

A COMPREHENSIVE PLAN FOR THE ASPEN BRANCH OF THE DENVER & RIO GRANDE WESTERN RAILROAD CORRIDOR



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UPDATE**

Prepared by Design Workshop
For the Roaring Fork Transportation Authority



PREFACE

This 2005 Update of the Comprehensive Plan for the Aspen Branch of the Denver & Rio Grande Western Railroad Corridor has been prepared by the staff of Roaring Fork Transit Authority (RFTA) including Renee Black, Mike Hermes and Rob Comey, with the assistance of Design Workshop. A Draft Comprehensive Plan was first published in 1999, two years after the railroad corridor was purchased by the Roaring Fork Railroad Holding Authority. The Comprehensive Plan was a requirement of the Purchase Agreement. An update of the Comprehensive Plan was published in 2000.

The Comprehensive Plan is intended to guide all future use of the railroad corridor and at the time it was first published, the plan was intended to comply with and be incorporated into the Conservation Easement for the Railroad Corridor. However, since the first printing of the Comprehensive Plan, there have been changes in the ownership and management of the railroad corridor as follows:

- The Roaring Fork Transportation Authority became the owner of the Aspen Branch of the Denver & Rio Grande Western Railroad Corridor in November 2001, replacing the Roaring Fork Railroad Holding Authority.
- The Conservation Easement was removed and replaced by the Conservation Covenant in July 2001.
- Several trail segments have been constructed by local jurisdictions and by RFTA, and the entire trail is anticipated to be complete by 2010.

The focus of RFTA's efforts at the time of this Master Plan Update is completion of trail construction for the 2010 trail in the railroad corridor. Because the Plan will be amended every five years, this Update of the plan does not specifically address rail but includes provisions for mass transit to occur in the future. It is anticipated that the Plan will be amended to specifically address the requirements for transit when transit use becomes more imminent in the corridor.

As a result of the factors listed above, several of the components of the previous Comprehensive Plan have been superseded and/or are no longer relevant. Such references have been removed from this Update and replaced by more current information. Specific changes that are reflected in this document include:

- The Conservation Easement has been replaced by the Conservation Covenant; see *Attachment VI, Conservation Area Assessment*.
- The Recreation Plan focuses on the 2010 trail alignment.
- The Access Plan focuses on access relative to trails in the railroad corridor.
- The Categorical Exclusion provides the most current information on resources in the railroad corridor.

This Comprehensive Plan is primarily a compilation of documents that guide current and future use of the railroad corridor. The first section of the Comprehensive Plan identifies the documents that are included and provides a brief summary of each. The full documents are included as attachments, following the main text.

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I. INTRODUCTION

In September of 1991, eight local governmental entities resolved to purchase the Aspen Branch of the Denver & Rio Grande Western railroad corridor from the Southern Pacific Transportation Company to preserve the corridor as a public asset. In December of 1994, the eight local governments signed an Intergovernmental Agreement to purchase the property. The urgency of the purchase was realized when the merger of Southern Pacific and Union Pacific railroads was announced. With the dissolution of Southern Pacific, Union Pacific could have abandoned the rail corridor and the land reverted to possible residential and commercial development. The result would have been the loss of the corridor and any opportunity to preserve it for recreational and transportation use.

On June 30, 1997, the Roaring Fork Railroad Holding Authority (RFRHA), a public entity created in 1993 by the towns and counties within the Roaring Fork Valley, purchased the Aspen Branch of the Denver & Rio Grande Western Railroad right-of-way from the Southern Pacific Transportation Company. The purchase was funded by a consortium of state and local interests including Eagle County, Pitkin County, the City of Aspen, the City of Glenwood Springs, the Town of Snowmass Village, the Town of Basalt, the Town of Carbondale, the Eagle County Regional Transportation Authority, the Pitkin County Open Space and Trails Program, the Colorado Department of Transportation and the Great Outdoors Colorado Trust Fund. On November 15, 2001, the Roaring Fork Transportation Authority (RFTA) accepted ownership of the railroad corridor from RFRHA and RFRHA was dissolved.

Existing Conditions: Traffic congestion on State Highway 82 is and will continue to be a problem as the valley continues to grow and develop. Traffic congestion causes a negative impact on the economic and personal well being of the local communities. It leads to longer commute time and slower freight movements, and it reduces the convenience of traveling throughout the valley. In addition to the recreational opportunities mentioned above, one of the objectives of the purchase was to reduce the amount of traffic congestion by increasing the transportation choices within the valley.

A large percentage of the Roaring Fork valley is in public domain as Bureau of Land Management (BLM), White River National Forest or state holdings. Within recent years, increases in population and resort development, and the escalation of land values have dramatically increased growth in the valley. With this growth, lands available for trail and recreational use along the valley floor are diminishing. Currently, there are numerous trails throughout the valley but there is limited continuity between these trails. In addition to the transportation opportunity mentioned above, the other major opportunity and objective of the purchase is to develop a continuous non-motorized trail along the corridor.

Recreational activities define the lifestyle and economy of the Roaring Fork valley. Skiing, hunting, hiking, rafting, bicycling, and wildlife viewing are just a few of the recreational opportunities in the region. The population in the valley is more active than most regions and as the population and number of visitors grow, so does the demand for outdoor recreation facilities. Wildlife species are abundant in the valley with approximately 160 species throughout the region. All species of wildlife are important for viewing, photographing, and balancing the ecosystem of the valley. The purchase of the railroad

corridor provides an opportunity to develop environmental and wildlife educational programs and to enhance access to public lands and the Roaring Fork River.

The Roaring Fork River, through its scenic and recreational opportunities ties the valley together. It is currently used by residents and visitors for a number of recreational activities including fishing, rafting, and kayaking. The river is designated as a “Gold Medal” resource because it is one of the highest quality aquatic habitats in the state. Over 15,000 anglers use the river annually. Proper access points to the river are important for the safe use of the resource. Currently there are six designated boat ramps for watercraft. The purchase of the railroad corridor presents the opportunity to provide additional river access and parking on public land to continue and expand the use of this resource.

Purchase Agreement: All of these above issues deal with the overall quality of life of the residents, visitors, and guests in the Roaring Fork Valley. The purchase of this corridor has presented an opportunity to develop an integrated transportation and recreation solution for the future. As a part of the agreement to purchase the corridor in 1997, it was required that a Comprehensive Plan be prepared that would determine the future uses of the corridor. The specific language within the Intergovernmental Agreement (“IGA”) to purchase the railroad corridor requiring the development of a Comprehensive Plan is as follows:

“The Governments shall develop, consider and approve the Comprehensive Plan for the Property within twenty-four (24) months of the date this Amended Agreement is signed, unless the Governments mutually agree to extend the time period for the formulation and adoption of such a Plan. The adoption of the Comprehensive Plan and any amendments thereto shall be consistent with the grant conditions set forth in the grant documents referenced at section 5, above. It is anticipated that when the Comprehensive Plan for the Property is approved by all participating Governments, a new Intergovernmental Agreement will be negotiated and become effective to implement the Comprehensive Plan.”

The specific language within the IGA that defines the Comprehensive Plan is as follows:

“The Plan shall include the following:

- I. A listing and description of possible uses for the property, including but not limited to such improvements necessary to place and operate a public transportation system, public trail, and/or access to public lands;*
- II. A detailed improvements and operations plan for the ultimate preferred uses(s) on the property, including a recommended management and funding strategy; and*
- III. An interim plan which incorporates the interim use of the rail corridor for a temporary trail following approval from the Surface Transportation Board of a certificate of interim trail use pending the re-establishment of rail service.”*

Conservation Easement: In addition to these specific requirements, the Conservation Easement that was initially placed on the corridor also outlined requirements regarding access and retention of the property's conservation values. The original purpose of this document was to set out a Comprehensive Plan for the corridor that would be adopted by the Roaring Fork Railroad Holding Authority and its member governments. The Comprehensive Plan would be used to guide all future use of the corridor and its findings would be incorporated into the existing Conservation Easement on the corridor to insure strict adherence to the uses set forth herein. Subsequently, more detailed analysis of the environmental qualities of the railroad corridor resulted in a reduction of the total area that needed to be conserved. On January 17, 2001, an Agreement was reached between RFRHA and Great Outdoors Colorado that replaced the Conservation Easement that applied to the entire railroad corridor with the Conservation Covenant that applies to approximately half the area in the railroad corridor.

II. COMPLIANCE OF THE COMPREHENSIVE PLAN WITH THE REQUIREMENTS OF THE CONSERVATION EASEMENT

A Conservation Easement was placed on the approximately 34 miles of railroad corridor when it was purchased in 1997. The Conservation Easement was located along the property from the terminus of the "Wye" (approximately 12th Street in Glenwood Springs), to the end of the tracks in Woody Creek. The purpose of the easement was to assure that the corridor would be maintained as a linear, open space corridor, appropriate for recreation (including trails), wildlife, environmental and educational purposes, while permitting the construction of trails and trailhead facilities and the continuation and construction of rail facilities. The easement was intended to prevent any use of the Property that would significantly impair the "conservation values" of the corridor. The conservation easement contemplated a change in uses, and therefore a modification to the easement once a Comprehensive Plan for the corridor was adopted.

The "conservation values" of the corridor were defined in the conservation easement as follows:

"The Property possesses natural, scenic, open space, historical, educational, wildlife, trail and recreational values (collectively, "Conservation Values") of great importance to Grantor, and, in particular, the people of Pitkin, Eagle and Garfield Counties, the Cities of Aspen and Glenwood Springs, and the Towns of Snowmass Village, Carbondale and Basalt, and the People of the State of Colorado."

Paragraph 5.c. of the Conservation Easement outlined twelve requirements that the Comprehensive Plan must fulfill in order to be considered for approval by the State Board of the Great Outdoors Colorado Trust Fund (GOCO) and the Colorado Department of Transportation (CDOT). Since the conservation easement has been replaced by the Conservation Covenant, compliance with the easement requirements is no longer essential. However, all twelve requirements were addressed by the original Comprehensive Plan. Many of these requirements are included in the attached documents and/or have been implemented.

The following are eleven of the twelve requirements:

- *location of both a permanent continuous public recreation trail running along the entire length of the property and the location of a continuous interim trail within the Pitkin County portion of the Property, in accordance with Ordinance 97-7, as amended, of the Board of County Commissioners of Pitkin County and the location of an interim trail outside of Pitkin County;*
- *location and description of trailhead facilities;*
- *identification of public access points over the Property for the purpose of gaining access to the Roaring Fork River and other public lands along the Property for public recreation;*
- *description of proposed wildlife and environmental education programs on the Property;*
- *a signage plan for all activities to be developed within the Property;*
- *location and existence of historic structures or areas;*
- *a biologic inventory of the Property to amend and update the Baseline Documentation;*
- *description of structures and facilities necessary to place and operate a rail transportation system and their location within the Property;*
- *the identification of all areas other than Pitkin County where the Property will not support both trail and rail uses (In these areas the Comprehensive Plan will identify alternate routes for trails);*
- *identification of all utility easements and facilities, both underground and above surface, including, but not limited to, telecommunications facilities; and*
- *a detailed improvements and operations plan for all uses, including a management and funding strategy.*

The twelfth requirement reads as follows:

- *identification of criteria to be considered in implementing the Comprehensive Plan to protect and preserve the Conservation Values of the Property to the extent reasonable and practical.*

The Roaring Fork Transportation Authority is committed to uphold the original values and goals of the Conservation Easement on the property. To that end, the following criteria were developed and will continue to be used by RFTA for evaluating proposed plans for uses of the corridor. These criteria will take the form of a policy statement and shall govern the RFTA's Board of Director and staff in their decisions regarding the development of uses on the property:

- ***Natural Values of the Corridor***

- The degree to which a proposed use disturbs or otherwise changes the natural, existing topography, vegetation and landscape of the corridor will be considered and mitigated in the area(s) where the use will be placed.
- The degree to which the proposed use will enhance or improve the existing site conditions so that they better conform to the surrounding topography, vegetation and landscape of the corridor will be considered when reviewing a proposed use.

- ***Scenic Values of the Corridor***

- No new above-ground structures or buildings shall be allowed on the corridor other than those proposed as a part of the rail or trail/recreational uses defined within the Comprehensive Plan.
- No new roads or other surface disturbances shall be allowed other than those proposed within the Comprehensive Plan.
- RFTA will request that future development on adjacent lands consider the scenic values of the corridor when designing development proposals for approval by local land use authorities.

- ***Historical Values of the Corridor***

- New uses will consider the historical nature of adjacent properties and the railroad corridor itself, when a final design of improvements for those uses is developed.
- Interpretive and informational signing regarding historical community assets will be placed as a part of the trail and recreational improvements.

- ***Educational Values of the Corridor***

- RFTA shall encourage educational use of the corridor whenever feasible, provided that this use is passive in nature and does not leave permanent impact or change to the property.
- Interpretive and informational signing regarding educational attributes of the corridor shall be pursued as a part of the trail and recreational improvements.

- ***Wildlife Values of the Corridor***

- Impacts of the use of the property on wildlife habitat and migration corridors will be avoided or mitigated if necessary. Mitigation will be provided at the cost of the use that impacts wildlife sensitive portions of the corridor.

- Wildlife viewing opportunities will be pursued by RFTA and adjacent property owners agreeable to such activities.
- No hunting will be allowed on the property. Proper hunting safety procedures and protocol shall be observed when using the corridor for hunting access to adjacent public or private lands.

- ***Trail and Recreational Values***

- The trail plan described within the Comprehensive Plan will be pursued by RFTA with the goal of completing a trail on the corridor by 2010.
- Access to the Roaring Fork River and adjacent public lands will be opened to public use whenever practical.

III. SUMMARY OF KEY FINDINGS OF THE RECREATIONAL TRAILS PLAN

The overall intent of the Recreational Trails Plan is to develop a trails and recreation plan for the corridor that provides a wide range of public recreational opportunities including trails, river access, wildlife viewing, habitat conservation and educational and interpretive activities.

The purpose of the Recreational Trails Plan is as follows:

- To provide a continuous trail between Glenwood Springs and Aspen on the railroad corridor that has been environmentally cleared through a National Environmental Policy Act (NEPA) process;
- To meet the expressed community recreational needs;
- To develop trails programming and design principles that will provide a quality trail experience;
- To plan for support facilities such as trailheads and parking;
- To minimize impacts on adjacent landowners;
- To develop implementation costs.

A summary of key findings within the Recreational Trails Plan is as follows:

Policies and Design: The plan describes the 2010 trail alignment along the corridor. The 2010 trail identifies what the facility may look like in the long term. The plan envisions a 10-foot-wide hard surface and a 4-foot-wide soft surface as the platform for the trail. The intent is to connect Glenwood Springs to Aspen with a multi-use recreational path. The Recreational Trails Plan also defines the following policies with regard to trail design:

- Every attempt will be made to maximize separation of trail and transit on the corridor at the time transit occurs;
- Grade-separated intersections will be pursued for major public road crossings at the time transit occurs;

- Soft-surfaced pedestrian paths will be established from the trail alignment to public lands and the river where appropriate;
- A common theme for construction of trail amenities will be encouraged provided that local governments may modify these themes within their own jurisdictions;
- Natural, salvaged and recycled materials will be utilized during the course of trail and facility construction;
- The facilities will be designed for low maintenance and reduction of potential vandalism.

Trail Use: The trail will be designed and operated for multi-purpose use. Uses include walking, running, biking, skating, equestrian and cross-country skiing. No motorized use except for emergency access and maintenance will be allowed. The trail will be designed and operated with the potential for commuting in mind. Local entities will have control over use of the trail in their jurisdiction. No camping or open fires will be allowed on the railroad corridor.

Linkages: Every effort will be made to allow for easy, convenient and direct access to the trail. Connections to existing and proposed trails will be encouraged and coordinated. A regional recreational experience will be emphasized as a part of the trail experience.

Environmental Impacts/Mitigation: The overriding goal of trail design and management will be to protect the natural quality of the railroad corridor. This will be done through minimization of impacts to the natural environment through design, management and education. Sensitive areas will be identified and mitigation measurements will be implemented where appropriate.

Safety: Safety of the trail user and the adjacent landowners will be assured through design and management techniques. This will include providing adequate width to avoid user conflicts, situating trail access points so that they are sensitive to safety, and providing barrier protection where appropriate between trail and transit. Perimeter fencing is also proposed to reduce conflicts with livestock and wildlife.

Implementation: Implementation of the overall trail system will be a regional effort that will include the local governments, state government and possibly the private sector. RFTA will be responsible for implementing the sections of trail that are not being developed by local jurisdictions.

IV. SUMMARY OF READING THE ROARING FORK LANDSCAPE

The Ideabook presents results, conclusions, and recommendations from the first steps in the planning process for interpretive/environmental education efforts. It is based on discussions with residents, interested agency officials, and Trails Task Force members, as well as research both inside and outside the Roaring Fork Valley. Key principles of the proposed approach include:

- Interpretation and environmental education should be developed specifically for residents who are using the trail or transit.

- Interpretive/educational components should relate to the following overarching theme: *As people understand the dynamics and workings of nature – learn how to read the landscape – they will take better care of it because they will know something of it. When people have little understanding of the nature and culture of their landscapes, they may tolerate changes that will have serious consequences for the future health of those landscapes.*
- The places for interpretation along the corridor can be thought of as a string of pearls, in which the pearls are interpretive nodes along the trail or railroad corridor. Primary interpretive locations are proposed along the trail, on the terrain, and on RFTA’s website.

Future development of the ideas presented will be based upon comments from residents and organizations responding to the draft approach. The report includes the following:

- The opportunity: need for the interpretive program;
- Reading the landscape: an interpretive approach;
- What to interpret along the Roaring Fork Corridor;
- Possible interpretive media for the Roaring Fork Valley;
- A framework for interpretation and education: string of pearls;
- Next steps – implementation; and
- Contact.

V. SUMMARY AND KEY FINDINGS OF THE ACCESS CONTROL PLAN

The overall intent of the Access Control Plan is to promote the stewardship of the corridor by the owner (RFTA), adjacent property owners, the conservation and trail easement holder and the local governments. In addition, the plan strives to facilitate coordination between RFTA and the local governments, the Colorado Department of Transportation, and the Colorado Public Utilities Commission.

Purpose: The purpose of the Access Control Plan is as follows:

- Minimize the number of new road crossings over the railroad corridor;
- Ensure the safe operation of existing railroad corridor crossings;
- Consolidate existing railroad corridor crossings when practical; and
- Implement the Conservation Covenant objectives, by avoiding adverse impacts to the open space, recreation, scenic and wildlife values of the corridor, and adjacent lands that add to the scenic value and enjoyment of the corridor. When adverse impacts cannot be avoided, they shall be mitigated to the extent practicable.

A summary of key findings within the Access Control Plan is as follows:

Policy for Existing Crossings: The plan acknowledges, to the best extent possible, all existing crossing on the corridor. Changes to or creation of new, public and utility crossings will be under the jurisdiction of the Colorado Public Utility Commission (CPUC), unless

transit is not on the Corridor and a license is acceptable to RFTA. Private crossings under RFTA control will be allowed by permit as opposed to easement and shall be memorialized in a revocable license. Existing private crossings shall be allowed to continue on the corridor. If the existing crossing is already licensed, that license shall be adhered to unless it is mutually determined by the licensee and RFTA that modification of the license is warranted. If an existing crossing is currently not licensed, or a change of use of the existing crossing is requested, the user of the crossing shall apply for a license or license modification under a permitting process administered by RFTA.

Policy for New Crossings: New crossings of the railroad corridor shall be generally prohibited. In special circumstances, there may be exceptions to this policy, including:

- A new public street or road crossing, which is administered through the CPUC;
- A need for a new crossing to provide access to a pre-existing private property that otherwise cannot be reasonably provided by an existing permitted crossing or another route (i.e. connection to an existing public road).

Parties interested in pursuing a new crossing under the exceptions stated above must apply for such a crossing through either the CPUC procedures or through the permitting procedure administered by RFTA. It is the burden of the party proposing a new crossing to prove it is necessary under the hardships described above. If a new crossing of the corridor is pursued, the following standards shall be followed:

In order grant a permit or license outside of the Plan (exceptions), the Standards are as follows:

- The proposed crossing will protect the railroad corridor for future transit;
- The proposed crossing will not interfere with conservation or trails values;
- The proposed crossing is a unique situation and will cause extreme hardship if not approved. (NOTE: Extreme hardship means more than economic loss or diminution of value); and
- The landowner/entity will be financially responsible for all future upgrades of the crossing to meet the requirements of future transit systems in the corridor.

Policy for Crossing Consolidation: Consolidation of existing crossings is an effective method of reducing conflicts on the railroad corridor. To that end, RFTA will encourage the consolidation of existing crossings wherever practicable. RFTA may also require crossing consolidations as a part of any new crossing application, proposed development activity, or in conjunction with joint railroad/other transportation facility improvements. For example, if a commuter transit improvement is conducted on the railroad corridor property, some public road crossings may be consolidated as a part of the public works project.

The corridor mapping included within *Attachment IV, Access Control Plan* shows crossings that are suitable for potential consolidation under these criteria. RFTA will proactively pursue crossing consolidation by meeting with license holders individually, evaluating potential consolidations on a case-by-case basis based upon transportation, trail and open space values, conducting safety analysis where applicable, and monitoring development activity on adjacent private lands.

Permit for Crossings and Consolidations: RFTA currently requires private interests who are desirous of crossing or otherwise utilizing the corridor to obtain permission to do so from RFTA. The permit form is available from RFTA offices. This form will be used by RFTA to review and approve/deny crossings and other uses of the rail corridor.

VI. SUMMARY AND KEY FINDINGS OF THE CORRIDOR INVESTMENT STUDY

Overview: This Corridor Investment Study (CIS) of May 2003 presents detailed analyses for a No Action/Committed Projects Alternative, a Bus Rapid Transit Alternative with two sub-alternatives, and a Rail Alternative for the West Glenwood Springs to Aspen transportation project. A trail, the new Rio Grande Trail, is proposed for both Build Alternatives. Detailed alternative analyses and public involvement programs have been conducted for this project and these results are summarized in this document. The Project Corridor is located in the Roaring Fork Valley beginning at the West Glenwood I-70 interchange in West Glenwood Springs, Colorado and ending in downtown Aspen, Colorado, a distance of approximately 66.5 kilometers (41.3 miles).

This CIS documents social, economic, and environmental impacts of the three alternatives. Mitigation measures are identified for any impacts identified. This document also includes a history of project development and financing options available for the implementation of the alternatives.

What is the CIS: The Corridor Investment Study (CIS) is a long-range planning tool created by the Roaring Fork Transportation Authority (RFTA) in consultation with its member jurisdictions, the Colorado Department of Transportation, (CDOT), the Federal Transit Administration (FTA), and the Federal Highway Administration (FHWA). The CIS is intended to compare long-range transportation alternatives in the RFTA service area through the year 2025 and provide useful information for long-range decision-making.

The CIS, which commenced in 1998, assumes the findings of the 1998 *State Highway 82 Entrance to Aspen Record of Decision (Entrance to Aspen ROD)* for the purpose of comparing long-range alternatives for the future of transit in the RFTA service area. Once RFTA selects a preferred alternative for its long-range transit plan, RFTA will work with member jurisdictions and its partners at CDOT, FTA, and FHWA to develop projects and programs that support the long-range vision of improved transit, and are respectful of the desires of RFTA communities.

The Role of RFTA: In November 2000, Valley residents in seven jurisdictions approved the formation and funding of the Roaring Fork Transportation Authority (RFTA), the state's first Rural Transportation Authority, based on the Colorado Rural Transportation Authority Act passed by the Colorado legislature in 1997. RFTA has the directive to plan and expand mass transit and build a regional trail for both commuter and recreational use and is also responsible for the completion of the *West Glenwood Springs to Aspen Corridor Investment Study* (CIS). From 1998 to spring of 2003, the CIS was conducted as a National Environmental Policy Act (NEPA) Environmental Impact Statement process. During the analysis of the alternatives it became apparent that an alternative based upon rail

technology would not be available to RFTA due to funding constraints and that an EIS was inappropriate for the remaining alternatives. RFTA and its partners determined that the CIS would be released as a local planning document to provide the local community a comparative analysis of bus and rail technologies, as well as a No Action alternative, to confirm local support for the transit project, and to seek input from the public as the project is refined.

Alternatives: Many of the options identified early in the CIS process were screened from further consideration. The result of this process was the development and refinement of the three alternatives for comparative analysis and ultimately the selection of a preferred alternative by the community and the RFTA Board:

- No Action/Committed Projects Alternative (No Action/Committed Projects)
- Bus Rapid Transit (BRT) Alternatives and Trail
 - BRT-Bus sub-alternative uses dedicated busway from Buttermilk to Aspen
 - BRT-LRT sub-alternative uses light rail transit (LRT) from Buttermilk to Aspen
- Rail + Trail

Each of the build alternatives includes the construction of a trail in the railroad corridor.

Public Involvement: The goal of the public involvement process was to identify public issues and priorities at the start, and to provide an opportunity for citizens to participate in resolution of those issues throughout the course of study. For that reason, citizens and local elected officials were involved in establishing project objectives, developing measures for screening alternatives, and assessing the strength of alternatives against the project objectives and measures. The public involvement process allowed for multiple forms of input and addressing new issues as they arose.

Screening Process: At each screening level, options that did not meet the respective criteria were eliminated from further study. To simplify the task, the options were categorized into four types:

- Technology – of the 46 technology alternatives, only self-propelled buses and rail vehicles were carried to the end of the screening
- Propulsion – eight of the 19 propulsion options considered were retained for a final decision
- Station Location – nine of 16 station locations are retained
- Alignment – Alternative C was retained for detailed analysis

Based on the conclusions of the screening process, the alternatives described make two types of provisions for transit:

- Both the No Action/Committed Projects and BRT alternatives provide for the use of self-propelled buses on the existing Highway 82 corridor. The BRT system proposed for the Project Corridor would operate in general travel lanes with bus signal preference and preemption between Glenwood Springs and Basalt and in peak-hour HOV lanes between Basalt and Aspen. The BRT Alternative combines intelligent transportation systems technology, priority for transit, cleaner and quieter vehicles, rapid and convenient fare collection, and integration with local land-use policy.

- The Rail Alternative provides for rail vehicles utilizing portions of the existing RFTA right-of-way and portions of the Highway 82 corridor (Alignment C) in addition to self-propelled buses serving a feeder function for the mainline rail alignment.

Alternatives and Impacts: The study provides a summary and comparison of alternative physical characteristics: alignments, station locations, park-and-ride facilities, and proposed vehicles. The CIS analyzes social, economic and physical environmental resources to identify any major environmental impacts, see also *Attachment VII, Categorical Exclusion*.

Financing: Transportation impacts are analyzed as well as cumulative impacts. The financing and implementation section describes capital costs, operations and maintenance costs as well as revenue sources. The financial feasibility of the alternatives is compared. Based upon the assumptions described in this chapter, it is evident that all of the project alternatives, including the No Action/Committed Projects alternative, would have local cost and financing implications. Additional local funding would be necessary under all of the alternatives.

The No Action/Committed Projects Alternative is financially feasible. This alternative is expected to be comparable in local costs to the BRT-LRT Alternative. While federal and state funding requirements would be minimal, additional average annual funding levels of \$9.4 million over the 2002 to 2025 time frame would be expected to cover anticipated induced operating and capital requirements.

The BRT-LRT Alternative is expected to require the lowest amount of additional federal, state and local funding resources. This alternative assumes a downvalley regional bus trunk line with a transfer to LRT at the Pitkin County Airport. The BRT-Bus Alternative is expected to require more bus transit operating hours than the BRT-LRT Alternative, since buses would continue beyond the Pitkin County Airport into Aspen. Increased operating hours combined with slightly higher capital costs is expected to result in slightly greater required funding levels for this alternative.

The Rail Alternative is the most expensive alternative and is considered to have marginal financial feasibility. Funding requirements would be two to three times those of the BRT-LRT and BRT-Bus Alternative.

Implementation: Once public comment is received on this CIS and the RFTA Board selects a preferred alternative, an implementation and financing plan will be prepared as a part of preliminary engineering. An outline of project activity from CIS to revenue service will be detailed in this later plan.

The project scope and schedule originally anticipated the preparation of an Environmental Impact Statement due to the potential for environmental consequences and mitigation requirements of the Rail Alternative. However, if the BRT Alternative is selected, the environmental consequences may not be significant and a Categorical Exclusion or an Environmental Assessment (EA) and a Finding of No Significant Impacts (FONSI) from FTA or FHWA may be appropriate.

Rather than a schedule, RFTA has developed the concept of “trigger points” – measurable conditions that would trigger consideration of the next phase in transit development, as follows:

- A vote of the people;
- Highway capacity; and
- Best one-way peak trip time.

VII. SUMMARY AND KEY FINDINGS OF THE CONSERVATION AREA ASSESSMENT

On June 30, 1997, the Roaring Fork Railroad Holding Authority (RFRHA), a public entity created in 1993 by the towns and counties within the Roaring Fork Valley, purchased the Aspen Branch of the Denver & Rio Grande Western Railroad right-of-way from the Southern Pacific Transportation Company. The purchase was funded by a consortium of state and local interests. Each of the funding participants agreed to the placement of a Conservation Easement on the corridor to protect the “conservation values” of the property. The conservation easement required that no new structures, fences, crossings, or pavement be placed, or that any mining or harvesting of timber occur on the corridor. The Aspen Valley Land Trust (AVLT) was designated as the steward of the conservation easement. would then be responsible for correcting any of the violations to the satisfaction of AVLT.

On February 3, 2000, a Comprehensive Plan for the railroad corridor was adopted by the then RFRHA. One of the components of the plan was to reduce the size and scope of the conservation easement on the corridor. The plan cited that upon careful inspection and assessment of the corridor through the Corridor Investment Study (CIS) process, many portions did not contain the attributes described as “conservation values” by the conservation easement. As such, these portions of the corridor did not warrant protection under the conservation easement. In addition to the reduction of the size of the conservation areas, RFTA received strong advice from a member of their federal legislative contingent that a conservation easement on the corridor would significantly hinder RFRHA’s ability to receive federal funding participation for future transportation improvements. In response to this issue, the Comprehensive Plan did the following:

- It changed the Conservation Easement to a Conservation Covenant. The covenant on the deed of the property requires the owner to abide by its terms through self-regulation. (This is different from the previous conservation easement, which is an encumbrance that runs with the land and requires an entity other than the owner to regulate compliance.)
- It reduced the size of the area covered by the conservation covenant to encompass only those areas of the corridor that contain the “conservation values” described within the original conservation easement. The size was reduced from 34.59 miles (the full length of the corridor from Glenwood Springs to Woody Creek) to 17.50 miles (roughly one-half of the corridor).

On January 17, 2001, an Agreement was reached between RFRHA and Great Outdoors Colorado that replaced the Conservation Easement with the Conservation Covenant. This change resulted in an overall reduction in the GOCO grant for purchase of the property from \$2.0 million to \$1.5 million. On November 15, 2001, the Roaring Fork Transportation Authority (RFTA) accepted ownership of the railroad corridor from RFRHA and RFRHA was dissolved. RFTA then replaced RFRHA as a party to the Conservation Restriction Agreement. RFTA created a Covenant Enforcement Commission made up of representatives from each of the entities that the Authority serves. It is the responsibility of the Commission to meet annually to make an assessment of the rail corridor and to recommend to RFTA that it make any corrections necessary to insure that the conservation values of the areas described within the Conservation Restriction are not compromised.

The assessment of the ten conservation areas was last conducted in October of 2005. The full report includes a spreadsheet that summarizes the observed violations, the remedies recommended, and the actions taken to address each violation. The spreadsheet is a living document – a checklist to be used by RFTA to track violations and take actions to resolve them.

The following is a list and brief description of the ten conservation areas:

- **Conservation Area #1:** Running from the end of the A-1 Traffic Control property south to the intersection of Highway 82 and Grand Avenue (old Highway 82), this area is well vegetated by native, scrub oak dominated mountain-shrub vegetation that offers excellent habitat for birds and small animals.
- **Conservation Area #2:** This section begins at the crossing of County Road 107 (known as Coryell Ranch Road) to a location about one-fourth-mile below the CMC Road/Highway 82 intersection. This area is well vegetated by mature native, mountain-shrub and related plant species that offer excellent habitat for birds and small animals
- **Conservation Area #3:** This section of the railroad corridor covers the broad bend in the Roaring Fork River between the Bair Chase Ranch property and the ranchette parcels near Aspen Glen. There are mature sage shrubs in this section and the mountain shrub ecosystem on the corridor in this area provides excellent habitat for birds and small animals.
- **Conservation Area #4:** This section goes from about a three-fourths-mile south (up valley) of the Aspen Glen entrance to a private crossing located just below the confluence of the Crystal River and the Roaring Fork River. This area is well vegetated by mature native, mountain-shrub and related plant species that offer excellent habitat for birds and small animals.
- **Conservation Area #5:** This section surrounds the Railroad Bridge at Satank and offers excellent river and recreation access opportunities and preserves wetland and riparian habitat.

- **Conservation Area #6:** This section begins near the Catherine Store Bridge (County Road 100) and continues southwest to Emma Road including the Rock Bottom Ranch property. A number of conservation values are provided within this section of the corridor including riparian and wetland habitat protection; access to river recreation opportunities; access to public lands; preservation of habitat critical to eagle, hawk and heron populations in the valley; and preservation of winter range migratory patterns for macro fauna (mule deer and elk).
- **Conservation Area #7:** This section begins shortly east of the Emma Road/Highway 82 intersection, continues toward the Basalt High School between ranch properties and federal lands and ends just west of the Wingo Trestle. This area is well vegetated by mature native, mountain-shrub and related plant species that offer excellent habitat for birds and small animals.
- **Conservation Area #8:** This section includes the Railroad Bridge at Wingo Junction and offers excellent river recreation access opportunities. This area also contains wetland and riparian habitat.
- **Conservation Area #9:** This section includes the Railroad Bridge at Wingo Junction and offers excellent river recreation access opportunities. This area also contains wetland and riparian habitat.
- **Conservation Area #10:** This section begins near the crossing of Lower River Road, and continues through the Woody Creek area until the end of the corridor at Woody Creek Road. The river side of this section contains mountain shrub and riparian vegetation that offers excellent habitat for birds and small animals.

VIII. SUMMARY AND KEY FINDINGS OF THE CATEGORICAL EXCLUSION

The proposed Rio Grande Trail between West Glenwood Springs and Woody Creek Junction is also discussed in the *West Glenwood Springs to Aspen CIS* transportation document. As a result of analyses conducted for that study, a Categorical Exclusion (CE) appeared to be applicable for the Rio Grande Trail. The proposed Rio Grande Trail meets the definition contained in 40 CFR 1508.4 and does not involve significant environmental impacts. In lieu of additional legal clarification of the need for NEPA compliance for the proposed Rio Grande Trail, this environmental analysis has been completed and was submitted appropriately as a Categorical Exclusion.

As a result of analysis conducted for the potential transportation projects in the same corridor, the following resources were also analyzed for the Rio Grande Trail:

Social Environment

- Population
- Demographic characteristics
- Environmental Justice
- Services
- Recreation
- Land use
- Section 6(f) resources

Economic Environment

- Economic base
- Commercial growth trends
- Employment
- Income
- Housing
- Local government finance

Physical Environment

- Air quality
- Water resources – water quality
- Floodplains

- Geology and soils
- Upland and floodplain vegetation (and noxious weeds)
- Wetlands
- Fisheries
- Wildlife
- Wild and scenic rivers
- Threatened, endangered, candidate and other special concern species
- Historic Preservation
- Paleontological resources
- Section 4(f) resources
- Farmlands
- Noise and ground-borne vibration
- Visual character
- Potential hazardous waste sites
- Public Safety and Security
- Energy
- Construction

Historical Resources: Although no adverse impacts are associated with the following resources, a discussion of applicable background research and/or Section 106 coordination is included: historic preservation, paleontological resources, Section 4(f) resources. After initially reviewing 44 sites, eight sights were identified as being officially eligible for or listed on the National Register of Historic Places. These include:

- Denver and Rio Grande Western Railroad – specific bridges and trestles.
- Hardwick Bridge
- Satank Bridge
- Emma School
- Wheatley School
- Emma Historic District
- Mather Residence
- Wingo Trestle

The SHPO concurred with CDOT's finding that the trail location would have no adverse effect on the historic Denver and Rio Grande Western Railroad Grade and right-of-way. Nevertheless, a full photographic recordation of the railroad corridor as it currently exists has been completed. RFTA will also implement a program of public interpretation and education in stations along the railroad corridor per recommendations contained in *Reading the Roaring Fork Landscape: An Ideabook for Interpretation and Environmental Education*.

Vegetation: The new Rio Grande Trail will have little to no impact on upland and floodplain vegetation. The trail will be contained fully within the RFTA right-of-

way. Noxious weed management along the new Rio Grande Trail, which is completely contained within the RFTA right-of-way, will follow the RFTA Integrated Weed Management Plan or the Pitkin County Noxious Weed Management Plan.

Wildlife: Construction activities will be focused on a relatively small percentage of the overall Project Corridor. Consequently, negligible habitat loss and associated impacts to wildlife populations is anticipated.

Within the Project Corridor three species of concern are known to occur and one species potentially could travel through the corridor. These species are the bald eagle (federally protected under the Endangered Species Act, Bald and Golden Eagle Protection Act, and Migratory Bird Treaty Act), great blue heron (State Species of Concern), and river otter (State Endangered).

Recent observations indicate that the Canadian lynx (federally protected under the Endangered Species Act) may move through the Project Corridor, even though suitable lynx habitat is not found within the corridor. Provided the recommendations of the categorical exclusion are implemented, there would be no impact to these species.

Wetlands: Potentially up to 57,000 square feet of wetland area (371 locations) could be impacted by trail construction. However, avoidance and minimization recommendation have reduced this area to 34,300 square feet. Appropriate review agencies will be contacted and recommendations implemented.

Hazardous Waste: Potential hazardous waste sites in the Project Corridor were evaluated. Two sites may be associated with the construction of the new Rio Grande Trail, surficial soil staining at the 4th Street crossing in Carbondale, and the former lumber yard. Monitoring and further analysis will ensure that there will not be negative impacts.

Conclusions: Public involvement and agency involvement have also contributed to the process related to the evaluation of the railroad corridor between 1997 and 2003. The conclusion of the study is that based on the full range of activities completed for the Rio Grande Trail, including the individual environmental studies, the development of mitigation plans, and the public and agency coordination, the project qualifies as a Class II Categorical Exclusion. No impacts have been identified that would either individually or cumulatively result in significant effects to the environment. Furthermore, no issues have been identified that suggest the significance of the environmental impacts have not been clearly established.

IX. ADDITIONAL RECOMMENDATIONS

Approved Uses: The following uses are determined to be appropriate for the property under the Comprehensive Plan:

Trail and Recreational Use: A regional trail, with associated side trails to access the river and public lands, trailheads and signage program as defined within *Attachment II, Recreational Trails Plan*. In addition, placement of interpretive and environmental educational facilities as described within *Attachment III, Reading the Roaring Fork Landscape: An Idea Book for Interpretation and Environmental Education*.

Anticipated Future Uses Appropriate to the Corridor: There are some emerging local issues in the Roaring Fork valley that may, at some point in the future, require the use of the corridor. Such use of the corridor will not impact the conservation values or the approved uses of the corridor, but could enhance the nature of the corridor as a public asset. Two such uses are public telecommunication and transit use.

It is becoming apparent that rural access to broadband telecommunications technology is to a large extent being ignored by the private sector, primarily because of its poor economic return. As a result, rural areas may find themselves forced to provide their own access to this broadband technology if they want to keep pace with their urban counterparts. As a result of this need to stay abreast with new technology, it may be necessary for the railroad corridor to be available as a corridor for a future regional telecommunication system. Any use of the corridor for these purposes would likely come in the form of buried cable or fiber optic lines, and should not be undertaken unless it is a part of an overall regional telecommunication master plan. Any physical undergrounding of utilities in the corridor shall be subordinate to existing and future planned transportation and recreation uses of the corridor.

Another possible future use of the property could be for placement of facilities needed under existing transit use prior to implementation of transit. This use of the property will consist of park-and-rides and/or stations for bus improvements to facilitate existing Roaring Fork Transportation Authority (RFTA) bus service or to facilitate the Enhanced Bus/TSM transit alternative if this alternative is carried forward as a phasing option within the Record of Decision (ROD).

Any future anticipated use of the corridor deemed appropriate by the RFTA Board will be reviewed, discussed and considered for adoption into the Comprehensive Plan under the methodology described below.

Access Plan: The Access Plan sets out policies, standards and procedures for existing and new crossings, as well as for consolidation of crossings. The oversight and approval of crossings on the corridor will be managed by RFTA.

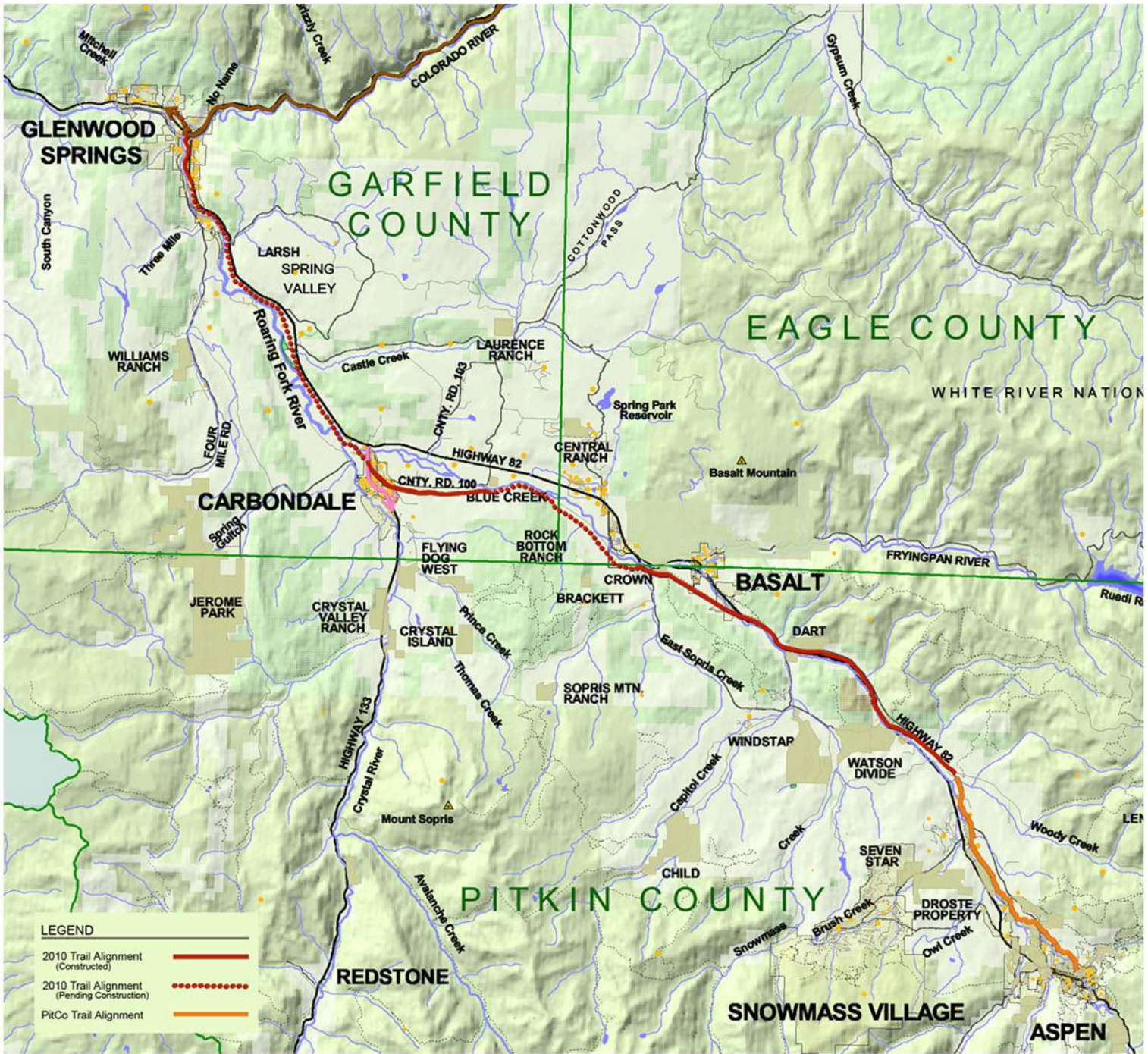
Modification of the Conservation Easement to the Conservation Covenant:

The conservation values of the corridor are defined as being the natural, scenic, open space, historical, educational, wildlife, trail and recreational values. The Comprehensive Plan addresses and preserves all of these values with the exception of the natural and wildlife values. The conservation easement, which covered the entire corridor, has been reduced in physical scope to cover only those areas where natural features, such as riparian areas, critical wildlife habitats and prime wetland areas exist. With this reduction in size, the conservation easement has been modified to become a restriction or covenant on the property. The boundaries of the reduced conservation easement/restriction are described within *Attachment VI, Conservation Area Assessment*. The criteria proposed to protect the conservation values on the remainder of the corridor will be used by RFTA to govern use (or non-use) of the property in the future.

Retention of the Trail Easement: It is proposed that the trail easement be retained by the easement holder (Pitkin County). The trail easement will burden the entire property until the trail is actually placed, at which time it will be reduced to a 20-foot-wide easement, 10 feet either side of the centerline of the trail.

Procedure for Modification to the Comprehensive Plan: Every five years, the RFTA Board shall review the Comprehensive Plan and make changes to it if deemed necessary. In addition, RFTA staff or Board members may propose to initiate a modification to the Comprehensive Plan because of a perceived need to do so. A draft of the proposed changes will be distributed to the Colorado Department of Transportation, for their comments, and to Great Outdoors Colorado for its approval. A final draft of the amendment(s) will then be brought back to the RFTA Board for their final acceptance. The Comprehensive Plan can only be amended if approved by a unanimous vote of the original members of RFTA (Pitkin County, Eagle County, Aspen, Town of Snowmass Village, Basalt, Carbondale and Glenwood Springs).

Transferability of the Comprehensive Plan: Should ownership of the railroad corridor be transferred to another public agency, the Comprehensive Plan will be tied to the property and will transfer with property ownership to that new ownership entity.



