted in January 2008, identifies SH 13 Rifle to Meeker

as a high priority corridor indicating potential for future projects on SH 13 to be added to the STIP; however, State funding is extremely limited at this time and no future projects have been identified. Similar to case 2, once funding is available, a project will follow CDOT's relevant process and procedures.

Detailed engineering drawings of exact roadway alignments and access improvements will be required as project funding is identified. Details related to storm drainage, utilities, landscaping, environmental issues, pedestrian/bicycle facilities, roadway sections, and other topographic features will be considered during this design process. For access points on the SH 13 Bypass without A-line openings or for A-line openings with inadequate width, A-line opening modification requests consistent with the Access Plan must be submitted to and approved by CDOT in order to obtain an Access Permit and Notice to Proceed for construction within the highway ROW.

To provide for continued commitment to the access modifications recommended by this study, we recommend that the City, County, and CDOT adopt an Access Control Plan. The Access Control Plan identifies access locations and levels of access by reference point for US 6 and SH 13, within the project limits. In addition, the Access Control Plan should be included in future transportation and land use planning efforts that may involve US 6 and SH 13. In order to formalize an Access Control Plan, an Intergovernmental Agreement (IGA) must be developed and adopted by CDOT, the City of Rifle and Garfield County. Draft versions of the proposed IGA and the Access Control Plan Tables that will serve as Exhibits A, B, and C to the IGA are presented in Technical Appendix F and Technical Appendix G, respectively.

In recognition of the plan's long-range nature and the potential for conditions to change over time, a critical element of the IGA is the definition of a process for plan modifications. For the US 6 and SH 13 corridors, the process for administration of the plan shall be as described in the *State of Colorado State Highway Access Code, latest edition*. In summary, plan modifications shall only occur by mutual agreement of the IGA parties.

In addition to adoption of an IGA, we recommended that the City of Rifle and Garfield County adopt the proposed off-highway alternate local routes identified by this study via separate resolution. Adoption of the local routes supports City and County staff in implementation of these important local connections. The connections are needed to support the proposed access modifications in the Access Control Plan as land use conditions change along US 6 and SH 13.

8.0 List of Acronyms

ADT = Average Daily Traffic Volume (vehicles/day)

BA = Business Access

BOCC = Garfield County Board of County Commissioners

CDOT = Colorado Department of Transportation

E-X - Expressway

FA – Field Access

FHWA = Federal Highway Administration

FTA = Federal Transit Administration

IGA = Intergovernmental Agreement

LOS = Level of Service

MP = Milepost

MPO = Metropolitan Planning Organization

MPH = Miles Per Hour

MUTCD = Manual on Uniform Traffic Control Devices

NR-A = Non-Rural Regional Highway

OP = A-line Opening

PRS = Public Road Signalized

PRU = Public Road Unsignalized

PVRU = Private Road Unsignalized

PUC = Public Utility Commission

R-A = Regional Highway

RA = Residential Access

RP = Reference Point

ROW = Right-of-Way

RTP = Regional Transportation Plan

STIP = Statewide Transportation Improvement Program

TPR = Transportation Planning Region

UPRR = Union Pacific Railroad

WHI = Weighted Hazard Index

9.0 Glossary

$\frac{3}{4}$ Movement Access - An access that is configured to accommodate partial movements (i.e. left-turn in or out, right-turn in, and right-turn out)

Access – Any driveway or other point of entry and/or exit such as a street, road or highway that connects to the general street system

Access Category – means one of eight categories described in Section Three of the State Highway Access Code, and determines the degree to which access to a state highway is controlled

Access Control Line (A-line) – A line, usually located at the right-of-way boundary, indicating the legal limitation of access along a section of highway

Access Plan, Access Control Plan – A plan which designates access locations and levels of access for the purpose of bringing those portions of roadway included in the planning area into conformance with the highway functional classification to the extent feasible

Access Management – Systematic control of the location, spacing, design, and operation of driveways, median openings, and street connections to a roadway

Access Permit – Means by which access improvements are reviewed, approved and constructed in accordance with the State Highway Access Code

A-line Opening – A break in the A-line delineating the location and width of a potential access point, if permitted by CDOT.

Average Daily Traffic Volume (ADT) – The total 24-hour volume of vehicular traffic at a particular location measured in vehicles per day

Conditional Access – An access that is permitted to remain as described, until such time as a stated condition(s) is met. Upon occurrence of the condition(s) specific access modifications are required. Modifications may take place in multiple pre-defined steps to comply with the proposed ultimate condition.

Driveway – An access that is not a public street, road, or highway

Full Movement Access – An access without turn restrictions

Intergovernmental Agreement (IGA) – A legally-binding agreement between two or more governmental agencies

Issuing Authority – The entity responsible for issuing access permits for a segment of state highway. The board of county commissioners, the governing body of a municipality, or the department of transportation may be the Issuing Authority.

Level-of-Service (LOS) – An indication of the quality of traffic flow as measured by vehicle delays or travel speeds. Level-of-service grades range from LOS A (ideal traffic flow) to LOS F (heavily congested conditions). LOS D is typically considered an acceptable traffic condition during peak demand periods in urbanized locations.

Median – That portion of a highway separating opposing traffic flows

Right-in, Right-out – An access that is configured to accommodate only right-turns in and right-turns out

Right-of-way (ROW) – The entire width between the boundary lines of every way publicly maintained when any part thereof is open to the use of the public for purposes of vehicular travel

State Highway Access Code – A manual containing the access regulations that apply to state highways within Colorado

Turning Movement Count – A tally of the number of vehicles turning left, right, or traveling through an intersection

Vehicle Classification Count - The total 24-hour volume of vehicular traffic at a particular location categorized by vehicle type on the roadway. Generally used to provide an indication of the level of truck traffic on a section of highway

Weighted Hazard Index (WHI) – A statistic that provides a comparison of vehicular crash data for a particular section of highway to crash data from other highway sections in the state with similar characteristics