Plan of the Aspen Branch of the Denver & Rio Grande Western Railroad Corridor

Attachment I

**RESOLUTION 2001-6
AMENDING THE ROARING FORK
TRANSPORTATION AUTHORITY
INTERGOVERNMENTAL
AGREEMENT**

**RESOLUTION 2001-6
(AS AMENDED)
RESOLUTION OF THE BOARD OF DIRECTORS
OF THE
ROARING FORK TRANSPORTATION AUTHORITY
AMENDING
ROARING FORK TRANSPORTATION AUTHORITY INTERGOVERNMENTAL
AGREEMENT**

WHEREAS, the Roaring Fork Transportation Authority ("Authority") was created pursuant to the Roaring Fork Transportation Authority Intergovernmental Agreement dated as of September 12, 2000 (the "Agreement") (capitalized terms used but not defined in this Resolution have the meanings assigned to them in the Agreement); and

WHEREAS, the Authority was formed for the purpose of financing, constructing, operating and maintaining an efficient, sustainable, and regional multi-modal transportation system; and

WHEREAS, all the Members of the Authority are also members of the Roaring Fork Railroad Holding Authority ("RFRHA") and all the members of RFRHA are also Members of the Authority; and

WHEREAS, pursuant to Section 8.03(b) of the Agreement, the Authority already has the obligation to meet the obligations set forth in each RFRHA budget approved by the Authority; and

WHEREAS, the Authority and RFRHA have determined that the immediate reorganization of RFRHA will result in the elimination of duplication of administrative activities, cost savings to the Members of the Authority and the members of RFRHA, and greater effectiveness in delivering services and executing responsibilities; and

WHEREAS, the Authority and RFRHA and have agreed to reorganize RFRHA by RFRHA assigning all of its assets, rights and privileges to the Authority and the Authority assuming all of the obligations and liabilities of RFRHA pursuant to an Assignment and Assumption Agreement between RFRHA and the Authority, consistent with the terms of the form agreement attached hereto as Appendix A (the "RFRHA Assignment and Assumption Agreement"); and

WHEREAS, the Authority has agreed to create a Denver Rio Grande Right-of-Way GOCO Covenant Enforcement Commission to facilitate compliance with an Agreement dated as of January 17, 2001 between RFRHA and the State Board of the Great Outdoors Colorado Trust Fund, a copy of which is attached hereto as Appendix B, the First Amendment to the Legacy Grant Agreement for the Roaring Fork Railroad Legacy Project dated January 3, 2001 between the State Board of the Great Outdoors Colorado Trust Fund and all of the voting members of RFRHA, a copy of which is attached hereto as Appendix C, and the policy adopted by RFRHA on July 5, 2000 defining the types of uses that may be permitted within the Denver Rio Grande Right-of-Way for the purpose of determining whether or not a proposed encroachment is

compatible with the transportation, recreation and conservation values of the Denver Rio Grande Right-of-Way, a copy of which is attached hereto as Appendix D; and

WHEREAS, pursuant to Section 12.01 of the Agreement, the Agreement may (with certain exceptions not relevant here) be amended by resolution of the Board of the Authority; and

WHEREAS, this Resolution is being adopted and the Agreement is being amended as described herein to facilitate the reorganization of RFRHA, to authorize the execution, delivery and the performance of the obligations of the Authority under the RFRHA Assignment and Assumption Agreement and to create the Denver Rio Grande Right-of-Way GOCO Covenant Enforcement Commission;

NOW, THEREFORE, be it resolved by the Board of Directors of the Roaring Fork Transportation Authority that:

ARTICLE I

AMENDMENTS TO AGREEMENT

Section 1.01. Amendment of Article II of Agreement. The text of Article II of the Agreement is amended to read as follows:

Section 2.02. Purpose. The purpose of the Authority is to finance, Construct, operate and maintain an efficient, sustainable and regional multi-modal transportation system at any designated location or locations within or without the Boundaries of the Authority, and to preserve, maintain and enhance conservation and trail values within the Denver Rio Grande Right-of-Way and other designated conservation or trail corridors, subject to compliance with the Act.

Section 1.02. Amendment of Article IV of Agreement. The title of Article IV of the Agreement is amended from "ADVISORY COMMITTEES" to "ADVISORY COMMITTEES AND COMMISSIONS" and the text of Article IV of the Agreement is amended to read as follows:

Section 4.01. Advisory Committees. The Board shall appoint and maintain a Citizen Advisory Committee to advise the Board with respect to policy and service matters. The Board may also appoint other Advisory Committees to advise the Board. The members of the Citizen Advisory Committee shall not be Directors, Alternate Directors or Officers of the Authority. The members of Advisory Committees other than the Citizen Advisory Committee may include Directors, Alternate Directors and Officers of the Authority. Advisory Committees shall not be authorized to exercise any power of the Board.

Section 4.02. Denver Rio Grande Right-of-Way GOCO Covenant Enforcement Commission. The Board hereby establishes the Denver Rio Grand Right-of-Way GOCO Covenant Enforcement Commission (the "Commission"). The Board shall appoint, as members of the Commission, one elected official from each Member and two "at-large" members who are residents in the Authority's Boundaries and who are

not elected officials or employees of Members or employees of the Authority. The Pitkin County Open Space Board shall appoint one member of the Commission and the Roaring Fork Open Space, Park and Recreation District shall appoint one member of the Commission. Appointees shall serve three year terms and may be reappointed. The appointing authority may remove any member of the Commission appointed by it and appoint a successor at any time, except that the "at-large" members of the Commission may only be removed by a unanimous vote of the Directors present and voting at a meeting of the Board, open to the public and convened with at least forty-eight (48) hours prior written notice to all members of the Commission. The Commission shall meet not less than annually to review the annual performance audit described below and to provide information, advice and recommendations to the Board with respect to actions required to comply with the terms of the Agreement dated as of January 17, 2001 between RFRHA and the State Board of the Great Outdoors Colorado Trust Fund; the First Amendment to the Legacy Grant Agreement for the Roaring Fork Railroad Legacy Project dated January 3, 2001 between the State Board of the Great Outdoors Colorado Trust Fund and all of the voting members of RFRHA; and the policy adopted by RFRHA on July 5, 2000 defining the types of uses that may be permitted within the Denver Rio Grande Right-of-Way for the purpose of determining whether or not a proposed encroachment is compatible with the transportation, recreation and conservation values of the Denver Rio Grande Right-of-Way (collectively, the "Environmental Covenants"). The Authority shall retain an independent professional to monitor conservation activities within the Boundaries and conduct an annual performance audit and to deliver a written report to the Commission and the Board that states whether the Environmental Covenants have been and are being complied with and describes the actions, if any, required to correct any past failure to comply with such covenants or to comply with such covenants in the future.

Section 1.03. Amendment of Section 6.02(d) of Agreement. Section 6.02(d) of the Agreement is amended to read as follows:

(d). **Protection and management of the Denver Rio Grande Right-of-Way.** The Authority shall be responsible for the protection and management of the Denver Rio Grande Right-of-Way, including the preservation, maintenance, and enhancement of the conservation values of the Denver Rio Grande Right-of-Way, and including the obligations of RFRHA under that certain agreement dated January 17, 2001 between RFRHA and GOCO, and shall provide funding for and monitoring of enforcement of these conservation values, subject to compliance with the Act.

Section 1.04. Amendment of Section 6.02(e) of Agreement. Section 6.02(e) of the Agreement is amended to read as follows:

(e). **Funding, Construction and Maintenance of Regional Trails.** The Authority shall provide funding for and be responsible for construction and maintenance of regional trails in cooperation with Members or other Persons.

Section 1.05. Amendment of Section 8.03 of Agreement. Section 8.03 of the Agreement is amended to read as follows:

Section 8.03. Reorganization of RFRHA. RFRHA shall be reorganized in accordance with the Assignment and Assumption Agreement between the Authority and RFRHA executed by the Authority and the members of RFRHA.

ARTICLE II

AUTHORIZATION OF OFFICERS AND EMPLOYEES

The officers and employees of the Authority are hereby authorized and directed to take all actions that are necessary, convenient and in conformity with the Agreement (as amended by this Resolution), the Act and the Constitution and laws of the State, to carry out the provisions of the Agreement (as amended by this Resolution), the RFRHA Assignment and Assumption Agreement and the Environmental Covenants, including, but not limited to, the execution and delivery of a RFRHA Assignment and Assumption Agreement consistent with the terms of the form agreement attached hereto as Appendix A and agreements and instruments necessary or convenient to implement the terms thereof.

* * *

INTRODUCED, READ AND PASSED by the Board of Directors of the Roaring Fork Transportation Authority, Roaring Fork Valley, Colorado, at its regular meeting held June 25, 2001.

ROARING FORK TRANSPORTATION AUTHORITY



Chairperson

I, the Secretary of the Board of Directors (the "Board") of the Roaring Fork Transportation Authority (the "Authority"), do hereby certify that (a) the foregoing Resolution was adopted by the Board at a meeting held on June 25, 2001; (b) the meeting was open to the public; (c) the Authority provided at least 48 hours' written notice of such meeting to each Director and Alternate Director of the Authority and to the Governing Body of each Member of the Authority; (d) the Resolution was duly moved, seconded and adopted at such meeting by the affirmative vote of at least two-thirds of the Directors then in office who were eligible to vote thereon voting; and (e) the meeting was noticed, and all proceedings relating to the adoption of the Resolution were conducted, in accordance with the Roaring Fork Transportation Authority Intergovernmental Agreement dated as of September 12, 2001, all applicable bylaws, rules, regulations and resolutions of the Authority, the normal procedures of the Authority relating to such matters, all applicable constitutional provisions and statutes of the State of Colorado and all other applicable laws.

WITNESS my hand this 19th day of September, 2001.



Secretary

Attachment II:

RECREATIONAL TRAILS PLAN 2005 UPDATE

ASPEN BRANCH OF THE DENVER & RIO GRANDE WESTERN RAILROAD CORRIDOR



RECREATIONAL TRAILS PLAN UPDATE

DECEMBER 2005

Prepared for the Roaring Fork Transportation Authority



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I. INTRODUCTION

The Roaring Fork Valley has been experiencing growth and development unparalleled since European settlement during the silver boom of the late 19th century. The subdivision of agricultural land is gradually transforming the character of the valley floor from a predominantly rural, pastoral setting to a developed state inclusive of golf courses, housing and commercial centers. The linear property corridor of the Aspen Branch of the Denver & Rio Grande Railroad was purchased by the Roaring Fork Railroad Holding Authority (RFRHA) in 1997 to maintain a continuous valley-wide right-of-way for recreation, conservation and mass transit implementation. On November 1, 2001, the Roaring Fork Transportation Authority (RFTA) became the owner of the railroad corridor.

The corridor affords an opportunity to develop recreational trails and manage public access on and across the previously restricted private property. The centralized ownership, design and management of the corridor will help to maintain open space and the diverse valley legacy and enrich the adjacent communities and visitors alike.

There are over thirty-three miles of railroad corridor extending through the scenic valley of the Roaring Fork River. Passing through three counties and several towns and communities, the property offers the opportunity to provide a continuous recreational link between Glenwood Springs, Carbondale, Basalt and Woody Creek. The relative isolated nature of the railroad corridor as it traverses through private agricultural lands and along canyon walls presents a unique opportunity to provide a high quality outdoor experience including active recreation, habitat protection and interpretation.

The principal purpose in the original formation of RFRHA was the preservation of the railroad corridor, enabling multi-jurisdictional planning, funding, development and management of a public recreational trail system throughout the length of the corridor. Additional goals of property acquisition include providing access to public lands and to the Roaring Fork River, the preservation of open space and wildlife habitat, and to allow the development of mass transit uses. The Comprehensive Plan (CP) for the RFTA property envisions integrated trail and transit development within the railroad corridor as a regional asset inclusive of open space, recreation and transportation resources.

The purpose of this Trails Plan (the Plan) is to develop a conceptual plan and implementation guidelines for a recreational trail within the RFTA railroad corridor. The trail shall provide public use of the lineal property, and is envisioned to afford a wide range of recreation opportunities including, but not limited to: a continuous non-motorized trail link, river access, biking, hiking, equestrian uses, access to public lands, wildlife viewing, habitat conservation, and educational and interpretive activities. The plan is based on design requirements, recommendations and preferences evolving from public input and through the study of the corridor's physical and aesthetic qualities.

II. PROPERTY CHARACTER

A. Physical

The character of the Roaring Fork Valley (the valley) is a mosaic composition of native plant communities, agriculture, rural, suburban and urban land uses. The railroad corridor shares the valley floor with the river and State Highway 82, traversing through diverse land uses ranging from unspoiled natural areas to sand & gravel pits, including hay meadows, riparian forest, residential, commercial, and industrial districts along its course. The valley bottom is relatively narrow, averaging less than one mile in width and ranging from 1.5 miles near Carbondale to under 700 feet in the narrows of Snowmass Canyon. The railroad corridor property has numerous potential access points resulting from its proximity to State Highway 82 in the lower and mid valley, and at public road crossings throughout the corridor.

The railroad corridor extends a distance of approximately 33.3 miles in a narrow strip from the wye junction with the mainline in Glenwood Springs upvalley to the Woody Creek gulch. The property varies in width from 50 feet to 200 feet with a predominant width of 100 feet, encompassing approximately 460 acres. When the corridor was purchased in 1997 by RFRHA, the rail bed, ballast, ties and tracks were continuous throughout the corridor, with the exception of the short section removed by CDOT for highway improvements at Wingo Junction. In 2005 the RFTA Board of Directors approved the sale of the track tie and other track materials for salvage. Both the existing tracks and proposed transit line configured on the preferred alignment identified in the CIS alignment (alignment "C") are located on the centerline of the railroad corridor, effectively halving the useable width for trail implementation in certain areas at the time transit with trail occurs. The length of this 'transit-with-trail' situation totals 21.5 or 22.5 miles, dependent on the location of the transit crossing to the highway corridor at Catherine Bridge. In rail-to-trail sections (10.8 or 11.8 miles) the assumption is that the full width of the railroad corridor is available for trail alignment. The corridor length by county is 18.3 miles in Garfield, 3.1 in Eagle and 11.9 in Pitkin.

Generally, the corridor provides pastoral surroundings and views as it runs across the alluvial terraces of the valley floor. The foreground scenery of agricultural lands is highlighted by a backdrop of largely undeveloped valley slopes and distant mountain peaks. The impressive twin peaks of Mt. Sopris command attention from the lower reaches of the railroad corridor. In many areas the alignment lies directly adjacent to and above the river, offering scenic views of flowing water and associated riparian flora and fauna. The open, expansive views of the lower valley are an interesting contrast to those provided farther upvalley. In Snowmass Canyon the landscape canopy and vertical landforms along the corridor provide an enclosed, intimate experience, resembling a forested backcountry trail. This wide range of character helps enrich the experience for both passive and active recreation opportunities.

A large percentage of the upper valley walls are in the public domain such as state, Bureau of Land Management (BLM) or U.S. Forest Service (USFS) property. The adjacency of the project corridor offers several potential access points to these extensive public-owned parcels providing opportunities for backcountry hiking, skiing, equestrian and mountain biking activity. This property attribute is very important to residents seeking access to nearby public lands. It also dramatically increases the range and level of difficulty of recreational opportunities available from the trail corridor including the potential to provide a high-quality wilderness experience.

The composition of native vegetation changes as you move upvalley dependent on changing elevation, solar aspect and river adjacency. The complex composition of natural, riparian and agricultural vegetation patterns, coupled with the scenic landforms of a mountain valley provides a picturesque setting for outdoor recreation. This mixture of large open spaces, railroad corridors, dense cover, wetlands and the riparian river corridors also provide excellent wildlife habitat. Wildlife sightings commonly include elk, deer, fox, heron, eagle, falcon, bear, blue herons, eagles and other waterfowl species that provide viewing opportunities and add interest to the trail experience.

The Roaring Fork River with its winding ribbon of bottomland forest forms the visual and recreational backbone of the valley. The relationship between the railroad corridor and the river provides for a myriad of water-based recreation opportunities and forms an integral component of the property's character.

From the confluence with the Colorado River in Glenwood Springs upstream to Carbondale the river is designated Gold Medal water, characterized as some of the highest quality aquatic habitat in the state. An estimated 15,000 anglers utilize this valuable resource annually. River recreation opportunities include fishing, boating, swimming, waterfowl viewing, photography and numerous other activities. Throughout the corridor is an established network of river access easements for fishing and recreation. The RFTA trail enables public access to many of these areas. In addition the property encompasses additional riverbank areas which will become available for public river access. The Trail Plan identifies additional potential parking and trailheads on RFTA property further enhancing public use of this valuable resource.

In addition to the wealth of positive attributes, recreational and open space opportunities characterizing the property, specific physical and legal planning constraints exist that are considered in the plan. These factors significantly limit the options for trail alignment, access and the location of support facilities. The main limiting elements are the narrow, linear shape of the property, the shared use of the railroad corridor with the transit line, and the fiber optic easement restrictions. Potential conflicts between trail and transit functions will require safety, security and access control measures that will affect design and costs. The fiber optic line is addressed in a subsequent section. In addition, several other planning constraints such as wildlife, vegetation, ditches and wetlands also impact the trail plan and must be considered in the final design.

In several areas of the corridor steep topography across the property dramatically influences trail alignment, design and construction costs. In these areas the rail bed was benched into the slope with cuts and embankments, increasing the cross slope for much of the property width. Rail-with-trail implementation within the railroad corridor property requires relatively high construction costs due to earthwork, retaining walls and protective trail barriers. The plan recommends thorough evaluation of design alternatives for these areas during final design to determine the most cost effective, acceptable solution. Several other property characteristics were noted in the planning process which will affect final trail design and management decisions. These factors include:

- irrigation ditches crossing, running adjacent to, and within the property;
- seasonal and permanent ‘wetland’ areas adjacent to and within the property;
- the proximity and encroachment of State Highway 82 on the property;
- private crossings and encroachments including existing utility easements.

B. QWEST Easement

The RFTA property contains a utility easement granted to Southern Pacific Telecomm and subsequently transferred to Qwest for the installation, maintenance and operation of an underground fiber optic communications cable. The 10 feet wide easement parallels the rail bed, predominantly on the north side, with an average offset from the track of 8 to 10 feet. The continuous easement begins at 23rd St. in Glenwood, running upvalley the length of the property to Woody Creek.

Easement restrictions preclude the use of this utility corridor for trail implementation to the fullest extent possible. Crossings of the easement shall be minimized and shall intersect perpendicular to the cable. Trail implementation within the easement can occur only at corridor “choke” points. Within the easement all repairs to existing or proposed improvements, including the Rio Grande trail, resulting from fiber optic line repairs, are the responsibility of RFTA. The location of the line was considered along with other physical elements during the evaluation of trail alignments.

C. Conservation Covenant Areas

When RFRHA bought the railroad corridor, a conservation easement was placed on the entire corridor. However, through the Corridor Investment Study Process, it was found that many portions of the corridor did not contain the attributes described as “conservation values” by the conservation easement. Therefore, in 2001 the Conservation Easement was changed to a Conservation Covenant. Ten conservation covenant areas were established along the corridor and a corridor enforcement commission was established. The covenants require the owner to abide by its terms and require the owner to hire an outside consultant to evaluate the covenant areas each year and report the findings to the covenant enforcement commission.)

The area covered by the conservation covenant encompasses only those areas of the corridor that contain the “conservation values” described within the original conservation easement. The size was reduced from 34 miles (the full length of the corridor from Glenwood Springs to Woody Creek) to 17.50 miles (roughly one-half of the corridor).

D. Pitkin County Trail Easement

As defined in the Deed of Trail Easement, dated June 30, 1997, the Pitkin County Open Space and Trails board was deeded the right to construct an interim trail on the corridor within Pitkin County should the Comprehensive Plan not be completed within two years of the date of acquisition of the property. An interim trail alignment was identified in the Pitkin County reach that accommodates public use of the property while protecting the integrity of both existing and proposed rail and transit alignments. This trail has been completed on its interim alignment and by 2020 RFTA is required to identify a final alignment for the trail through Pitkin County.

In this plan the trail design assumes an 8 foot wide trail platform with crusher-fines surfacing and basic safety and signage improvements. Public land and river access points are identified.

III. TRAIL PLAN DEVELOPMENT

The Trail Plan was begun as a component of the Corridor Investment Study (CIS) and Comprehensive Plan (CP) for the then RFRHA property. The overall study was programmed for comprehensive evaluation of the costs, benefits and impacts of a proposed mass-transit system in the valley, primarily within the railroad corridor property. Culminating in the production of a Draft Environmental Impact Statement (DEIS), the study includes inventory and assessment of physical, economic and social impacts of several transportation implementation alternatives.

A. Task Force Workshops

As one facet of the broadly-scoped study, the Trails Plan utilized the previously established public involvement process of open Trails Workshops. Between May of 1998 and March of 1999, five publicly advertised workshops were held to formulate project goals and objectives, discuss alternatives, review progress and receive public comment. Through this series of public workshops the plan incorporated the community ideas and expectations for the trail corridor.

At the initial workshop attendees were introduced to the project and the study area through presentations and a hands-on work session using aerial maps of the corridor. Participants helped identify key goals, issues, constraints and opportunities to be considered in the planning process. Interested trail supporters volunteered to serve on the Trails Task Force, attend future meetings and gather information pertinent to the trail plan.

As a preferred transit alignment emerged the plan progressively developed. At subsequent Task Force workshops members reviewed and discussed trail alignment alternatives, design standards and recreation opportunities. The involvement and direction of the Task Force participants was key in the decision-making process and has helped build consensus and support for the plan. Their knowledge of the valley, existing use patterns and goals of local open space groups has been instrumental in the planning effort. It was with this key involvement that the design principles, goals and trail plan take its final form.

B. Project Coordination

As a result of the complexity inherent in a project of this scope, coordination for the planning study involved several project parameters and local agencies. Thorough coordination with the transit system planning effort is required because of the exacting design parameters and relatively large impact of a transit line on the narrow corridor. Transit elements affecting trail planning include station locations, passing tracks, grade-separated road crossings and overall rail bed improvements, all occurring within the railroad corridor and potentially impacting trail alignment.

Consistent with the CP goal of coordination with planning efforts of local agencies, trail planning has included county and local governments, trail, open space and recreation groups in the process. Consultations with the following agencies and interest groups in a positive, cooperative atmosphere has helped guide the plan toward meeting local objectives for parks, open space and trails.

- City of Glenwood Springs Planning Department
- Garfield County Planning Department
- Town of Carbondale Planning Department
- Town of Basalt Planning Department
- Mid-Valley Trails Committee
- Pitkin County Open Space & Trails Board
- Colorado Department of Transportation
- Glenwood Springs River Commission.

IV. TRAIL PROGRAMMING AND DESIGN PRINCIPLES

The development of the program for the trail plan began prior to the formation of RFRHA and evolved throughout the CIS/DEIS/CP process. Pitkin County purchased the railroad corridor segment from Woody Creek to Aspen in 1969. Today this corridor serves the upvalley residents as continuous trail corridor, providing recreation and off-road commuting opportunities. Since the opening of this amenity to public use, local trail supporters and agencies have been advocating the down valley extension of the system, due in part to the embargoed status of the rail line. Previous trail studies for the downvalley corridor include the Roaring Fork Trail Conceptual Plan (1992) and the Recreation Access Feasibility Study (1996). These plans and related planning documents completed for local highway projects and transit studies provided a major portion of the site inventory and project programming information for this trail plan.

A project program defines the individual components of the overall system. A program may be described in a variety of formats ranging from a simple list of components to a more generalized, broad set of guidelines, goals or principals that are utilized in the decision-making process to shape and steer project implementation. Design goals establish parameters for the physical design of the trail components. Programming for the RFTA trail was developed and refined throughout the planning process. Program elements include information, ideas and input from both past and current corridor studies and include local, regional and national sources and standards. Specific to the valley, program goals, principals and design elements have been summarized from the RFTA mission, legal requirements, meetings, public workshops, project research and coordination.

The main components of the plan involve recreation, preservation, interpretation and environmental education. Recreation objectives include the alignment and design of multiple-use, non-motorized trails and ancillary facilities for both hard- and soft-surface activities including biking, hiking, equestrian and other trail uses. The Roaring Fork Holding Authority - Comprehensive Trails Plan recreation component also includes access to the river and public lands. The preservation element seeks to maintain the natural resource to the fullest extent possible for wildlife, residents, visitors, and for the overall health and value of the natural system. Knowledgeable trail design and management of the corridor is key to resource protection. The interpretive/environmental education components will provide experiences designed to help give meaning to the landscape and to contribute to trail users' understanding of the cultural and natural elements of the Roaring Fork Valley environment.

The RFTA trail will function at several levels. On the valley-wide level the trail provides a continuous connection from Glenwood Springs to Carbondale, Basalt and Aspen, including spur trails, trailheads and points of interest such as river access or scenic overlooks. Individual trail segments may serve as discrete elements connecting local destinations, and as a part of the larger trail system. Trail users can spend several hours or several days enjoying different parts and features of the corridor. The program elements categorized below include principals, goals, objectives and specific recommendations for trail planning, future design and implementation of the trail system.



2010 Soft-Surface Trail East of Emma near Basalt High School

A. General

- Improve the quality of life for residents through the development of the corridor that meets expressed community transportation and recreation needs.
- Plan for a continuous trail throughout the corridor.
- The proposed trail alignments (paved and soft-surfaced) shall be restricted to use of the linear RFTA property to the fullest possible extent.
- Maximize recreation, education and interpretation opportunities.
- Develop a trail system that provides a quality experience for both local and visiting users, and results in economic benefits to the valley.
- Minimize impact to adjacent landowners from existing and proposed activities (transit, river access, etc)
- Take advantage of existing corridor resources including access points, road grades, trail connections and river access.
- Plan for the ultimate development of appropriate support facilities such as water stations, restrooms, picnic shelters, etc.
- Consider implementation costs.

B. Design Detail

- Trail design shall provide barrier-free access.
- The trail shall be a 10 feet wide hard surface, particularly in high volume areas.
- Develop a soft-surfaced jogging trail, minimum 4 feet wide with improved, soft gravel surface.
- Identify equestrian use of the corridor. Separate bridal path from paved trail for safety.
- Maximize separation of trail and transit alignments. Use grades, vegetation and ditches where feasible for separation and to improve user experience.
- Provide smaller soft-surface trails to access natural areas, the river and public lands where appropriate.
- Utilize a common theme in the design of all trail amenities and structures. Design and materials should complement the natural environment.
- Incorporate natural, salvaged and recycled materials as available and appropriate in design of trail improvements.
- Low maintenance and vandal resistance shall be design considerations.

C. Trail Use

- Design for multi-purpose use and provide interest and variety for users.
- Provide for a wide variety of high-quality, non-motorized, passive and active recreational experiences and opportunities.
- Provide a trail suitable for non-motorized commuting. Only non-motorized use shall be allowed, except for emergency and trail maintenance access.
- Trail design shall accommodate hiking, running, biking, skating, equestrian and challenged users. Other uses identified include picnicking, wildlife viewing, cross-country skiing, photography, river, environmental education/interpretation and public land access. Local communities may decide independently with respect to skaters, equestrians and other uses within developed areas.
- Plan shall accommodate specific design requirements and constraints of programmed uses.

- Camping and open fires are prohibited.
- See the RFTA Rio Grande trail rules and regulations for further detail.

D. Linkage

- Provide for convenient, direct access and use by residents and visitors. Identify trail access points considering proximity to residential, educational and employment centers. The trail will provide off-street connections between communities, towns, commercial employment centers and to other resources throughout the valley.
- Identify connections to existing and proposed trails, recreation areas, population and activity centers, roads, the river and public lands. Specifically, provide direct links to the Glenwood Springs River Trail, the Basalt-Old Snowmass Trail, the Rio Grande Trail and local trails in Carbondale and Basalt. Trail connections provide indirect access to the Glenwood Canyon Trail, the Christine State Wildlife Area, Pitkin County trails, BLM and USFS lands.
- Trail system shall emphasize regional recreational concept and commuter functions.
- Identify or develop off-street access to schools for student commuting and environmental education.

E. Environmental

- Protect natural qualities including habitat values and the river corridor.
- Minimize environmental impacts from trail construction.
- Minimize user impacts to resource through design management and education.
- Identify sensitive natural areas and recommend design and management mitigation measures.
- Evaluate alternative trail alignments that provide adequate buffer zones or completely avoid sensitive habitats.
- Consider mandatory or voluntary seasonal trail closure ('management' areas) during critical seasons (for example, endangered species nesting); provide detour route during temporary closure. Use seasonal closures and other management activities as environmental education opportunities.

F. Safety

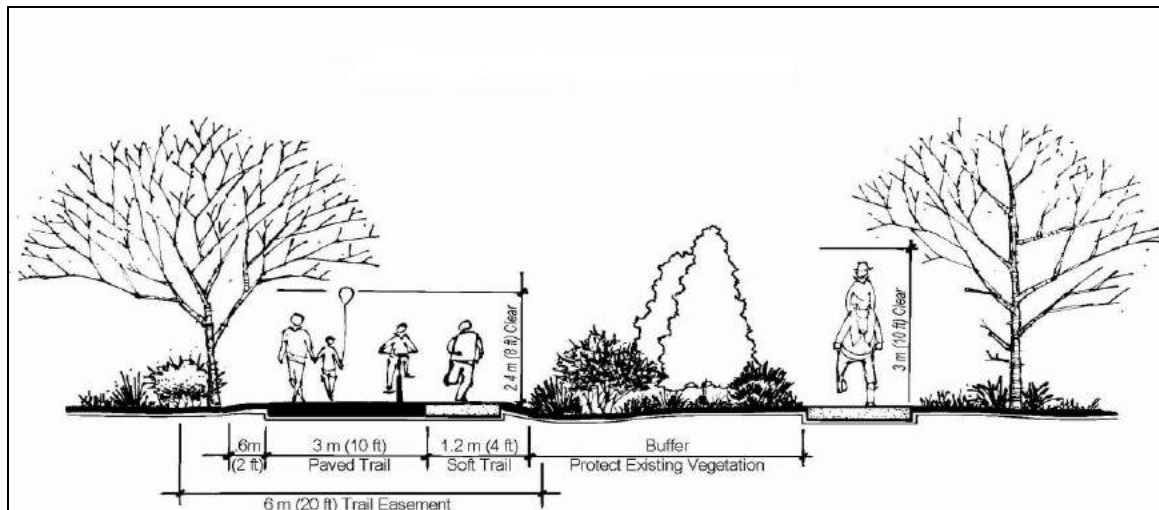
- Develop safe and secure trails for users and adjacent property owners.
- Provide sufficient trail pavement width to minimize user conflict.
- Provide adequate shoulder width and sight distance to enhance trail user safety.
- Locate trail access points and support functions considering safety, visibility and emergency access.
- Provide barrier fencing at convergence areas to protect trail user from transit hazards.
- Provide perimeter fencing where needed to protect property privacy or livestock.
- Utilize discrete or unobtrusive barriers to direct the trail user away from hazards and sensitive natural areas.
- Recommend grade-separated rail and major roadway trail crossings.
- Consider solar-powered emergency call boxes in isolated areas and at trailheads.

G. Interpretation

- Develop opportunities for environmental education and interpretation.
- Directly and indirectly expose trail users to natural processes and cultural resources.
- Minimize impact to historic, cultural and archaeological resources. Use existing infrastructure for interpretation.
- Coordinate educational interpretation with wildlife observation opportunities at “*Wildlife Watchpoints.*” Interpretive efforts should be focused on identified interpretive nodes along the corridor. Primary sites are envisioned at transit stops; therefore, those transit stops that intersect the trail will be critical interpretive nodes.
- Interpretive nodes along the trail that are not at transit stops or trailheads should be more understated than at transit stops or trailheads, to avoid community concerns for cluttering the landscape.
- All interpretive components should relate directly to identified themes as described in the companion document *Reading the Roaring Fork Landscape: An Ideabook for Interpretation and Environmental Education*, attached in Section III of the Comprehensive Plan.

H. Implementation

- Coordinate with local governments, agencies, commercial and public interest groups during design development to insure compliance with community and county planning objectives, state and federal requirements.
- Detailed designs for other proposed uses within and adjacent to the property should be prepared collaboratively, particularly the transit alignment, stations, passing tracks and highway improvements.
- Foster public support for region-wide recreation, environmental education and interpretation opportunities and the concept of regional land planning and stewardship.
- Utilize the resource of local interest groups and trail advocates willing to provide volunteer services and disseminate information.



Typical Section through 2010 Trail with Potential Equestrian Trail

V. TRAIL SYSTEM ELEMENTS

A trail system is an organized assembly of several discrete components including pavements, trailheads, signage, site furniture and other related elements, organized to meet the project's physical and aesthetic goals. In addition to the apparent features of pavement type, width and alignment, support facilities are vital to the success of any trail system. These elements can maximize the recreational potential of the resource and enhance the user experience. For example, trailside rest areas, interpretive stations and signage help to guide and inform, protecting both the user and the resource. A trailhead can serve as a multi-purpose parking area for river access, a highway wayside or a park-n-ride in addition to its trail related functions.

Trail infrastructure elements will contribute to the overall character and landscape of the Valley. Prominent trail features such as bridges, road crossings and picnic shelters will become a visual reminder of this regional amenity. These elements should be designed and integrated into the fabric of the natural and built environment to support the regional character, complement interpretive themes, and enhance the quality of the trail system and the user experience.

A. Trail Characteristics

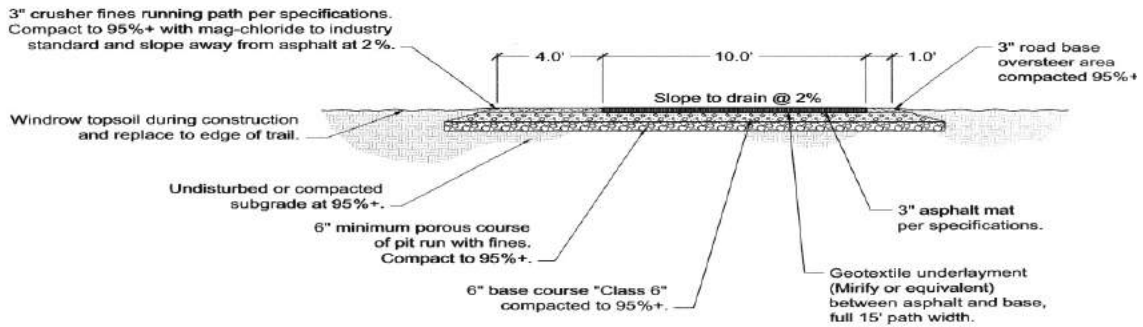
In transit with trail segments trail alignment is limited to one half or less of the overall corridor width due to the proposed transit alignment on the railroad corridor centerline. The fiber optic line on one side of the rail line further restricts the available width. The preferred alignment would occur near the edge of the property (generally the south east side of the corridor) to maximize the offset and buffer distance from the transit line. A 10 feet minimum buffer from the nearest track or transit line is recommended for trail user safety and comfort. Trail alignment generally runs on the downhill or river-side of the corridor to enhance river access and reduce impacts and conflicts with roadways. The plan also suggests a curving trail alignment where feasible to maximize design flexibility and landform integration. A winding trail can help improve the user experience by directing views and avoiding monotonous long, straight sections.

Environmental and habitat impacts are minimized by avoiding mature vegetation and reduced grading requirements of a curving alignment. In trail (without transit) sections the trail alignment can utilize the full width of the property, avoiding the fiber optic easement. In these sections the alignment generally utilizes the existing or previous rail bed to minimize environmental impacts and costs, and provide a superior viewing position for the trail user.

Several pavement materials are commonly used for both hard- and soft-surfaced trails and selection will significantly affect construction cost, maintenance, aesthetics and trail use. Conventionally hard-surfaced pavement options are limited to asphalt or concrete. Concrete is recommended for the trail for durability, use and aesthetic considerations.

Task Force recommendations include a pavement width of 10 feet with a 4 feet graded shoulder on one side (jogging path) and a maximum longitudinal slope of 5%.

Final design should include integral concrete coloration to reduce the visual impacts and glare.



Typical Construction Section through 2010 Asphalt Trail with Soft Surface Path

Proper surface finishing and sawcut joints provide a smooth, uninterrupted pavement for comfortable use by wheeled apparatus including wheelchairs, strollers, skates, blades and bicycles.

The structural design and width of the trail pavement and structures (walls, bridges) should be adequate to withstand loading by trail maintenance and emergency vehicles. A 6-inch thickness of concrete is considered minimum for this application. In some isolated sections of the corridor the trail provides the only vehicular access to the proposed transit line. Final trail design coordination should include potential transit related maintenance, inspection and access functions. As noted previously, trails within Pitkin County shall be constructed to standards defined in the *OST Trail Design and Management Handbook*.

Funding realities or public sentiment may not permit hard-surface pavement installation during the initial phase of trail implementation. In this case, the plan recommends construction of the full-width platform for the ultimate trail to facilitate future paving operations, maintenance and emergency access.

Separate soft-surface trails are included in the trail program primarily for running and equestrian uses. The implementation of the soft-surfaced running path is best accomplished as a shoulder extension of the primary trail alignment. This arrangement meets program objectives, avoids unnecessary resource impacts, and provides the most economical solution. A minimum four-foot-wide, soft-surface is recommended. This path can diverge from the main alignment if needed to avoid physical corridor constraints, reduce resource impacts or provide access to a view or resource apart from the main trail. The jogging path alignment should fall within the future 20 foot-wide-trail easement.

Horses can startle easily particularly from fast moving quiet objects such as bikes or bladders, and may kick out posing a serious safety hazard.

A separate alignment for the bridle path is recommended that will maximize the buffer areas between incompatible corridor uses. This reality necessitates that any bridle path implementation occur outside of the 20 foot trail easement. Bridle path alignment on the opposite side of the tracks from the main trail may be an option dependent on RFTA policy regarding dual alignments within the corridor. In highly developed areas the development of a separate bridal path may not meet safety and management objectives.

Horses function best on soft surfaces and in most soil conditions bridle paths function well on native surfacing. These trails have less strict design parameters for gradient, curve radii and drainage crossings. Trail implementation and maintenance should include shrub and boulder removal, mowing, tree trimming to provide 10 feet vertical and 8 feet horizontal clearances and trail markers for path delineation. At corridor choke points, road crossings and other areas the bridal path may join the main trail for physical, safety or cost-related issues. All trail users should be aware of these shared-use zones. Shared equestrian use of trail bridges should be avoided. Align bridle paths to intersect watercourses at safe ford locations or provide alternate route at river crossings.

B. Road and Transit Crossings

Crossings of public roads and private drives are required throughout the corridor. Grade separated trail crossings are highly recommended for highway crossings of State Highway 133 at Carbondale and State Highway 82 at Wingo. Due to poor sight lines and proximity to State Highway 82, the intersection of the trail with Grand



Avenue at Buffalo Valley is also recommended for a grade separated crossing. The plan for the transit overpass at State Highway 133 accommodates a trail platform. At Wingo Junction the trail plan recommends a bridge crossing of both State Highway 82 and the proposed transit line. Existing State Highway 82 underpasses adjacent to the corridor provide safe access across the highway near Aspen Glen, Carbondale and Emma. For at-grade road and private drive crossings, trail design should emphasize safety. Basic safety elements include right-angle intersections, adequate sight distances, warning signs and pavement markings for both trail and roads per the Manual of Uniform Traffic Control Devices (MUTCD) standards. Measures should be included to restrict trail access by unauthorized vehicles. The trail plan recommends additional design treatment for public road crossings to

further enhance trail safety, identity and recognition. Site improvements can include special crosswalk paving, landscaping, trail signage, rustic fencing and potentially lighting to enhance these trail entrances.

A main objective in the trail alignment design process seeks to minimize rail corridor crossings. Severe topography, river adjacencies and other corridor constraints require the trail to cross the potential transit alignment up to seven times along the corridor. It was strongly recommended by the Trails Task Force that the plan include grade-separated crossings for all trail-transit intersections. The plan includes underpasses at these locations to improve trail safety and reduce visual impacts. At grade crossings are suitable prior to transit line implementation.

C. Trailheads

In addition to neighborhood connections and street crossings, trail access would be provided at eight proposed and existing trailheads along the corridor. Trailheads provide parking and access to the trail system for valley visitors, groups, or residents choosing to drive their equipment or animals to the trail corridor. Trailheads are a place to park, meet, prepare equipment, obtain trail information, use a restroom, relax or picnic before or after recreating. The simplest trailhead facilities include parking for 5-10 vehicles, horse trailers and buses, and trail information signage. Basic services such as restrooms (composting or portable type), potable water, picnic shelter with table, trash collection, interpretation, equestrian facilities, and telephone are recommended to enhance the utility of the property. improve safety, and protect private property and the resource. Gates or removable bollards restrict trail access by unauthorized vehicles including ATV's and motorcycles. Depending on power supply, security objectives and local sentiment, trailhead areas may be lighted during evening hours.

Should transit stations be located adjacent to the trail alignment they could be incorporated with trailhead facilities to provide multi-modal transportation hubs. Transit station planning should include safe bicycle parking facilities and other provisions for interfacing bicycle travel with public transit, such as racks on buses and allowing bicycles on transit system.

The Plan proposes trailheads at several locations in response to the following criteria:

- Located directly adjacent to the trail within the railroad corridor property;
- Easily accessible from existing roads;
- Adequate size. to support planned improvements. Proposed trailheads are located at 200-foot-wide railroad corridor sections to insure sufficient property area.
- Distribution throughout the corridor length.

D. Bridges



The proposed trail alignment includes creek, gulch and road crossings at several locations that require bridge structures for trail continuity. Major crossings on the corridor include Cattle Creek, the Roaring Fork between the Satank bridge and Highway 133, Sopris Creek, the Roaring Fork at Wingo, State Highway 82 and the transit line at Wingo, Arbaney Gulch, and potentially at the end of the corridor at the Woody Creek gulch. At each of the river crossings it may be possible to utilize the existing railroad bridges for the trail until such time as a mass transit project is feasible within the rail corridor. For the Satank River crossing it may be feasible to utilize the structural support of the existing railroad bridge to accommodate a separated trail function.

The design of new bridges should identify with historic or other valley bridge precedents in the valley in materials, form and structure including supports, railings and decking. These highly visible trail elements should complement and enhance the landscape of the valley. Bridge engineering should accommodate vehicle loading and the widths of trail maintenance and security vehicles including emergency vehicles (ambulance, fire fighting), trail sweepers, plows, cross-country track setters and pickups. Crossing design should occur at right angles to the drainage to minimize impacts to the riparian area.

E. Rest Areas

Located at regular intervals along the trail corridor rest areas provide opportunities to stop along the trail, rest and enjoy the outdoor experience and the natural beauty of the corridor. A thoughtfully placed bench or turnout on the trail provides reason for pause, reflection and observation. Coordinate rest area location and design to relate to interesting or unique natural features, processes or views. Integrate rest areas with other trail elements such as interpretative stations, trail junctions, scenic overlooks or river access points.

F. Support Elements

Miscellaneous structures, site furniture, amenities and other design features are integral components of the trail system and can make significant contributions to the user experience. The design of trail elements should utilize a common palette of materials, colors and forms to present a cohesive image. Construction materials and design form should reflect the cultural and natural history of the valley and typify structures and elements found along the corridor. Railroads, ranching and mining are suitable local themes for design inspiration.

Materials should be sustainable, requiring minimal maintenance and have low susceptibility to vandalism. Encourage the use of recycled and salvaged materials. During trail clearing and grading, native materials can be salvaged and used for the design of trail infrastructure and amenities. Boulders can be used for retaining

walls, informal seating, vehicle barriers or culvert headwalls. Salvaged timbers and logs provide rustic benches, tables, fencing and structural elements. Other site elements include shelters, san-o-let enclosures, fencing and gates.



Signs and trash receptacles made from recycled materials, mounted on peeled juniper posts

G. Signage and Interpretive Elements

Providing accurate information is important for both use and management of the trail corridor. Signs are needed to convey information, directions and regulations but should be kept to a minimum to avoid clutter in the natural setting. For the RFTA trail, significant subject matter includes user safety related to the contiguous transit line, resource protection of the riparian corridor and respect for private property.



Signage should exhibit a consistent design theme throughout the corridor. Designs may include a graphic logo, potentially with a railroad focus, to relate to past and present use and property origin. Signage system should complement other site elements in materials, color and pedestrian scale. Salvaged railroad materials may potentially be utilized for signage elements including tracks, brackets, spikes and ties, for sign posts, mounting, anchoring, framing and other structural elements. Other trail amenities (benches, walls, fencing) can use similar materials for theme reinforcement.

Signage stenciled on asphalt trail surface.

All designs should consider the general context and particular setting in which signs are to be placed. Placement of signs within scenic vistas and sight lines should be avoided. Lettering styles should draw inspiration from historic precedent in the Valley and avoid exotic or contemporary styles. Utilize universal symbols where appropriate. Design a unified sign mounting system throughout trail corridor that minimizes vandalism, maintenance and the intrusion of signs on the landscape.

Several means of providing information via signage are recommended:

- Information Kiosk: Provide in prominent location at trailheads and other major access points. Include system map, safety items, regulations, resource and wildlife protection, distances, phone numbers, etc. The kiosk can also provide interpretive information to describe natural and cultural themes and locate interpretive stations along the trail. To reduce trailhead clutter the information center may dispense pet clean-up bags and trail guides. Bulletin space is available for temporary or seasonal postings, warnings or restrictions.
- Interpretive Sites: Locate primary interpretive nodes at stations where trail and transit lines converge, and at trailheads. Along the trail interpretive messages can use existing elements or creative messages (e.g. text or animal tracks embedded into pavement or boulders) in lieu of stand-alone signage to highlight a particular site feature or natural process and educate the trail user. Interpretation should support an overall interpretive theme. Encourage the use of symbols in lieu of text to convey information. Refer to the interpretive plan *Reading the Roaring Fork Landscape* for more information.
- Trailside Signs: Provide information to the trail user involving mileage, directions and distances at trail and road intersections and points of special interest. Mileage signs can be used in tourist areas to encourage travel to noted locations. A unified system of simple signs, posts, narrow corridors or other symbols should be developed to indicate river and public land access points from the trail. On the riverbank, limits of public access areas should be delineated to protect private property. A unified system of simple post markers or similar discrete elements may be used.
- Private property signs should be installed at points where trespass is likely.
- Identity Signs: To enhance trail recognition, use and security, develop a graphic logo or system of common elements that identify the trail from public road crossings, at trailheads, local accesses and along the length of the trail.
- Traffic Control: Regulatory signage and pavement markings should be required for safety, code and liability concerns. Typical messages include “stop”, “caution horse xing”, “yield”, etc. and pavement markings to improve user safety. Utilize standard graphic symbols where applicable. Safety signs should conform to the MUTCD standards for size, mounting location, message, etc. Signage and traffic control markings for trail/roadway intersections are included as Appendix B of this plan. The signage system may be developed further by RFTA in a separate document that sets signage standards. Further information is available by contacting the RFTA director of trails.

VI. TRAILS PLAN DESCRIPTION

This section of the document describes the proposed alignment, features, design elements and recreational opportunities for the 2010 trail located within the RFTA property. A proposed trail with transit alignment is not included in this description, but is anticipated to be addressed in the future based on the current needs and technologies. The 2010 trail alignment provides a continuous trail connection throughout the railroad corridor per RFTA board policy. The trail alignment is located entirely within the railroad corridor and avoids the rail bed to the extent possible. At pinch points and wetlands, that are either the result of topographic conditions or a narrow corridor width, the trail is placed over the rail bed.

Conservation covenant areas have been identified where sensitive environmental conditions exist on the trail segments. See the Comprehensive Plan, Attachment IV, Conservation Area Assessment, Appendix B, for descriptions and locations of conservation areas.

The RFTA trail is described in eight segments that vary in length from 0.9 miles to 3.2 miles. The ninth and tenth segments are part of the Pitkin County trail easements. These trail segments are also identified on Maps 1 through 6, following. Several segments of the trail are already constructed; the remaining sections will be complete by 2010. The trail descriptions reference distances that are measured in two ways. The mileage marker system extends over the entire length of the trail. The engineering system is based on 100-foot increments where 1+00 is equal to 100 feet. The engineering measurements start at the beginning (north) of the referenced trail segment and continue to the end (south) of the segment.

The 2010 trail begins at the wye at the confluence of the Roaring Fork River and the Colorado River. The Glenwood Springs River trail has been constructed by the City of Glenwood Springs along a section of the RFTA railroad corridor, from the wye to 23rd Street (MP 361.7). The Glenwood Springs River trail also extends north over a bridge that crosses the Colorado River and provides access to Two Rivers Park. This trail extension provides concrete and soft-surfaced connects to the popular Glenwood Canyon Trail that extends east through the Glenwood Canyon. It also provides a connection to the Lower Valley (LoVa) Trail system that will connect Glenwood Springs to Rifle and Parachute along the Colorado River.

The trail descriptions begin where RFTA's trail starts at 23rd Street in Glenwood Springs. The RFTA trail extends thirty-two miles upvalley to the end of the RFTA Rio Grande Trail at Woody Creek. From Woody Creek, the trail continues to Aspen along the Pitkin County Rio Grande Railroad Corridor. This trail segment has been built by and is owned by Pitkin County. The Pitkin County Trail Easement is the trail section from the Pitkin/Eagle County line to Woody Creek. A description of the Pitkin County Trail Easement is also included as it is located within the RFTA corridor.

The Rio Grande trail has unequalled scenic value and recreational opportunities. The trail links most of the communities in the valley, provides a backbone through the Roaring Fork valley that is part of the framework for a regional trail system, and also provides connections to many enjoyable spur trails.



Pitkin County trail segment near Basalt

A. 23rd Street to Buffalo Valley (2.8 miles)

This trail segment extends 2.8 miles from the end of the existing river trail at the intersection of 23rd Street (MP 361.7), State Highway 82 and Grand Avenue in Glenwood Springs, upvalley to Buffalo Valley (MP 364) near the intersection of County Road 115 (Red Canyon) with State Highway 82.

From the start of the alignment at the intersection of 23rd Street in Glenwood Springs, the trail crosses Grand Avenue at a signalized intersection. For the first 1,500-feet of the rail corridor, the actual right-of-way is only 50-feet wide (25-feet either side of the centerline of the tracks). From station 0+00 to 5+00, the trail can be placed on the west side of the rail bed immediately adjacent to the right-of-way boundary. However, from station 5+00 to 15+00, the rail bed is built up in such a fashion as to create a short, steep hillside on the west side of the tracks. Because of this configuration, the trail will be placed directly on the rail bed for this section, which ends at the 27th Street crossing.

At station 15+00 (MP362.03), the corridor widens to 100-feet (50-feet either side of the centerline of the tracks) with a section of 200-feet width (100-feet either side of the centerline of the tracks) between stations 36+00 and 44+00. The relatively flat nature of the corridor in this area allows the trail to move away from the rail bed and follow adjacent to the right-of-way boundary or existing fence lines, past the RE-1 facility, LDS Church and Valley View Subdivision. Along this segment there are several opportunities for neighborhood access points connecting to residential streets.

There is an existing primitive road and an old, unused ditch-bed in this area, along with buried electric utilities, all of which can easily be avoided by meandering the trail along the ample right-of-way width. There is also an open, reinforced drainage ditch from the Wal-Mart shopping center that crosses the rail corridor and goes over to the north edge of the Rosebud Cemetery. The trail will need to cross this ditch as it travels up the west side of the rail corridor. The Rosebud Cemetery at MP362.9 offers a point of interest and relatively easy trail implementation along its length.

The area adjacent to the Rosebud Cemetery and Grand Avenue can be used in the future to place a trailhead (T.H.#1).

At station 57+00 (MP362.82), the right-of-way width expands to 200-feet in width (100-feet either side of the right-of-way), a configuration that remains constant to the end of the trail section. At station 63+00, Grand Avenue encroaches significantly on the rail corridor in an area of steep slopes, requiring the trail to utilize the rail bed for approximately 500-feet to station 68+00. The utilization of the rail bed also allows the trail to avoid an old, potentially historic retaining wall between the rail bed and Grand Avenue. At station 68+00, the trail can then continue along the west and south side of the right-of-way. The rail corridor in this area contains relatively dense scrub oak/mountain shrub vegetation on a sloping hillside.

After about 3,000-feet, the trail again joins the rail bed at station 96+00 to station 102+00 avoiding steep slopes between the rail bed and Grand Avenue. The close adjacency of the river results in scenic river views. The trail then leaves the rail bed and continues along the west and south side of the rail corridor at station 102+00 until the terminus of this trail section at Buffalo Valley at station 110+00. Red Canyon on the east side of State Highway 82 is a popular bike ride accessible at the signalized State Highway 82 intersection.

B. Buffalo Valley to Colorado Mountain College (CMC) Intersection (3.03 miles)

This alignment starts at the intersection of County Roads 154 and 115. From station 0+00 to station 12+00 the right-of-way is 50-feet wide and the rail bed is built up in such a fashion as to create a short, steep hillside on both side of the tracks. Because of this configuration, the trail is located on the rail bed from station 0+00 to station 12+00.

Past the Holy Cross Electric facility, at station 12+00 (MP 364.1) the right-of-way widens to 100-feet. At this point, the trail leaves the rail bed and parallels the edge of the right-of-way along the west side. The railroad corridor drops below State Highway 82 providing a relatively quiet and pastoral setting. The trail runs adjacent to open hay meadows for 1.4 miles. A large portion of this agricultural land is protected by the Jackson conservation easement. At station 17+00 two minor irrigation ditches and a fence line are located within the west side of the right-of-way. These private improvements within the rail corridor continue to Station 72+00. RFTA will need to work with the adjacent ranch owners to relocate the fences and possibly the ditches to provide room for the trail in this segment.

The trail continues along the west side of the corridor, avoiding the Qwest easement, until reaching County Road 156 (station 83+00) where the trail makes a perpendicular crossing of the County Road. Immediately after the County Road 156 crossing at station 83+00, the right-of-way widens to 175-feet continuing to station 90+00, then narrows on the east side of the tracks to 25-feet. The west side remains approximately 100-feet wide from the centerline of the tracks to station 114+00. In this area, the trail will meander through the west side of the corridor, preserving the juniper, pinion and scrub oak vegetation that is prevalent.

At MP365.4 the river meanders back toward the corridor, increasing the cross-slope and requiring substantial grading for trail implementation. Property line location and the presence of the Glenwood Ditch to the north of the rail bed maintain the trail alignment on the south side of the tracks. Boat and fishing access occurs upstream from the Westbank Bridge (MP365.9).

At station 92+00, the gently sloping hillside becomes steeper, and the trail will be placed on top of the rail bed to avoid these steep slopes starting at station 110+00. At station 131+00, the trail leaves the rail bed and follows along the west side of the corridor until its terminus at County Road 114 (CMC Road at MP 367 or station 181+00). In this area, the trail follows along relatively flat terrain as the corridor passes by light-commercial uses near the intersection with the CMC Road.

There are several factors that support the State Highway 82 and County Road 114 intersection as a primary trailhead location (T.H. #2). These factors include the 200 foot railroad corridor width, an existing transit stop, Colorado Mountain College and the signalized highway access.

C. CMC Intersection through Bair Chase Ranch (1.9 miles)

This segment of trail travels almost two miles through the recently approved Bair Chase Ranch PUD. As part of the development agreement, which includes the granting of an access easement across the RFTA railroad corridor, the project has made several contributions to the RFTA trail system. A soft surface 10-foot-wide trail alignment on the railroad corridor through the two mile length of the property will be provided to RFTA. RFTA will install the asphalt trail surface. In addition, Bair Chase Ranch will provide landscape maintenance, irrigation and vegetation management in the railroad corridor.

The trail alignment starts at the intersection of County Road 114 and Highway 82, also known as the CMC intersection. The alignment travels south on the west side of the rail corridor, which is 200-feet wide in this area (100-feet either side of the tracks) from station 0+00 to station 16+00. The trail design is allowed to meander using relatively shallow curvature radii, taking advantage of the width of the corridor in this section. From station 16+00 to station 94+00, the corridor narrows to 100-feet (50-feet either side of the tracks). The trail alignment continues to meander back and forth along the west side of the corridor through the Bair Chase property, also avoiding the fiber optic line and unnecessary railroad bed crossings. This segment provides a quiet, rural setting with scenic views of the riparian river corridor and views to towering Mt. Sopris to the south.

At the access road to the Bair Chase Ranch immediately north of Cattle Creek (station 60+00) a grade-separated trail underpass will be provided by the developer as a part of the access easement agreement. The trail continues south towards Cattle Creek, staying below the grade of the rail bed as it approaches the Cattle Creek trestle (station 65+00). The wooden railroad trestle and irrigation diversion structures at Cattle Creek provide visible interpretation opportunities.

The trail crosses Cattle Creek on a new pedestrian bridge provided by the developer and then continues south between the rail bed and the buried Glenwood Ditch. The trail continues in this fashion until reaching an area of jurisdictional wetlands along the ditch alignment (station 87+00 to station 89+00). The trail merges with the rail bed for approximately 100-feet to avoid the wetlands, then leaves the rail bed to continue following between the rail bed and the buried ditch. At the south end of the Bair Chase property, the trail merges with the buried ditch at station 92+00 to station 102+00 and uses the ditch alignment as a platform to cross moderate to steep slopes between the rail bed and the river.

D. Bair Chase Ranch to Carbondale at Highway 133 Intersection (3.2 miles)

This alignment starts at the south end of the Bair Chase property where the railroad corridor is adjacent and parallel to State Highway 82. The alignment travels south on the west side of the railroad corridor, which varies between 75-feet and 200-feet in width. The trail design primarily follows parallel to the tracks to take advantage of the topography and keep the slope of the trail to a minimum. At MP368.8 there is a steep pinch point between the highway and a river oxbow. This section of the trail has several unique and interesting features including scenic river views, bald eagle roost sites, a Division of Wildlife (DOW) fisherman's access, and extensive river easements on both banks of the channel. The adjacent ranch is protected by the Larsh conservation easement. To serve this trail segment a trailhead (T.H. #3) is proposed in a wide railroad corridor section with existing private road access, just upvalley from the undeveloped CDOW fishermen's parking area (MP369.5).

Near the south property boundary of the Aspen Glen (station 92+00), the trail alignment merges with the rail bed as the corridor becomes flanked with two irrigation ditches and the side slopes become steep. At station 119+00, an opportunity exists for the trail to leave the rail bed and follow adjacent to the river for approximately 600-feet. The trail then joins the rail bed at station 125+00 for the next 4,075 feet to avoid wetlands and steep slopes.

The segment beyond Aspen Glen continues past the confluence of the Crystal River with the Roaring Fork River. The trail passes the closed Satank Bridge over the Roaring Fork River that offers a potential historic interpretation element. Several river access easements exist in this area including the north side of the river from the Satank Bridge to the railroad bridge, from the SH133 bridge downstream 1/8 mile, (and across the river from the Satank Bridge downstream to the confluence) and up the Crystal to the Colorado Rocky Mountain School Bridge.

The trail crosses the Roaring Fork River on the existing railroad bridge. At station 166+00 near the Carbondale Community School, the trail leaves the rail bed and follows to the south of the tracks until the intersection with Highway 133 and Highway 82 in Carbondale.

E. Carbondale to Catherine Store Bridge at Main Street and County Road 100 (3.0 miles)

After crossing the Roaring Fork River the trail enters Carbondale in a 200-foot-wide railroad corridor section. Trail alignment on the south edge of the corridor provides views of the valley from above the rail bed cut and connects to a trailhead (T.H. #4) at the proposed State Highway 133 transit station location. A transit overpass of State Highway 133 is proposed that will accommodate the trail crossing of this busy roadway. The State Highway crossing will also provide connections to the proposed local trail system including Red Hill, enhancing the site's potential function as a high visitation information center.

After crossing State Highway 133 the trail enters downtown Carbondale through an area of mixed residential, commercial and industrial development. Historically the rail corridor was treated as a back alley with homes and businesses sited to face away from this noise generator. Trail implementation in this corridor that bisects the Town has outstanding potential to provide a vibrant, off-street pedestrian axis to complement the Central Business District. This section of trail also provides direct foot or bike access to the proposed downtown Carbondale transit station. The trail alignment is on the south side of the rail bed to avoid the fiber optic line and connect directly to the transit station.

At the eastern edge of Carbondale at White Hill, the character of the corridor quickly shifts from an enclosed passageway to an open, elevated position hugging the south toe of the valley. The next 2.8 miles of trail to Catherine Store Bridge offers superior views of the valley floor, with its ranches and extensive riparian forest, along with views to Basalt Mountain, upvalley to the east.

This alignment starts at the intersection of County Road 100 and Snowmass Drive on the east side of Carbondale. It is recommended that traffic calming measures, for example stop signs and pedestrian crossing road markings, are implemented to improve safety at this intersection. The alignment places the trail directly on the rail bed for approximately 2,635-feet, avoiding an area of steep slopes and an area of jurisdictional wetlands. At Hobo Gulch, the trail departs from the rail bed and follows an existing haul road located adjacent to and south of the railroad tracks for approximately 2,915-feet to the intersection with the Mid-Continent access road. The impressive Mid-Continent Resources coal load-out facility at MP 374.6 provides a potential interpretation site related to resource extraction.

The trail alignment continues to follow south of the railroad tracks for approximately 550-feet until joining with a siding track formally used to access the coal load-out facility. The trail is then placed directly on the rail bed for the siding track for approximately 4,800-feet. The siding track rejoins the mainline, and the trail continues on the rail bed of the main line until its terminus at the Catherine Store Bridge. In total the trail is placed on the mainline railroad bed for approximately 4,250-feet to avoid an area of jurisdictional wetlands and an area of steep hillside.

A trailhead (TH #5) is proposed immediately west of Catherine Bridge in a 200 foot-wide railroad corridor section (MP375.9) providing good access for this scenic section of trail and river easement at the bridge

F. Catherine Store Bridge to Rock Bottom Ranch at the Garfield/Eagle County Line (2.45 miles)

The two and three quarters miles of trail above Catherine Store Bridge provide the most extensive and scenic backcountry experience of the property. The river and the railroad corridor are in close proximity through this roadless area that includes valuable undisturbed wildlife habitat. There are dramatic river views from the trail, as well as opportunities for river and public land access.

Through this sensitive habitat final corridor design should identify secondary trails for BLM and river access and revegetate excess social trails to discourage use and protect habitat.

At MP376.6 a hiking trail connects to BLM land providing access to the popular Crown area trail system. Additional public land access points occur between here and MP378.2 due to the adjacency of BLM land to the south of the corridor. The upper transit crossing option occurs at MP377.1 permitting unrestricted trail use of the corridor upvalley to Emma. It is important for trail location and construction to avoid unnecessary resource impacts. Resources include spectacular riparian habitat, and opportunities for wildlife viewing, winter sport, photographic and interpretive sites. The winding alignment of the corridor enhances the trail experience, providing changing viewsheds and inviting exploration at each turn.

The alignment starts at the Catherine Store Bridge on County Road #100. From station 0+00 to station 79+00 the trail will generally follow the rail bed, allowing the trail to meander towards and away from the river to provide variability. The trail will leave the mainline of the railroad at station 79+00 and follow the rail bed of an old siding located to the south of the tracks. After following the siding, the trail will once again join the rail bed at station 85+00. The trail should be designed to meander where possible to provide variety to the trail user. At station 126+00, the trail leaves the rail bed for approximately 1,000-feet, following along the north side of the corridor. The trail then comes back to the rail bed at station 135+00 following it until the terminus of this trail segment (station 147+00) at Rock Bottom Ranch.

Rock Bottom Ranch is a nature preserve owned by the Aspen Center for Environmental Studies. Rock Bottom Ranch provides a refuge for wildlife, especially herons and bald eagles. It is also a demonstration center for sustainable agricultural practices. RFTA and Rock Bottom Ranch are coordinating to develop guidelines for trail access in this segment of the RFTA trail. The goal is to protect the sensitive natural environment while allowing people to use this trail segment that traverses a beautiful area. Other potential protection tools include wood fencing, signs, and controlled access from the trail alignment.

G. Rock Bottom Ranch to Hooks Spur Lane (2.07 miles)

This alignment starts at the end of Hooks Spur Lane at the entrance to the Rock Bottom Ranch (station 0+00) where the trail leaves Garfield County and enters Eagle County (MP378.35). Views from the trail begin to open up as the river, valley wall, and railroad corridor diverge. There is a large Great Blue Heron rookery in this area providing interesting wildlife viewing. From this point eastward the railroad corridor parallels Hooks Spur Lane offering scenic views of the ranching land uses of the valley floor.

The alignment travels east directly on the rail bed for approximately 850-feet, avoiding an area of jurisdictional wetlands. The trail then leaves the rail bed at station 8+50 and follows an old primitive road within the south side of the rail corridor for approximately 800-feet, and returning onto the rail bed at station 16+50. The trail continues on the rail bed until station 26+00, where it diverts off of the rail bed and follows along a dry field on the south side of the rail corridor for approximately 450-feet. At station 31+00, the trail resumes an alignment on the rail bed for approximately 4,250-feet. The Eagle County recreation complex and social services facility occurs on the other side of the river near MP379.6. It is not visible from the trail alignment. A trail connection from the RFTA Trail to the EI Jebel community could be located through the intermediate private land parcel at the time that development of the parcel is planned.

At station 73+00, the trail leaves the rail bed again and travels along the south side of the rail corridor for approximately 1,800-feet. An irrigation ditch in the rail corridor will need to be crossed and a fence in the corridor will have to be relocated to facilitate this alignment. This section of trail ends at the intersection of Hooks Spur Road with Hooks Lane (station 93+00). Trailhead #6 is located here. The nearby Hooks Bridge offers access across the river at MP380.6 providing a connection from the trail to a primitive boat launch area, a river access easement, and a local trail system that connects to the Willits/EI Jebel population center on the north side of the river.

H. Hooks Spur Lane to Sopris Creek at the Eagle/Pitkin County Line (0.9 miles)

This trail reach is an important student commuter route due to its linkage of mid-valley population centers with Basalt High School. From Hooks Spur Lane to Emma, the railroad corridor extends through small, scenic residential and ranch parcels, passing farm ponds and irrigation ditches. It is isolated from public roads until it crosses Sopris Creek on the improved railroad bridge and converges with Emma Road at the State Highway 82 intersection (MP382.05). Traffic calming and striping of the pedestrian crossing is recommended for this intersection.. In this area, a highway underpass at Sopris Creek links the trail to an existing Town of Basalt trail to the north and parallel to State Highway 82. The Town of Basalt trail connects to extensive river access easements. It also passes historic buildings that may provide an opportunity for historic interpretation. The Sopris Creek crossing is also the

approximate location of the county line at MP 381.7 where the railroad corridor enters Pitkin County.

I. Pitkin County Trail Easement - Sopris Creek to Old Snowmass (5.5 miles)

Upvalley the trail proceeds through open agricultural ranches of the mid-valley with protective livestock fencing. East of Emma at MP382.1 the transit line leaves the railroad corridor and the soft surface trail runs on the south side of the rail bed. Two minor pinch points occur due to slope and irrigation ditch conflicts between MP382.4 and 382.8 where the trail utilizes the rail bed for short lengths to avoid excess grading and drainage improvements.

Adjacent public land (owned by BLM) south of the railroad corridor affords access to the Light Hill trails network at MP382.7. There is a potential access behind the Basalt High School at MP383.5. The High School is identified as a trailhead location (#7) since there is road access, parking, existing facilities and opportunities for trail connections to the community of Basalt.

Continuing upvalley the trail proceeds through pasture land until entering the Roaring Fork Club, a golf course and residential development at MP384.4. *Special trail design considerations may be required for the section through the golf course for trail user safety and the prevention of unauthorized property access. Very attractive native plantings have been installed by the Club along this section of trail that is also maintained by the Club.*

The railroad bridge at Wingo is retrofitted for the trail river crossing. Bridge modifications include trail decking and handrails among other improvements. A river access easement exists at the railroad bridge. A long trail bridge spans State Highway 82 at Wingo Junction (MP385).

Upvalley from Wingo the trail alignment is located on the north side of the rail bed to avoid conflict with nearby homes or with steep slopes down to the river. The trail alignment follows the top of the cut for the rail bench to MP385.7.

Trail design on the north side of the track provides an expedient connection to the existing Basalt-Old Snowmass Trail at MP385.7. This paved trail alignment runs predominantly within the railroad corridor, crossing the rail bed five times between MP385.7 and its terminus at a trailhead (#8) with a parking area at Old Snowmass (MP386.8).

This segment of trail offers stunning views up and down the valley. Numerous public land and river access opportunities are available. River access occurs in two locations: on the opposite side of the river from Lazy Glen and downstream for one mile from the Old Snowmass Bridge. The existing trail link to Basalt crosses through BLM land at three points providing public land foot and hoof access to the north.

J. Pitkin County Trail Easement - Old Snowmass to Woody Creek (6.87 miles)

The bridge at Old Snowmass marks the west end of River Road that shares the railroad corridor with the trail and transit alignments on the north side of the steep canyon. At this location the almost vertical valley wall slopes down to the river to squeeze the road and rail bed onto narrow corridor platforms through a narrow corridor pinch point. Part of this section includes existing retaining walls below River Road adjacent to the river.

At the mouth of Wheatly Gulch (MP387.1) the canyon widens facilitating integration of transit with trail. A foot and hoof trailhead has been established at this point on the Dart property, near a historic pioneer cemetery. From here to MP389.1 the trail continues on the north side of the track to avoid conflict with River Road and to take advantage of superior views and the character of this edge of the property. Just upvalley the trail passes the Bates siding and historic brick schoolhouse at MP387.5. Scenic views of the valley, red cliffs, pastoral ranches, and occasional sightings of elk and deer grazing on adjacent south facing pastures enhance the trail experience.

Along the next few miles there are many fisherman's easements. The first of these occurs at MP388.6. A river recreation easement exists at MP389.1 where River Road crosses over to the north side of the track. The plan proposes a trail crossing to the river (south) edge of the property. The trail bridges Arbaney Gulch just upvalley from this point. Additional fishing easements occur near MP389.4 and 389.6. Near here the valley begins to narrow with the river meandering closer to the railroad corridor, resulting in steep side slopes and trail implementation constraints including several pinch points (MP389.65. to 390). The trail is placed on the rail bed through these sections and the Phillips Curves reach of the river. This zone is a quiet, relatively intimate stretch of railroad corridor far above the river with scenic views. An irrigation ditch is benched into the steep slope below the rail bed. A recreation easement exists between the pinch points within the watercourse of the river.

Immediately upstream, the slopes to the riverbank soften, providing easy river access and BLM land access at MP390.1 (through private property). Upvalley from the Phillips property, the transit alignment leaves the railroad corridor at MP390.55 and the trail alignment utilizes the rail bed up to Woody Creek. Numerous long and steeply benched sections of the property require use of the rail bed to bypass pinch points. From Lower Gerbazdale upvalley to Woody Creek, the RFTA corridor becomes a rail-to-trail property. The rail bed is benched into a steep section of valley wall to MP391.85. Trail features in the area include existing access to BLM & USFS lands at the base of Triangle Peak (MP391.2), the Lower Woody Creek Bridge river easement on the north bank from MP390.7 to MP391.4, and fisherman's access on the Koch property near MP391.1.

From MP391.0 to MP391.2 the trail alignment is proposed on the riverside of the rail bed to reduce impacts for the nearby River Road. Interesting irrigation flume structures occur adjacent to the scenic and steeply benched rail bed between

MP391.2 and 391.6. At MP391.6 the trail crosses Gerbaz Way that provides a road connection across the river to State Highway 82 via the Lower Woody Creek Bridge. A trail on the side of Gerbaz Way crosses Highway 82 via an underpass and affords access to the Aspen Village residential area and public lands (BLM and State) on the west side of the Valley.

For the next 1.5 miles the trail transects the quiet of the lower floodplain terrace, removed from both River Road and the river, passing through intermittent stands of dense trees. The corridor is relatively enclosed and intimate as it runs adjacent to residential “ranchettes” of the lower Woody Creek area. A short length of fishing easement occurs near MP392.45 via private land access to the river. At MP393.0 the trail encounters a multiple rail siding at the county's Pitkin Iron property. Development of this site includes open space adjacent to the railroad corridor with public parking and a trailhead (#9). A footpath and pedestrian crossing of the river are proposed to connect to the affordable housing and State Highway 82 on the opposite side of the river. The Pitkin Iron site has historical value related to early settlement and mining that may be significant for interpretation.

Just past the Pitkin Iron site, River Road crosses the railroad corridor for the final time and the trail assumes an elevated position relative to the road, benched into an alluvial terrace. From this vantage point the trail offers scenic views of the Woody Creek basin, Shale Bluffs, Buttermilk and Aspen ski areas. The trail continues to the upper terminus of the RFTA property at Woody Creek Road (MP393.67).

The RFTA trail connects with the existing Rio Grande Trail at Woody Creek that provides a continuous route upvalley to Aspen with numerous recreational adventures in between. The trail first enters Aspen at Puppy Smith Road near the Aspen Post Office and the Aspen Center for Environmental Studies.

VII. PHASING RECOMMENDATIONS

The implementation of the 2010 trail requires a multi-year funding and phasing plan that identifies both valley-wide and localized priorities. The following strategy is recommended to initially establish the continuous trail corridor, followed by subsequent improvements and amenities to further expand trail use and enrich the user experience.

- Implement the 2010 trail alignment to allow public use of the corridor. Trail surfacing may be phased, initially as a multi-use, stabilized soft-surface trail to limit initial costs. The full-width trail platform should be constructed to facilitate maintenance and emergency access, and future surfacing improvements. Bridges should be considered high priority items, absent a nearby, accessible crossing. Hard surfacing and retaining wall improvements can be prioritized into discrete phases and occur as funding is available. If applicable, the equestrian trail may be implemented concurrent with the 2010 trail clearing, grubbing and grading to economize on the equipment mobilized for the main trail establishment. Initial trail development shall include basic signage, and simple improvements (e.g. fencing, trash receptacles) to inform and direct the user, and protect both the resource and private property.

- Establish trailheads to encourage non-resident recreational use. Provide limited parking, rest areas, restrooms and information for resident and visitor trail users.
- Install interpretive system sites and/or signage to educate and enrich the trail experience.
- Provide site amenities such as furniture, shelters, landscaping, special signage, etc. to enhance recreational appeal, user comfort and range of opportunities.



Newly Constructed Asphalt Surface Trail Segment near Emma

VIII. MANAGEMENT, MAINTENANCE AND OPERATIONS

For successful operation and continuity of the RFTA trail an integrated, comprehensive maintenance and management program is essential. The trail plan should adopt minimum maintenance standards to ensure trail quality and safety. A comprehensive program will help ensure that required maintenance is performed and will minimize conflict between user groups. Trail operations and management responsibilities may be unified under a single entity or delegated to local jurisdictions. For the RFTA, trail multi-jurisdictional management is recommended. The development of the program should include representation of all involved parties inclusive of RFTA - the counties, towns and agencies having jurisdiction along the corridor and adjacent public lands.

Similar to other open space and park facilities, trail management maintenance operations utilize both full-time employees and seasonal staff. Staff levels depend on desired level of presence of enforcement and patrol, information/educational programs and in-house versus contracted maintenance services. Volunteer and “adopt-a trail” programs are encouraged to reduce Operations and Management costs and improve the sense of local ownership. The following basic scope of responsibilities lists many of the services generally required for trail maintenance and management/operations.

The trail rules and regulations are available on the RFTA web site at RFTA.com.



Carbondale to Catherine Store Trail Segment Under Construction

A. Maintenance

- Trash collection, litter control
- Tree, shrub and groundcover maintenance (pruning, mowing, selective thinning, etc.). Infrastructure inspection, maintenance and repair (bridges, fencing, culverts, lighting, etc.). Repair of site amenities (benches, signs, tables), seasonal openings and closures
- Cleaning and maintaining of water and sanitary facilities
- Safety system: signs, pavement markings
- Trail surface inspection, maintenance and repair (sweeping, snow removal, sanding, etc.)
- Noxious weed control (weed species will travel along corridor)
- Cosmetic repairs (graffiti removal, repainting)
- Riverbank clean-up programs
- Erosion control

B. Management /Operations:

- Emergency assistance including medical and rescue
- Security patrol/enforcement of trail use regulations (vandalism prevention, other crime, etc.)
- Educate and manage potential user conflicts (bike/jog, blade/hike, individual/commercial, etc.)
- Prevent unauthorized motorized vehicle use
- Address and resolve liability issues
- Ecological Management: native plant restoration, beaver management
- Trail Host/Guide Programs

C. Management Principles and Actions

In addition to specific tasks required for maintenance and operation of the trail system, a comprehensive management plan includes activities outside of the trail corridor. The following principles, actions and design elements can help secure funding for trail construction and operations, and facilitate the unified management of the system.

- On-going collaboration with local and county governments, agencies, interest groups and RFTA should be initiated to coordinate trail funding, implementation and management efforts and avoid duplication of services. Working together the counties and communities in the Valley can promote good design, continuity of resource quality and economies of scale. A united front among the communities will help promote the project enhancing funding probabilities.
 - The RFTA trail is both a local and regional endeavor with local segments forming the most heavily-utilized, vital links in the regional system. An effective operating relationship among the participants is essential for funding and implementation of trail improvements within a reasonable time frame.
 - Publicize the benefits and opportunities of the trail to improve visibility, local involvement and pride. Locally funded, strategic pilot projects can help generate public interest and demonstrate dedication to the completion of the comprehensive project.
 - Vital involvement of key stakeholders is critical for project coordination and eventual development.
 - On-going review of adjacent proposed development activities to ensure compatibility with RFTA conservation, access and recreational goals for the property.
 - Organize a management entity with overall responsibility for trail funding, implementation and perpetual management:
 - Extend and maintain the intergovernmental agreement authorizing RFTA as the basis for cooperative implementation and management of regional trail system and open space. Maintain a multi-jurisdictional trails steering committee to provide trails development and management cooperation,
- OR
- Form a non-profit corporation with tax exempt status and a Board of Directors but no jurisdictional authority. All projects based on cooperative partnerships with public and private entities. Must include all participating communities with consensus on organizational structure, programming and representation. This corporation can apply for, accept and hold grant funding.

D. Management Elements

- Animal control and leash regulations should be posted and the public should be well-informed.
- Education and potential fines can be effective deterrents, reducing management cost of animal control enforcement.
- Improve the utility and aesthetics of the corridor by elimination of illegal activities such as dumping. Again, education and potential serious fines may be effective management tools.
- Develop a weed control program that improves habitat through restoration of native plant species in disturbed areas of the corridor.
- Area lighting and emergency phones at trailheads help decrease vandalism and improve emergency response.

IX. FUNDING

The RFTA trail will be implemented through the efforts of public and private groups working in cooperation. Funding to support trail improvements, management and maintenance will come through creative use of public and private sources of assistance. The trail will be implemented through funding sources of grants, special appropriations programs, Open Space programs, county general funds, recreation districts, private fundraising, gifts and donations. The design of the program for trail funding should attempt to:

- Organize and energize trail supporters with the goal of securing local sponsorship
- Organize local fund raising activities (volunteer activities and fund raising), and solicit funding from corporations, foundations, local non-profit agencies, civic groups and other private sources
- Work with local businesses to support the interpretive program, particularly those themes that examine the importance of human activities in the landscape
- Pursue non-local funding sources
- Build productive relationships with federal, state and local agencies and stakeholders
- Request federal and state agencies grants and technical assistance.

The following funding sources should be explored as system management responsibilities and identifies the most likely sources of assistance.

A. Trail Construction

- Local community and county funds
- Colorado State Parks Funds
- State Trails Program Grants
- GOCO (Great Outdoors Colorado) Grants
- Private Sector: Corporate, Individual, Non-Profit
- CDOT ISTEA-21 Enhancements funding
- Colorado Historic Society

- Colorado Department of Local Affairs Energy Impact Grants
- Salvage of railroad infrastructure
- Volunteer Organizations including Volunteers for Outdoor Colorado (VOC)
- Local school & college programs
- USDA Natural Resources Conservation Service - Resource
- Conservation and Development Program

B. Operations & Maintenance Costs

- Local community and county funds (local management within city limits)
- Easement and right-of-way license fees
- Concession contracts and special use permits
- Volunteer programs
- Trail User Fees
- Transit user Fees



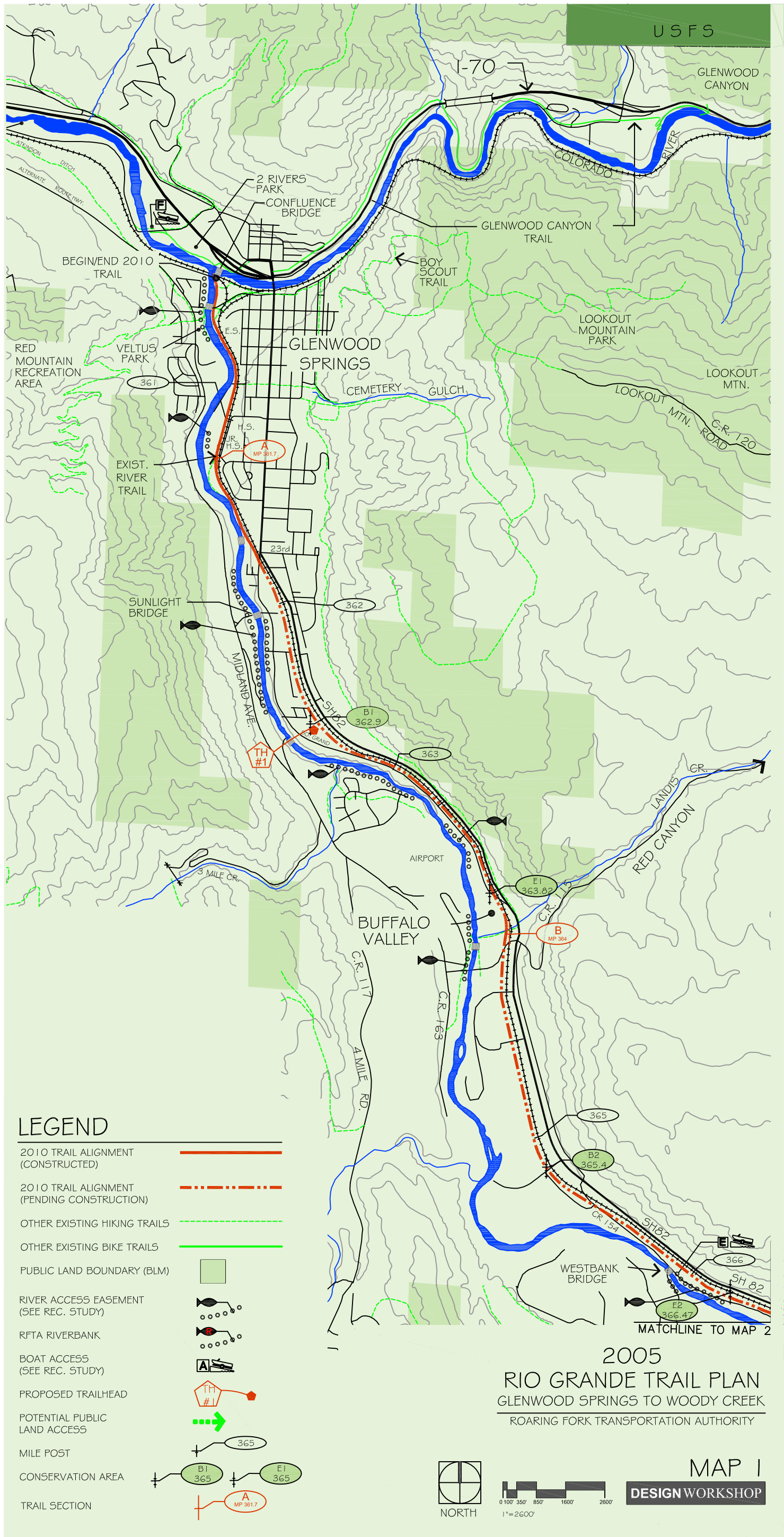
Volunteers Break Ground on a New Trail Segment near Emma

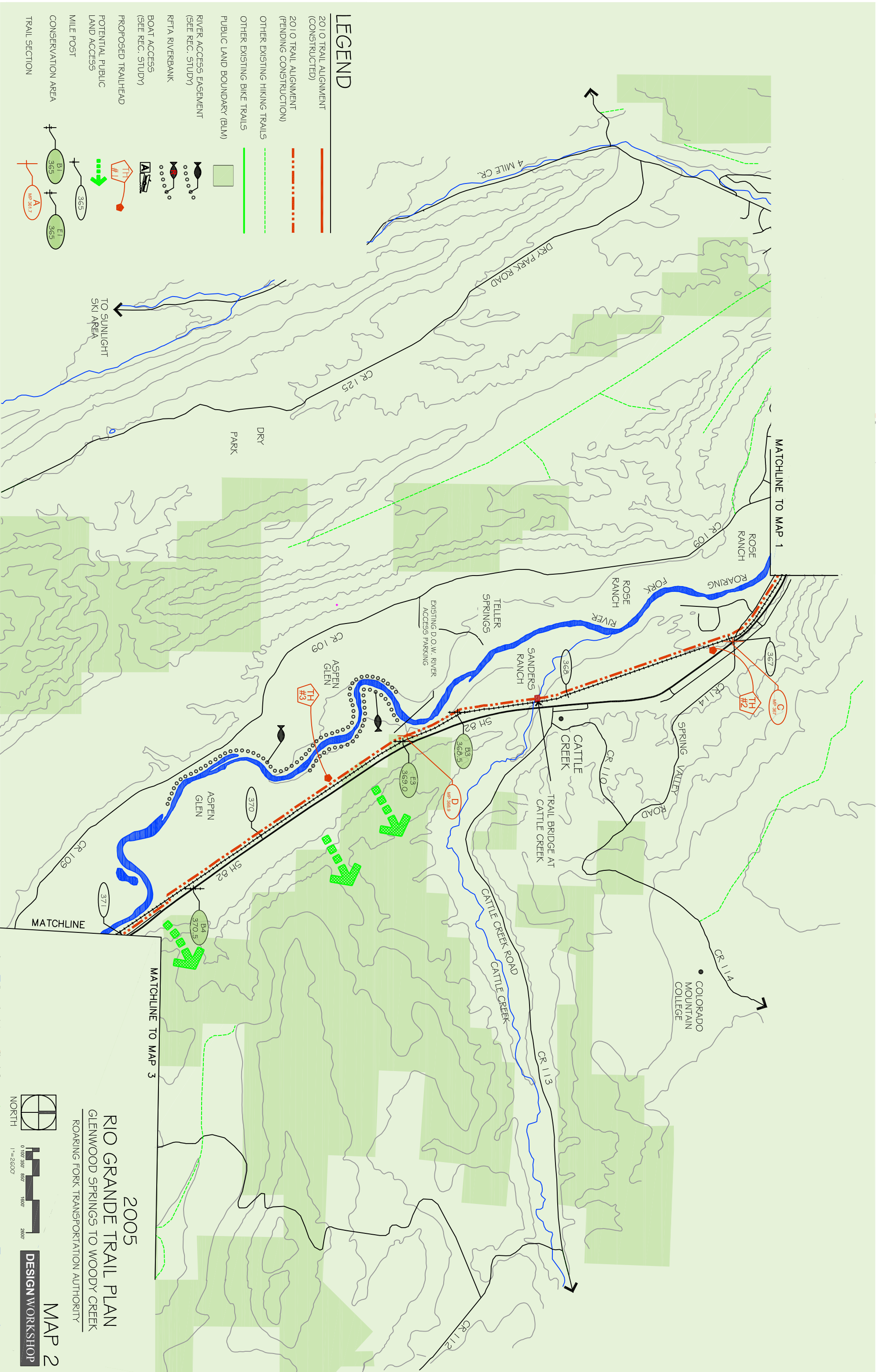
MAPS

APPENDIX A

APPENDIX B

Maps





LEGEND

- 2010 TRAIL ALIGNMENT (CONSTRUCTED) —
- 2010 TRAIL ALIGNMENT (PENDING CONSTRUCTION) - - -
- OTHER EXISTING HIKING TRAILS - - -
- OTHER EXISTING BIKE TRAILS —
- PUBLIC LAND BOUNDARY (BLM)
- RIVER ACCESS EASEMENT (SEE REC. STUDY) —
- RFTA RIVERBANK •••••
- BOAT ACCESS (SEE REC. STUDY) ◀
- PROPOSED TRAILHEAD (SEE REC. STUDY) #1
- POTENTIAL PUBLIC LAND ACCESS ▶
- MILE POST 365
- CONSERVATION AREA
- TRAIL SECTION B1 E1 A

TO SUNLIGHT
SKI AREA

MATCHLINE TO MAP 1

MATCHLINE TO MAP 3

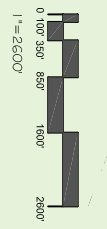
2005

RIO GRANDE TRAIL PLAN GLENWOOD SPRINGS TO WOODY CREEK

ROARING FORK TRANSPORTATION AUTHORITY

MAP 2

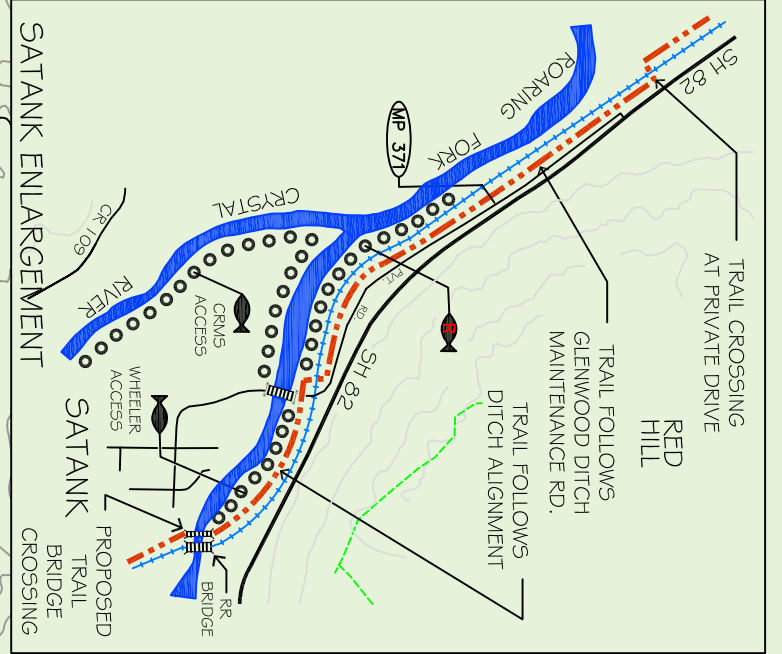
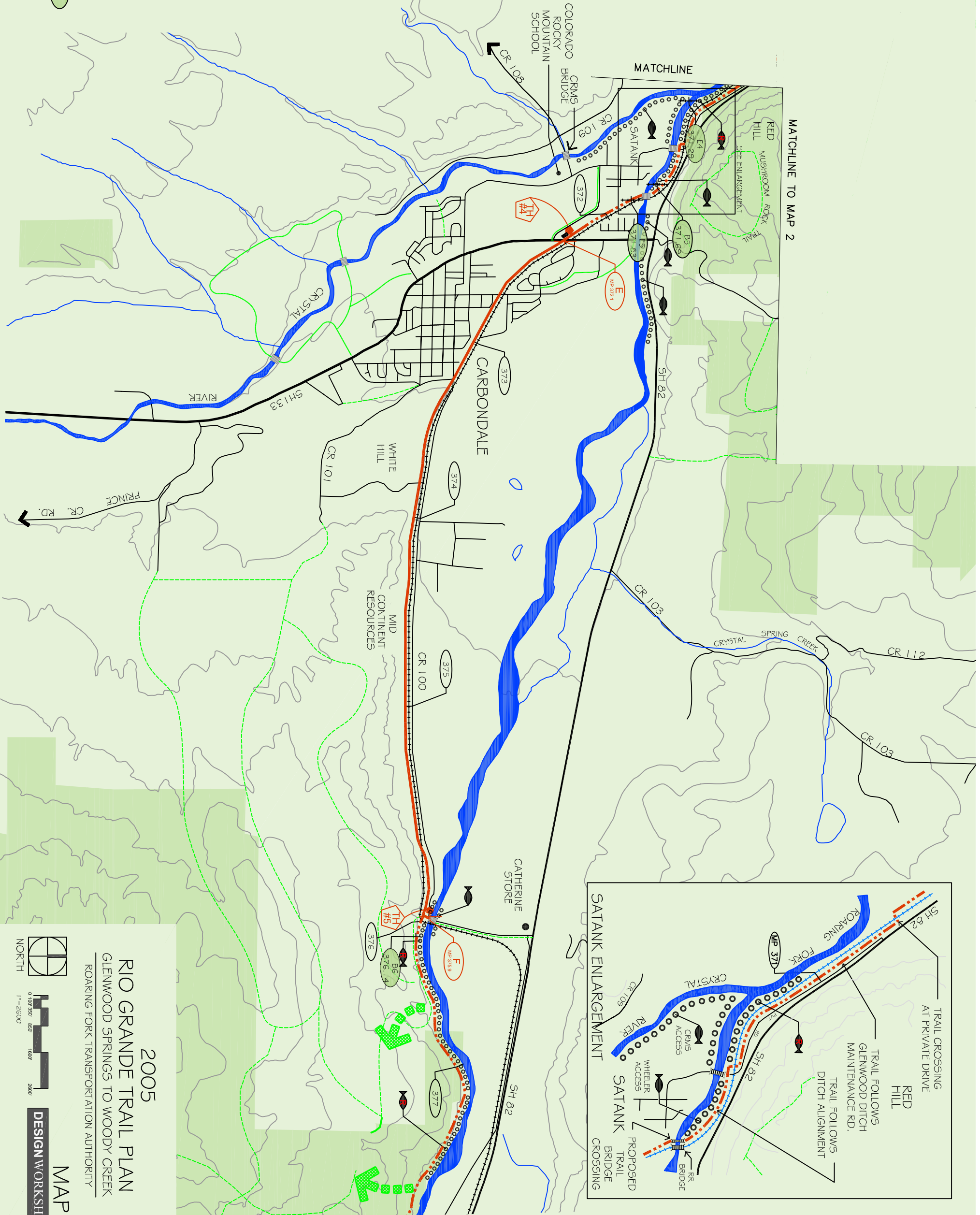
DESIGNWORKSHOP



NORTH

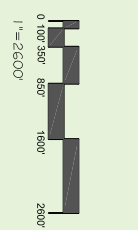
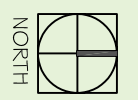
1"=2,500'

- ### LEGEND
- 2010 TRAIL ALIGNMENT (CONSTRUCTED)
 - 2010 TRAIL ALIGNMENT (PENDING CONSTRUCTION)
 - OTHER EXISTING HIKING TRAILS
 - OTHER EXISTING BIKE TRAILS
 - PUBLIC LAND BOUNDARY (BLM)
 - RIVER ACCESS EASEMENT (SEE REC. STUDY)
 - RAFT RIVERBANK
 - BOAT ACCESS (SEE REC. STUDY)
 - PROPOSED TRAILHEAD
 - POTENTIAL PUBLIC LAND ACCESS
 - MILE POST
 - CONSERVATION AREA
 - TRAIL SECTION



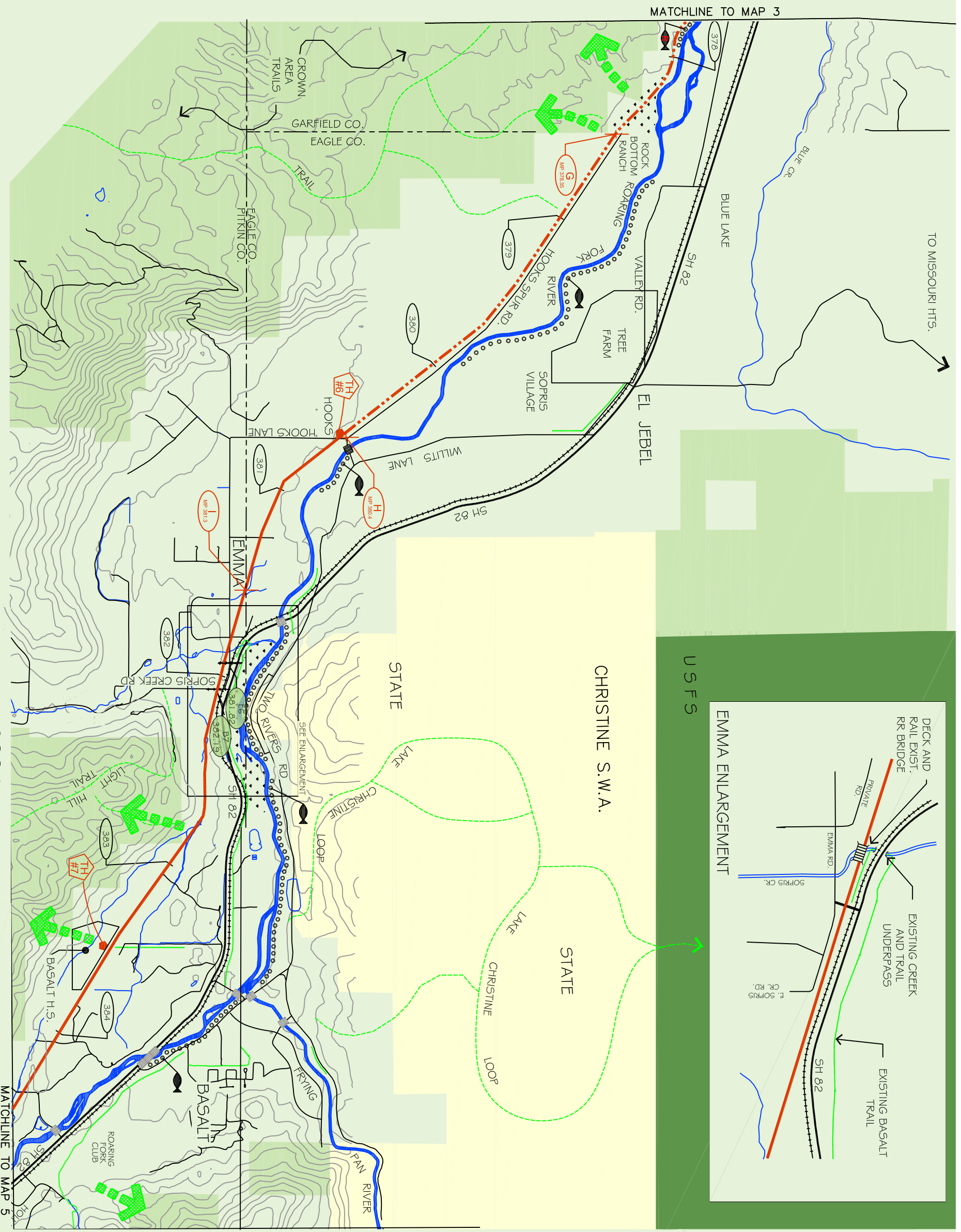
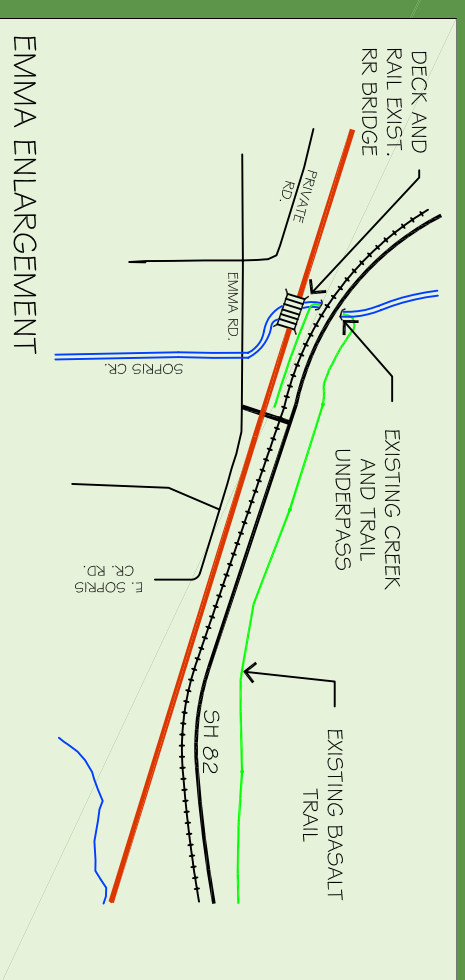
2005
RIO GRANDE TRAIL PLAN
 GLENWOOD SPRINGS TO WOODY CREEK
 ROARING FORK TRANSPORTATION AUTHORITY

MAP 3
 DESIGN WORKSHOP



MATCHLINE TO MAP 2 (top left)

MATCHLINE TO MAP 4 (bottom center)



- ### LEGEND
- 2010 TRAIL ALIGNMENT (CONSTRUCTED) ———
 - 2010 TRAIL ALIGNMENT (PENDING CONSTRUCTION) - - - - -
 - OTHER EXISTING HIKING TRAILS - - - - -
 - OTHER EXISTING BIKE TRAILS - - - - -
 - PUBLIC LAND BOUNDARY (BLM) ———
 - RIVER ACCESS EASEMENT (SEE REC. STUDY)
 - RTFA RIVERBANK
 - BOAT ACCESS (SEE REC. STUDY)
 - POTENTIAL PUBLIC LAND ACCESS
 - MILE POST
 - CONSERVATION AREA
 - TRAIL SECTION

2005

RIO GRANDE TRAIL PLAN

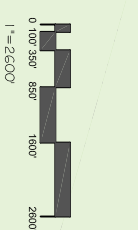
GLENWOOD SPRINGS TO WOODY CREEK

ROARING FORK TRANSPORTATION AUTHORITY

MAP 4

DESIGN WORKSHOP

MATCHLINE TO MAP 5



MATCHLINE TO MAP 3

TO MISSOURI HTS.

CHRISTINE S.W.A.

USFS

STATE

STATE

GARFIELD CO.
EAGLE CO.

EAGLE CO.
PITKIN CO.

BASALT H.S.

ROARING FORK CLUB

CROWN AREA TRAILS

TRAIL

HOOKS5

EMMA

EMMA

EMMA

EMMA

EMMA

EMMA

EMMA

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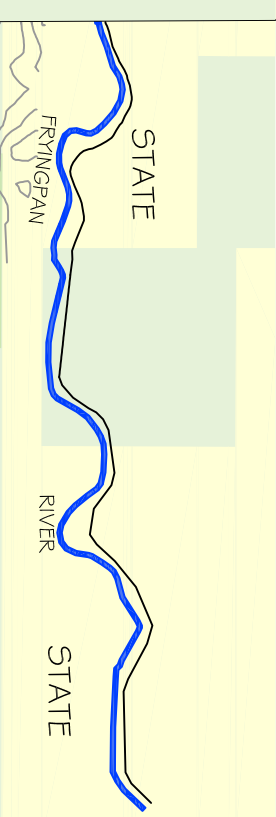
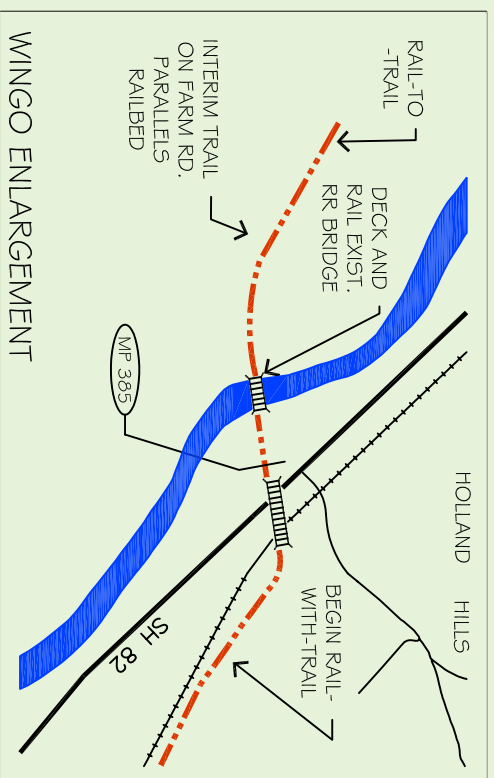
EMMA

EMMA

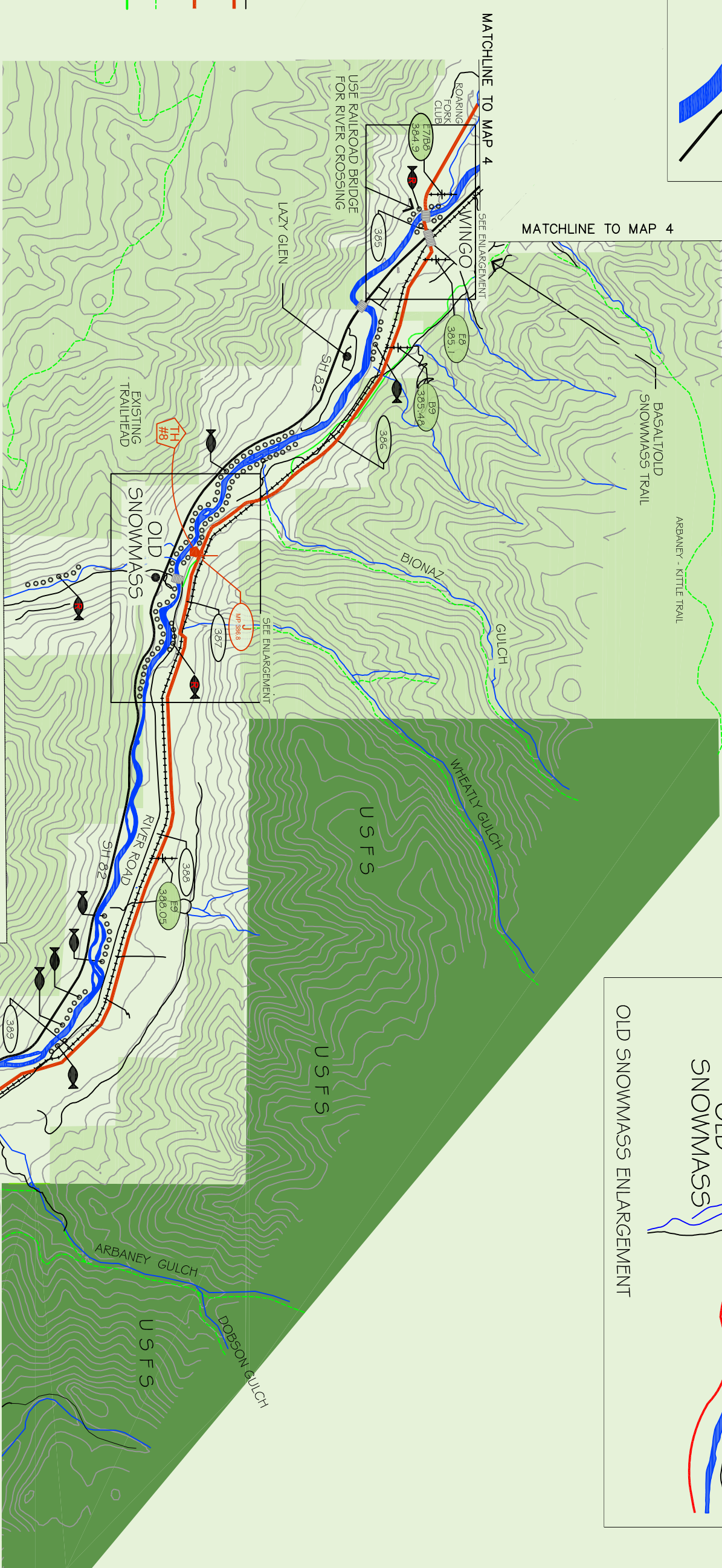
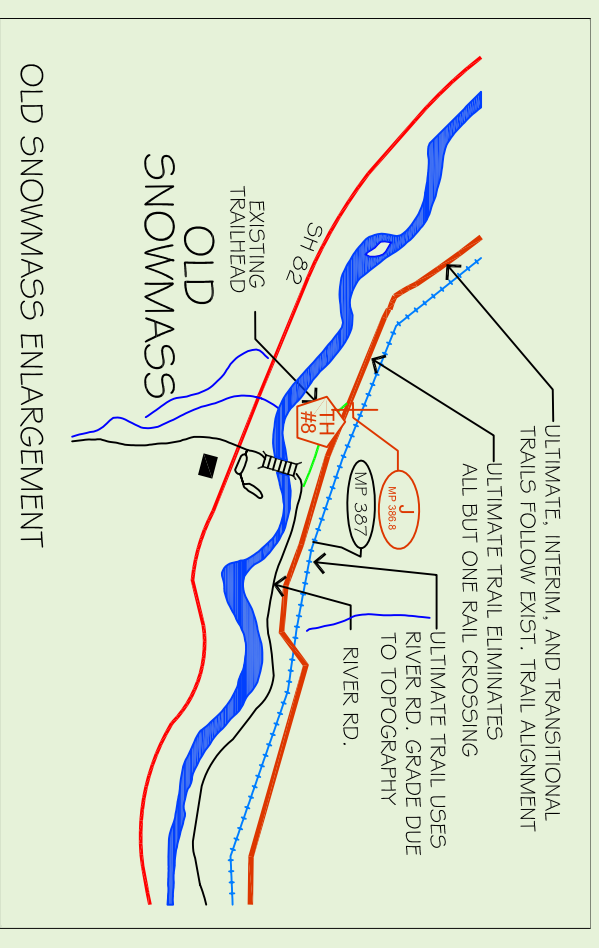
EMMA

EMMA

EMMA



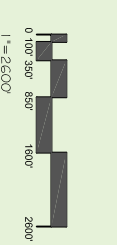
EAGLE CO.
PITKIN CO.

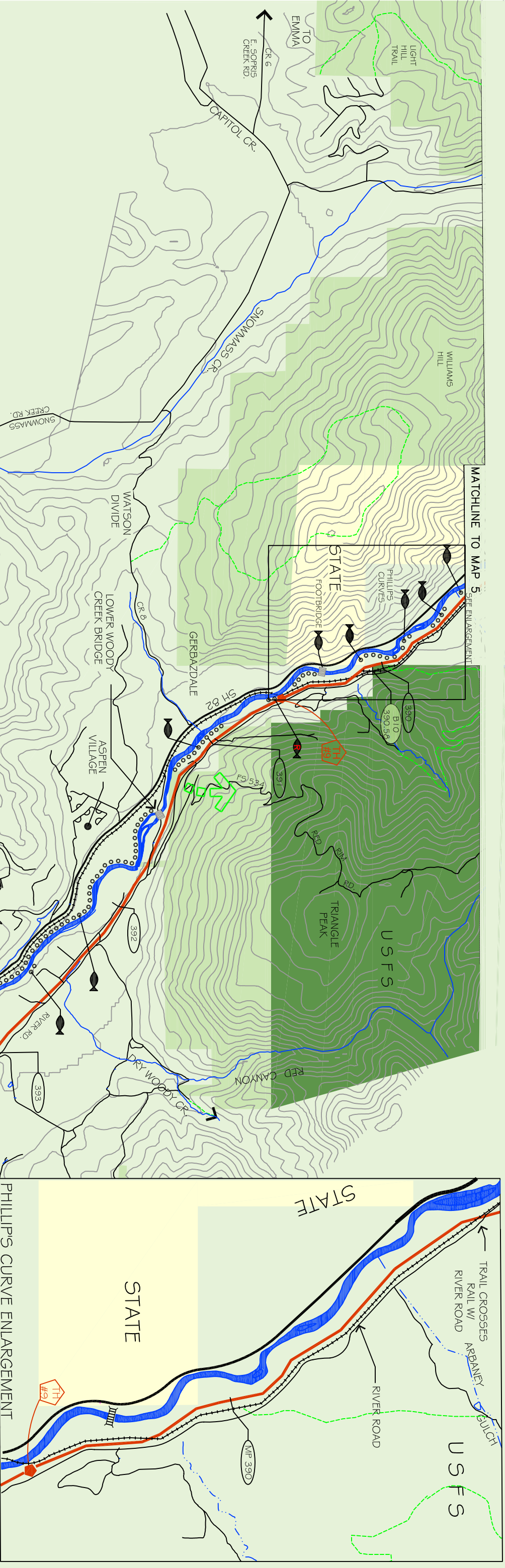


LEGEND

- 2010 TRAIL ALIGNMENT (CONSTRUCTED)
- 2010 TRAIL ALIGNMENT (PENDING CONSTRUCTION)
- OTHER EXISTING HIKING TRAILS
- OTHER EXISTING BIKE TRAILS
- PUBLIC LAND BOUNDARY (BLM)
- RIVER ACCESS EASEMENT (SEE REC. STUDY)
- RTTA RIVERBANK
- BOAT ACCESS (SEE REC. STUDY)
- PROPOSED TRAILHEAD
- POTENTIAL PUBLIC LAND ACCESS
- MILE POST
- CONSERVATION AREA
- TRAIL SECTION

2005
RIO GRANDE TRAIL PLAN
 GLENWOOD SPRINGS TO WOODY CREEK
 ROARING FORK TRANSPORTATION AUTHORITY
MAP 5
DESIGNWORKSHOP





LEGEND

- 2010 TRAIL ALIGNMENT (CONSTRUCTED)
- 2010 TRAIL ALIGNMENT (PENDING CONSTRUCTION)
- OTHER EXISTING HIKING TRAILS
- OTHER EXISTING BIKE TRAILS
- PUBLIC LAND BOUNDARY (BLM)
- RIVER ACCESS EASEMENT (SEE REC. STUDY)
- RFTA RIVERBANK
- BOAT ACCESS (SEE REC. STUDY)
- PROPOSED TRAILHEAD
- POTENTIAL PUBLIC LAND ACCESS
- MILE POST
- CONSERVATION AREA
- TRAIL SECTION

2005
RIO GRANDE TRAIL PLAN
 GLENWOOD SPRINGS TO WOODY CREEK
 ROARING FORK TRANSPORTATION AUTHORITY
MAP 6
 DESIGN WORKSHOP

Scale: 1" = 2500'
 0 100 200 300 400 500 600 700 800 900 1000
 NORTH

Appendix A

Estimated Construction Costs 2004 Dollars		Catherines Store to Rock Bottom Ranch	Rock Bottom Ranch to Hooks Lane	23rd Street to Buffalo Valley	Buffalo Valley to CMC exit	CMC Through Bair Chase	Bair Chase to Carbondale	Total - Feet	Miles
Year	2006	2006	2007	2008	TBD	2009	2009	80,300.00	15.21
Total Length of Trail Segment (feet)	14,700.00	9,500	11,100	16,100.00	1,1600	17,300.00			
ESTIMATED Cost of Trail Alignment:									
Mobilization and General Conditions	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 10,000.00	\$ 20,000.00	\$ 20,000.00		
Engineering Cost Alignment B 7% of total cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Clearing and Grubbing	\$ -	\$ -	\$ 38,000.00	\$ 21,800.00	\$ -	\$ -	\$ 21,000.00		
Topsoil Strip and Stockpile	\$ -	\$ -	\$ 9,500.00	\$ 10,900.00	\$ -	\$ -	\$ 10,500.00		
Hillside Excavation:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Easy Slopes	\$ -	\$ -	\$ 117,500.00	\$ 247,500.00	\$ -	\$ -	\$ 232,500.00		
Moderate Slopes	\$ -	\$ 0	\$ 163,400.00	\$ -	\$ -	\$ -	\$ 45,600.00		
Steep Slopes	\$ -	\$ 0	\$ 0	\$ -	\$ -	\$ -	\$ -		
Concrete Retaining Wall	\$ -	\$ 0	\$ 0	\$ -	\$ -	\$ -	\$ -		
Pit Run	\$ 147,000.00	\$ 93,000.00	\$ 100,000.00	\$ 109,000.00	\$ -	\$ -	\$ 173,000.00		
Elevator/drain trail platform in wetlands	\$ -	\$ 0	\$ -	\$ -	\$ -	\$ -	\$ -		
Road base	\$ 147,000.00	\$ 93,000.00	\$ 110,000.00	\$ 161,000.00	\$ 100,600.00	\$ -	\$ 173,000.00		
Geotextile fabric	\$ 24,990.00	\$ 15,810.00	\$ 18,870.00	\$ 27,370.00	\$ 18,200.00	\$ -	\$ 29,410.00		
3" x 10' Asphalt Trail Surface	\$ 176,400.00	\$ 111,600.00	\$ 133,200.00	\$ 193,200.00	\$ 127,200.00	\$ -	\$ 207,600.00		
Crusher Fines	\$ -	\$ -	\$ 16,650.00	\$ -	\$ 15,900.00	\$ -	\$ 25,950.00		
Erosion Control/Wetland Protection	\$ 14,700.00	\$ 9,300.00	\$ -	\$ 16,100.00	\$ -	\$ -	\$ 17,300.00		
Topsoil Replacement	\$ -	\$ -	\$ 19,000.00	\$ 21,800.00	\$ -	\$ -	\$ 21,000.00		
Revegetation	\$ 22,050.00	\$ 1,425.00	\$ 16,650.00	\$ 24,150.00	\$ -	\$ -	\$ 15,750.00		
Intersection Safety	\$ -	\$ -	\$ 30,000	\$ 40,000.00	\$ -	\$ -	\$ 20,000.00		
Permits and fees	\$ 400.00	\$ 400.00	\$ 400.00	\$ 400.00	\$ -	\$ -	\$ 400.00		
Survey costs where track is removed	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Wetland Mitigation	\$ 5,000.00	\$ 5,000.00	\$ -	\$ -	\$ -	\$ -	\$ 5,000.00		
Signage Contingency	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ -	\$ 5,000.00		
Safety fencing -steep slopes & other hazards	\$ 9,000.00	\$ 9,000.00	\$ 16,200.00	\$ 45,000.00	\$ -	\$ -	\$ 68,400.00		
Fence relocation - Ranches	\$ -	\$ 0	\$ -	\$ 71,100.00	\$ -	\$ -	\$ -		
Irrigation ditch relocation -Ranches	\$ -	\$ 0	\$ -	\$ 79,000.00	\$ -	\$ -	\$ -		
Culverts/ cost per	\$ 20,000.00	\$ 16,000.00	\$ -	\$ 28,000.00	\$ -	\$ -	\$ 8,000.00		
Sub-Total:	\$ 591,540.00	\$ 379,535.00	\$ 814,370.00	\$ 1,145,470.00	\$ 276,900.00	\$ 1,099,410.00	\$ 1,284,351.00		
Contingency (10%) of sub total	\$ 59,154.00	\$ 37,953.50	\$ 81,437.00	\$ 114,547.00	\$ 27,690.00	\$ 109,941.00	\$ 1,284,351.00		
Decking and railing for Bridge over Roaring Fork alignments 1&2							\$ 75,000.00		
Catherine Store to Rock Bottom Ranch- 10% cost increase due to lack of accessibility to site.	\$ 59,154.00								
Total	\$ 709,848.00	\$ 417,488.50	\$ 895,807.00	\$ 1,260,017.00	\$ 310,420.00	\$ 1,284,351.00	\$ 4,877,931.50		

Appendix B

Signage and Markings for Trail and Low-Volume Roadway/ Driveway Intersections

Note: Descriptions apply to both approaches unless indicated.

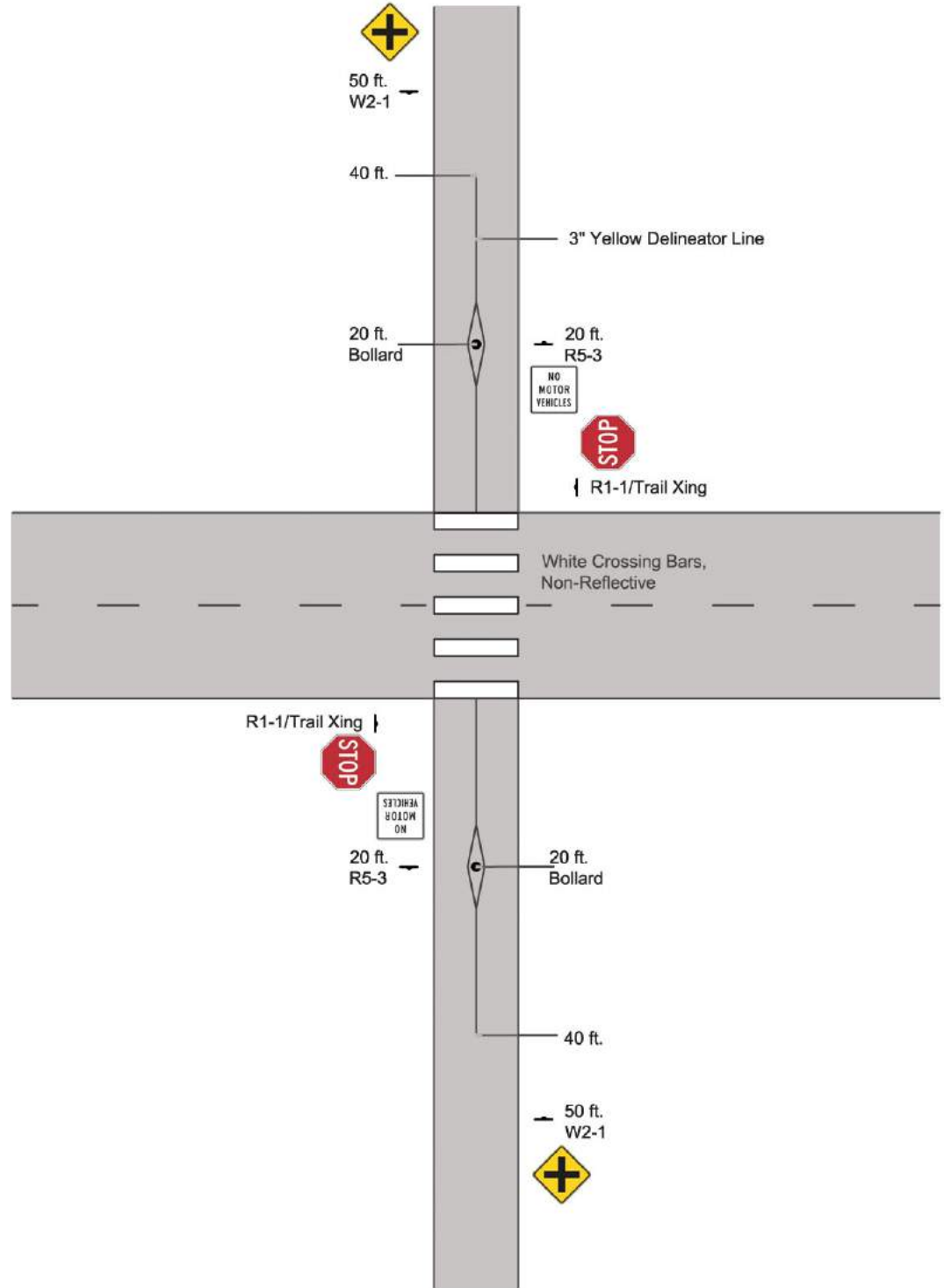
<u>Sign</u>	<u>Marking</u>	<u>Location/Comments</u>
On Trail:		
W2-1	50 ft.	18" x 18" Symbolic crossroads
*Pets on Leash Sign	50 ft.	12" x 18" Mounted on back of W3-1a, OR
*Trail User Yield	50 ft.	12" x 12" Mounted on back of W3-1a, OR
R5-3	20 ft.	18" x 18" "No Motor Vehicles"
42" Yellow Bollard	15-25 ft.	Impact Recovery Systems traffic delineator
No Motor Vehicles	On bollard	3" x 11" Rockart reflective decal
3" Yellow Separator Line	0-20' beyond bollard	Forms 2" ft. by 10" ft. diamond at bollard
On Road:		
Crossing Bars	Centered @ 0 ft.	2' x 10' white thermal plastic (90 mil) crossing bars
R1-1	Edge of trail tread	24" x 24" stop, on top of post
Trail Xing Sign	Shares post w/ R1-1	24" x 18" fluorescent yellow/green below R1-1

*optional items

Notes:

1. Trail signs are mounted on 96" unpeeled juniper fence posts, 24"-27" in the ground and set in a compacted soil cement mixture. Posts are typically 4"-6" at the top. Road signs are mounted on 10 ft. tall, 3 lb./ft. U-channel.
2. Trail sign substrates are either 0.080" aluminum, Hi-density overlay plywood, or Altree composite. Road signs are 0.080" aluminum substrate.
3. Sheeting for all MUTCD-compliant signs are 3M DG3. Other signs will vary.
4. Dog Stations consist of a two-roll metal or polyethylene dispenser box and aluminum open mesh cylindrical covered trash receptacle, both mounted to a juniper post on the "trail" side. Trail Regulations sign is mounted above the dispenser.
5. Bollards all have a reflective "No Motor Vehicles" decal on the side facing motor vehicle traffic. A vertical 3" x 12" yellow reflective strip is affixed to the opposite side.

Signage and Markings for Trail and Low-Volume Roadway/Driveway Intersections



Signage and Markings for Trail and Medium-Volume Roadway/ Driveway Intersections

Note: Descriptions apply to both approaches unless indicated.

<u>Sign</u>	<u>Marking</u>	<u>Location/Comments</u>
On Trail:		
R1-1	0 ft. (@ stop bar)	18" x 18" Stop sign
Stop Bar	0 ft.	12" x 60" white stop bar - non-reflective
"Good Neighbor"	75-85 ft.	White painted stencil on pavement
Dog Station	75-85 ft.	Optional component - 1 per mile
Trail Regs	@ Dog Station	Shares post w/ bag dispenser & trash can
W3-1a	100 ft.	18" x 18" Symbolic "Stop Ahead"
Pets on Leash sign	100 ft.	12" x 18" Mounted on back of W3-1a OR
Trail User Yield sign	100 ft.	Rockart, 12" x 12" Mounted on back of W3-1a
R5-3	20 ft.	18" x 18" "No Motor Vehicles"
42" Yellow Bollard	15-25 ft.	Impact Recovery Systems traffic delineator
No Motor Vehicles	On bollard	3" x 11" Rockart reflective decal
3" Yel. Separator Line	0-20 ft. after bollard	Forms 2 ft. by 10 ft. diamond at bollard

On Road:

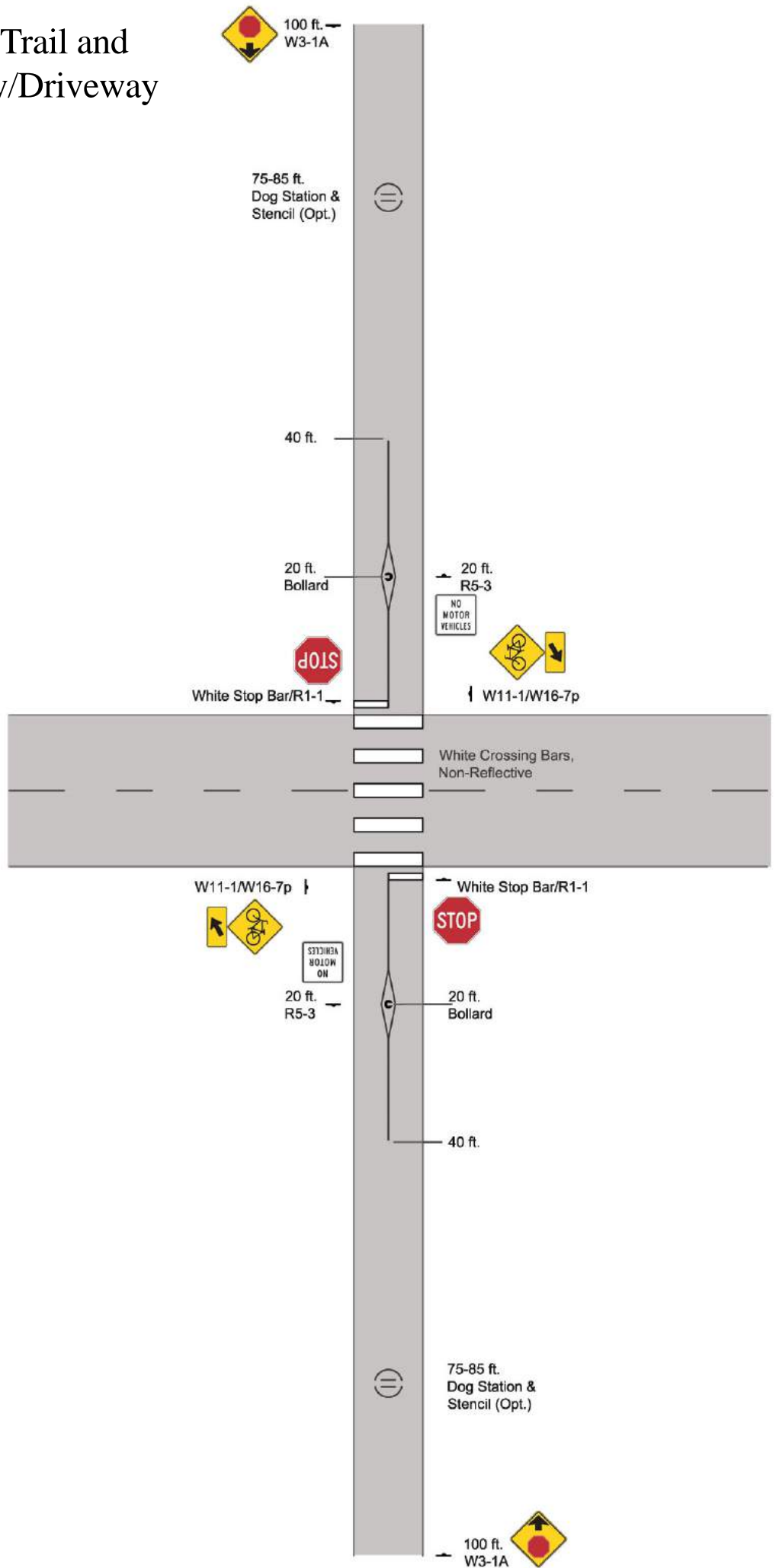
Crossing Bars	Centered @ 0 ft.	2' x 10' white thermal plastic (90 mil) crossing bars
W11-1	Edge of trail tread	24" x 24" fluorescent yellow/green bicycle symbol
W16-7p	Edge of trail tread	18" x 24" diagonal arrow; shares post w/ W11-1

*optional items

Notes:

- Trail signs are mounted on 96" unpeeled juniper fence posts, 24"-27" in the ground and set in a compacted soil cement mixture. Posts are typically 4"-6" at the top. Road signs are mounted on 10 ft. tall, 3 lb./ft. U-channel.
- Trail sign substrates are either 0.080" aluminum, Hi-density overlay plywood, or Altree composite. Road signs are 0.080" aluminum substrate.
- Sheating for all MUTCD-compliant signs are 3M DG3. Other signs will vary.
- Dog Stations consist of a two-roll metal or polyethylene dispenser box and aluminum open mesh cylindrical covered trash receptacle, both mounted to a juniper post on the "trail" side. Trail Regulations sign is mounted above the dispenser.
- Bollards all have a reflective "No Motor Vehicles" decal on the side facing motor vehicle traffic. A vertical 3" x 12" yellow reflective strip is affixed to the opposite side.

Signage and Markings for Trail and Medium-Volume Roadway/Driveway Intersections



Signage and Markings for Trail and High-Volume Roadway/ Driveway Intersections

Note: Descriptions apply to both approaches unless indicated.

<u>Sign</u>	<u>Marking</u>	<u>Location/Comments</u>
On Trail:		
R1-1	0 ft. (@ stop bar)	18" x 18" Stop sign
Stop Bar	0 ft.	12" x 60" white stop bar - non-reflective
"Good Neighbor"	75-85 ft.	White painted stencil on pavement
Dog Station	75-85 ft.	Optional component - 1 per mile
Trail Regs	@ Dog Station	Shares post w/ bag dispenser & trash can
W3-1a	100 ft.	18" x 18" Symbolic "Stop Ahead"
Pets on Leash sign	100 ft.	12" x 18" Mounted on back of W3-1a OR
Trail User Yield sign	100 ft.	Rockart, 12" x 12" Mounted on back of W3-1a
R5-3	20 ft.	18" x 18" "No Motor Vehicles"
42" Yellow Bollard	15-25 ft.	Impact Recovery Systems traffic delineator
No Motor Vehicles	On bollard	3" x 11" Rockart reflective decal
3" Yel. Separator Line	0-20 ft. after bollard	Forms 2 ft. by 10 ft. diamond at bollard

On Road:

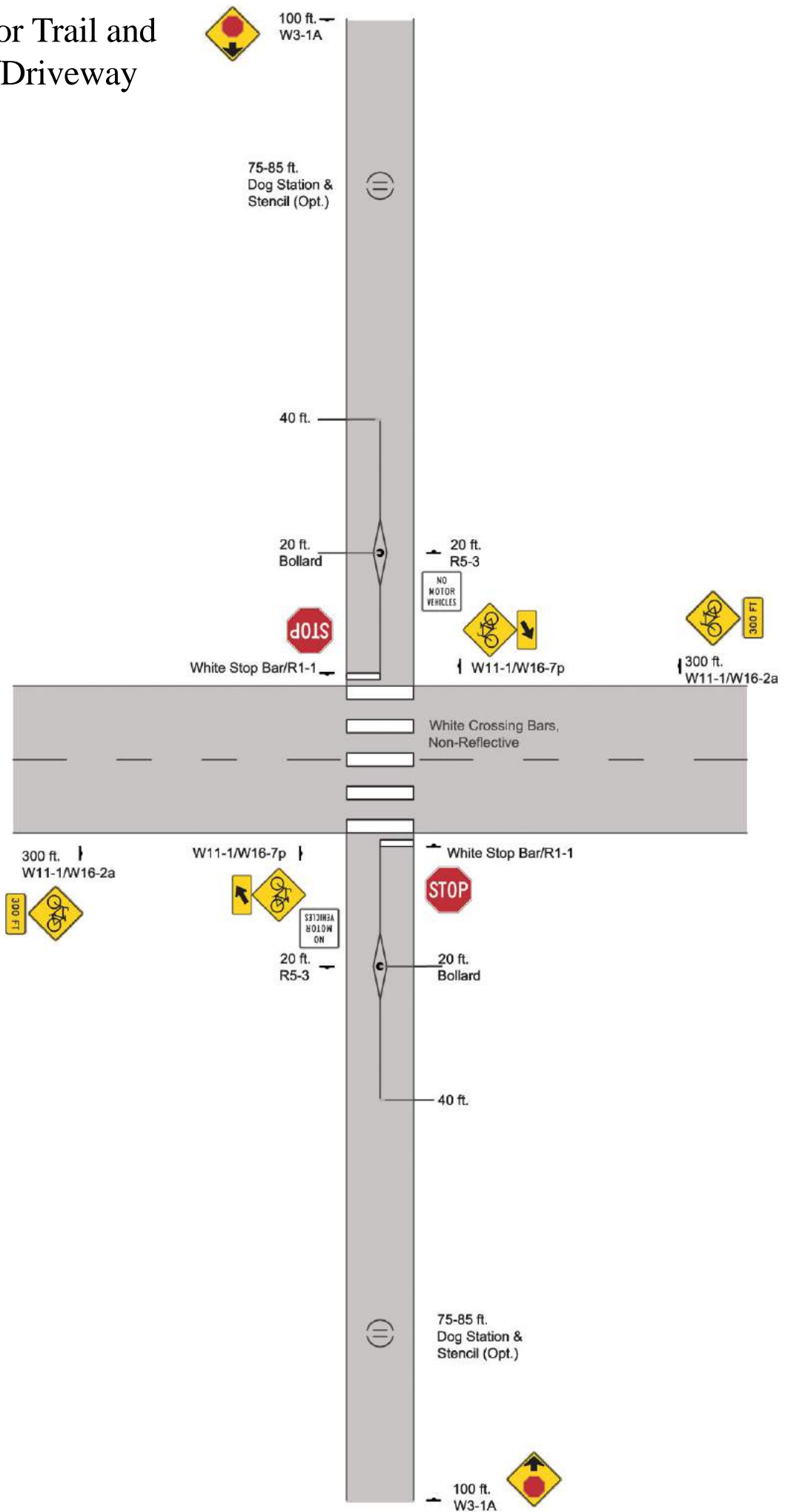
Crossing Bars	Centered @ 0 ft.	2' x 10' white thermal plastic (90 mil) crossing bars
W11-1	Edge of trail tread	24" x 24" fluorescent yellow/green bicycle symbol
W16-7p	Edge of trail tread	18" x 24" diagonal arrow; shares post w/ W11-1
W11-1	300 ft. from tread	Shares post with W16-2a
W16-2a	300 ft. from tread	"300 feet"

*optional items

Notes:

- Trail signs are mounted on 96" unpeeled juniper fence posts, 24"-27" in the ground and set in a compacted soil cement mixture. Posts are typically 4"-6" at the top. Road signs are mounted on 10 ft. tall, 3 lb./ft. U-channel.
- Trail sign substrates are either 0.080" aluminum, Hi-density overlay plywood, or Altree composite. Road signs are 0.080" aluminum substrate.
- Sheating for all MUTCD-compliant signs are 3M DG3. Other signs will vary.
- Dog Stations consist of a two-roll metal or polyethylene dispenser box and aluminum open mesh cylindrical covered trash receptacle, both mounted to a juniper post on the "trail" side. Trail Regulations sign is mounted above the dispenser.
- Bollards all have a reflective "No Motor Vehicles" decal on the side facing motor vehicle traffic. A vertical 3x12 yellow reflective strip is affixed to the opposite side.

Signage and Markings for Trail and High-Volume Roadway/Driveway Intersections



Attachment III:

**READING THE ROARING FORK
LANDSCAPE –
AN IDEA BOOK FOR INTERPRETATION
AND ENVIRONMENTAL EDUCATION**



Reading the Roaring Fork Landscape: An Ideabook for Interpretation and Environmental Education

A Component of the Roaring Fork Railroad Holding Authority Comprehensive Plan

Prepared for:

Roaring Fork Railroad Holding Authority (RFRHA)
and
Colorado Department of Transportation

Revised Draft
July 15, 1999



Executive Summary

The Roaring Fork Valley is an area of outstanding natural and cultural resources. Tremendous changes, however, are predicted for the valley, and the Roaring Fork Transportation Corridor Study is being conducted to respond to those potential changes. As part of the comprehensive plan for the corridor, current work includes planning for a trail and companion interpretive/education plan. Interpretation and education present opportunities to teach people about the landscape so they are better informed when changes are proposed.

This Ideabook presents results, conclusions, and recommendations from the first steps in the planning process for interpretive/environmental education efforts. It is based on discussions with residents, interested agency officials, and Trails Task Force members, as well as research both inside and outside the Roaring Fork Valley. Key principles of the proposed approach include:

- Interpretation and environmental education should be developed specifically for residents who are using the trail or transit.
- Interpretive/educational components should relate to the following overarching theme: *As people understand the dynamics and workings of nature--learn how to read the landscape--they will take better care of it because they will know something of it. When people have little understanding of the nature and culture of their landscapes they may tolerate changes that will have serious consequences for the future health of those landscapes.*

- The places for interpretation along the corridor can be thought of as a string of pearls, in which the pearls are interpretive nodes along the trail or rail corridor. Primary interpretive locations are proposed at the transit stops and trailheads, and secondary interpretive locations are proposed along the trail, on the train, and on the Internet.

Future development of the ideas presented here will be based upon comments and ideas from residents and organizations responding to this draft approach.

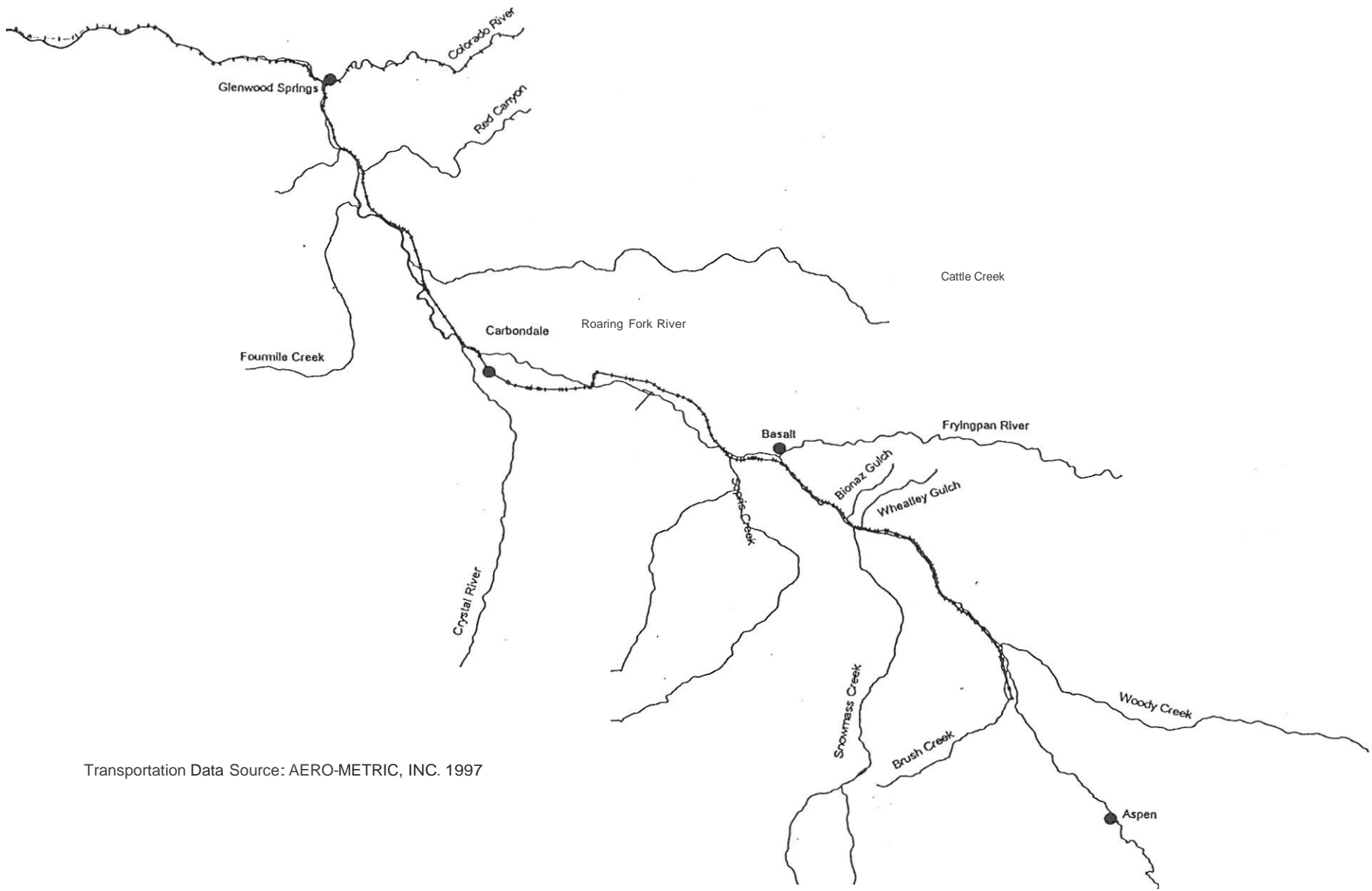


Confluence of the Roaring Fork and Crystal River

This report includes the following:

1. The opportunity: Need for the interpretive program;
2. Reading the landscape: An interpretive approach;
3. What to interpret along the Roaring Fork Corridor;
4. Possible interpretive media for the Roaring Fork Valley;
5. A framework for interpretation and education: String of pearls;
6. Next steps-implementation; and
7. Contacts.

Figure 1 presents a map of the Roaring Fork Valley Transportation Corridor.



Transportation Data Source: AERO-METRIC, INC. 1997



The Opportunity

For many years, the Roaring Fork Valley, from Glenwood Springs to Aspen, was traversed by the Aspen Branch of the Denver & Rio Grande Railroad. Now this linear corridor through the valley, no longer used as a railroad, is owned and managed by the Roaring Fork Railroad Holding Authority (RFRHA), whose objective is to maintain the right-of-way for recreation, conservation, and mass transit.

Currently, a Corridor Investment Study and Comprehensive Plan are being developed for this property to evaluate the costs, benefits, and impacts of a proposed mass transit system in the valley. One component of these studies is a Recreational Trails Plan. Another is this plan (Ideabook) for interpretation and environmental education.

The Ideabook outlines a broad approach to presenting natural and historical themes *to* both trail and transit users, with a goal of educating people about the significance of the landscapes through which they are traveling. It is crucial to recognize that both trail and transit planning are in their early stages; therefore the appropriate role of this Ideabook is to provide a framework and foundation upon which further refinement can be based.

The Ideabook is organized as follows:

- The remainder of Section 1 describes the need for providing interpretive opportunities and outlines priorities expressed by residents which set the stage for the recommended approach.
- Section 2 discusses the general interpretive approach and key themes.

- Section 3 examines more specific interpretive opportunities and themes for the valley.
- Section 4 provides an overview of several appropriate interpretive tools or media that could be used in the project.
- Section 5 outlines a basic physical framework for developing the interpretive/environmental education program, using primary and secondary interpretive nodes.
- Section 6 suggests next steps in the process.
- Section 7 provides a list of contacts.

Pace of change in the valley

The landscape of the Roaring Fork Valley is undergoing a rapid transformation. Housing and commercial developments are replacing ranchland and natural areas. The population of the valley has grown significantly over the past two decades and likely will continue to grow.

The rise in population has caused dramatic increases in sprawl throughout the state and has resulted in many rural landscapes being developed at exurban, suburban, or urban densities. Figure 2 presents past and projected changes in the landscape of the Roaring Fork Valley, based on U.S.



Valley ranch area giving way to development

Census data and using projections developed for the Colorado Division of Wildlife Commissioners.¹

The design of a trail and mass transportation system at this time provides a special opportunity to educate people about the ways that the landscape changes in response to human actions. As human impacts upon the land intensify, this interpretive opportunity has the potential to be a tremendous educational resource for the entire valley.

Residents' priorities

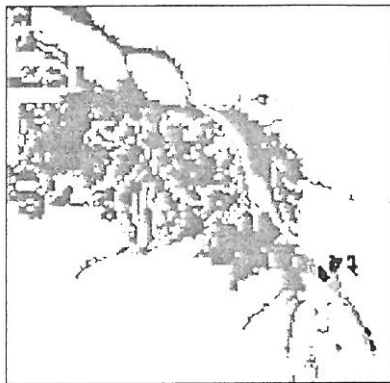
At a meeting of the Trails Task Force for the Roaring Fork Transportation Corridor, task force members and other community members discussed ideas and priorities for the interpretive program. Additionally, ideas and priorities were discussed with other interested community members (see "Contacts" at the end of this report). Box 1 summarizes the essential ideas expressed during these meetings.

Box 1

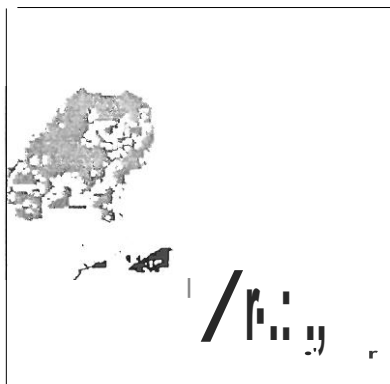
Priorities expressed by 'the Trails Task Force and other community members:

- Focus most interpretive efforts on built-up or high-use areas, with transit stops as a key multimodal opportunity.
- Explore ways *to* use a "wordless" presentation (environmental art is one of these ways). Signs should not limit the ability of trail users *to* interpret nature for 'themselves.
- Consider a "necklace" approach, where there are special places (pearls) along the 'trail (string) that provide interpretive opportunities.
- Continue to *encourage* the valley's communities *to* work 'together in refining 'this interpretive plan. Each community's interpretive effort should, however, reflect local interests.
- Look for opportunities *to* involve long-term residents, children and others (e.g., use storytelling, oral histories, have a competition for working artists *to* design artwork along the corridor).

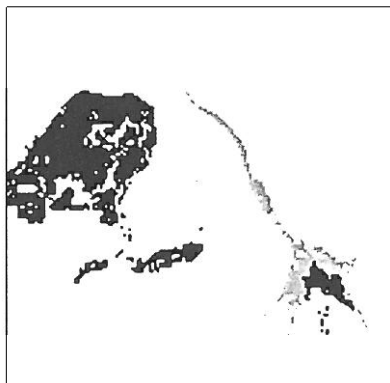
¹ Hobbs, N.T. and D.M. Theobald, *Effects of Population Growth on Wildlife Habitat in Colorado*, Briefing Paper for the Colorado Division of Wildlife Commissioners, June 1998. <http://nd.is.nrel.colostate.edu/escop/briefing.html>.



1960



1990



2020

1960 and 1990 data from U.S. Bureau of Census. Projections of development density in Colorado during 2020 taken from a model developed from historical data from U.S. Bureau of Census.

From *Effects of Population Growth on Wildlife Habitat in Colorado: A Briefing Paper for the Colorado Division of Wildlife Commissioners*, N. Thompson Hobbs and David M. Theobald, June 1998.

Figure 2
Transformation of the Roaring Fork Valley

Information versus interpretation: the purpose of the interpretive plan

Sometimes people view environmental education/interpretation with skepticism: they think interpretive efforts may clutter the landscape, or that they might be used to advance a narrow political agenda. Properly done, interpretation should do neither.

The sheer quantity of information that is presented to us each day can be overwhelming. It has been estimated that more new information has been produced in the last 30 years than in the previous 5,000 years.¹ Few would want educational efforts along the Roaring Fork corridor to contribute to the sense of information overload so prevalent in modern society. It is therefore crucial to distinguish between interpretation and mere information.

Writer and conservationist Freeman Tilden notes, "Information, as such, is not interpretation. Interpretation is revelation based upon information. But they are entirely different things."²

Rather than simply providing facts, data, or information, the purpose of the interpretive story is to inspire and to

provoke people to broaden their horizons.³ Interpretation helps to give meaning to the landscape. It helps people to see, to evaluate what they see, and to come to their own conclusions.

In the case of the Roaring Fork Rail/Trail Corridor, a well-planned interpretive program can enhance the experience of nature for pedestrians, cyclists, and transit riders, and contribute to residents' understanding of the valley and their place in it. Many of the valley's residents have moved here from somewhere else, and most residents aren't exposed to the valley's many natural and cultural resources on a daily basis.

An interpretive program focused on learning to read the landscape can provide a foundation for understanding the valley and the specific sense of place that makes the valley unique.

¹ Wurman, R.S. 1989. *Information anxiety*. New York, NY: Doubleday.

² Tilden, F. 1977. *Interpreting our heritage*. (3rd ed.) Chapel Hill: University of North Carolina Press.

³ Beck, L. and T. Cable. 1998 *Interpretation for the 21st Century*. Champagne, IL: Sagamore Publishing.

Reading the landscape: An interpretive approach

Interpretation and environmental education should be developed specifically for residents as they use the trail or transit system. Residents are the ones who will have to deal with changes to the landscape the most directly. If they truly understand the landscape they will be better prepared to participate in community discussions about landscape change.

Themes and means of presenting them will need to be substantial and detailed enough to withstand repeated viewing by residents. Overly simplistic messages or presentations can become boring very quickly.

Overarching theme

The overarching theme is the grand organizer, to which interpretative/educational components must relate. This overarching theme is:

As people understand the dynamics and workings of nature learn how to read the landscape they will take better care of it because they will know something of it. When people have little understanding of the nature and culture of their landscapes they may tolerate changes that will have serious consequences for the future health of those landscapes.

Supporting broad themes

The following supporting themes will help make the overarching theme practicable. These help provide direction for the eventual development of specific interpretative/ educational programs.

Once you learn to read the land, I have no fear what you will do to it, or with it.
- Aldo Leopold

- 1. Reading the landscape.** Nature in the rail corridor and surrounding landscape is dynamic and complex (as well as inspiring), and the mosaic of ecosystems that make up the river corridor has repeating patterns that are readily discernable (as patches and corridors of differing vegetation, for example).
- 2. Learning from history.** People have a long history of interaction with the corridor, for better and for worse. Knowing this history and its impacts on nature can be very instructive in guiding future community decisions. The pattern of future conservation and development will directly affect the future environment.
- 3. Being stewards.** With our help, nature can heal, and there are many opportunities for conservation and restoration in the corridor.
- 4. Water as lifeblood.** Water is the grand integrator of the valley; it ties together landscapes and communities. Water flows downhill, and not only to the Roaring Fork, but further downstream to other regions and states. Its many uses make protecting its quality paramount.

What to interpret along the Roaring Fork Corridor

There are many worthy themes or stories to be presented in the river corridor. From discussions with residents, interpreters, and educators, some of the most important have been identified. When a full interpretation and environmental education plan is developed for the corridor, careful thought should be given to selecting themes and stories that are focused on the overarching themes and that give depth to those broader themes.

No matter how interesting, subthemes that don't support the main theme should not be introduced because they may dilute the strength of the main message.

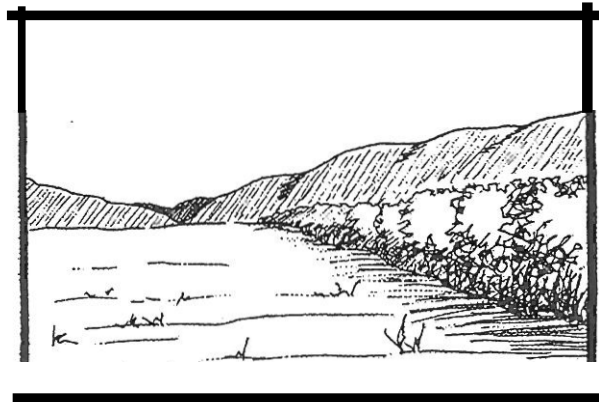
Developing appropriate themes will be an opportunity for those in the valley with shared interests in cultural and natural history to work together, something that has been uncommon.

Fundamental changes are occurring in the valley. This interpretive approach will enable residents to deal with change in an informed fashion, by giving them tools to read and understand the land, rather than just providing information. (See Figure 3, "Reading changes in the landscape over time.") The concepts presented below are preliminary ideas, designed to give a sense of the approach.

Reading the natural history of the landscape

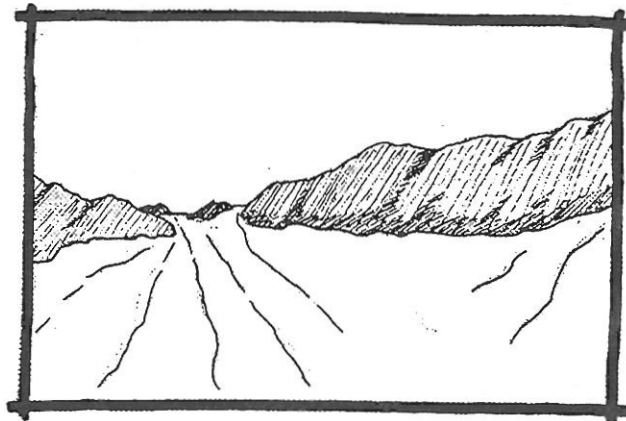
- What makes this valley different from other valleys in Colorado? How do we see and understand specific factors, e.g., iron in the soil and other soil characteristics, width of valley, elevation and rate of elevation change, how much snow and rain the valley receives, that make this valley unique?

- How do we learn to read broad patterns in the landscape? What is an edge, a patch, a corridor, and the surrounding landscape matrix they all sit within? How can we distinguish between more pristine areas and degraded areas? Where do we see opportunities to restore degraded areas?
- How was the valley formed? Did the river carve the valley? Did geologic uplift create the mountains? Are these processes still at work? How can we tell by looking at the land?
- What does a healthy river look like? What does the color of the water tell us? Plant life in the river corridor? Presence or absence of fish? How has hydropower production changed the river?
- What plants do we see as we go up or down the valley? What do they tell us about changes in elevation, precipitation, and temperature as we move through the landscape? Which are plants native, which are introduced? Are some beneficial and others nuisances to wildlife or people?
- What animals live in different parts of the valley? If we don't see the animals themselves, what can we look for to get clues about what might live here? Why are some animals less prevalent than they used to be?
- What is a microclimate? How do we learn to recognize different microclimates? Why are they important to agriculture and wildlife?

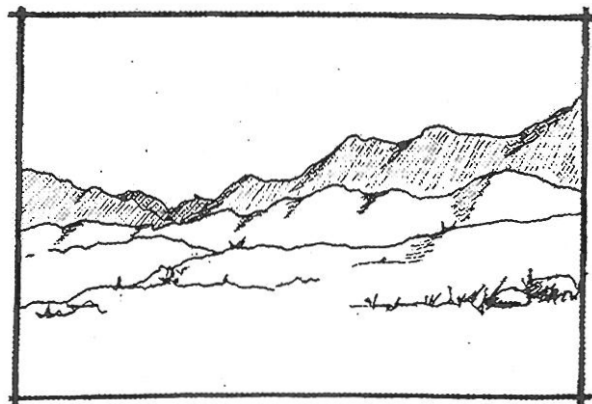


By learning *to* read the landscape, we can find clues that help us *to* envision what forces may have shaped our environment.

In this example, a current-day landscape, *top*, may provide clues about its distant past through its geology and vegetation.



In an earlier era, *middle*, glaciers smoothed the mountains and deposited silt in the valley. Existing topography indicates a history of glacial activity *to* the interested observer.



In a *still* earlier era, *bottom*, an uplift created these mountains, and processes *of* erosion immediately began *to* alter the landscape, ultimately creating the present-day environment shown at top.

Figure 3

Reading changes in the landscape over time

Reading the cultural history of the landscape

- What evidence survives of the wide range of transportation types that have passed through the valley? What are the obvious forms of transportation from the present era? What remnants survive from other times? What forms of transportation can we surmise, even though we can't see any evidence? What has been the impact on the



Historic remnants such as Basalt's coke ovens invite inquiry about the valley's cultural history

landscape here as well as where the transportation

- led? What opportunities would there be to view elk if they hadn't been reintroduced by train from Wyoming early in the century?
- Which patterns of vegetation have been shaped by people? Toward what end did people make these changes? How has nature responded to these changes?
- What are the patterns of land use along the trail or transit line? Why are some areas not developed? What are the characteristics of buildings in the valley? How have the patterns of development and the styles of buildings changed over time?
- Why is it important that wildlife have places of their own, where people don't go? Why there are places along the river that people should not access the water? Why are some portions of trails potentially closed during parts of the year?

These are, of course, just preliminary ideas for interpretive themes. Deciding on the

ultimate themes to present is an important educational process for those involved.

Examples: selected interpretive opportunities in the Roaring Fork Valley

Following are selected examples of interpretive stops that would support the themes outlined in this section:

Example A

Wildlife observation and interpretive point:
Riparian Site Above Old Snowmass

Approximately one mile above Wheatly Gulch, a high quality wetland close to the trail could serve as an excellent wildlife observation point.

This site has provided habitat for beaver, with currently inactive dams, and presents an array of plant and animal species. Vegetation in this area includes narrowleaf cottonwood, twinberry honeysuckle, red osier dogwood, serviceberry, and various willow species. Bird species such as Lewis's woodpecker, yellow warbler, song sparrow, and fox sparrow may be observed.

Excellent habitat for cavity nesting species can be viewed at this site; at the same time, young live cottonwoods and other species are also present, generating a diversity of habitat that could be of great interest to trail users.

In order to preserve the natural, undeveloped character of this site, trailside interpretive information should be minimized or absent. This information should be presented instead at the nearest primary interpretive node (see Section 5) - - most likely at the nearest trailhead (Trailhead #7 in the Trails Plan) - and through other media such as brochures and the internet.

Interpretive information could usefully focus on issues such as: What animals, birds, and plants dominate this part of the valley? If we don't see the animals themselves, what can we look for to get clues about what might live here? Why are some animals less prevalent than they used to be?

Example 8
Carbondale transit stop and trail

Here the width of the valley and the rich ranching history provide interpretive opportunities about both natural and cultural history. Because the transit line and trail are in close proximity here, this type of location provides the ideal site for primary interpretive information (see Section 5).

The expansive views provided in this part of the valley provide opportunities to examine natural history questions such as: How do we learn to read broad patterns in the landscape, how was the valley formed, and how can we tell by looking at the land? They also lend themselves to exploration of cultural history issues such as: Which patterns of vegetation have been shaped by people? What is it about the land, vegetation, and climate in this part of

the valley that supported the local ranching economy? How has irrigation changed this part of the valley?

Example 9
Emma Townsite

The trail passes close to the old townsite of Emma, just west of Basalt. The Mathers Building in Emma, which served as an early railroad stop for the D&RGW, is eligible for National Historic Register listing.

Because an existing pedestrian underpass provides a safe highway crossing and facilitates connections with river easements and Basalt, people may use this site for trail access. Consequently, having some interpretive information here may be appropriate; alternatively, cultural and historic information about the Emma townsite could be available at Trailhead #5, located at the site of Basalt High School.

Interpretive efforts could focus on issues such as: What are the patterns of land use along the trail? What are the characteristics of historic buildings here? Why are some areas less developed than others?

-4-

Possible interpretive tools for the Roaring Fork Valley

The interpretive program can best be conducted through use of several media or modes for conveying the message. This way, different audiences can be addressed at the appropriate level, and the interests of different types of trail and transit users are more likely to be met. In this section, we present a range of media for interpretive programs; those that appear most appropriate for this project are discussed in Section 5.

Modes of conducting interpretation and environmental education can be personal (e.g., talks, demonstrations, living history, nature walks), and nonpersonal (e.g., signs, exhibits, video presentations, self-guided tours). Both have a place in the Roaring Fork plan.

Key to the quality of the individual's experience, however, is the degree to which *experiential learning* takes place. Rather than simply reading a sign or listening to a talk, the resident or visitor should have the opportunity to become personally involved in the learning experience. This personal involvement allows the theme of understanding nature's dynamics (reading the landscape) to be and applied, again and again. Box 2 provides summaries of media that may be especially appropriate for conveying interpretive messages in the Roaring Fork Valley.

Box2

Possible interpretive media for the Roaring Fork Valley

- **Signage.** Signs are most appropriate at transit stops or at key trail connecting points/trailheads. As shown in Figure 4, signage can be imaginative and attractive and can include a layering of messages to reach varied audiences.
- **Brochures/written guides.** These can be useful for both rail and trail users. Greater opportunities for experiential learning may occur when information in these brochures corresponds to actual sites that can be viewed from the trail or the train. (See Figure 5.)
- **Visual/written information** presented in pavement, stepping stones, or benches, *etc.*
- **Demonstration sites.** Could include a planting area or garden at transit stops featuring native species, and the possibility of moving historic buildings into the corridor.
- **Environmental art.** These pieces can be temporary or permanent. They usually are designed to help the viewer better perceive environmental processes. Potential exists for community involvement and community design competitions. (See Figure 6.)
- **Tools for environmental observation.** Sundials, precipitation monitors, and wind monitors can increase people's awareness of environmental processes.
- **Video presentations.** These can include interactive programs that allow people to enter information they have gathered. Computer-based presentations can allow people to access increasingly detailed information about topics of interest to them.
- **Video monitors** showing real-time views of sensitive wildlife areas.
- **Internet** connections and interpretive websites.
- **Live presentations.** These could be on the train or along the trail.
- **Involvement of groups** (e.g., School to Careers Program) in longer-term projects that both teach and involve students as stewards of the corridor.

WETLANDS ON A DRY PRAIRIE

Even semi-arid prairies have wetlands. Like an oasis, these water-filled depressions attract wildlife you wouldn't expect to see on a dry grassland. The U.S. Fish and Wildlife Service built these wetlands as wildlife habitat. But *The Wetlands* are for you too. Hike, explore, seek out, watch, discover and experience a wetland world on the High Plains.

BENEFITING WILDLIFE

A migrating sandpiper spots these wetlands from the air and drops down to rest and feed.

The water of these wetlands is vital to many wildlife species. Aquatic plants, fish, and other wetland plants provide food for many species of birds and animals that live in a wetland for a portion of their lives.


BENEFITING PEOPLE

A little girl on her first birdwatching outing spots a sandpiper feeding at the water's edge and marks it on her checklist.


Wetlands offer a great place to take a break from urban life, watch wildlife, and enjoy the natural world. Wetlands have many benefits too. The water in wet treatment plants wetlands filter chemicals and pollutants from waste water. They also help reduce water pollution, diploid, pondwater. They help the wetland to be restored.

AND LISTEN


WILDLIFE TO WATCH FOR




The Killdeer is a small, ground-dwelling bird that lives in wetlands. It has long legs and a long neck, which helps it see over the water.



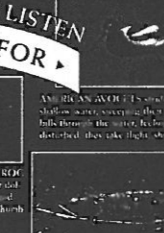
Not far from the water, AMERICAN COOTS look like ducks but have chicken-like bills and feet. Their heads pop forward and back as they swim.



The tiny STRIPED CHORUS FROG is no larger around than a silver dollar. Its bright call is one of the loudest in the wetland. When they are disturbed, they take flight, making a loud, sharp sound.



Like frogs, GREAT EGRETS are also amphibians. They live in wetlands and are usually active at night.



YELLOW-HEADED BLACKBIRDS are noisy and territorial. They build their nests over deep water, so they can't be seen from the ground.

figure 4

Example of interpretive sign panel with multiple message layers to reach varied audiences and encourage stewardship.

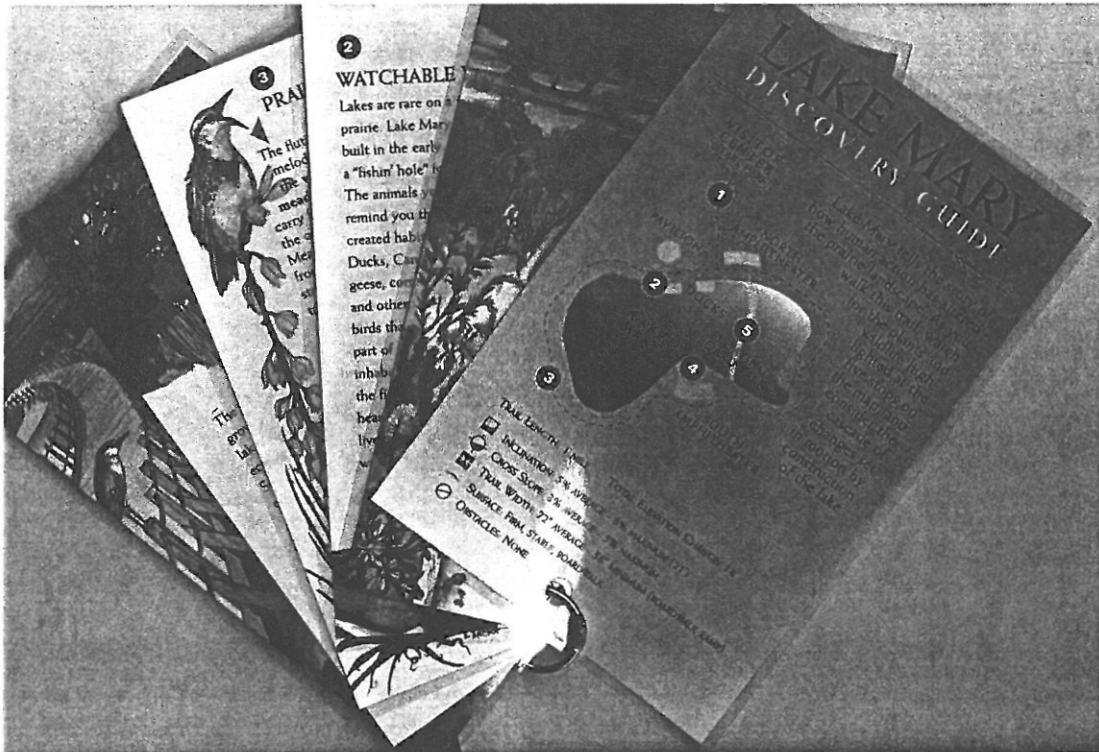
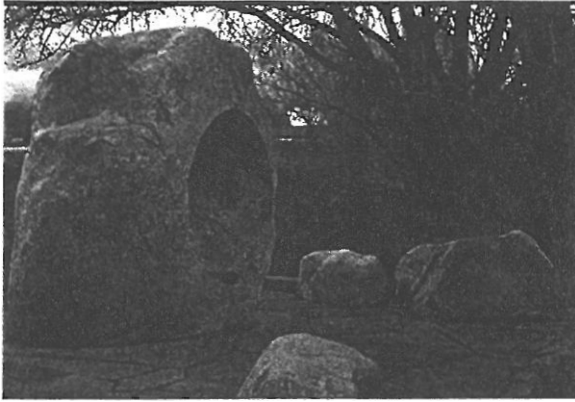


figure 5
Reusable trail guide with neck strap.



"Listening Stones"
Bench carved in rock
positioned beside a river
to amplify its sounds.

ROBERTTULLY

"Scatter" Hydroglyph
Water cache-basin for
desert wildlife.



LYNNE HULL



ROBERTTULLY

"Prairie
Underground"
Stone carvings
depicting prairie
animals and plants.

figure b
Examples of environmental art.

A framework for interpretation and education: String of Pearls

Residents have expressed a concern for adding too many human-made items along the trail (even if they are for interpretation). Their comments have tended to support low-profile presentation away from developed areas, with more obvious interpretation in towns or other developed areas. This has led to the development of the following strategies for delivering the interpretative messages.

Collectively the places for interpretation can be thought of as a string of pearls—or two strings of pearls, one for the transit system and one for the trail. The pearls are the interpretive nodes along the way. Some of the pearls are larger than others. These are the primary interpretative nodes. The smaller pearls are secondary interpretive nodes. In Figure 7, a diagram illustrates the "string of pearls" framework

Primary interpretive locations would be located at transit stops and trailheads, and secondary interpretive locations would occur on the trail, on the train, and on the Internet. Each of these is described below. Box 3 below presents five "rules of thumb" that should guide interpretive efforts at all of these sites.

Primary interpretive locations: Transit stops and trailheads

The primary interpretive spots are where people will naturally congregate anyway: the stops along the transit system and major trailheads. Transit stops will have platforms, a covering, a kiosk for ticket sales, and in some cases a parking area, picnic tables, and toilets. Not only will people wait here for trains, but also others will likely drive cars here with their bicycles and use the stops as trailheads.

Trailheads will have most of these amenities as well and will provide a similar function as a gathering point for trail users. All of this makes the transit stops and trailheads ideal places for providing interpretation for people who will be experiencing the corridor, either on the trail or on the transit system.

Transit stops would be developed as interpretative nodes that interpret the corridor in either direction from that station to the next, as well as putting that location in the context of the entire corridor. Just as a legend on a map provides a key to the meaning of the map's symbols, these interpretive nodes present keys to the elements of the landscape to be seen around that community. In this way, the nodes present a kind of microcosm of that community's environs.

Although each transit stop would be a primary interpretive node, the trail does not go to each of the planned stops. The trail is planned to serve three transit stops: one at Glenwood Springs and two at Carbondale. In addition, the trail will be readily connected to the transit stop by a local trail system being planned in Basalt.

At El Jebel, however, the transit stop will be across the river and a distance from the trail, so the stop will not serve the trail. The Brush Creek transit stop will be a considerable distance from the trail, which will be across the valley. Particularly in these up-valley locations, then, trailheads would serve as primary interpretive nodes.

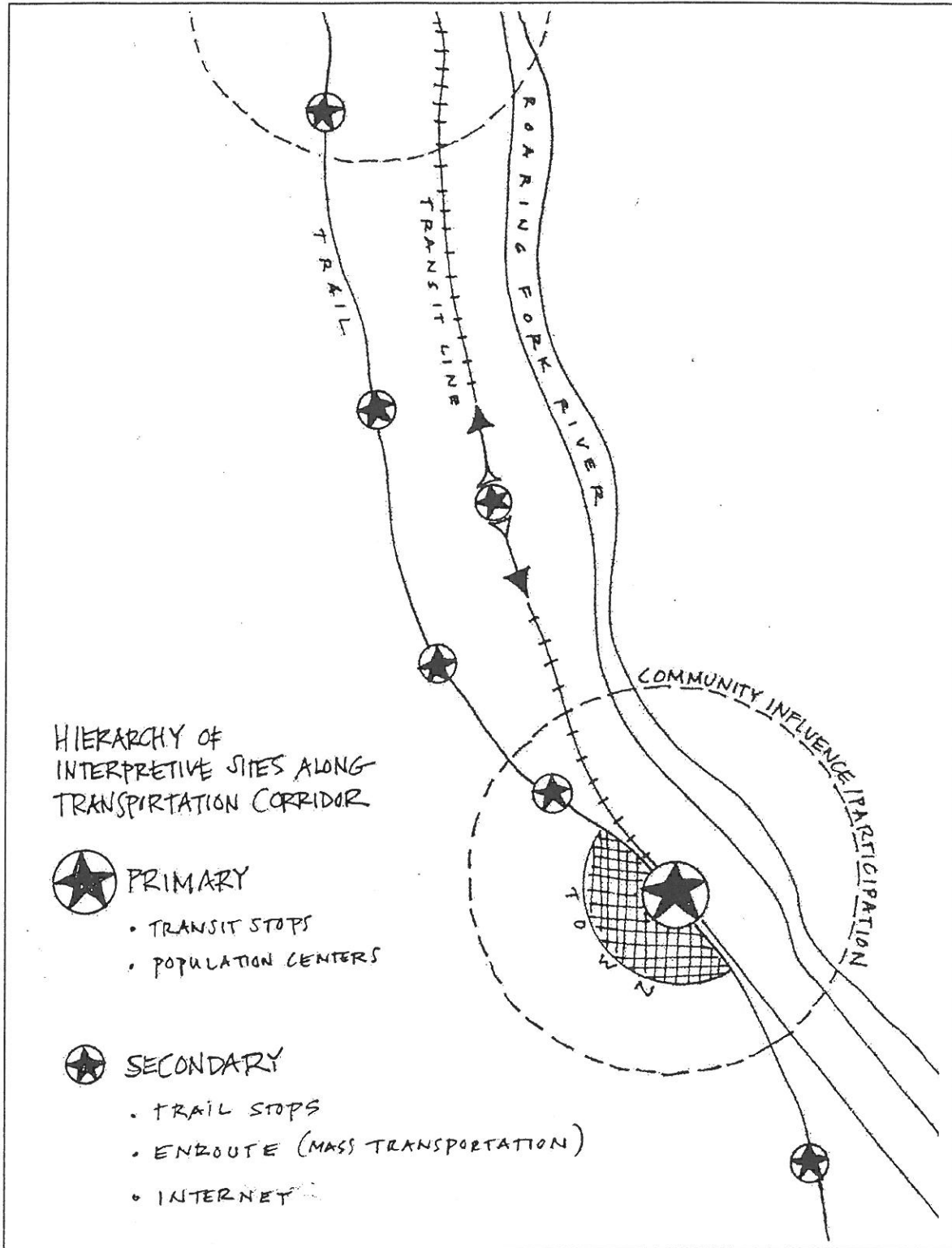


Figure 7
Concept Diagram: "String of Pearls"

Primary interpretive locations would be characterized by the following approach:

Given the audience (local residents who are repeat visitors), art and other interpretative pieces at transit stops need to be interesting enough to invite repeated viewing or should be changed often.

It may be possible to have a video monitor at the ticket kiosk that presents interactive interpretive messages. Such messages could be changed for the season of year or other important landscape happenings. It may further be possible for people to enter information themselves describing aspects of the landscape they have seen, similar to when birdwatchers write on a chalkboard species they have sighted at a park. In this corridor people might note

sightings of elk or bald eagle, penstemon in flower or golden aspen. The interactive program might allow people to obtain up-to-date information about conditions along the trail or at other outdoor places in the valley.

The monitor might also offer real-time views of sensitive wildlife near the trail, areas that people should not approach. This technique is used, for example, at the Rocky Mountain Arsenal National Wildlife Refuge, where visitors can pan a video camera in the area used by large numbers of bald eagles. The cameras send detailed pictures to a nearby bird blind, from which otherwise one can only see the mass of trees.

The transit ticket kiosks might also sell interpretative maps and brochures and print current interpretative

Box 3

Rules of thumb for the Roaring Fork interpretive plan

These five Rules of Thumb provide guiding principles for specific interpretive *efforts* along the corridor, as well as guidance for the overall approach:

1. Relate the subject *to* the lives *of* residents in the Roaring Fork Valley.
2. Interpretation must go beyond simply providing information *to* reveal meaning and tools for understanding the valley and people's place in it.
3. The interpretive presentation should be designed as a story about the cultural and natural history of the valley that informs, entertains, and enlightens.
4. The plan should be flexible enough *to* respond *to* varying audiences: children, the general adult population, and that portion *of* the population that is avidly interested in the subject matter.
5. The quantity of information presented at transit stops, on the train, and, especially, along the trail, should be limited; however, ways *to* access more detailed information should be readily available.

These Rules of Thumb are *adapted* from the 15 Guiding Principles presented in Beck, L. and T. Cable, 1998, *Interpretation for the 21st Century*, Champagne, IL: Sagamore Publishing.

messages on tickets.

Native plants or tracks of wildlife might be included at these interpretive nodes so people can see up close what will be whisking by when they are on the train or so they can get detailed information about things they might see along the trail.

This is also a place to advise trail users of appropriate behavior along the trail, some of which may be specific to times of year. This helps reduce conflicts between trail users and the environment. This approach is somewhat like the interpretation that occurs at the Telluride transit ski lift station that is provided by the US Forest Service.

Secondary interpretive locations: along the trail

The secondary points of interpretation—the smaller pearls—will be along the trails, but will be much more understated than at the transit stops and trailheads, out of respect for community concerns for cluttering the landscape. In some cases the markers may simply be mile markers that locate an interpretive spot and tie it into a brochure or some other explanation. In other situations, the means of calling attention to a special place may be a stone bench (perhaps with a message etched into it) or text that is inscribed in stepping stones.

Secondary trail interpretive nodes will be characterized by the following approaches:

Interpretive messages will be on benches and boulders, rather than mounted as stand-alones.

These secondary points are mostly at rest stops along the trail.

There will be much more of a sense of discovery (and delight) in finding interpretive pieces. They will be

thoughtful and understated, more inspirational than informational.

These will be quiet places for contemplation that offer elements of suspense.

Where appropriate, some interpretation will be at points to access the river.

Specific places along the trail with interpretive significance, such as Satank Bridge (on the National Register of Historic Structures) will be identified.

There should be careful treatment of nature resource areas that might be easily disturbed by trail users.

In several locations, the trail approaches sensitive habitat and species. Specific information on these areas is available in the Environmental Impact Statement for the Roaring Fork project. Where this occurs, fencing and signage (preferably at primary nodes or in brochures) can be used to keep people at appropriate distances from wildlife. Guidelines for wildlife buffers developed by the Colorado Division of Wildlife are summarized in the Appendix. In some locations it may be more appropriate not to call attention to sensitive wildlife areas at all.

Secondary interpretive locations: on the trains

Those on trains will be moving through the landscape at much faster speeds than those on the trail. The experience will be more like reading the headlines than detailed study of the landscape, but should invite exploration on the ground.

Secondary transit interpretive nodes will be characterized by the following approaches:

This kind of presentation prepares people to be better, more sensitive

users of the trail when they do venture out on foot or bicycle.

Occasionally, it may be possible to have a live interpretive program on the transit system. Transit riders might choose to ride in a certain car one day of the month to hear a presentation by an interpreter and to discuss what they are seeing out the window. This is similar to the live interpretation that happens in Alaska on ferryboats (that are part of the Alaska Maritime Highway) and on the Alaska Railroad. During less crowded times, school groups might ride the transit to see and discuss the landscape.

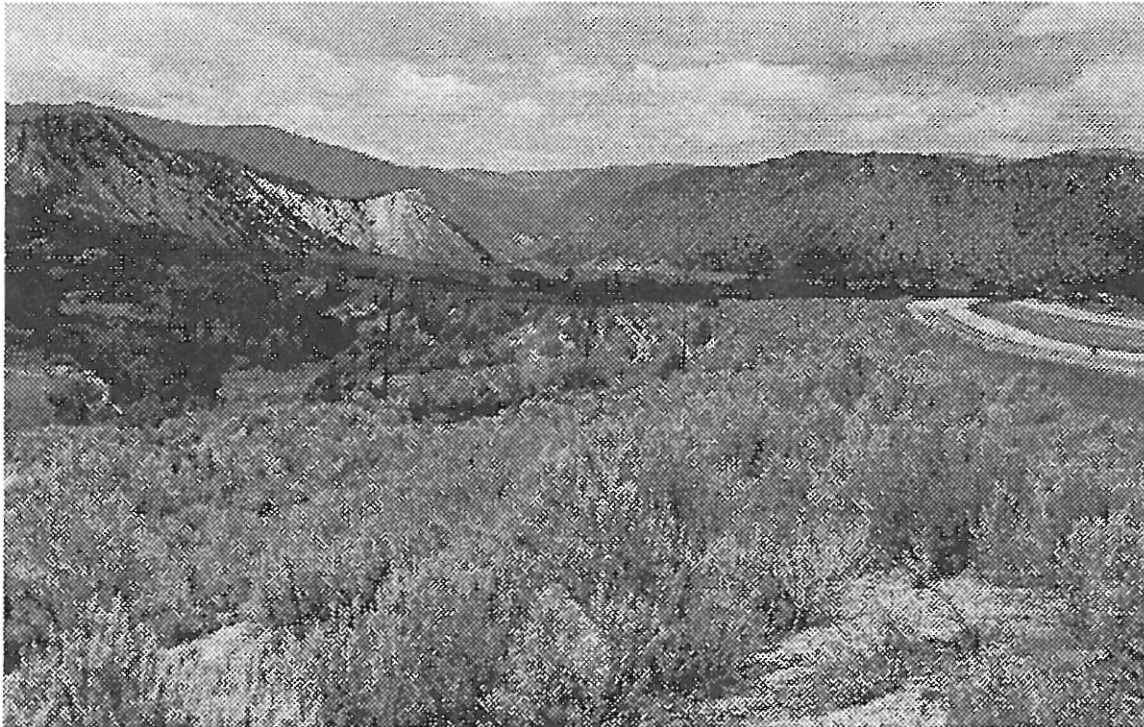
Secondary interpretive locations: on the Internet

A goal of interpretation in the valley should be to direct people who want it, to more detailed information. A cost-effective means of doing this is the Internet. A website could also report on current trail conditions and recent wildlife sightings.

Environmental Education Programs

Several schools in the area already study aspects of the Roaring Fork through programs such as RiverWatch and those provided by the Aspen Center for Environmental Studies and the Roaring Fork Conservancy. With the new interpretive effort many tie-ins could be explored for environmental education.

Even refining the interpretive approach presented in this document could be an educational opportunity for area students interested in developing the themes and carrying the process forward.



The Roaring Fork River and Highway 82 wind through the lower valley.

Next steps--implementation

This document is the beginning of an ongoing discussion of the nature and timing of interpretation and environmental education along the Roaring Fork River.

Important next steps include:

1. Further discussions among interested parties to refine the messages and approach.
2. Opportunities to identify those who want to play key roles in developing or implementing the interpretation/education plan.
3. Wider discussions both within and among the local communities.
4. Developing a means of coordinating the various groups involved.
5. Determining the steps that need to be done collectively and collaboratively and those that can be done locally.
6. Determining if the design and expense of interpretation at the transit stops can be included in construction of the transit system or if funds must be raised separately.
7. Developing a strategy that includes many partners to pursue funding from Great Outdoors Colorado, the Colorado Division of Wildlife, and other sources.
8. Determining if there is a need for temporary interpretation if some the transit stops or other improvements are delayed for a considerable length of time.

-7-
Contacts

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Aspen Center for Environmental Studies	Jim Kravitz, 970-925-5756
Aspen Historical Society	Lisa Hancock, 970-925-3721
Colorado Department of Transportation (Region 3 – Grand Junction)	Joe Temple, 303-757-9771
Colorado Department of Transportation, Bicycle and Pedestrian Program	Gay Page, 303-757-9982
Colorado Department of Transportation, Historic Considerations	Sally Pearce, 303-757-9786
Colorado Division of Wildlife	Kevin Wright, 970-947-2920
Environmental Artists (who shared their work during the planning process)	Andy Dufford, 303-477-3780 Robert Tully, 303-665-7133 Lynne Hull, 970-416-1881
Four Rivers Coalition (Roaring Fork School District, Colorado Mountain College, Science Outreach Center, and the Aspen Center for Environmental Studies)	Rob Dolan, 970-945-6558 x112
Great Outdoors Colorado	Debbie Pentz 303-863-7522
Pitkin County Open Space and Trails	Jen Pierce, 970-920-5232
Roaring Fork Conservancy	Jeanne Beaudry (Executive Director) Leigh Gillette (Education Director), 970-927-1290
Roaring Fork Railroad Holding Authority	Tom Newland Alice Hubbard, 970-704-9282
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Volunteers for Outdoor Colorado	303-715-1010
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Learning is the process of remembering what you are interested in.
- Richard Saul Wurman

Appendix

Recommended Buffer Distances from Raptors

The Colorado Division of Wildlife recommends that the following distances be maintained as buffers around nests of birds of prey (raptors). *This* information was provided by CDOW's Wildlife Resource Information System.

Species	Recommended Buffer
Owls	
Burrowing Owl	No human encroachment or disturbance for 1/16-mile radius from April 1 to July 31. Burrowing owls frequent prairie dog colonies, so buffer zones should be applied to colony perimeters.
Cavity Nesters (boreals, sawwhet, screech, flammulated)	1/2 mile
Great Horned Owl	1/8 mile
Long-eared Owl	1/2 mile
Falcons	
Peregrine Falcon	No surface occupancy within 1 mile of nest and associated alternate nests. No human encroachment within 1/2-mile of nest cliffs (or cliff complex) from March 15 to July 31.
Prairie Falcon	No surface occupancy within 1 mile of nest site. No human encroachment within 1 mile of nest from March 15 to July 31.
American Kestrel	Unknown.
Hawks and Eagles	
Bald Eagle	No surface occupancy within 1/2 mile of nest. No activity within 1/2-mile of nest from November 15 to July 30.
Golden Eagle	No human encroachment within 1 mile of nest and any alternate nests from February 1 to July 15. No surface occupancy within 1/2 mile of nest and alternate nests.
Osprey	No surface occupancy within 1/2 mile of nest. No human encroachment within 1/2 mile of nest from April 1 to August 31.
Ferruginous Hawk	No surface occupancy within 1/2 mile of nest and any alternate nests. No human encroachment within 1/2 mile of nest from February 1 to July 15.
Cooper's Hawk	1/4-mile
Red-tailed Hawk	No surface occupancy within 1/3 mile of nest and any alternate nests. No human encroachment within 1/3 mile of nest from March 1 to July 15.
Northern Harrier	1/4-mile
Swainson's Hawk	No surface occupancy within 1/2 mile of nest and any alternate nests. No human encroachment within 1/2 mile of nest from April 1 to July 15.
Goshawk	1/2 mile buffer around nest to protect integrity of

Appendix

	nesting and post fledgling effort. Nest site occupancy occurs from early March through late September.
Other Species/Miscellaneous	
Common Raven	Unknown
Turkey Vulture	1/4- mile
Accipiter species	1/4- mile
Scrape	1/4- mile
Stick Nest-large (> 3 feet)	1/2 - mile

Attachment IV

Access Control Plan 2005 Update

**Aspen Branch
of the
Denver & Rio Grande Western
Railroad Corridor**

ACCESS CONTROL PLAN

UPDATE



Prepared for the
Roaring Fork Transportation Authority



DECEMBER 2005

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V. APPENDICES

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I. OVERVIEW

This document contains the proposed Access Control Plan for the Roaring Fork Transportation Authority (RFTA)*. The plan area covers the Aspen Branch of the Denver & Rio Grande Western Railroad corridor between Glenwood Springs and Woody Creek, Colorado. The plan is intended to implement the planning requirements of the Great Outdoors Colorado Conservation Covenants, and contribute to the Comprehensive Plan for the Railroad Corridor.

The Access Control Plan describes the policies for managing Railroad Corridor Crossings. The document includes Railroad Corridor Access Control Plan Maps and State Highway 82 Access Control Plan Maps. It also includes memorandums with background information on Highway 82 crossings and existing railroad crossings.

The October 2005 Update of the Access Plan focuses on current conditions in the railroad corridor. While the overriding policy is to preserve the railroad corridor for the return of rail or other transit systems, the current plan emphasizes trail use. To the extent that trail use and transit use conflict, transit shall be the priority use of the Corridor.

* RFTA was previously the Roaring Fork Railroad Holding Authority (RFRHA)

II. POLICIES FOR MANAGING RAILROAD CORRIDOR CROSSINGS

1.0 Title.

This Policy shall officially be known, cited, and referred to as the Policy for Managing Crossings of the railroad corridor owned by the Roaring Fork Transportation Authority, hereinafter “this Policy.”

2.0 Purpose and Intent.

A. The purpose of this Policy is to:

1. Minimize the number of new road crossings over the railroad corridor.
2. Ensure the safe operation of existing railroad corridor crossings.
3. Consolidate existing railroad corridor crossings when practical.
4. Implement the Conservation Covenant objectives, by avoiding adverse impacts to the open space, recreation, scenic and wildlife values of the corridor, and adjacent lands that add to the scenic value and enjoyment of the corridor. When adverse impacts cannot be avoided, they shall be mitigated to the extent practicable.

B. This Policy is intended to promote stewardship of the railroad corridor by the Roaring Fork Transportation Authority (RFTA), and adjacent property owners, in cooperation with local governments.

3.0 Authority.

The Roaring Fork Transportation Authority Board of Directors, hereinafter “Board”, is vested with the authority to review, approve, conditionally approve and disapprove applications for construction, reconstruction, realignment, consolidation, and modification of railroad corridor crossings. The Board’s authority emanates from intergovernmental agreements, adopted pursuant to the Rural Transportation Authority Act, Section 43-4-601, et seq. Although the overriding policy is to preserve the corridor for the return of rail, or other transit systems, the current plan emphasizes trail use.

4.0 Jurisdiction.

This Policy applies to all railroad corridor crossings located within the Aspen branch of the Denver & Rio Grande Western Railroad Corridor (Railroad Corridor) owned by RFTA from County Road 18 in Woody Creek to the corridor’s intersection with the Union Pacific main line in Glenwood Springs.

5.0 Interpretation, Conflict, and Separability.

- A. ***Interpretation.*** In their interpretation and application, the provisions of this Policy shall be held to be the minimum requirements for the promotion of the public health, safety, and general welfare. This Policy shall be construed broadly to promote the purposes for which it is adopted.
- B. ***Conflict.***
1. ***Public Provisions.*** This Policy is not intended to interfere with, abrogate, or annul any other ordinance, rule or regulation, statute, or other provision of law except as provided in the Policy. Where any provision of this Policy imposes restrictions different from those imposed by any other provision of this Policy or any other ordinance, rule or regulation, or other provision of law, the provision which is more restrictive or imposes higher standards shall control.
 2. ***Private Provisions.*** This Policy is not intended to abrogate any easement, covenant or any other private agreement or restriction, provided that where the provisions of this Policy are more restrictive or impose higher standards or regulations than such easement, covenant, or other private agreement or restriction, the requirements of this Policy shall govern. Private provisions, when not in conflict with this Policy, shall be operative and supplemental to the Policy and determinations made under the Policy.
- C. ***Separability.*** If any part or provision of this Policy or the application of the Policy to any person or circumstance is adjudged invalid by any court of competent jurisdiction, the judgment shall be confined in its operation to the part, provision, or application directly involved in the controversy in which the judgment shall be rendered and it shall not affect or impair the validity of the remainder of the Policy or the application of them to other persons or circumstances. The Board hereby declares that it would have enacted the remainder of the Policy even without any such part, provision, or application which is judged to be invalid.

6.0 Amendments.

For the purposes of protecting the public health, safety, and general welfare, and consistent with the purpose and intent in Section 2.0, the Board may adopt amendments to this Policy in accordance with RFTA procedures, every five years or sooner if needed.

7.0 Permitted Crossings Defined.

A “crossing” means a railroad corridor crossing by a public street, private drive, trail, utility, or similar facility. “Permitted crossings” are those that are recognized by RFTA as allowed, based on the following three criteria:

- A. The crossing had a license agreement, easement, or pending contract effective at the time of RFTA’s (previously RFRHA) purchase of the railroad from Southern Pacific Transportation Company (List “A” on file with RFTA); or
- B. RFTA (previously RFRHA), CDOT, and GOCO approved the crossing as a “proposed new crossing” at the time of the railroad purchase (List “B” on file with RFTA); or
- C. RFTA has approved an access permit and the crossing has been constructed in accordance with the permit and a license has been issued by RFTA. This includes crossings initiated by RFTA. Section 17.0 (C) RFTA Review Process for Private Crossings.

8.0 New Crossings Defined.

A “new crossing” means a new railroad corridor crossing by a public street, private drive, trail, utility, or similar facility approved by RFTA or the PUC (as applicable), which did not exist prior to the effective date of this Policy, that is June 24, 1999.

9.0 Owner Defined.

“Owner” means the owner of real property or the contract purchaser of real property of record as shown on the current assessment roll in the office of the county assessor; or the holder of an easement. Owners may include public bodies, as in the case of a street right-of-way, or a private entity (e.g., private land owners and utility companies).

10.0 Responsibility for Crossings.

- A. **Public and Utility Crossings.** All public and utility crossings shall be maintained in good condition, and in a manner that does not conflict with trail or future transit operations. The owner(s) of a public street or utility crossing shall be responsible for maintaining and repairing their respective crossing(s), and obtaining required permits from the Colorado Public Utilities Commission (CPUC), RFTA and any other applicable permit authority (e.g., local government or CDOT) prior to commencing such work. The CPUC is the permit authority for public crossings, but RFTA may issue revocable licenses for public and utility crossings if mass transit is not operating on the corridor.
- B. **Private Crossings.** The owner of a private crossing shall be responsible for repair and maintenance of the private crossings. RFTA is the permit authority for all private crossings.

11.0 Design Standards for Up-Grading Existing Crossings.

All crossings shall meet the minimum design standards in subsections A through D, below. An owner may be required to upgrade an existing crossing that does not comply with the design standards when a subdivision or site development is proposed, or when the crossing itself is proposed to be improved, realigned, or reconstructed. RFTA shall coordinate with local jurisdictions and the CPUC to determine when improvements are required.

- A. **Grade Separated Crossings.** *(This section reserved)*
- B. **Public At-Grade Street and Highway Crossings.** All public at-grade street and highway crossings require improvements, constructed and maintained in conformance with the details, specifications and standards for the type of transit system in place, and subject to review and approval by the Colorado Public Utilities Commission (CPUC).
- C. **Private At-Grade Vehicle Crossings.** Private at-grade vehicular crossings may require safety improvements.
- D. **Trail Crossings.** Trail crossings of the railroad corridor shall comply with the Recreational Trails Plan.
- E. **Underground Utilities.** All existing underground utility crossings shall continue to be underground. Any above-ground utilities may continue to cross the railroad corridor above ground, but shall comply with the vertical clearance standards per the CPUC, as a minimum.

12.0 Consolidation of Crossings.

RFTA encourages consolidation of existing crossings whenever practicable. RFTA may require consolidation of private crossings (i.e., a private crossing with another private crossing; or a private crossing with a public crossing) when a new crossing is proposed adjacent to one or more existing crossings under the same ownership or control; or when an opportunity for consolidation exists through a land division, joint railroad/other transportation improvements, or proposed site development. Private crossings shall be consolidated when the criteria in subsections A through E, below, are met. (The criteria may also be used in recommending the consolidation of public crossings, subject to PUC approval.)

- A. **Site Feasibility.** Consolidation is feasible based on site topography, existing parcel configuration and use, right-of-way, and property ownership; or can be made feasible through reasonable requirements (e.g., lot line adjustments, dedication of right-of-way, easements, grading, or other improvements).
- B. **Out of Direction Travel.** The out-of-direction travel which would result is a reasonable trade-off for the safety benefit to be gained from the consolidation.
- C. **State Highway 82.** Consolidation would not adversely impact operation or safety of State Highway 82. Access consolidations that affect Highway 82 shall also be subject to review and approval by the issuing authority as defined in the State Highway Access Code (Volume 2, CCR 601-1).
- D. **Consistency with City and County Standards.** Access consolidations that require city or county land use approval, or require a street access permit from a local jurisdiction, shall also be subject to review and approval by the applicable local jurisdiction(s). See also, subsection C, above.
- E. **Consistency with Conservation Covenants.** Existing crossings shall be consolidated so long as the trail, open space, recreational, parks, and wildlife uses and values will not be impaired.
- F. **Permit Required.** The owner shall obtain a permit in accordance with Section 17.0.

13.0 Crossing Improvements and Maintenance (Existing Crossings)

- A. **Improvements.** It will be the responsibility of the owner to improve existing crossings either as part of a general transit system improvement initiated by RFTA, or by separate proceedings. RFTA shall review and approve the materials to be used and specifications for all construction, in accordance with this Policy. Improvements shall require a permit in accordance with Section 17.0.
- B. **Maintenance.** It is the duty of each owner to maintain their roadway approach in good repair. Maintenance shall include, but not be limited to, removing rocks, soil, vegetation and other material that may fall, slide, wash, or be placed onto crossing areas; and maintaining the railroad crossing free of other obstructions (e.g., snow storage, parked vehicles, equipment, etc.). RFTA retains the right to undertake supplemental maintenance, as necessary.
- C. Any construction will include the obligation to revegetate disturbed areas according to RFTA's Revegetation Policy, which is available through RFTA's website, www.rfta.com, or on file in the RFTA office.

14.0 Crossing Repair Permits.

RFTA shall issue Repair Permits upon receiving a written or verbal request from a private entity, public entity or utility company seeking to repair grade-crossings (i.e., roadways and rail platforms within RFTA right-of-way). The permit shall prescribe the kind of repair to be made, the material to be used, and specifications therefore. Any person desiring to construct or reconstruct a crossing shall first obtain a permit and license as prescribed in Section 17.0.

15.0 Closure of Crossings and Alternatives to Closure

RFTA shall have the authority, per existing license agreements and easements (as applicable), to close private crossings. In order to further the public health, safety, and welfare, RFTA will work cooperatively with property owners to identify options and alternatives to closure; e.g., crossing realignment, relocation, consolidation, grade separation, conditions on type of access, and similar measures, as appropriate. RFTA will also work cooperatively with the PUC and local governments to resolve conflicts related to public crossings.

16.0 Policy and Design Standards for New Crossings.

As a general policy, RFTA seeks to minimize the number of railroad corridor crossings to ensure the safe and efficient operation of the future transit system and to avoid adverse impacts to the open space, trail, recreational, parks and wildlife uses and values of the corridor. New crossings generally are prohibited, except that

they may be allowed for public street crossings when approved by the CPUC. New public crossings will be granted only if the landowner/entity will be financially responsible for providing safety improvements, possibly including grade separated crossings, should transit return. In special circumstances, private crossings may be approved by RFTA when property access cannot reasonably be provided by an existing permitted crossing or another route and the pertinent land use authority has approved the lot. Being exempt from subdivision regulation shall not automatically indicate an approved lot. Crossings may be improved either as part of a general railroad improvement initiated by RFTA, or by separate proceedings. RFTA shall review and approve the materials to be used and specifications for all construction, in accordance with this Policy.

- A. *Permit for Consolidation.* The applicant shall receive a permit for consolidating crossings, in accordance with Section 17.0. PUC approval is required for public crossings and RFTA approval is required for private crossings.
- B. *Restriction on New Crossings to Serve New Parcels or Lots.* No new at-grade crossings will be permitted to serve any new parcels or lots. "New" means the lot or parcel that was created (i.e., by plat or deed) after the effective date of this Policy. New at-grade crossings may be permitted to provide access to lots or parcels created prior to the effective date of this Policy if no other access is available.
- C. *Denial of Private Crossing.* RFTA retains the right to deny a private crossing request.

17.0 Permits for New Crossings and Consolidations.

When a private crossing is located within the RFTA railroad corridor, owners shall obtain permits from RFTA prior to commencing work on railroad corridor crossing improvements and consolidations. When the crossing is located within CDOT right-of-way, owners shall obtain permits from both CDOT and RFTA. When a public crossing is proposed, the owner shall obtain required permits from the CPUC unless transit is not operating in the rail corridor, in which case the applicant may apply for a license from RFTA. The following permit process applies only to RFTA permits:

- A. ***Applications.*** Permit applications for private crossing improvements and consolidations within RFTA right-of-way shall provide the following:
 - 1. Complete application form. RFTA shall keep a standard application form for crossing improvements and consolidations. The application form (available from RFTA offices) shall provide address and contact information for the owner and his/her contractor(s); contractor license/registration number(s); description of the proposed

improvements; construction schedule; proposed traffic control measures; and other pertinent information as deemed necessary by RFTA.

2. Application fee to cover the cost of processing the application. The fee schedule shall be kept on file at RFTA offices.
3. Site plan prepared by a qualified professional (e.g., engineer, surveyor, planner, landscape architect). The site plan shall be drawn to a scale of at least 1 inch equals 40 feet. It shall list materials to be used, and provide section details and construction specifications. Applications for crossing consolidation shall include two site plans: one for the proposed corridor crossing, and one for the corridor crossing(s) to be closed.
4. The RFTA Director of Trails or his/her designee shall be responsible for deeming an application complete when subsections one to three are met.

B. *Approval Criteria.* Permits for private corridor crossing improvements and consolidations shall comply with the following approval criteria:

1. All of the applicable standards of this policy;
2. The State Highway Access Code, as applicable;
3. Any applicable local government land use and access permit requirements (e.g., permit to construct in the public way);
4. Conservation Covenant requirements, including: avoidance of adverse impacts to the open space, recreational, parks, and wildlife uses and values of the railroad corridor crossing to the extent practicable. This shall be accomplished through careful consideration of alternative access alignments, consolidations, construction techniques, materials, and appropriate mitigation measures (e.g., erosion control, landscaping, screening, buffering, etc.).
5. The applicant agrees to enter into a license agreement to memorialize the crossing.

The RFTA Director of trails shall prepare an administrative determination that approves or denies the application for a private corridor crossing.

C. *RFTA Review Process for Private Crossings.* The following review procedures shall apply to applications for private corridor crossings (i.e., new crossings and consolidations). For public crossing application procedures, please refer to the PUC.

1. The RFTA Director of Trails shall review the applications submitted as per Section 17.0 (A) based on the approval criteria in Section 17.0 (B).
2. The RFTA Director of Trails shall prepare an administrative determination that approves or denies an application for a private corridor crossing.
3. The applicant may appeal the decision of the RFTA Director of Trails by filing an appeal of the administrative determination in writing, to the Board.
4. If the Board decides to address the ruling, the Board will inform the appellant of a hearing to be scheduled at the next Board meeting. (The Board may refuse to make any exception.)
5. In order for hearing standards to go outside of the Plan (exceptions), the Standards are as follows:
 - a. The proposed crossing will protect the railroad corridor for future transit;
 - b. The proposed crossing will not interfere with conservation or trails values; and
 - c. The proposed crossing is a unique situation and will cause extreme hardship if not approved. (NOTE: Extreme hardship means more than economic loss or diminution of value).
 - d. The landowner/entity will be financially responsible for all future upgrades of the crossing to meet the requirements of future transit systems in the corridor.
6. If the ruling on the crossing will set a precedent, the Board must attempt to amend the Access Plan so that the ruling is evenly
7. The Access Plan may be revised every five years or sooner if circumstances require.

18.0 Adjustments to Standards.

The RFTA Board may approve adjustments to this Policy upon finding that an adjustment is necessary to protect the public health, safety or welfare. "Adjustment"

means a modification, waiver, or exemption to a standard or procedure. RFTA shall prepare a notice when adjustments are made. The notice shall contain findings of fact, and be kept on file at RFTA offices.

19.0 Coordination of Development Review with Local Jurisdictions

It is the policy of RFTA to participate in the review of planning, zoning, and development applications, as necessary, to safeguard the interests of the railroad. RFTA will coordinate with property owners, local governments, CDOT, and other affected agencies, in order to identify railroad corridor crossing requirements at the earliest possible stage in the development review process (i.e., preferably before a formal application has been submitted to a local jurisdiction). Review by RFTA staff of local planning, zoning, and development proposals does not imply approval of RFTA permits or local land use applications.

Attachment V

West Glenwood Spring to Aspen CIS
Executive Summary

EXECUTIVE SUMMARY

A. INTRODUCTION

1. What is the CIS and how will it be used by RFTA?

The Corridor Investment Study (CIS) is a long-range planning tool created by the Roaring Fork Transportation Authority (RFTA) in consultation with its member jurisdictions, the Colorado Department of Transportation, (CDOT), the Federal Transit Administration (FTA), and the Federal Highway Administration (FHWA). The CIS is intended to compare long-range transportation alternatives in the RFTA service area through the year 2025 and provide useful information for long-range decision-making. In comparing the alternative futures, simplifying assumptions were made regarding other transportation initiatives in the RFTA service area. These assumptions are the same for all alternatives. Once RFTA selects a preferred alternative for its long-range transit plan, RFTA will work with its member jurisdictions and its partners at CDOT, FTA, and FHWA to develop projects and programs that are consistent with the long-range vision and respectful of the desires of RFTA communities and state and federal policies.

2. How does the CIS relate to the Entrance to Aspen?

The CIS, which commenced in 1998, assumes the findings of the 1998 *State Highway 82 Entrance to Aspen Record of Decision (Entrance to Aspen ROD)* for the purpose of comparing long-range alternatives for the future of transit in the RFTA service area. The findings of the ROD are applied the same way for all alternatives in this comparative process. The citizens of Aspen and Pitkin County have expressed their desires regarding the Entrance to Aspen in many advisory and binding votes over the years. RFTA recognizes that since the *Entrance to Aspen ROD* was released in 1998, these votes have indicated a preference by the majority of voters to retain the existing alignment of the Highway.

Once RFTA selects a preferred alternative for its long-range transit plan, RFTA will work with member jurisdictions and its partners at CDOT, FTA, and FHWA to develop projects and programs that support the long-range vision of improved transit, and are respectful of the desires of RFTA communities. This will include working with the City of Aspen, Pitkin County, and CDOT to develop projects and programs within the Entrance to Aspen area that are consistent with the stated desires of the community. All references to the *Entrance to Aspen ROD* should be considered in this context.

3. Project Background

The New York Times, in an article titled “Five commutes that make you feel better about yours,” listed the Roaring Fork Valley commute as one of the worst in the country (October 20, 1999). Even

with current Highway 82 investments, traffic congestion on the completed four-lane highway will reach Level of Service (LOS) F between 2009 and 2015, according to RFTA and CDOT studies.

The region's growing traffic congestion cannot be solved with just one mode of transportation or by highway expansions alone. Providing transportation choices is a critical part of the solution. The region's multi-modal approach started with the formation of the Roaring Fork Transit Agency in 1983. Since then, transit ridership has reached almost four million annually, and the transit system has become the state's second largest.

In 1997, with assistance from the Colorado Department of Transportation and Great Outdoors Colorado, Valley jurisdictions, joining together as the Roaring Fork Railroad Holding Authority (RFRHA), purchased the Denver and Rio Grande Western Rail line between Glenwood Springs and Aspen to preserve a Valley-wide corridor for transit and trail development. Most recently, in November 2000, Valley residents in seven jurisdictions approved the formation and funding of the Roaring Fork Transportation Authority (RFTA), the state's first Rural Transportation Authority, based on the Colorado Rural Transportation Authority Act passed by the Colorado legislature in 1997. One result of the November 2000 election was the merger of the pre-existing RFRHA into RFTA, which assumed all of RFRHA's responsibilities.

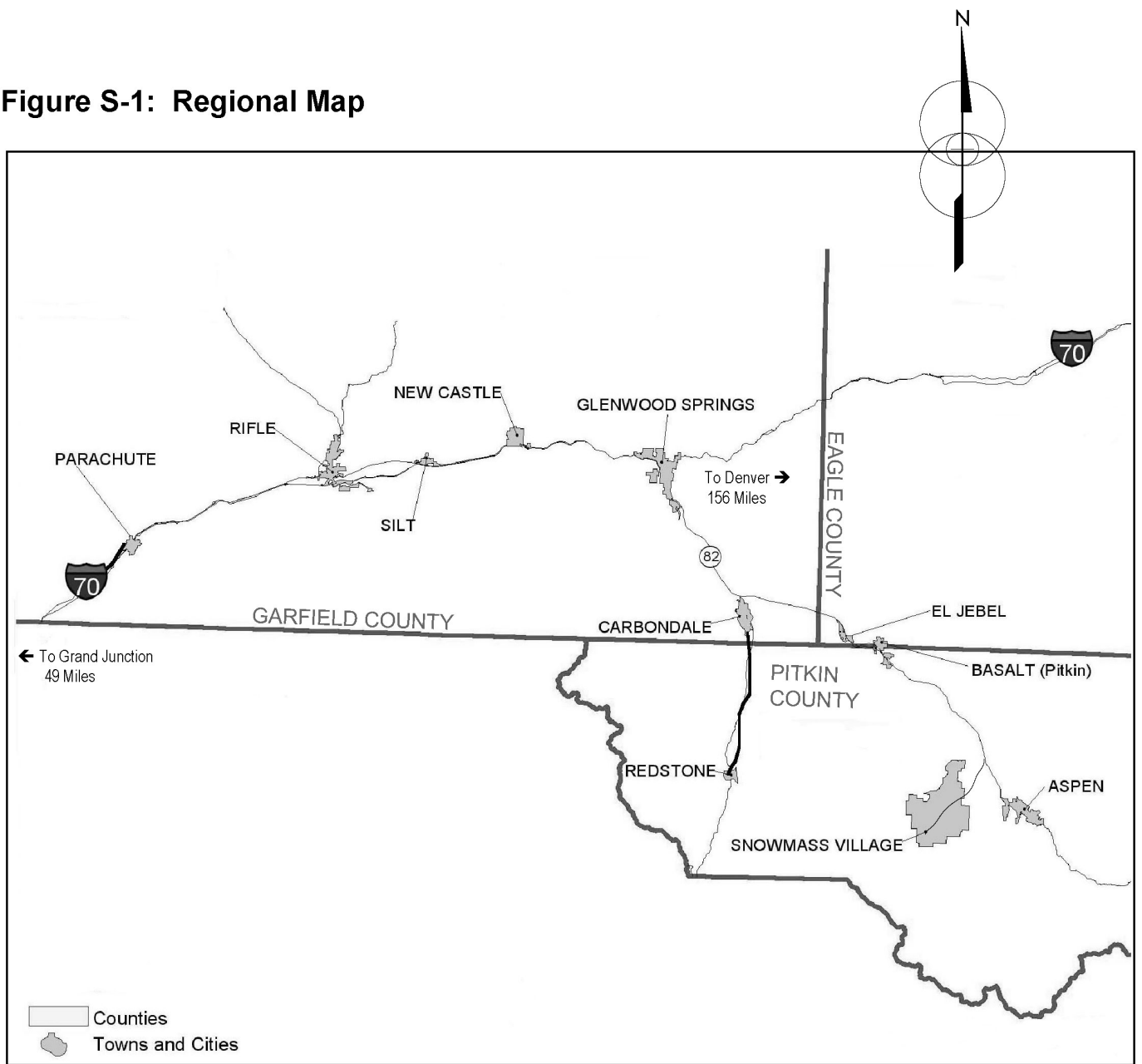
RFTA has the directive to plan and expand mass transit and build a regional trail for both commuter and recreational use. It is also responsible for the completion of the *West Glenwood Springs to Aspen Corridor Investment Study* (CIS), evaluating the region's long-term transportation alternatives, including rail on the Rio Grande Right-of-Way. From 1998 to spring of 2003, the CIS was conducted as a National Environmental Policy Act (NEPA) Environmental Impact Statement process. During the analysis of the alternatives it became apparent that an alternative based upon rail technology would not be available to RFTA within the planning horizon of the project due to funding constraints and that an EIS was inappropriate for the remaining alternatives. RFTA determined through discussions with our partners at the FTA, FHWA, and CDOT that the CIS would be released as a local planning document to provide the local community a comparative analysis of bus and rail technologies, as well as a No Action alternative, to confirm local support for the transit project, and to seek input from the public as the project is refined. While not required, this CIS follows the format of a NEPA-type document.

Many of the options identified early in the CIS process were screened from further consideration using a tiered approach that incorporated a reality check screening and a fatal flaw screening. The result of this process was the development and refinement of the three alternatives for comparative analysis and ultimately the selection of a preferred alternative by the community and the RFTA Board:

- No Action/Committed Projects Alternative (No Action/Committed Projects)
- Bus Rapid Transit (BRT) Alternatives + Trail
 - BRT-Bus sub-alternative uses dedicated busway from Buttermilk to Aspen
 - BRT-LRT sub-alternative uses light rail transit (LRT) from Buttermilk to Aspen
- Rail + Trail

This Executive Summary of the CIS is generally a stand-alone report. However, due to the complexity of the project, references to the expanded discussion in the full document are included in each section below.

Figure S-1: Regional Map



B. PURPOSE AND NEED FOR THE PROPOSED ACTION

- See **Chapter I: Purpose and Need** for additional information.

The purpose of the CIS process is to develop a regional transportation solution that addresses the mobility needs and respects the quality-of-life concerns of the citizens residing within the Project Corridor. The Project Corridor is located in the Roaring Fork Valley of Western Colorado between West Glenwood Springs and Aspen/Snowmass. It extends through Garfield, Eagle, and Pitkin Counties. In addition, communities along Interstate 70 west and east of Glenwood Springs are part of the Corridor “travelshed.” The distance from Glenwood Springs to downtown Aspen along Highway 82 is approximately 66.5 kilometers (41.3 miles) (see Figure S-1).

This CIS was conducted for the Roaring Fork Transportation Authority (RFTA). The Federal Transit Administration (FTA), the Federal Highway Administration (FHWA), and the Colorado Department of Transportation (CDOT) advised RFTA during the CIS process and will act as partners with RFTA as the region’s preferred transportation plan is developed and implemented.

1. Purpose and Need

1.1 Project Corridor Congestion

Highway 82 is the state’s most congested rural highway, with a summer average daily traffic (ADT) volume of over 28,000 vehicles in some locations. Highway congestion within the Project Corridor threatens the economic vitality, environmental health, and character of the larger region.

The location of activity centers at either end of this narrow corridor, with only one through route, results in a commuter pattern similar to highway corridors between the suburbs and the central core city in many metropolitan areas. Commuter traffic flows eastbound on Highway 82 in the morning and westbound on Highway 82 in the evening. Because so many workers live west of Glenwood Springs in the communities of New Castle, Silt, and Rifle, there is a constant flow of traffic between the I-70 corridor and Highway 82, adding substantially to congestion at peak hours.

Within the Project Corridor, Highway 82 operates at LOS C or worse for much of the day during peak summer and winter seasons. Segments in Glenwood Springs and Upvalley from Basalt operate at LOS E or worse during the peak hour. The maximum capacities for several sections of Highway 82 are shown in Table S-1 and are compared with design hour volumes (30th highest peak hour traffic count) used by CDOT for highway design purposes.

Figure S-2: Project Corridor

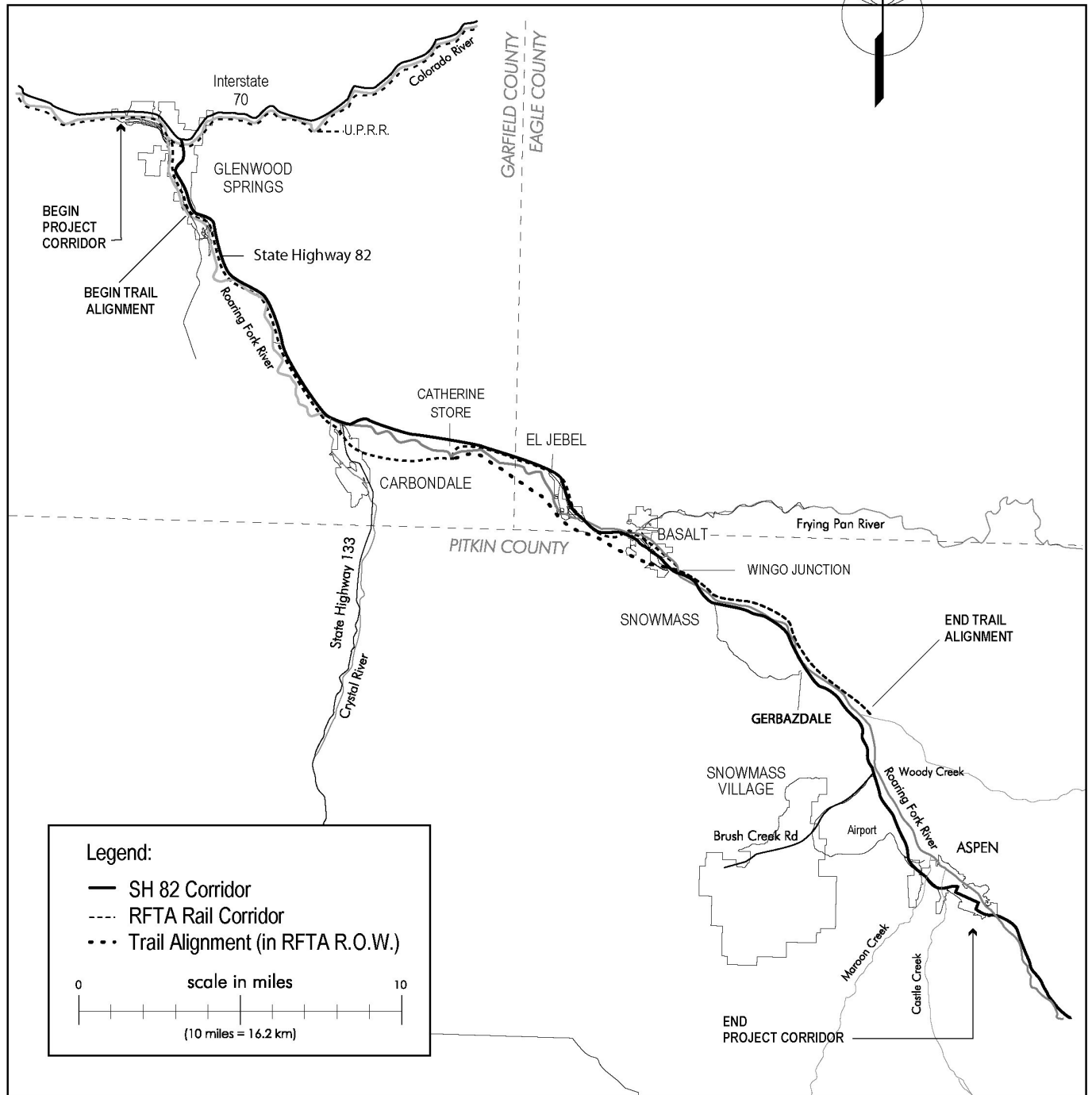
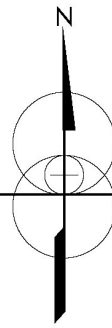


Table S-1
Highway 82 Existing Level of Service
 2001 Design Hour Volumes

Location	Design Hour Volume	% No-Passing Zones	Truck Percentage	Maximum Capacity ¹	Level of Service
10 th St. in Glenwood Springs	3,294	0%	2.84%	2,280	F
Highway 133 intersection	1,820	0%	2.98%	2,280	C/D
El Jebel Road	2,083	0%	2.04%	2,530	C/D
Basalt	1,798	0%	2.30%	2,530	C
Snowmass Canyon	2,018	65%	2.39%	1,600	F
Pitkin County Airport	1,923	65%	2.24%	2,420	E
Cemetery Lane in Aspen	2,633	65%	1.76%	2,420	F

¹ Maximum capacity is the hourly flow rate under ideal conditions of LOS E. The definition of capacity assumes good weather and pavement conditions exist. At capacity, no more vehicles can reasonably be expected to traverse a section of roadway during the given time under prevailing roadway, traffic, and control conditions.

1.2 Committed Transportation Projects Will Not Meet Future Needs

Two significant transportation projects in the Project Corridor have federal approval. Even with the completion of these projects, the forecast transportation needs for the West Glenwood Springs to Aspen Project Corridor will not be met. These projects also make up a large portion of the No Action/Committed Projects Alternative addressed in this CIS. Each is briefly described below.

State Highway 82, East of Basalt to Buttermilk Ski Area Project (Project No. STR 0821-029, STIP No. 4021). In October of 1993 FHWA, in conjunction with CDOT, released the *State Highway 82 East of Basalt to Buttermilk Ski Area Final Environmental Impact Statement (SH 82 Basalt to Buttermilk FEIS)*. The Record of Decision (*Basalt to Buttermilk ROD*) for this project was released in December 1993. The Selected Alternative includes widening Highway 82 from two to four lanes from just east of Basalt to the Buttermilk Ski Area, with two of the four lanes between Basalt and the Buttermilk Ski Area operating as bus/high occupancy vehicle (HOV) lanes during peak travel periods. Construction of this project will be completed by 2005.

Travel demand forecasts conducted for the *SH 82 Basalt to Buttermilk EIS* and for this CIS predict that, without investment in an improved transit system, the new four-lane highway will approach peak-hour gridlock at critical locations as early as the year 2009. CDOT has indicated that funding does not exist to widen the highway to six lanes, even if this were desirable.

State Highway 82 Entrance to Aspen Project (Project No. NH 0821-055, STIP No. 4021). The Selected Alternative described in 1998 in the *Entrance to Aspen ROD* for this project is a combination of highway improvements, transit improvements, and a transportation management program. The highway element consists of a two-lane divided highway that generally follows the existing alignment from Buttermilk Ski Area to 7th and Main Street in Aspen, except across the Marolt-Thomas property.

The Selected Alternative for the Entrance to Aspen Project provides an LRT system from the Aspen Maintenance Facility near the Pitkin County Airport to Rubey Park in downtown Aspen. The LRT alignment is generally parallel to and south of the highway alignment. In the event that Aspen and Pitkin County voters do not approve funding for the LRT system, the *Entrance to Aspen ROD*

provides for an interim busway parallel to the highway alignment from Buttermilk to 7th and Main Street.

As a part of the *Entrance to Aspen ROD*, the City of Aspen has agreed to undertake an incremental Transportation Management (TM) program designed to maintain the volume of traffic entering Aspen at 1994 levels. The program includes progressively more aggressive disincentives to automobile use and incentives for transit use in response to measured traffic levels. The program continues to be successful to date.

The Entrance to Aspen project does not address the need to provide service throughout the valley from Glenwood Springs to Snowmass Village, the Airport, and into Aspen, nor does it address travel demand between 2015 and 2025 into downtown Aspen.

2. Opportunities

The linear nature of settlement in the Roaring Fork Valley is ideally suited for transit-oriented development. Historically, Valley communities were located to serve the resource-based economy and were in turn served by the Denver & Rio Grande Railroad. The small block sizes, street grids, storefronts, and mix of housing and commercial activity, all within close proximity, are legacies of the Valley's railroad era. This historic integration of land use and transportation gave today's residents the pedestrian-friendly communities they cherish and hope to preserve and enhance. Additional investment in transit, providing enhanced access within and between town centers, will provide an incentive for investment in the Project Corridor's incorporated areas. This investment, coupled with the transit-supportive land use policies of the local governments within the RFTA service area, should lead to more compact and efficient land use patterns.

The opportunity for an expanded solution to corridor transportation challenges arose when the portion of the Aspen Branch of the Denver and Rio Grande Western Railroad (D&RGW) that remained between Glenwood Springs and Woody Creek Junction (outside of Aspen) became available for purchase as the result of the merger of the Southern Pacific and Union Pacific Railroads. On June 30, 1997, the D&RGW right-of-way corridor was purchased for \$8.5 million. The Roaring Fork Railroad Holding Authority (RFRHA) was established to purchase and manage the corridor. The purchase of this right-of-way presented an opportunity to explore both transportation and recreation solutions to Highway 82 congestion and trail connectivity challenges in the Roaring Fork Valley.

As a part of the agreement to purchase the right-of-way in 1997, it was required that a comprehensive plan be prepared that would determine the future uses of the corridor. *A Comprehensive Plan for the Aspen Branch of the Denver and Rio Grande Western Railroad Corridor* was submitted to the RFRHA Board and accepted on November 3, 1999. The plan included the following specific elements:

- Location of a permanent, continuous public recreation trail running along the entire length of the RFRHA right-of-way. This proposed trail will be called the Rio Grande Trail.
- Description of structures and facilities necessary to place and operate a rail transportation system utilizing the RFRHA right-of-way.

It was recognized early in the process that another type of public transportation system might be substituted for, or phased in prior to, a rail transportation system if such a system better met the needs

of the Roaring Fork Valley through the year 2025. A Corridor Investment Study (CIS) was initiated by RFRHA to identify the best public transportation solution for the Roaring Fork Valley.

When the Roaring Fork Transportation Authority (RFTA) was approved by voters as a Rural Transportation Authority under Colorado law in November 2000, it absorbed the responsibilities of RFRHA. References in the current document to the RFTA right-of-way refer to the RFRHA right-of-way that was acquired as noted above.

The West Glenwood Springs to Aspen Project is included in the 2020 Statewide Transportation Plan adopted by the State Highway Commission on November 16, 2000. More recently, the CDOT Intermountain Transportation Planning Region has ranked the West Glenwood Springs to Aspen Project as its top priority project in the ongoing CDOT 2003 Strategic Corridor Program. In April 2003 the CDOT Transportation Commission identified the RFTA BRT project as a high priority transit project in the state.

3. Objectives

The nine project objectives described below are the foundation of the alternatives screening and development process, which resulted in the alternatives evaluated in this CIS. These objectives address the purpose and need for this project and support the development of an improved and safe transportation and recreation system while avoiding or minimizing adverse environmental impacts.

1. **Affordability and Economic Viability.** Develop a system that is financially realistic in construction, operation, and maintenance costs with respect to current and expected funding levels and programs.
2. **Community-based Planning.** Provide a system that fits the character of the Roaring Fork and Colorado River Valley communities and is responsive to local community-based planning efforts, including directing growth to appropriate locations.
3. **Environmental Soundness.** Develop a system that avoids, minimizes, and mitigates adverse environmental, social, and economic impacts.
4. **Flexibility.** Provide a system that is flexible in operation and in future transportation options and upgrades.
5. **Increased Transportation Choices.** Provide a multimodal system, with various mode options, that meets the demand of the forecasted person trips.
6. **Integrated Approach to Transportation Planning.** Provide a complete integrated transportation and recreation system.
7. **Livability.** Provide a system that enhances the quality of life for residents and visitors, including linking communities within the Roaring Fork and Colorado River Valleys.
8. **Safety.** Provide a safe transportation and recreation system, including minimizing conflict between various transportation components.

9. **Trails and Recreational Resources.** Provide a system that meets the trail and recreational access demand of the Project Corridor.

4. Transportation Problems the Proposed Build Alternatives Will Address

1. **Highway 82 congestion will continue even after investment in a four-lane platform.** Completion of the East of Basalt to Buttermilk Ski Area and Entrance to Aspen projects will represent an investment of almost \$500 million in safety and capacity improvements to Highway 82. Travel demand forecasts predict that, without additional investment in transit, the highway could reach peak-hour capacity as early as 2009, and certainly within the planning horizon of the CIS. Additional investment in transit, coupled with transit-supportive land use policies, would help limit the growth of automobile travel in the Project Corridor.
2. **Additional Highway 82 expansion is constrained by cost and environment.** Highway 82 is located in a steep, narrow mountain valley proximate to the Roaring Fork River. The construction of a four-lane highway platform through portions of the corridor, particularly the Snowmass Canyon and Shale Bluffs areas, has been accomplished at costs exceeding \$30 million per highway mile. Approximately 30 years of planning and environmental analysis preceded the construction. Given the financial and environmental constraints, it is unlikely that additional lanes will be added to Highway 82 during the planning horizon of the CIS. Additional investment in transit service is the most cost-effective means of adding transportation capacity to existing facilities in the Project Corridor.
3. **Lack of mode choice has broad economic impacts on the region and on working families.** Lack of affordable housing has become a regional problem, and in spite of a variety of very aggressive affordable housing programs, a majority of workers in each community must commute from homes further north and west. Aspen, with an average home price in excess of \$2 million, houses less than 49 percent of its workforce. Glenwood Springs, with an average home price of \$305,000, imports 55 percent of its workers from western Garfield County. The working families that provide this labor force are dependent upon the automobile for transportation from the places they can afford to live to their places of employment. This auto dependency forces many families to maintain multiple automobiles, spending a third or more of their income on automobile and commuting costs. An auto-dependent environment forces these families to forego other investments that would enhance their quality of life. Additional investment in transit would provide a viable alternative to the automobile, reduce the percentage of their household budgets allocated to transportation, and provide the means for investment in housing, education, and recreation.
4. **Growth in transit demand has exhausted the capabilities of traditional bus transit service and infrastructure.** RFTA was originally organized in 1983 to provide local transit service to Aspen and Pitkin County. The agency has grown incrementally since that time to provide regional service to three counties and eight incorporated communities in a 70-mile corridor. A significant investment in transit infrastructure – park-and-ride lots, transit stations, queue bypass lanes, maintenance facilities, information systems, vehicles, and so forth – is required to create the efficiency, quality, and speed needed to keep pace with transit demand. Investment in these facilities would also provide RFTA management the resources needed to consolidate routes and stops, minimize dead-heading of vehicles, and take advantage of the efficiencies available through the use of intelligent transportation system (ITS) technology.

C. PUBLIC INVOLVEMENT

■ See **Chapter IX: Public Involvement** for additional discussion.

The goal of the public involvement process was to identify public issues and priorities at the start, and to provide an opportunity for citizens to participate in resolution of those issues throughout the course of study. For that reason, citizens and local elected officials were involved in establishing project objectives, developing measures for screening alternatives, and assessing the strength of alternatives against the project objectives and measures. The public involvement process allowed for multiple forms of input and addressing new issues as they arose.

Specific groups that participated on an ongoing basis included a staff resource group, four Citizen Task Forces (CTFs) organized by geographic region, a Regional Citizen Task Force (RTF), a Rio Grande Trail Task Force, Policy Committee, RFRHA Board, RFTA Board and local elected boards.

In addition to the efforts outlined above, the public involvement program also included the following techniques:

- Scoping meetings (five community meetings and an agency meeting)
- Open house public meetings and workshops (ten open houses and five workshops)
- Focus group meetings with property owners along the corridor
- City Council and County Commission briefings
- Slide presentations to discuss with community, civic, and business groups
- Hispanic/Latino outreach
 - A Latino outreach survey, door-to-door canvassing in Hispanic/Latino neighborhoods, and an open house specifically for Hispanic/Latino residents in the region
 - Study Team members and interpreters riding on buses to discuss transit with Hispanic/Latino riders
 - Spanish-speaking interpreters on hand at public open houses
- Newspaper inserts and periodic newsletters
- Issue briefs and fact sheets
- Weekly informational columns in valley newspapers
- Ongoing media coverage through numerous local papers, Grass Roots TV (public access), and local radio stations
- One-on-one meetings and e-mail correspondence with interested citizens and organizations
- A regional public opinion survey
- Transit-oriented community design workshops to discuss station location options and integration with local land use plans
- Rio Grande Trail plan open houses

D. SCREENING PROCESS SUMMARY

- See **Chapter II: Alternatives, B. Screening and Selection Process** for additional discussion.

Many of the alternatives identified early in the *Corridor Investment Study* process were screened from further consideration using a tiered approach that incorporated a reality check screening, a fatal flaw screening, and a comparative screening. The screening process resulted in the three alternatives analyzed in detail in the CIS:

- No Action/Committed Projects Alternative
- Bus Rapid Transit (BRT) Alternative + Trail
 - BRT-Bus, using dedicated busway from Buttermilk to Aspen (BRT-Bus) *or*
 - BRT-LRT, using light rail transit (LRT) from Buttermilk to Aspen (BRT-LRT)
- Rail Alternative + Trail

Each of the Build alternatives includes the construction of a trail in the RFTA right-of-way. This proposed “Rio Grande Trail” begins at the terminus of the Glenwood Springs River Trail at 23rd Street in Glenwood Springs. It ends 51.5 kilometers (32 miles) east, where it connects to the end of the existing Rio Grande Trail at Woody Creek. The existing Rio Grande Trail provides a connection into Aspen.

1. Screening Process

Four CTFs were established in the Project Corridor. The purpose of these groups was to involve, gather input from, and solicit ideas from Valley residents, and provide recommendations to the RFRHA Policy Committee. The RFRHA Policy Committee, appointed by the RFRHA Board, was made up of a broad range of political and agency representatives from throughout the Project Corridor, and served as the policy-making body for the public involvement process. A total of 92 CTF meetings were held between January 19, 1998 and October 6, 1999. The screening process applied progressively more demanding criteria to a range of potential options through a series of three screening levels: Reality Check, Fatal Flaw and Comparative. At each screening level, options that did not meet the respective criteria were eliminated from further study.

1.1 First Level: Reality Check Screening

The Reality Check Screening was intended to eliminate options that are clearly unrealistic, inappropriate, or unreasonable by applying common knowledge. This screening was qualitative, based on existing data and judgment of the CTF members, the Study Team, and the RFRHA Policy Committee. The options that were eliminated at this level had no realistic chance of being implemented because of physical constraints, funding, public opposition, or technology limitations.

1.2 Second Level: Fatal Flaw Screening

Options that survived the Reality Check Screening continued to the Fatal Flaw Screening level. This screening eliminated options that did not meet one or more of the project objectives as identified and defined by the CTFs and the RFRHA Policy Committee. Screening at this level was a collaborative process that included input from the local communities and other interests. Fatal flaw criteria were developed through the public process based upon the project objectives noted in **Section A. 3** above.

1.3 Third Level: Comparative Screening

The remaining options from each category (i.e. technology, propulsion, station location, and alignment) were combined to form alternatives. These alternatives continued to the Comparative Screening level. This screening eliminated alternatives that, although they appeared to meet the project objectives, did not compare favorably to other available alternatives. Alternatives evaluated at this level underwent a planning-level analysis of key environmental parameters and issues.

2. Options Considered

At each screening level, options that did not meet the respective criteria were eliminated from further study. To simplify the task, the options were categorized into four types:

- Technology
- Propulsion
- Station Location
- Alignment

2.1 Technology

A total of 46 technology alternatives were developed through the public and agency scoping meetings, the CTFs, and Policy Committee meetings. Examples of technology options ranged from dog sleds to airplanes and automobiles to a busway and heavy rail. Two technologies were carried to the end of the screening: self-propelled buses and rail vehicles.

2.2 Propulsion Options

A total of 19 propulsion options were developed. These options were combined with the technology options to create different mode variations. A total of eight propulsion options were retained for a final decision on propulsion to be made in preliminary engineering:

- Diesel
- Gasoline
- Hydrogen internal combustion
- Electric (battery)
- Electric (overhead catenary)
- Electric (hybrid)
- Liquid propane gas
- Natural Gas

2.3 Transit Station Location Options

A total of 16 potential transit station locations were developed. These stations could serve numerous combinations of alignment, technology, and propulsion options. Nine station location options were retained and are included in the Build alternatives that are evaluated in this CIS:

- West Glenwood Springs
- Downtown Glenwood Springs
- Carbondale at Highway 133
- Downtown Carbondale
- El Jebel (Willits or El Jebel Road)
- Basalt
- Brush Creek Road
- Pitkin County Airport
- Downtown Aspen

The *Glenwood Springs to Aspen/Pitkin County Airport Corridor Investment Study, Transit Oriented Community Design Report* (Otak, 2000) determined that 60 percent of the employment and 42 percent of the housing in the Project Corridor is within one-half mile of these nine stations. The BRT alternative added stations at South Glenwood Springs and near the Colorado Mountain College campus to enhance service to these areas.

2.4 Alignment Options

Five rail alignment options were developed through the public and agency scoping meetings, the CTFs, and Policy Committee meetings. These options could be combined with the technology options and potential station locations to create a variety of alternatives. All alignments provided connecting service to Aspen via the LRT transfer points at Brush Creek Road or the Pitkin County Airport. Alignment Alternative C was retained for detailed analysis in this CIS.

3. Conclusion of Screening Process

In November 2000, voters in Aspen, Snowmass Village, Basalt, Carbondale, Glenwood Springs, Pitkin County, and Eagle County voted to approve the formation and funding of the Roaring Fork Transportation Authority (RFTA) as a Rural Transportation Authority under Colorado law. Responsibility for the CIS shifted from RFRHA to RFTA as one result of the RFTA Intergovernmental Agreement and public vote.

After discussion with FTA, FHWA, and CDOT staff, and public outreach including meetings with the CTF members, presentations to local Boards and Commissions, and Open Houses in Glenwood Springs, Carbondale, Basalt, and Aspen, the Study Team recommended that RFTA include a Bus Rapid Transit (BRT) Alternative in the CIS. The BRT Alternative would be developed based upon the analysis conducted earlier in the screening process for the “Improved Bus/TSM (Transportation System Management)” Alternative. The Study Team further recommended that the CIS evaluate a No Action/Committed Projects Alternative, a BRT Alternative, and a Rail Alternative without designating any single alternative as “Locally Preferred.” The RFTA Board, in its Resolution 2002-05, concurred with these recommendations.

The alternatives described in subsequent sections of this document make two types of provisions for transit:

- Both the No Action/Committed Projects and BRT alternatives provide for the use of self-propelled buses on the existing Highway 82 corridor. The BRT system proposed for the Project Corridor would operate in general travel lanes with bus signal preference and preemption between Glenwood Springs and Basalt and in peak-hour HOV lanes between Basalt and Aspen. The BRT Alternative combines intelligent transportation systems technology, priority for transit, cleaner and quieter vehicles, rapid and convenient fare collection, and integration with local land use policy.
- The Rail Alternative provides for rail vehicles utilizing portions of the existing RFTA right-of-way and portions of the Highway 82 corridor (Alignment C) in addition to self-propelled buses serving a feeder function for the mainline rail alignment.

E. CIS ALTERNATIVES

■ See Chapter II: Alternatives, Section C. Definition of Alternatives for additional discussion.

Table S-2 provides a summary and comparison of alternative physical characteristics: alignments, station locations, park-and-ride facilities, and proposed vehicles. Figure S-2 shows the Rail alignment.

Table S-2
Comparison of CIS Alternatives – Physical Characteristics

ALIGNMENT			
No Action/Committed Projects Alternative	BRT-Bus Alternative	BRT-LRT Alternative	Rail Alternative
<ul style="list-style-type: none"> • Four general-purpose lanes Glenwood Springs to Basalt • Two general-purpose lanes and two peak-hour HOV lanes Basalt to Buttermilk • Two lane parkway from Buttermilk to 7th and Main • Light Rail Transit from Buttermilk to Rubey Park or Busway from Buttermilk to 7th and Main • Four-Mile Connection in South Glenwood Springs • New signals at 7th, 5th, 3rd, and Garmisch • Bike and pedestrian improvements per Basalt to Buttermilk and Entrance to Aspen RODs 	<ul style="list-style-type: none"> • Includes No Action/Committed Projects with Entrance to Aspen Busway plus: • Traffic signal modification for transit priority • Additional Remote Traffic Microwave Sensor on Highway 82 • Incident Management Program • Variable Message Sign System • Wildlife Warning Reflector System • Video surveillance to monitor traffic conditions • Queue Bypass Lanes for buses 	<ul style="list-style-type: none"> Includes No Action/Committed Projects with Entrance to Aspen Light Rail plus: • Traffic signal modification for transit priority • Additional Remote Traffic Microwave Sensor on Highway 82 • Incident Management Program • Variable Message Sign System • Wildlife Warning Reflector System • Video surveillance to monitor traffic conditions • Queue Bypass Lanes for buses 	<ul style="list-style-type: none"> Includes No Action/Committed Projects with Entrance to Aspen Light Rail plus: • Rail on Alignment C - See Figure II-3 • Additional Remote Traffic Microwave Sensor on Highway 82 • Incident Management Program • Variable Message Sign System • Wildlife Warning Reflector System • Video surveillance to monitor traffic conditions
STATION LOCATIONS			
No Action/Committed Projects Alternative	BRT-Bus Alternative	BRT-LRT Alternative	Rail Alternative
<ul style="list-style-type: none"> • Snowmass Village • Rodeo Lot • Brush Creek Road 	<ul style="list-style-type: none"> • West Glenwood Springs • Downtown Glenwood Springs • South Glenwood Springs • CMC (CR 54) • Highway 133 • Downtown Carbondale • El Jebel (El Jebel Road or Willits Lane) • Basalt • Snowmass Village • Rodeo Lot • Brush Creek Road 	<ul style="list-style-type: none"> • West Glenwood Springs • Downtown Glenwood Springs • South Glenwood Springs • CMC (CR 54) • Highway 133 • Downtown Carbondale • El Jebel (El Jebel Road or Willits Lane) • Basalt • Snowmass Village • Rodeo Lot • Brush Creek Road 	<ul style="list-style-type: none"> • West Glenwood Springs • Downtown Glenwood Springs • Highway 133 • Downtown Carbondale • El Jebel (El Jebel Road or Willits Lane) • Basalt • Snowmass Village • Rodeo Lot • Brush Creek Road

**Table S-2
Comparison of CIS Alternatives – Physical Characteristics**

STATION LOCATIONS, continued

No Action/Committed Projects Alternative	BRT-Bus Alternative	BRT-LRT Alternative	Rail Alternative
<ul style="list-style-type: none"> • Pitkin County Airport • Buttermilk • Maroon Creek Road • 7th and Main • 3rd and Main • Paepcke Park • Monarch Street Rubey Park 	<ul style="list-style-type: none"> • Pitkin County Airport • Buttermilk • Maroon Creek Road • 7th and Main • Paepcke Park • Rubey Park 	<ul style="list-style-type: none"> • Pitkin County Airport • Buttermilk • Uses LRT stations from Buttermilk to Rubey Park 	<ul style="list-style-type: none"> • Pitkin County Airport • Buttermilk • Uses LRT stations from Buttermilk to Monarch • Main and Galena

PARK-and-RIDE FACILITIES

No Action/Committed Projects Alternative	BRT-Bus Alternative	BRT-LRT Alternative	Rail Alternative
<p>6,700 total spaces proposed¹ in the Project Corridor, including:</p> <ul style="list-style-type: none"> • 450 spaces - Glenwood Springs • 500 spaces - Carbondale • 500 spaces - El Jebel • 500 spaces - Basalt • 400 spaces - Brush Creek Road • 750 spaces - Buttermilk • 3,600 spaces - Pitkin County Airport 	<p>4,140 total spaces in the Project Corridor, including:</p> <ul style="list-style-type: none"> • 600 spaces - West Glenwood Springs • 260 spaces - South Glenwood Springs • 800 spaces - Highway 133 • 360 spaces - El Jebel • 440 spaces - Basalt • 140 spaces - Brush Creek Road • 260 spaces - Buttermilk • 1,280 spaces - Pitkin County Airport 	<p>3,620 total spaces in the Project Corridor, including:</p> <ul style="list-style-type: none"> • 560 spaces - West Glenwood Springs • 260 spaces - South Glenwood Springs • 630 spaces - Highway 133 • 1,030 spaces - El Jebel • 410 spaces - Basalt • 530 spaces - Brush Creek Road • 30 spaces - Buttermilk • 170 spaces - Pitkin County Airport 	<p>4,710 total spaces in the Project Corridor, including:</p> <ul style="list-style-type: none"> • 940 spaces - West Glenwood Springs • 660 spaces - Highway 133 • 1,140 spaces - El Jebel • 390 spaces - Basalt • 890 spaces - Brush Creek Road • 120 spaces - Buttermilk • 570 spaces - Pitkin County Airport

¹ Note that the current transportation model shows a need by 2025 of 3,290 spaces.

VEHICLES

No Action/Committed Projects Alternative	BRT-Bus Alternative	BRT-LRT Alternative	Rail Alternative
<ul style="list-style-type: none"> • 19.8 meter (65-foot) articulated diesel buses • 40-foot diesel buses 	<ul style="list-style-type: none"> • 19.8 meter (65-foot) articulated alternative fuel buses (possibly low-floor) 	<ul style="list-style-type: none"> • 19.8 meter (65-foot) articulated alternative fuel buses (possibly low-floor) 	<ul style="list-style-type: none"> • Diesel Multiple Unit Railcars (Adtranz GTW 4-12 or equivalent) • Up to 4 vehicle consists during peak hours

F. PROJECT IMPACTS

The Project Impacts discussion is divided into three sections: resources considered, major environmental impacts and transportation impacts.

1. Resources Considered

- See **Chapter III: Affected Environment** for further information on all resources.

Social, economic, and physical environment resources were assessed in this study as follows:

Social Environment

- Population
- Demographic characteristics
- Environmental Justice
- Services
- Recreation
- Land use

Economic Environment

- Economic base
- Commercial growth trends
- Employment
- Income
- Housing
- Local government finance

Physical Environment

- Air quality
- Water quality
- Floodplains

- Geology and soils
- Upland and floodplain vegetation
- Wetlands
- Fisheries
- Wildlife
- Wild and scenic rivers
- Threatened, endangered, candidate and other special concern species
- Cultural resources
- Paleontological resources
- Section 4(f) and 6(f) resources
- Farmlands
- Noise and ground-borne vibration
- Visual character
- Potential hazardous waste sites
- Traffic safety
- Energy
- Construction

2. Environmental Impacts

- See **Chapter V: Environmental Consequences** and **Chapter VII: Mitigation Measures** for additional impact and mitigation discussion.

No measurable impacts have been identified for any of the alternatives for 17 of the resources listed. An additional nine resources will require no mitigation after best management practices are implemented.

Significant wildlife and cultural resources exist within the Project Corridor. None of the alternatives, including the trail, are expected to affect wildlife or threatened, endangered, candidate and other special concern species after implementation of best management practices.

A total of 29 cultural resource sites, including the Denver and Rio Grande Western Railroad itself, are included in the Area of Potential Effect. Of these, 12 sites are eligible for the National Register of Historic Places. No Adverse Effects have been identified for any of these resources.

A total of five resources will require impact mitigation. These impacts and mitigation are summarized below.

2.1 Right-of-Way and Relocation

Impacts. No additional right-of-way or relocations are associated with either the No Action/Committed Projects Alternative or the new Rio Grande Trail for Opening Day or 2025. The BRT Alternative will require additional right-of-way associated with the proposed new transit station and park-and-ride locations, estimated at 11.76 hectares (29.06 acres). No relocations are associated with either BRT Alternative. The Rail Alternative will result in 14 residential and three business relocations. A total of 18.85 hectares (46.57 acres) of additional right-of-way will be required for station and park-and-ride locations, as well as small amounts along the alignment itself. The right-of-way and relocation impacts are all associated with opening day (2008).

Mitigation. The Acquisition and Relocation Program for this project will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Relocation resources will be available without discrimination to all residents and businesses that are required to relocate.

2.2 Environmental Justice

Impacts. There are no identified disproportionate impacts to minority, low-income, or elderly populations in the opening year or in 2025 for the No Action/Committed Projects Alternative, the BRT Alternatives, or the proposed Rio Grande Trail.

Noise and relocations associated with the Rail Alternative may affect minority, low-income, or elderly populations for Opening Day. Four areas of possible concern were identified for noise impacts: H Lazy F Mobile Home Park (three impacted receivers), Mountain Valley Mobile Home Park (17 homes impacted), Roaring Fork Mobile Home Park (23 homes potentially impacted), and Philips Mobile Home Park (four impacted receivers). Up to 11 mobile homes in the Aspen-Basalt Mobile Home Park along Highway 82 at the intersection with Willits Lane are subject to relocation impacts associated with the Rail Alternative. There are 73 units in the mobile home park, and approximately 90 percent of the units are occupied by members of the Hispanic/Latino public, according to the operator of the park.

Mitigation. Mitigation of noise impacts is discussed under the Noise analysis.

2.3 Wetlands

Impacts. Opening day wetlands impacts are summarized in Table S-3. No additional impacts are expected by 2025.

Table S-3
Estimated Area of Permanent Impact, Roaring Fork Valley Wetlands
 (hectares/acres)

Measure	Committed Projects/No Build	BRT ¹	Rail	Rio Grande Trail
Area estimate of filled non-jurisdictional wetlands ²	0	.02/.05	0.36/.88	0.59/1.45
Area estimate of filled jurisdictional wetlands ²	0	.004/.01	0.15/.37	0.34/.86
Estimated Total Impact	0	.024/.06	0.51/1.25	0.93/2.31

¹ Wetlands impacts associated with this alternative are for both BRT-Bus and BRT-LRT at the proposed Basalt Station.

² Wetland fill estimated from 7.6 m (25 ft) cut and fill boundaries along proposed rail alignment, and a 6.1 m (20 ft) cut and fill projection for the Rio Grande trail alignment. Acreage estimates assume that all bridge impacts at stream/river crossings occur within cut and fill boundaries.

Mitigation. Wetlands evaluations were conducted in 1999 and will need to be redone upon selection of a preferred alternative and construction of the new Rio Grande Trail. Jurisdictional wetlands are subject to the Clean Water Act (CWA), Section 404(b)(1) Guidelines. Per CDOT policy both jurisdictional and non-jurisdictional wetlands are subject to mitigation. Wetland mitigation is identified as avoidance, minimization, and compensatory mitigation.

Avoidance and minimization. Within the constraints of the project, the design of the rail and trail reflect an effort to avoid wetland impacts when practicable, and to minimize the extent of unavoidable impacts. Avoidance and minimization have been accomplished by reducing the size of the footprint and by maximizing the use of existing infrastructure (e.g. the existing rail line).

Wetland replacement. Where practicable, mitigation will occur on site at a replacement ratio of 1:1. Functional replacement of more than 1:1 may be required to allow an adequate margin of safety to reflect the expected degree of success associated with the mitigation. Specific mitigation and monitoring requirements for permanent and temporary impacts will be established as part of CWA Section 404 permits and CDOT requirements for the project. Water rights issues will be considered during the final selection of mitigation sites.

2.4 Noise and Ground-Borne Vibration

Impacts. No noise impacts or mitigation are associated with the new Rio Grande Trail. Except for a receiver site identified in the *SH 82 Entrance to Aspen FEIS*, no noise impact locations have been identified for the No Action/Committed Projects Alternative. No noise impact locations have been identified for the portions of the BRT Alternatives located along Highway 82. Impacts associated with the BRT-LRT Alternative will be the same as for the No Action/Committed Projects Alternative noted above. The BRT-Bus Alternative may use the Entrance to Aspen interim busway in the event voters do not approve funding for the LRT system. Bus noise is expected to be similar to LRT noise and no additional impacts are anticipated. A total of 89 receiver sites were identified that satisfied the criteria of impact or severe impact based on the FTA methodology for the Rail Alternative.

Noise impacts are also possible at the proposed Carbondale and Basalt station locations associated with the BRT and Rail Alternatives.

Except for the Rail Alternative, no ground-borne vibration impacts have been identified. The potential for vibratory impacts was identified at two receiver locations in the Project Corridor. Both of these receivers were identified previously as falling into the severe impact category for airborne noise.

Mitigation. Noise barrier implementation is the result of an analysis for reasonableness and feasibility for each location. Reasonableness is directly related to cost per receptor. Feasibility relates to the potential effectiveness of the mitigation measure, based on the ability to minimize the number of openings in a noise barrier and the ability to provide a noise reduction of at least five decibels.

2.5 Potential Hazardous Waste Sites

Impacts. No additional hazardous waste sites have been identified in association with the No Action/Committed Projects or BRT Alternatives. Two sites may be associated with the construction of the new Rio Grande Trail. For the Rail Alternative, ten sites may require sampling during preliminary engineering, health and safety planning, or mitigation during construction.

Mitigation. Sites associated with the Rio Grande Trail include:

- Site 9: Surficial soil staining at the 4th Street crossing in Carbondale, and
- Site 13: The former lumber yard.

Additional sampling with indicated health and safety planning or mitigation should be performed at Site 9. No right-of-way is needed in the vicinity of Site 13 for the construction of the trail alone; therefore, no additional work is recommended.

Sites associated with the Rail Alternative may include the following recommended actions. Additional sampling with indicated health and safety planning or mitigation should be performed at the following sites:

- Site 1: West Glenwood to Wye rail storage
- Site 9: Surficial soil staining at the 4th Street crossing in Carbondale

Health and safety planning or mitigation should be undertaken for the following sites, if additional property acquisition is necessary:

- Site 3: Fattor Petroleum
- Site 5: Amoco Station at 2205 Grand Avenue, Glenwood Springs
- Site 13: The former lumber yard
- Site 18: The Pitkin County Airport
- Site 19: The RFTA Bus Maintenance Facility
- Site 20: The Aspen Airport Business Center
- Site 21: 435 E. Main Street, Aspen
- Site 22: 506 E. Main Street, Aspen

3. Transportation Impacts

- See **Chapter IV: Transportation Impacts** for additional information.

The transportation impacts chapter presents projected impacts of the alternatives on the overall transportation system. Impacts include changes in transit facilities and service, roadway volumes and level of service, parking patterns related to transit access, and bicycle and pedestrian facilities. Transportation impacts are assessed for both an opening day scenario (2008) and a twenty-year planning horizon (2025).

3.1 Overall Transit Demand

A relatively high portion of transit trips is represented under each option, reflecting the propensity for transit use in the Project Corridor. The portion of transit trips to total trips in 2008 is forecast to range from 5.5 percent for the No Action/Committed Projects Alternative to between 8.6 and 9.0 percent for the BRT and Rail Alternatives. By 2025 this range is forecast to increase to 9.3 percent for the No Action/Committed Projects, and to 10.1 to 11.4 percent for the BRT and Rail Alternatives.

3.2 Annual Boardings

Annual boardings on regional transit services range about 75 percent to 125 percent higher for the Build alternatives compared to the No Action/Committed Projects Alternative. Table S-4 summarizes these findings for 2008 and 2025.

3.3 Transit Parking

Estimates of daily parking demand in the Project Corridor were prepared using the travel demand model. The daily numbers were factored to account for auto occupancy and peak period activity. The Build alternatives all require more parking supply than the No Action/Committed Projects Alternative, ranging from an additional 30 percent for the BRT-LRT Alternative to an additional 70 percent for the Rail Alternative. In terms of total number of spaces, the Build alternatives require 810 to 1,900 more spaces by the year 2025. Total parking space requirements by 2025 are: 2,810 for the No Action/Committed Projects Alternative, 4,140 for BRT-Bus, 3,620 for the BRT-LRT and 4,710 for the Rail Alternative.

**Table S-4
Annual Boardings on Regional Transit Services**

Alternative	2008	2025
No Action/Committed Projects	1,510,000	3,830,000
BRT-Bus	4,780,000	8,740,000
BRT-LRT	3,890,000	6,730,000
Rail	3,990,000	6,920,000

Note: Boardings for the No Action/Committed Projects Alternative include some select local routes that serve regional as well as local trips along the corridor.

3.4 Roadway Traffic: Vehicle Miles Traveled (VMT) and Projections

All Build alternatives reflect a reduction in regional VMT of about three to four percent in comparison to the No Action/Committed Projects Alternative. The differences between the Build alternatives are slight, varying less than one percent. The BRT-Bus Alternative demonstrates the lowest overall VMT in 2008 and 2025. All of the alternatives provide an average annual growth rate in VMT of about 2.5 percent. By comparison, LRT projects in major cities typically reduce VMT by less than one percent. Table S-5 summarizes winter daily traffic for 2008 and 2025 for various segments of Highway 82. The analysis of the Build alternatives determined that the differences in future roadway volumes were negligible, and therefore an average volume for the Build alternatives is displayed.

For comparison, annual average daily traffic for 2001 on Highway 82 was 21,469 south of Glenwood Springs, 17,869 southeast of Carbondale, 16,488 southeast of Basalt, 19,238 at the Pitkin County Airport, and 20,164 in Downtown Aspen (AADT, CDOT Traffic Database, 2001). These numbers

are an annual average rather than the winter average shown in Table S-5. Winter numbers will be somewhat higher than the annual average.

**Table S-5
Winter Average Daily Traffic**

Highway 82 Winter Daily Traffic	2008		2025	
	No Action	Build ¹	No Action	Build
South Glenwood Springs	28,300	28,100	39,400	38,500
Southeast of Carbondale	21,400	20,900	29,400	26,800
Southeast of Basalt	20,200	19,600	28,500	25,200
Pitkin County Airport	20,000	19,100	27,700	23,200
Downtown Aspen	23,500	23,600	26,200	26,500

¹ The distinction between Build alternatives was negligible, less than one percent; therefore, an average is shown.

3.5 Station and Maintenance Facility Congestion

Traffic operations at intersections near the proposed transit stations have been analyzed to assess the impact on adjacent roadways for 2008 and 2025. Congestion at the following committed or planned park-and-ride and/or station locations will occur for all alternatives, resulting in poor levels of service for opening day (2008): Carbondale at Highway 133 and El Jebel at Willits Lane. By 2025, each alternative will also result in poor levels of service associated with West Glenwood Springs, Downtown Glenwood Springs, and the CMC areas, as well as Carbondale at Highway 133, both El Jebel locations, Brush Creek Road, the Pitkin County Airport, and Buttermilk. These congestion problems would be mitigated by including new traffic signals at unsignalized intersections adjacent to the station locations. The cost of these signals is included in the cost of each station.

4. Cumulative Impacts

- See **Chapter VI: Cumulative Impacts** for detailed discussion.

Cumulative impacts on the environment result from the incremental effect of adding an action to other past, present, and reasonably foreseeable future actions, regardless of responsible agency or persons. For such an impact to be significant, it should affect a resource to a level that could be measured locally or regionally. No regional level cumulative environmental impacts have been identified. Few measurable cumulative local impacts have been identified for the proposed Build alternatives. Traffic congestion, measurable as poor levels of service, has been identified for a number of station and maintenance facility areas; however, these congestion problems are not specific to the Build alternatives and will occur regardless of their implementation. For the Rail Alternative, the potential loss of low income and minority housing in the form of 11 mobile homes, will add the existing local housing shortage.

G. FINANCING AND IMPLEMENTATION

- See **Chapter VIII: Finance** for additional discussion.

1. Capital Costs

Capital cost estimates for the CIS alternatives have been prepared in accordance with the FTA *Guidance for Transit Financial Plans*, and the *Intelligent Transportation Systems (ITS) Joint Program Unit Cost Database*. Cost estimates are considered to be at the conceptual stage in project development, and will be refined as the project moves into preliminary engineering and final design. Table S-6 identifies costs by alternative.

Costs for the new Rio Grande Trail range between \$4.5 million and \$30 million, depending on the transit alternative selected. If the Rail Alternative is not selected, the trail could initially be constructed for an estimated \$4.5 million. This savings results from a reduction in the total typical section required in the RFTA right-of-way and the elimination of safety considerations for a shared right-of-way. If the Rio Grande Trail were to be constructed in this manner, any future use of the RFTA right-of-way for rail would include the cost of relocating the trail.

2. Operations and Maintenance Costs

Transit Operations and Maintenance (O&M) costs for existing RFTA transit serve as the basis for the O&M cost analysis for the No Action/Committed Projects and BRT alternatives. Budgeted O&M expenses for the 2002 fiscal year include \$12.45 million in basic O&M expenses and an additional \$481,200 in other operating expenses, for a total of \$12.93 million.

Future O&M costs take into account existing and forecasted transit ridership and service level goals. This assumption is important because it takes into account providing sufficient transit service to meet the adopted Aspen/ Town of Snowmass Village/Pitkin County policy goal for the Entrance to Aspen of “limiting vehicles in 2015 to levels at or below those of 1994.”

Annual O&M costs (excluding debt service) at the end of year 2008 are forecast to be \$17.9 million for the BRT-LRT Alternative, \$20.9 million for the BRT-Bus Alternative, \$21.7 million for the No Action/Committed Projects Alternative, and \$29 million for the Rail Alternative. Table S-6 also summarizes these costs.

3. Revenue Sources

Many revenues sources have been analyzed for this CIS. The source types include:

- Farebox revenues
- Sales and use taxes dedicated to transit
 - Pitkin County transit sales and use tax
 - RFTA sales and use tax
 - Eagle County 0.5 percent transit sales tax

- Pitkin County bond proceeds (includes debt service)
- Service contracts
- Federal grants, especially FTA Section 5309 New Start grants
- State funding
- Potential Local funding
 - Sales-based activities revenues
 - Additional sales and use tax revenues
 - Increased RFTA sales and use tax
 - Real estate development-based revenues
 - Property value based activities
 - Use or service charge-based activities
 - Other local revenues (including vehicle registration fees, highway users fees, airport passenger facility charges)

4. Financial Feasibility of Alternatives

Forecasted cash flow from expenditures and revenues for each alternative are also summarized in Table S-6.

Based upon the assumptions described in this chapter, it is evident that all of the project alternatives, including the No Action/Committed Projects alternative, would have local cost and financing implications. Additional local funding would be necessary under all of the alternatives.

Annual farebox and service contract revenues currently cover approximately 55 percent of RFTA's annual O&M expenses (excluding debt service). The sales and use tax, combined with RFTA farebox and contract service revenue, currently cover operating expenses, as well as debt service for capital expenses.

Each of the CIS alternatives would require increased levels of authorized local funding. Potential additional local funding sources, including enhanced sales and use tax revenues, a visitor use tax, development impact fees, a property tax levy, development contributions, airport passenger facility charges, vehicle registration fee increase, and other sources have been identified and evaluated as part of the CIS financial analysis. These potential local funding sources, if implemented, could generate an additional \$14 to \$24 million in annual funding to help address the funding shortfall.

The No Action/Committed Projects Alternative is financially feasible. This alternative is expected to be comparable in local costs to the BRT-LRT Alternative. While federal and state funding requirements would be minimal, additional average annual funding levels of \$9.4 million over the 2002 to 2025 time frame would be expected to cover anticipated induced operating and capital requirements.

Assuming federal/state/local capital funding allocations of 50/25/25 percent, both of the BRT alternatives are expected to achieve the highest level of financial viability of the Build alternatives.

The BRT-LRT Alternative is expected to require the lowest amount of additional federal, state and local funding resources. This alternative, which assumes a Downvalley regional bus trunk line with a transfer to LRT at the Pitkin County Airport, is expected to require federal and state funding commitments on the order of \$62.8 million and \$31.4 million, respectively. Additional average

annual local funding levels of \$9.4 million would be required over the 2002 to 2025 time frame to cover anticipated operating and capital funding requirements. This local funding requirement does not include the cost of building or operating the Entrance to Aspen LRT system.

The BRT-Bus Alternative is expected to require more bus transit operating hours than the BRT-LRT Alternative, since buses would continue beyond the Pitkin County Airport into Aspen. Increased operating hours combined with slightly higher capital costs (attributed primarily to higher station facility and vehicle costs) is expected to result in slightly greater required funding levels for this alternative. Federal and state funding commitments would need to be approximately \$66.1 million and \$33 million, respectively. Additional average annual local funding levels of \$11.8 million would be required over the 2002 to 2025 time frame to cover anticipated operating and capital funding requirements.

The Rail Alternative is considered to have marginal financial feasibility. It is the most expensive alternative, and is estimated to require federal and state funding commitments of approximately \$168.3 million and \$84.2 million, respectively. Additional average annual local funding levels of \$20.2 million would be required over the 2002 to 2025 time frame to cover anticipated operating and capital funding requirements.

**Table S-6
Project Alternative Cost Summary**

	No Action/ Committed Projects	Trail	BRT/Bus	BRT/LRT	Rail
2008 CAPITAL COST ELEMENTS (in millions)					
ROW & relocations (main line)	--	--	\$0.0	\$0.0	\$14.6
ROW & relocations (stations)	--	--	\$1.2	\$1.2	\$1.2
Civil construction	--	--	\$6.9	\$6.9	\$128.0
Stations/transit centers/ park-and-ride facilities	--	--	\$20.7	\$16.6	\$20.1
Feeder/collector stops	--	--	\$0.5	\$0.5	\$0.5
Vehicles (main line)	--	--	\$39.1	\$37.0	\$124.9
Vehicles (feeder)	--	--	\$2.9	\$3.5	\$3.2
Maintenance facilities	--	--	\$19.3	\$18.3	\$5.6
ITS applications	--	--	\$11.6	\$11.6	\$8.5
Total	--	\$4.5 - \$30	\$102.2	\$95.6	\$306.6
2008 O&M COSTS (in millions)					
Local Service	\$5.3	--	\$5.3	\$5.3	\$5.3
New Local Service	\$0.0	--	\$4.4	\$3.6	\$9.4
Regional Service	\$14.9	--	\$9.7	\$7.5	\$12.8
Other	\$1.5	--	\$1.5	\$1.5	\$1.5
Subtotal O&M	\$21.7	--	\$20.9	\$17.9	\$29.0
Capital (debt)	\$3.8	--	\$6.0	\$5.8	\$12.9
Total	\$25.5	Not applicable	\$26.9	\$23.7	\$41.9

**Table S-6
Project Alternative Cost Summary**

	No Action/ Committed Projects	Trail	BRT/Bus	BRT/LRT	Rail
RFTA NET CASH FLOW BALANCE (in millions in constant 2002 dollars)					
2002-2010	\$6.4	--	\$46.4	\$49.6	\$64.8
2010-2015	\$8.4	--	\$24.9	\$42.1	\$61.8
2015-2020	\$19.9	--	\$3.9	\$8.6	\$39.3
2020-2025	\$14.4	--	\$2.4	\$3.1	\$0.8
All Years	\$15.9	Not applicable	\$3.3	\$7.5	\$8.0

5. Implementation

A detailed implementation and financing plan is premature at this stage in the planning process. Once public comment is received on this CIS and the RFTA Board selects a preferred alternative, an implementation and financing plan will be prepared as a part of preliminary engineering. An outline of project activity from CIS to revenue service will be detailed in this later plan.

5.1 Preliminary Engineering and Environmental Review

The project scope and schedule originally anticipated the preparation of an Environmental Impact Statement due to the potential for environmental consequences and mitigation requirements of the Rail Alternative. However, if the BRT Alternative is selected by the environmental consequences may not be significant and a Categorical Exclusion or an Environmental Assessment (EA) and a Finding of No Significant Impacts (FONSI) from FTA or FHWA may be appropriate.

5.2 Secure Local Funding

All of the alternatives require additional local funding. It is anticipated that this local funding will have to be secured prior to the commitment of state and federal resources for final design, right-of-way acquisition, and construction. This would require voter approval in the jurisdictions that comprise RFTA. This election could occur as early as November 2004.

5.3 Secure State Funding

CDOT has ranked the Valley's transit project as one of the top priority strategic, unfunded, projects in the Intermountain Transportation Planning Region (see **Chapter 1: Purpose and Need**) as part of the 2003 Strategic Project Plan. As part of the Strategic Plan, this project would be eligible at some point for S.B. 97-001 funds. Originally not more than ten percent of the S.B. 97-001 funds could be used for transit purposes; however, H.B. 02-1310 was recently passed by the legislature, requiring that at least ten percent be used for transit or transit-related purposes. The amount of funds generated by this ten percent is estimated to be between \$20 million and \$30 million per year initially. The state is also allowed per TEA-21 to flex federal highway dollars to transit.

5.4 Secure Federal Funding

This project is authorized as a New Start project in the Transportation Equity Act for the 21st Century (TEA-21). Congress has appropriated federal funding for planning, environmental analysis, and

preliminary engineering, and to date RFTA has expended both federal and local resources on planning and environmental analysis. RFTA is currently required to secure permission from FTA to enter into preliminary engineering prior to obligating federal funds for preliminary engineering. A Request to Enter Preliminary Engineering will be submitted in 2003. Once environmental clearances have been secured, RFTA will request FTA approval to enter into Final Design. During the Final Design process, RFTA will negotiate a Full Funding Grant Agreement (FFGA). RFTA is working with its partners at the FTA, FHWA, and CDOT to determine the feasibility of streamlining the funding process in the event the BRT Alternative is selected by the RFTA Board.

5.5 Final Design, Right-of-Way Acquisition, Procurement and Construction

Once RFTA has obtained environmental clearances, the agency can commence right-of-way acquisition. Final design will commence upon FTA approval. Procurement of vehicles and other equipment and construction would commence upon a FFGA with the FTA.

5.6 Initiation of Revenue Service

Assuming the completion of construction in 2007, RFTA would initiate revenue service on the selected alternative. The first full year of revenue service is currently anticipated in 2008.

5.7 Possible Future Phases

While it is premature to anticipate the selection of an alternative, if the BRT Alternative is selected RFTA would have the opportunity to anticipate possible future phases to transit service in the Project Corridor.

Depending on the decisions of voters in Pitkin County and Aspen, the BRT Alternative could provide regional bus service into downtown Aspen or connect to the Entrance to Aspen LRT system. If light rail were not in place in the short term, the construction of the rail system from downtown to Brush Creek Road would be a logical next step if, and only if, the citizens of Aspen and Pitkin County decide to take that step. Incremental extension of rail from Brush Creek Road to Basalt, El Jebel, Carbondale, and Glenwood Springs could occur as need, funding availability, and public support warrant.

5.7.1 Trigger points. The decision to move from bus to rail would be made by the voters of the Roaring Fork Valley. This commitment was made when the governments of the Valley approved the Intergovernmental Agreement that led to the Valley-wide vote on the creation of RFTA. Once the voters decide to pursue rail, it will be up to RFTA, local governments, and the State of Colorado to secure the federal funding to implement that decision.

There are differing views on the implementation of rail transit in the Roaring Fork Valley. Proponents of rail want some certainty that BRT is a first phase towards rail. Others are reluctant to commit to a schedule for building a rail system, desiring some certainty that rail would be needed if built. Rather than a schedule, RFTA has developed the concept of “trigger points” – measurable conditions that would trigger consideration of the next phase in transit development. The following are suggested for adoption by the RFTA Board after public comment on the CIS document:

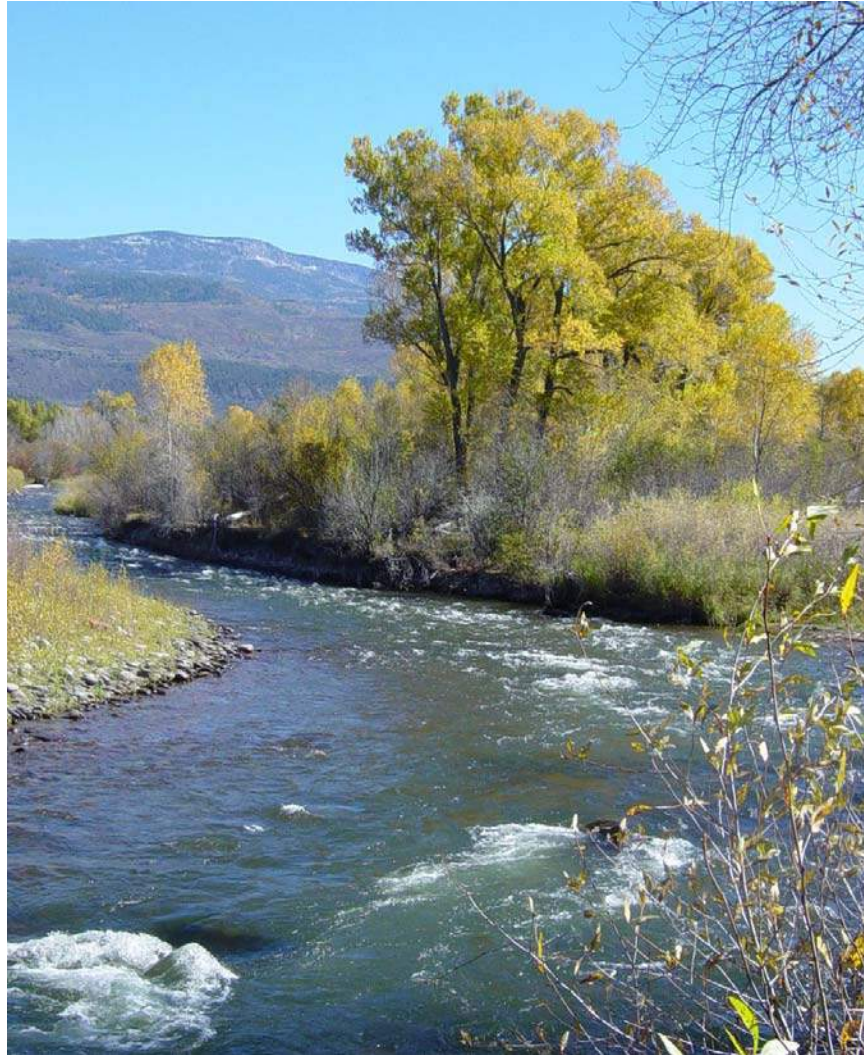
A vote of the people. “The Authority shall not finance rail construction unless and until the electors of the Authority, or of the area of the Authority in which the funding is to be generated, specifically approve such financing.” (*Roaring Fork Transportation Authority Intergovernmental Agreement*, September 12, 2000).

Highway capacity. It is reasonable to assume, for reasons of cost and Valley character, that Highway 82 can not be expanded beyond four lanes. As a bus system would be impacted by highway congestion, rail should be considered between points that are connected by a section of Highway 82 that has a volume-to-capacity ratio of 1.0 or higher in the peak hour or peak three hours of the day. The volume-to-capacity ratio is the relationship between the designed capacity of a section of highway in vehicles per hour and the actual traffic volume in vehicles per hour.

Best one-way peak trip time. Best one-way trip times forecast for BRT and rail service do not take into account weather, mechanical breakdown, or accidents. RFTA can gather data related to actual (vs. forecast) trip times that would factor in these considerations, as well as actual rather than predicted levels of traffic congestion. Rail should be considered when the best one-way trip times from each community increase by ten percent over 2003 levels.

Attachment VI

Conservation Area Assessment



ROARING FORK RAILROAD CORRIDOR CONSERVATION AREA ASSESSMENT

November 7, 2005

Prepared For:
Mike Hermes, Director of Properties and Trails,
Roaring Fork Transportation Authority

Prepared By:



NEWLAND PROJECT RESOURCES, INC

I. Introduction, Approach to the Assessment

On June 30, 1997, the Roaring Fork Railroad Holding Authority (RFRHA), a public entity created in 1993 by the towns and counties within the Roaring Fork Valley, purchased the Aspen Branch of the Denver & Rio Grande Western Railroad Right-of-way from the Southern Pacific Transportation Company. The purchase was funded by a consortium of state and local interests including Eagle County, Pitkin County, The City of Aspen, The City of Glenwood Springs, the Town of Snowmass Village, the Town of Basalt, the Town of Carbondale, the Eagle County Regional Transportation Authority, The Pitkin County Open Space and Trails Program, The Colorado Department of Transportation and the Great Outdoors Colorado Trust Fund (GOCO). Each of the funding participants agreed to the placement of a Conservation Easement on the corridor to protect the "conservation values" of the property. The conservation easement required that no new structures, fences, crossings, or pavement be placed, or that any mining or harvesting of timber occur on the corridor. The Aspen Valley Land Trust (AVLT) was designated as the steward of the conservation easement. AVLT was charged with the task of protecting the conservation values of the corridor by making an annual assessment of the property, noting any potential violations, and formally reporting those violations to RFRHA. RFRHA would then be responsible for correcting any of the violations to the satisfaction of AVLT.

On February 3, 2000, a Comprehensive Plan for the railroad corridor was adopted by RFRHA. One of the components of the plan was to reduce the size and scope of the conservation easement on the corridor. The plan cited that upon careful inspection and assessment of the corridor through the Corridor Investment Study (CIS) process, many portions did not contain the attributes described as conservation values by the conservation easement. As such, these portions of the corridor did not warrant protection under the conservation easement. In addition to the reduction of the size of the conservation areas, RFRHA received strong advice from a member of their federal legislative contingent that a conservation easement on the corridor would significantly hinder RFRHA's ability to receive federal funding participation for future transportation improvements.

In response to this issue, the Comprehensive Plan did the following:

- It changed the Conservation Easement to a Conservation Covenant. The covenant on the deed of the property requires the owner to abide by its terms through self-regulation. (This is different from the previous conservation easement, which is an encumbrance that runs with the land and requires some one other than the owner to regulate compliance.)
- It reduced the size of the area covered by the conservation covenant to encompass only those areas of the corridor that contain the "conservation values" described within the original conservation easement. The size was reduced from 34.59 miles (the full length of the corridor from Glenwood Springs to Woody Creek) to 17.50 miles (roughly one-half of the corridor). A detailed description of each of the 10 Conservation Areas follows as Appendix A of this report.

On January 17, 2001, an Agreement was reached between RFRHA and Great Outdoors Colorado that replaced the Conservation Easement with the Conservation Covenant. This change resulted in an overall reduction in the GOCO grant for purchase of the property from \$2.0 million to \$1.5 million. On November 15, 2001, the Roaring Fork Transportation Authority (RFTA) accepted ownership of the railroad corridor from RFRHA and RFRHA was dissolved. RFTA then replaced RFRHA as a party to the Conservation Restriction Agreement. RFTA created a Covenant Enforcement Commission made up of representatives from each of the entities that the Authority serves. It is the responsibility of the Commission to meet annually to make an assessment of the

rail corridor and to recommend to RFTA that it make any corrections necessary to insure that the conservation values of the areas described within the Conservation Restriction are not compromised. Through a competitive procurement process, RFTA selected Newland Project Resources, Inc., to provide the services necessary to conduct a thorough annual assessment of the 10 conservation restriction areas to discover if any potential violations exist.

The following report is a compilation of the assessment conducted in September and October of 2005 of the 10 Conservation Areas:

- Chapter II is a spreadsheet that summarizes the observed violations, the remedies recommended, and the actions taken to address each violation. The spreadsheet is a living document – a checklist to be used by RFTA to track violations and the actions taken to resolve them.
- Chapter III is a summary of remaining violations.
- Appendix A of this report describes the 10 Conservation Areas.
- Appendix B of this report describes the 2005 visual inspection conducted of each Conservation Area. During the visual inspection, structures, fences, crossings, timber harvesting, mining activities, paving, roads, trash, weeds and other improvements were noted as “Potential Violations”. Photographs of the violations on corridor at the time of the inventory are also included.

II. Observed Violations and Proposed Remedies

Following is a spreadsheet listing the violations to the Conservation Restriction observed in the field.

The first column of the spreadsheet lists the Conservation Area.

The second column lists the categories of potential violations as described within the Conservation Restriction Covenant:

- 1) Construction of Buildings and/or Other Structures
- 2) Fences
- 3) New Crossings, Structures and/or Crossing Improvements
- 4) Harvesting of Timber
- 5) Mining
- 6) Paving and Road and Trail Construction
- 7) Trash
- 8) Weeds
- 9) Other

The third column describes any violation observed in the field within each category.

The fourth column indicates by date when the violation was first noted and the jurisdiction in which the violation has occurred.

The fifth column recommends a remedy that RFTA could follow to correct the violation.

The sixth column is for RFTA staff to use to document the course of action followed to correct the violation.

III. Summary

Based on the visual inspection of the corridor, discussions with RFTA staff, and the meeting of the Conservation Enforcement Committee (CEC) on November 2, 2005, the following is a summary of the remaining violations on the corridor:

Violations Noted. These violations were present in the field and need to be addressed by RFTA in the coming year:

- New sign on corridor – Mile Post 379.2
- New dumpster in corridor – Mile Post 379.86
- Burning yard waste in the corridor – Mile Post 381.2
- Leaking irrigation culvert – Mile Post 382.52

Violations Resolved But Still in Place. These violations were noticed in the field but have been determined to be in compliance. Most of these violations need licenses or agreements to be formalized and considered no longer in violation of the Conservation Restriction:

- 2" PVP pipe across corridor for irrigation – Mile Post 366.1
- Dirt fill and fencing – Mile Post 370.99
- Riding Ring and Fencing in corridor – Mile Post 386.42
- Asphalt pull-off in corridor – Mile Post 386.72

General Corridor Remedies:

- Although noticed within the corridor, trash has been reduced significantly. RFTA should continue efforts to remove trash as a part of its general maintenance program.
- Although weed infestations were noticed along the corridor, they have been significantly reduced since 2002. RFTA should prioritize the conservation areas within its ongoing weed eradication program.

Conservation Area #1 (MP 362.9 to 363.82)	Conservation Category	Observed Violation	Date Violation First Observed	Recommended Remedy	Documentation of Actions Taken To Correct Violation
	1) Construction of Buildings	None Noted			
	2) Fences	None Noted			
	3) New Crossings	None Noted			
	4) Harvesting of Timber	None Noted			
	5) Mining	None Noted			
	6) Paving	None Noted			
	7) Trash	Significant amounts of trash removed in summer of 2004. One area noted at MP 363.13.	Sept. 2004 Garfield County	RFTA should continue to collect and dispose of trash as a part of ongoing corridor maintenance.	Trash is no longer a significant problem in this portion of the corridor.
	8) Weeds	4 areas of infestation noted in 2004 Are still present at MP 362.9, 363.5, 363.77 and 363.2	Sept. 2002 Garfield County	RFTA should include areas of the corridor covered by the Conservation Restriction within their ongoing weed eradication efforts.	Infestations continue to be reduced via ongoing weed control efforts.
	9) Other	None Noted			
Conservation Area #2 (MP 365.4 to 366.47)					
	1) Construction of Buildings	None Noted			
	2) Fences	None Noted			
	3) New Crossings	2" black PVC pipe at Milepost 366.1. Pipe brings water from Glenwood Ditch to private home over tracks.	Sept. 2002 Garfield County	Contact ditch company to Determine if the pipe is legal; Remove or discuss pipe placement With home owner.	Ditch company has been contacted and the pipe is a legal conveyance of water; pipe will remain until buried as a part of trail construction.
	4) Harvesting of Timber	None Noted			
	5) Mining	None Noted			
	6) Paving	None Noted			
	7) Trash	None Noted			
	8) Weeds	6 areas of weed infestation observed In 2004 still present: MP 365.4, 366.0, 366.2, 366.3, 366.4 and 366.7.	Sept. 2002 Garfield County	RFTA should include areas of the corridor covered by the Conservation Restriction within their ongoing weed eradication efforts.	Infestations continue to be reduced via ongoing weed control efforts.
	9) Other	None Noted			
Conservation Area #3 (MP 368.5 to 369.0)					
	1) Construction of Buildings	None noted			
	2) Fences	None Noted			
	3) New Crossings	None Noted			
	4) Harvesting of Timber	None Noted			
	5) Mining	None Noted			
	6) Paving	None Noted			
	7) Trash	None Noted			
	8) Weeds	None noted			
	9) Other	None Noted			

Conservation Area #4 (MP 370.5 to 371.29)	Conservation Category	Observed Violation	Date Violation First Observed	Recommended Remedy	Documentation of Actions Taken To Correct Violation
	1) Construction of Buildings	Dirt fill and fencing encroaching on corridor	Sept. 2002 Garfield County	Determine actual location of property line; remove fence from the corridor.	RFTA staff has determined that this use was in existence prior to acquisition of the corridor and a license for the use will be issued.
	2) Fences	None Noted (other than above)			
	3) New Crossings	None Noted			
	4) Harvesting of Timber	None Noted			
	5) Mining	None Noted			
	6) Paving	None Noted			
	7) Trash	None Noted			
	8) Weeds	6 Areas of weed infestation Observed in 2004 still present at MP 370.5, 370.6, 370.8, 370.9, 371.0 and 371.1.	Sept. 2002 Garfield County	RFTA should include areas of the corridor covered by the Conservation Restriction within their ongoing weed eradication efforts.	Infestations continue to be reduced via ongoing weed control efforts.
	9) Other	None Noted			
Conservation Area #5 (MP 371.69 to 371.83)					
	1) Construction of Buildings	None Noted			
	2) Fences	None Noted			
	3) New Crossings	None Noted			
	4) Harvesting of Timber	None Noted			
	5) Mining	None Noted			
	6) Paving	None Noted			
	7) Trash	None Noted			
	8) Weeds	1 area of weed infestation was observed.	Sept. 2002 Garfield County	RFTA should include areas of the corridor covered by the Conservation Restriction within their ongoing weed eradication efforts.	Infestations continue to be reduced via ongoing weed control efforts.
	9) Other	None Noted			

Conservation Area #6 (MP 376.14 to 381.82)	Conservation Category	Observed Violation	Date Violation First Observed	Recommended Remedy	Documentation of Actions Taken To Correct Violation
	1) Construction of Buildings	A construction staging area noted at MP 380.76-380.80 (Draeger Construction). <u>This area has not been revegetated.</u>	Sept. 2002 Eagle County	No further action required.	RFTA using area for rail/tie Storage and will revegetate as part of trail improvements.
	2) Fences	None Noted			
	3) New Crossings	New dumpster observed on corridor At MP 379.92	October 2005 Eagle County	Contact trash hauling company and have dumpster removed.	
	4) Harvesting of Timber	None Noted			
	5) Mining	None Noted			
	6) Paving	None Noted			
	7) Trash	Metal shelving, fencing, corrugated metal and a concrete footer placed on right-of-way, MP 381.4 (bird sanctuary).	Sept. 2004 Eagle County	Contact owner and have materials removed.	
		2 areas of trash were observed (MP 380.2 & 380.41) despite placement of "No Trash" signs by RFTA	Sept. 2004	RFTA should collect and dispose of trash on as a part of ongoing corridor maintenance.	"No Trash" sign placed by RFTA
		Lumber, culverts and fencing materials Stored on and near corridor at MP 379.2	Oct. 2005	Contact owner and have materials removed.	
	8) Weeds	5 areas of weed infestation observed In 2004 are still present: MP 378.87, 379.13, 379.25, 379.37 & 379.64	Sept. 2002 Eagle County	RFTA should include areas of the corridor covered by the Conservation Restriction within their ongoing weed eradication efforts.	Infestations continue to be reduced via ongoing weed control efforts.
	9) Other	Adjacent neighbor burning brush on Corridor at MP 381.2	Oct. 2005	RFTA should contact Property owner A request that this practice cease.	
		New sign placed on corridor at Crossing – MP 379.2	Oct. 2005	RFTA should contact property owner and have sign removed from corridor.	

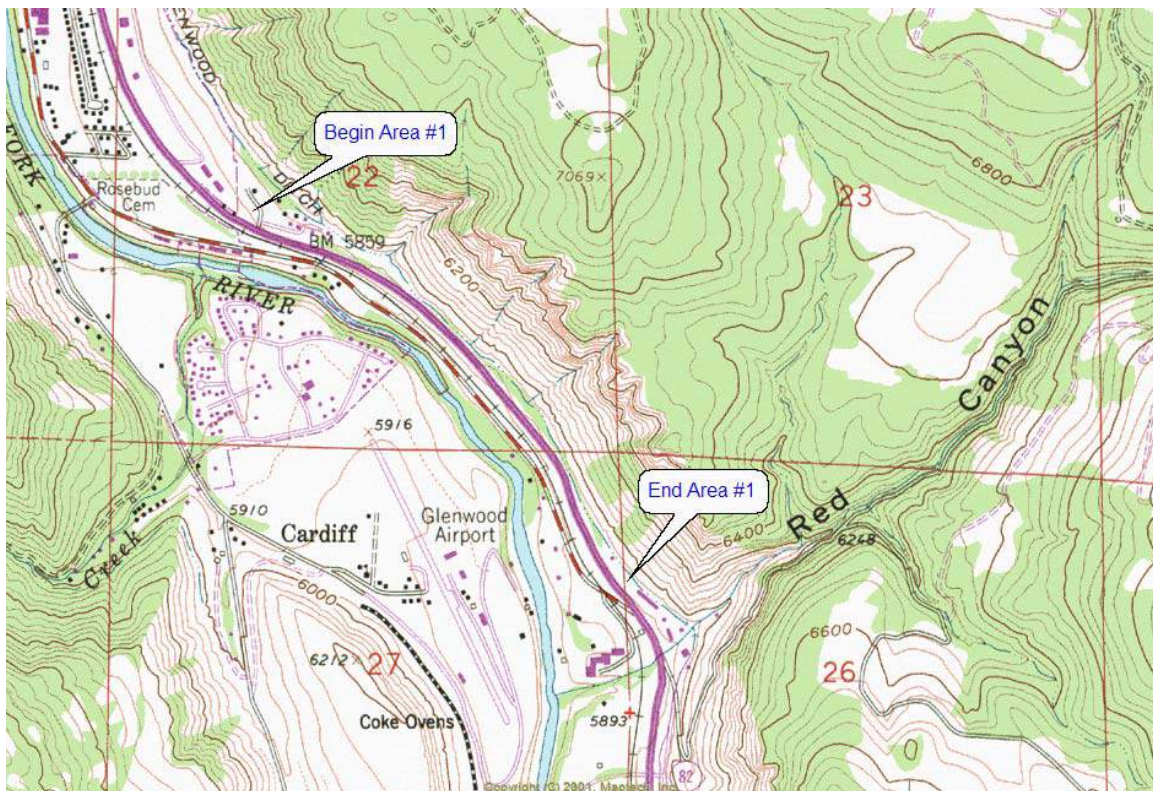
Conservation Area #7 (MP 382.19 to 384.90)	Conservation Category	Observed Violation	Date Violation First Observed	Recommended Remedy	Documentation of Actions Taken To Correct Violation
	1) Construction of Buildings	None Noted			
	2) Fences	None Noted			
	3) New Crossings	Road to Basalt High School not Licensed.	Sept. 2002 Town of Basalt	Work with Town of Basalt to properly license public road.	As of Sept. 2003, RFTA and TOB staff have met and agreed on an approach to licensing the road.
	4) Harvesting of Timber	None Noted			
	5) Mining	None Noted			
	6) Paving	None Noted			
	7) Trash	None Noted			
	8) Weeds	The 1 area of weed infestation observed in 2004 still remains (MP 383.5).	Sept. 2002 Pitkin County	RFTA should include areas of the corridor covered by the Conservation Restriction within their ongoing weed eradication efforts.	Infestations continue to be reduced via ongoing weed control efforts.
	9) Other	Leaking culvert adjacent to trail MP 382.52.	Oct. 2005 Pitkin County	Contact ditch owner to repair.	
Conservation Area # 8 (MP 384.90 to 385.10)					
	1) Construction of Buildings	None Noted			
	2) Fences	None Noted			
	3) New Crossings	None Noted			
	4) Harvesting of Timber	None Noted			
	5) Mining	None Noted			
	6) Paving	None Noted			
	7) Trash	None Noted			
	8) Weeds	None Noted			
	9) Other	None Noted			

Conservation Area #9 (MP 385.48 to 388.05)	Conservation Category	Observed Violation	Date Violation First Observed	Recommended Remedy	Documentation of Actions Taken To Correct Violation
	1) Construction of Buildings	Riding ring observed on corridor MP 386.42	Sept. 2002 Pitkin County	Contact owner and relocate riding ring.	License is being negotiated with the owner that will have violation removed.
	2) Fences	Wooden fence observed on corridor – MP 386.42	Sept. 2002 Pitkin County	Contact owner and relocate fence.	License is being negotiated with the owner that will have violation removed.
	3) New Crossings	None Noted			
	4) Harvesting of Timber	None Noted			
	5) Mining	None Noted			
	6) Paving	Paved pull-off observed on corridor – MP 386.72	Sept. 2003 Pitkin County	Contact owner and remove asphalt.	Improvements being placed in this area will relocate trail and utilize pull-off as part of driveway.
	7) Trash	5 piles of tree debris from ditch MP 385.64	Oct. 2005	RFTA should contact ditch owner and have debris removed.	
		Old tires observed on tracks in 2004 – MP 386.44	Sept. 2004	RFTA should contact ditch owner and have tires removed.	Tires have been removed.
	8) Weeds	2 areas of weed infestation observed on corridor in 2004 are still present.	Sept. 2002 Pitkin County	RFTA should include areas of the corridor covered by the Conservation Restriction within their ongoing weed eradication efforts.	Infestations continue to be reduced via ongoing weed control efforts.
9) Other	None Noted				
Conservation Area #10 (MP 390.58 to 393.67)					
	1) Construction of Buildings	Non Noted			
	2) Fences	None Noted			
	4) Harvesting of Timber	None Noted			
	5) Mining	None Noted			
	6) Paving	None Noted			
	7) Trash	None noted			
	8) Weeds	3 areas of weed infestation observed on corridor in 2004 are still present: MP 380.91, 392.9 & 393.75.	Sept. 2002 Pitkin County	RFTA should include areas of the corridor covered by the Conservation Restriction within their ongoing weed eradication efforts.	Infestations continue to be reduced via ongoing weed control efforts.
	9) Other	Dirt screening device observed at Swersky driveway in 2004	Sept. 2004 Pitkin County	Contact owner (Swersky) and remove object.	Screening device has been removed.

Appendix A: Description of the Conservation Area By Section

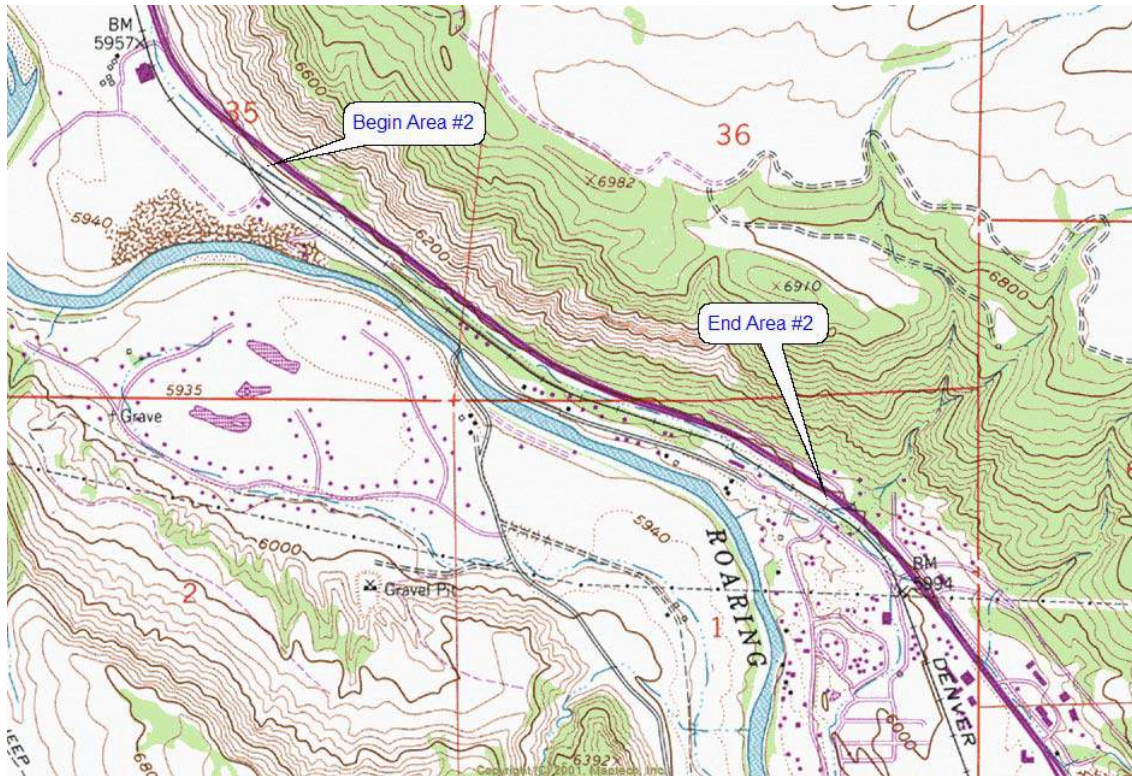
CONSERVATION AREA #1: Milepost 362.9 to 363.82 (0.92 miles)

Running from the Glenwood Springs City Limits south to the intersection of Highway 82 and Grand Avenue (old Highway 82), this area is well vegetated by native, scrub oak dominated mountain-shrub vegetation that offers excellent habitat for birds and small animals. Outstanding views of Mount Sopris are also provided on this section of the railroad corridor. The generally steep but benched hillside also provides a natural buffer between Highway 82 and Grand Avenue. Direct river access is offered from the railroad corridor over Grand Avenue.



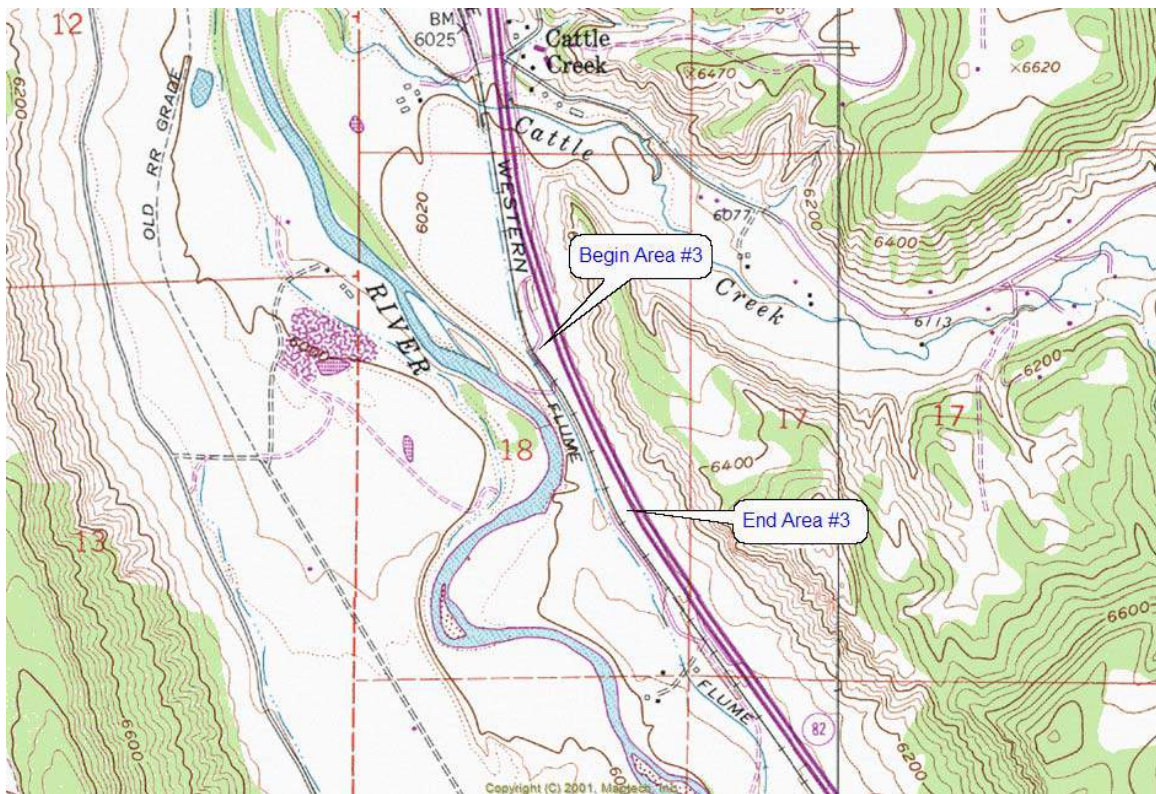
CONSERVATION AREA #2: Milepost 365.40 to 366.47 (1.07 miles)

This section begins at the crossing of County Road 107 (known as Coryell Ranch Road) to a location about ¼-mile below the CMC Road/Highway 82 intersection. This area is well vegetated by mature native, mountain-shrub and related plant species that offer excellent habitat for birds and small animals. The generally steep but benched hillside also provides an excellent, natural buffer between Highway 82 and County Road 107. Direct river access is offered from the railroad corridor over County Road 107. Dramatic views of Mount Sopris are also provided on this section of the railroad corridor.



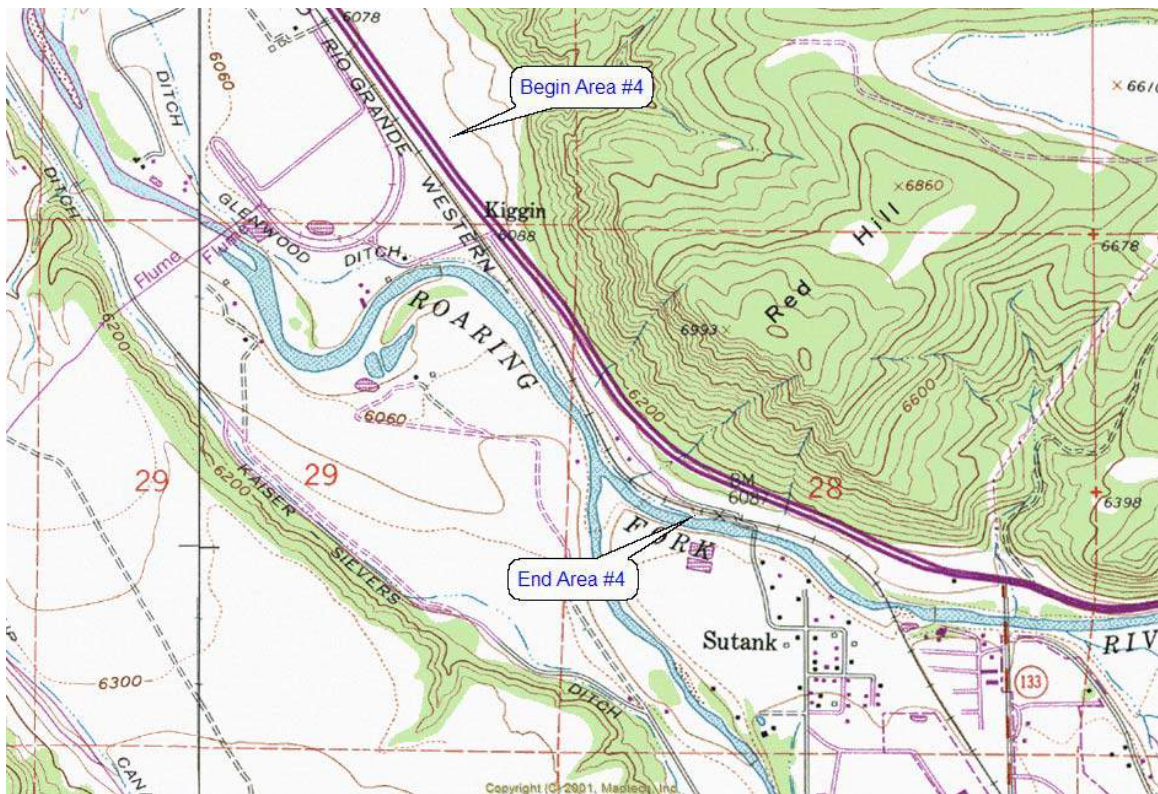
CONSERVATION AREA #3: Milepost 368.5 to 369.0 (0.50 miles)

This section of the railroad corridor covers the broad bend in the Roaring Fork River between the Sanders Ranch property and the ranchette parcels near Aspen Glen. Sage shrubs predominant in this section that are some of the most mature sage plants in the valley. The mountain shrub ecosystem on the corridor in this area provides excellent habitat for birds and small animals. The Roaring Fork River sweeps towards then away from the railroad corridor, providing access opportunity and riparian habitat protection. Outstanding views of Mount Sopris are also provided on this section of the railroad corridor.



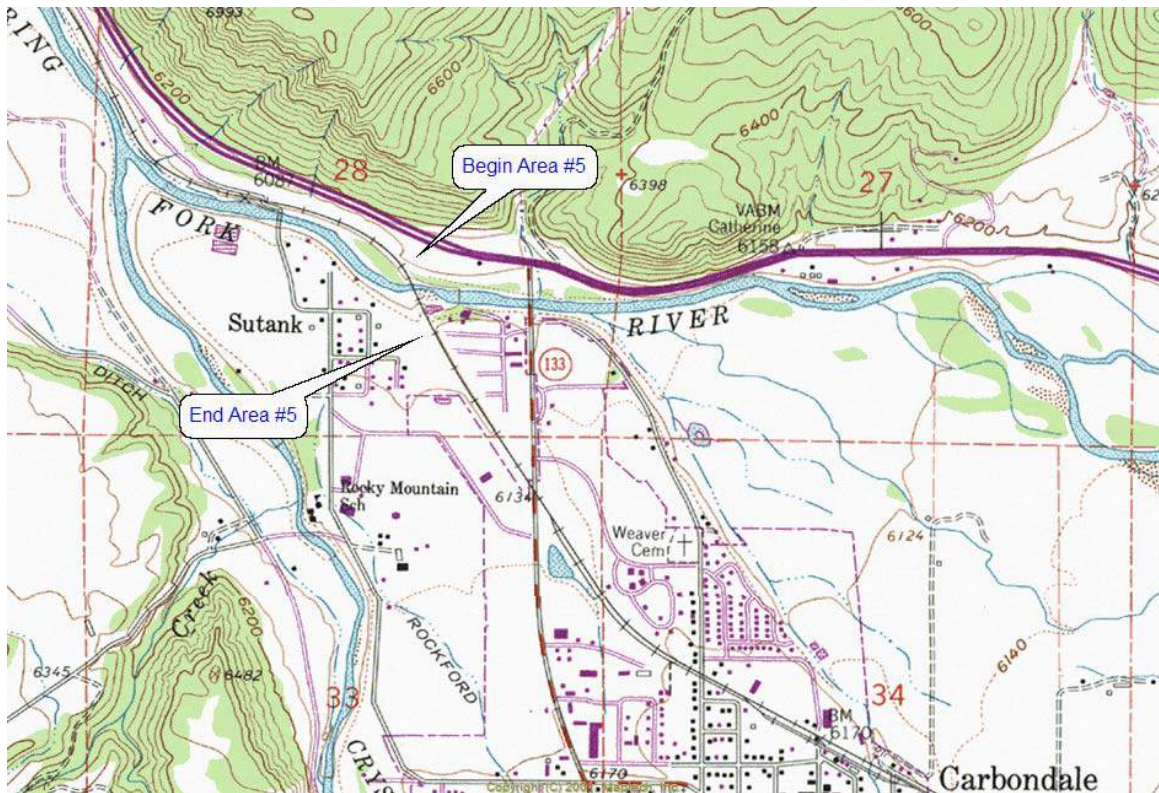
CONSERVATION AREA #4: Milepost 370.5 to 371.29 (0.79 miles)

This section goes from about a ¾-mile south (up valley) of the Aspen Glen entrance to a private crossing located just below the confluence of the Crystal River and the Roaring Fork River. This area is well vegetated by mature native, mountain-shrub and related plant species that offer excellent habitat for birds and small animals. Direct access to the Roaring Fork River is provided over the moderately sloping hillside that the railroad corridor crosses. Two significant irrigation ditches also follow within the railroad corridor, providing excellent wetlands and riparian habitat. Views of Mount Sopris and the confluence of the Crystal and the Roaring Fork rivers are also provided on this section of the railroad corridor.



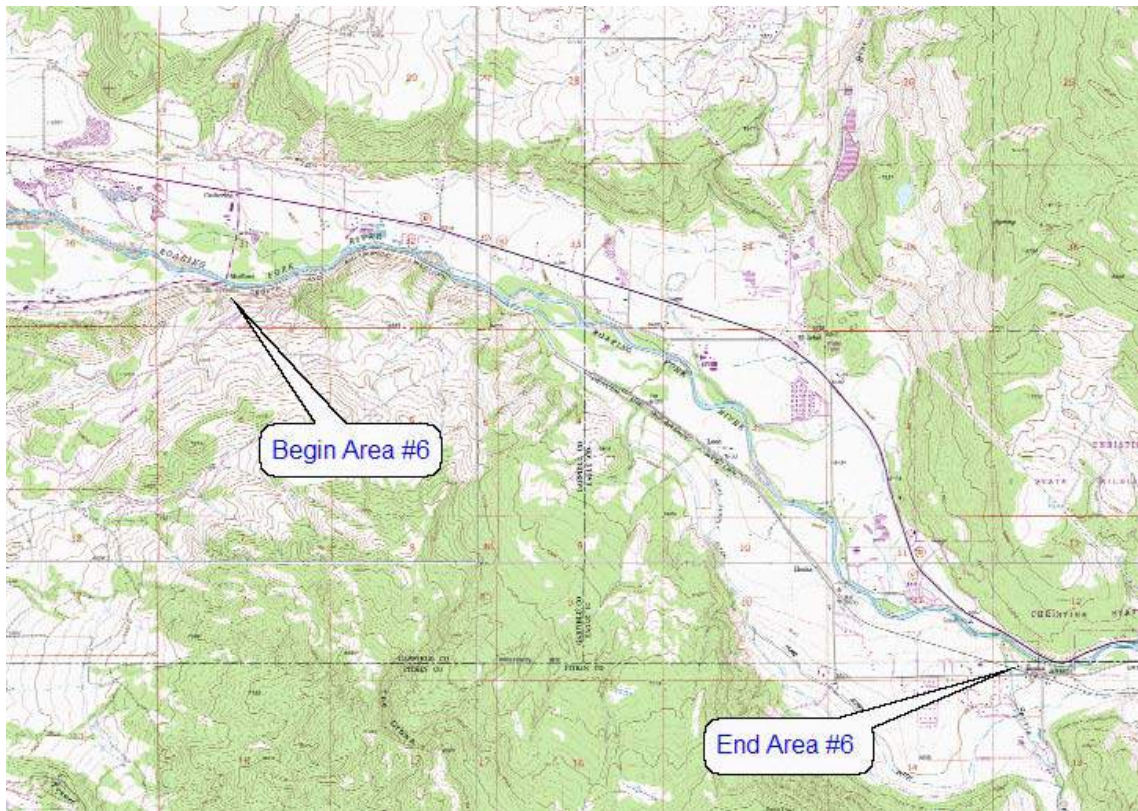
CONSERVATION AREA #5: Milepost 371.69 to 371.83 (0.14 miles)

This section surrounds the Railroad Bridge at Sutank and offers excellent river and recreation access opportunities and preserves wetland and riparian habitat. Views of Mt. Sopris are provided on the bridge.



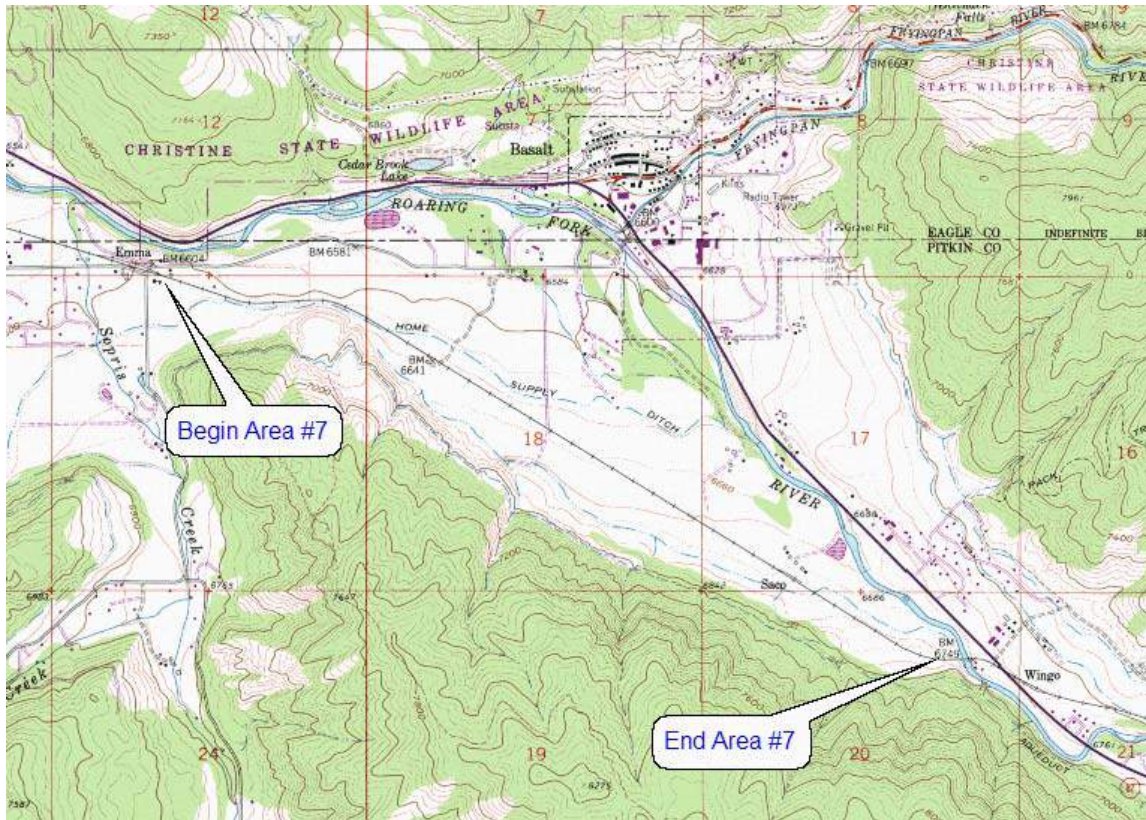
CONSERVATION AREA #6: Milepost 376.14 to 381.82 (5.68 miles)

This section begins near the Catherine Store Bridge (County Road 100) and continues southeast to Emma Road including the Rock Bottom Ranch property. Rock Bottom Ranch is owned by a non-profit entity, the Aspen Center for Environmental Studies, as a nature preserve. The nature preserve is also encumbered by a Conservation Easement held by the Aspen Valley Land Trust (AVLT). The railroad corridor is nestled between a broad, riparian area of the Roaring Fork River and Bureau of Land Management property. A number of conservation values are provided within this section of the corridor including riparian and wetland habitat protection; access to river recreation opportunities; access to public lands; preservation of habitat critical to eagle, hawk and heron populations in the valley; and preservation of winter range migratory patterns for macro fauna (mule deer and elk).



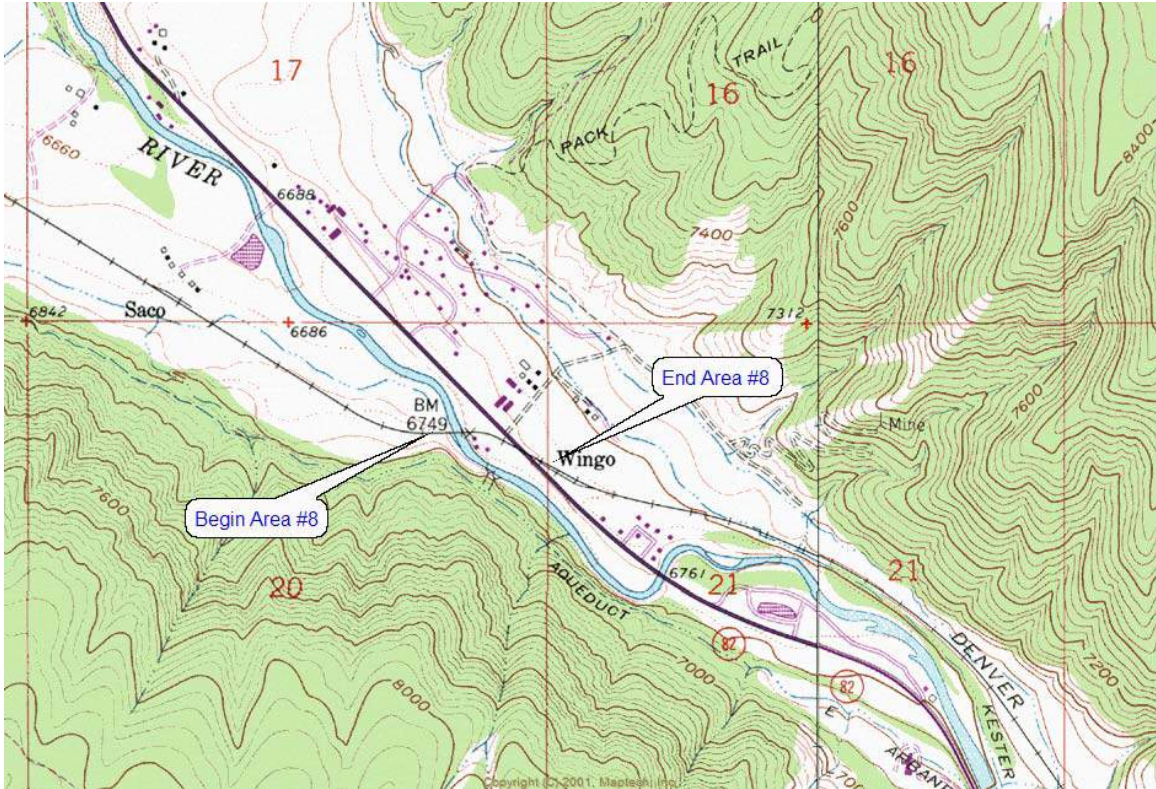
CONSERVATION AREA #7: Milepost 382.19 to 384.90 (2.71 miles)

This section begins directly east of the Emma Road/Highway 82 intersection, continues toward the Basalt High School between ranch properties and federal lands and ends just west of the Wingo Trestle. A parcel of land owned by the Pitkin County Open Space and Trails Program along the corridor contains a conservation easement to preserve a known migratory route for mule deer and elk. Another portion of private property in this area now contains a golf course and very low-density housing. This area is well vegetated by mature native, mountain-shrub and related plant species that offer excellent habitat for birds and small animals.



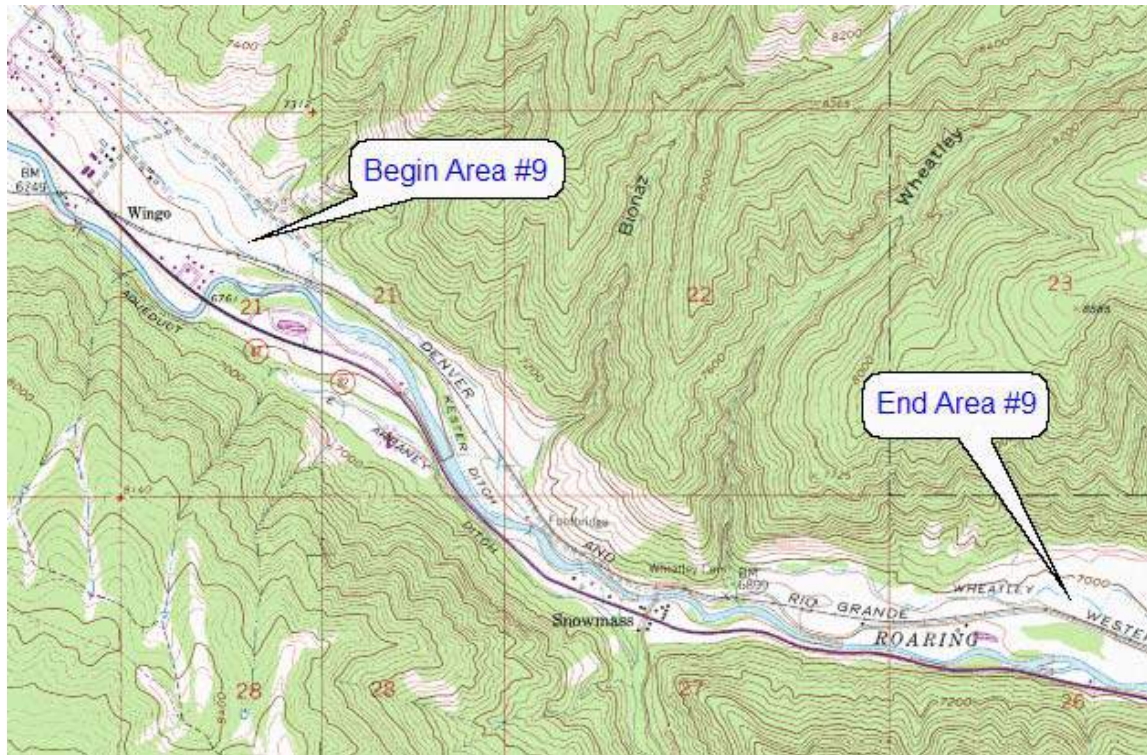
CONSERVATION AREA #8: Milepost 384.9 to 385.1 (0.2 miles)

This section includes the Railroad Bridge at Wingo Junction and offers excellent river recreation access opportunities. This area also contains wetland and riparian habitat.



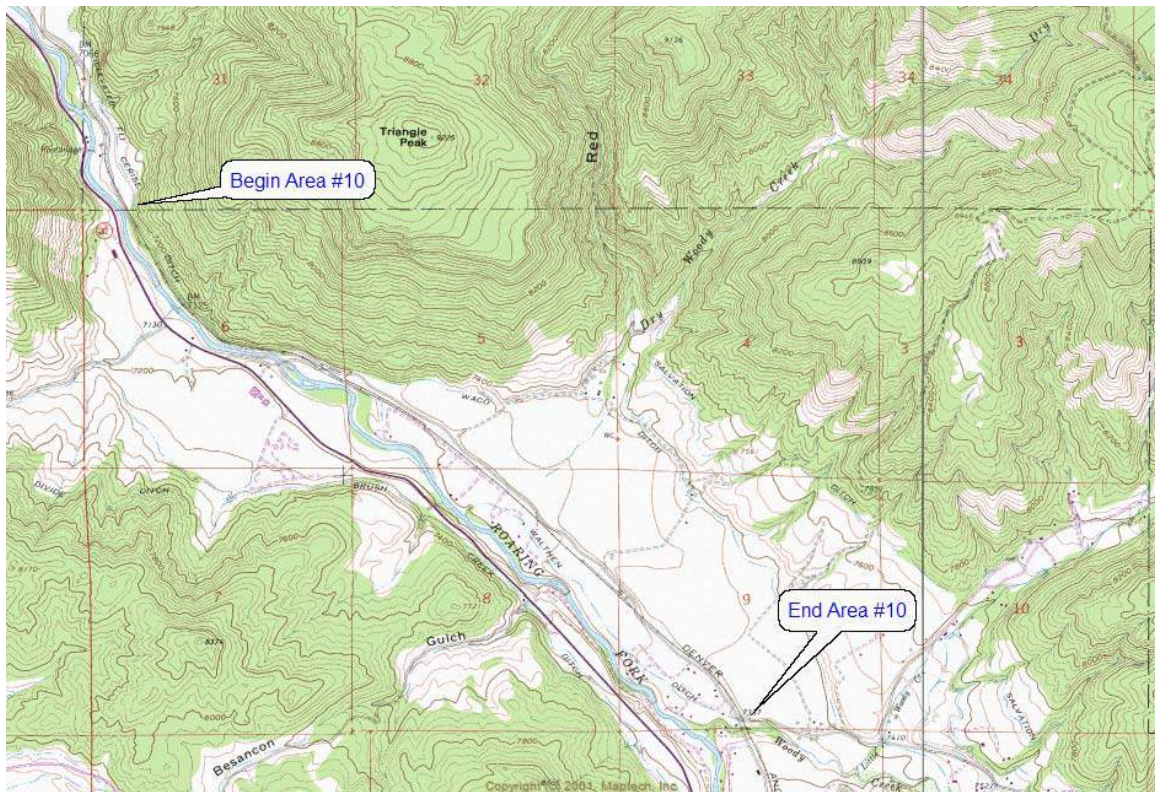
CONSERVATION AREA #9: Milepost 385.48 to 388.05 (2.57 miles)

This section starts at the east side of the Wingo Subdivision and continues southeast to the end of the Dart Ranch on Lower River Road. Several conservation values are present on this section of the corridor, including habitat for birds and small animals along the interface between mountain shrub and grassland habitat; access to the Roaring Fork River for recreation; access to National Forest lands; and preservation of critical habitat for macro fauna (mule deer and elk). A significant portion of this section is surrounded by a conservation easement held by Pitkin County on the Dart Ranch. Riparian vegetation along the Roaring Fork is also present. The railroad corridor can access several fisherman easements along the Roaring Fork River.



CONSERVATION AREA #10: Milepost 390.58 to 393.67 (3.09 miles)

This section begins near the crossing of Lower River Road, continues through the Woody Creek area until the end of the corridor at Woody Creek Road. The river side of this section contains mountain shrub and riparian vegetation that offers excellent habitat for birds and small animals. The railroad corridor is situated on a steep slope that comes down from Triangle Mountain (National Forest lands) and ends at the Roaring Fork River. The railroad corridor affords access to both the Roaring Fork River and National Forest lands. In addition, the railroad corridor can access several fisherman easements along the Roaring Fork River. The uphill side of the railroad corridor contains primarily steep shale hillside and includes or is adjacent to Lower River Road. In the Woody Creek area, the rail corridor is perched on a short but steep hillside that affords excellent views of the Elk Mountain range and Aspen-area ski resorts.



Appendix B: Potential Violations

Listed below are the potential violations of the conservation restriction as noted during visual inspection of the corridor in September and October of 2005. Each of the 10 Conservation Areas are listed below. The potential violations are categorized in the order that they are described within the Conservation Restriction Agreement:

- 1) Construction of Buildings and/or Other Structures;
- 2) Fences;
- 3) New Crossings, Structures and/or Crossing Improvements;
- 4) Harvesting of Timber;
- 5) Mining;
- 6) Paving and Road and Trail Construction;
- 7) Trash;
- 8) Weeds;
- 9) Other.

Conservation Area #1:

- 1) Construction of Buildings and/or Other Structures: No violations observed.
- 2) Fences: No violations observed.
- 3) New Crossings, Structures and/or Crossing Improvements: No violations observed.
- 4) Harvesting of Timber: No violations observed.
- 5) Mining: No violations observed.
- 6) Paving and Road and Trail Construction: No violations observed.
- 7) Trash: During the 2004 assessment it was noticed that scattered trash has been reduced to an insignificant amount on the corridor. One small area of trash from the highway was noticed at mile-marker 363.15 during the 2005 assessment.
- 8) Weeds: In 2004, this section of the corridor was almost entirely free of noxious weeds. Small patches of Yellow sweetclover (*Melilotus officinalis*) were noticed between mile-markers 362.9 and 363.17 (1500-feet); between mile-markers 363.50 and 363.60 (500-feet); and between mile-markers 363.77 and 363.82 (260-feet). Sparse areas of Common mullein (*Verbascum thapsus*) were observed at mile-marker 363.2 (100-feet). These areas of weed infestation were still present in 2005.
- 9) Other: No violations observed.

Conservation Area #2:

- 1) Construction of Buildings and/or Other Structures: No violations observed.
- 2) Fences: No violations observed.
- 3) New Crossings, Structures and/or Crossing Improvements:
A 2" black PVC pipe was noted at Milepost 366.1. The pipe is exposed and crosses under the tracks. The pipe appears to transport water from an existing outtake on the Glenwood ditch to a private residence, presumably for irrigation.



In 2005, RFTA staff discussed the pipe with the ditch owners and has determined that this is a legal irrigation use. When the trail is constructed on the corridor in this area, the pipe will be buried.

- 4) Harvesting of Timber: No violations observed.
- 5) Mining: No violations observed.
- 6) Paving and Road and Trail Construction: No violations observed.
- 7) Trash:
Potential Violations: In 2004, sparse areas of trash were observed at mile-marker 365.9; 366.2; 366.35; 366.7; and 366.8. No trash was present in this area in 2005.
- 8) Weeds: In 2004, six areas of sparse weed growth were noticed: Common tansy (*Tanacetum vulgare*) and Yellow sweetclover (*Melilotus officinalis*) at mile marker 365.4 (900-feet); Yellow sweetclover at mile-marker 366.0 (400-feet); Common mullein (*Verbascum thapsus*) and Common tansy at mile-marker 366.2 (300-feet); Yellow sweetclover at mile-marker 366.3 (200-feet); Yellow sweetclover at mile-marker 366.4 (1000-feet); and Yellow sweetclover at mile-marker 366.7 (800-feet). These areas of weed infestation were still present in 2005.
- 9) Other: No violations observed.

Conservation Area #3:

- 1) Construction of Buildings and/or Other Structures: No violations observed.
- 2) Fences: No violations observed.
- 3) New Crossings, Structures, and/or Crossing Improvements: No violations observed.
- 4) Harvesting of Timber: No violations observed.
- 5) Mining: No violations observed.
- 6) Paving and Road and Trail Construction: No violations observed.
- 7) Trash: No violations observed.
- 8) Weeds: No violations observed.
- 9) Other: No violations observed.

Conservation Area #4:

- 1) Construction of Buildings and/or other Structures: Since the 2002 Assessment, a dirt fill encroachment was noted between Milepost 370.99 and 371.09 on north side of rail corridor.

This is a landscaping company impound lot that was previously cited as a potential violation. During the 2005 assessment, these improvements were still in place.

- 2) Fences: Since the 2002 Assessment, a metal post and barbed wire fence running parallel to and about 25-feet from the tracks was also noted between Milepost 370.99 and 371.09. This fence was placed as a part of the landscaping company impound lot cited in (1) above.



- 3) New Crossings, Structures and/or Crossing Improvements: No violations observed.
- 4) Harvesting of Timber: No violations observed.
- 5) Mining: No violations observed.
- 6) Paving and Road and Trail Construction: No violations observed.
- 7) Trash: No violations observed.
- 8) Weeds: In 2004, six areas of sparse weed growth were noticed: Houndstongue (*Cynoglossum officinale*) and Common mullein (*Verbascum thapsus*) at mile-marker 370.5 (100-feet); sparse Common mullein and Yellow sweetclover (*Melilotus officinalis*) at mile-marker 370.6 (350-feet); very sparse Common mullein and Yellow sweetclover at mile-marker 370.8 (400-feet); Common mullein at mile-marker 370.9 (300-feet); Common mullein at mile-marker 371.0 (100-feet); Common mullein, Yellow sweetclover and Common tansy (*Tanacetum vulgare*) at mile-marker 371.1 (700-feet). These areas of weed infestation were still present in 2005.
- 9) Other: No violations observed.

Conservation Area #5:

- 1) Construction of Buildings and/or Other Structures: No violations observed.
- 2) Fences: No violations observed.
- 3) New Crossings, Structures and/or Crossing Improvements: No violations observed.
- 4) Harvesting of Timber: No violations observed.
- 5) Mining: No violations observed.
- 6) Paving and Road and Trail Construction: No violations observed.
- 7) Trash: No violations observed.
- 8) Weeds: In 2004, Yellow sweetclover (*Melilotus officinalis*), Common mullein (*Verbascum thapsus*) were observed at mile-marker 371.7 (less than 100-feet). This area of weed infestation was still present in 2005.
- 9) Other: No violations observed.

Conservation Area #6:

1) Construction of Buildings and/or Other Structures:

Potential Violations: In 2004, it was noted that the fill and construction staging area (Dreager Construction) cited previously at Milepost 380.76 – 380.80 had been removed but not revegetated. During the 2005 Assessment, it was noticed that although the ground remains bare, RFTA is using the area for rail and tie storage as a part of new trail construction on the corridor. Revegetation of the area will take place as a part of the trail construction.



2) Fences: No violations observed.

3) New Crossings, Structures and/or Crossing Improvements:

Potential Violations: Milepost 379.86: Existing crossing to “Glassier” residences. During the 2004 Assessment, a dumpster was cited as being on the corridor. This dumpster has been removed, but a new dumpster has been placed in a similar location.



4) Harvesting of Timber: No violations observed.

5) Mining: No violations observed.

6) Paving and Road and Trail Construction: No violations observed.

7) Trash:

Potential Violations:

a) Milepost 381.4: Metal and wood shelving, fencing, corrugated metal and an old concrete footer has been placed on the right-of-way adjacent to buildings formerly housing a bird sanctuary.



b) 2 areas of trash were observed (MP 380.2 & 380.41) despite placement of "No Trash" signs by RFTA.



- c) Lumber, culverts and fencing materials stored on and near corridor at MP 378.5.



- 8) Weeds: During the 2004 assessment; it was noted that 5 infestations of weeds were present on the corridor. These areas include: Common mullein (*Verbascum thapsus*) at mile-marker 378.87 (150-feet); Common mullein, Houndstongue (*Cynoglossum officinale*) at mile-marker 379.13 (300-feet); Common mullein, Houndstongue, and Yellow sweetclover (*Melilotus officinalis*) at mile-marker 379.25 (50-feet); Common mullein, Yellow sweetclover, and Common tansy (*Tanacetum vulgare*) at milepost 379.37 (1100-feet); Common mullein, Yellow sweetclover, Common tansy and Plumeless thistle (*Carduus acanthoides*) at mile-marker 379.64 (3500-feet). These areas of weed infestation were still present in 2005.

- 9) Other:

Potential Violations:

- a) In 2005, it was noticed that an adjacent property owner was burning yard debris on the rail corridor at MP 381.2.



- b) In 2005, a new sign was observed at a private road crossing at MP 379.2.



Conservation Area #7:

- 1) Construction of Buildings and/or Other Structures: No violations observed.
- 2) Fences: No violations observed.
- 3) New Crossings, Structures and/or Crossing Improvements:
Potential Violations: In 2003, the High School Road crossing at Milepost 383.49. was cited as not having proper licensing.
- 4) Harvesting of Timber. No violations observed.
- 5) Mining: No violations observed.
- 6) Paving and Road and Trail Construction: No violations observed.
- 7) Trash: No violations observed.
- 8) Weeds: In 2004, 1 area of weed infestation was observed along this section of the rail corridor. In 2005, this area was still present at mile-marker 383.5 (300-feet). This area includes sporadic growth of Common mullein (*Verbascum thapsus*) and Plumeless thistle (*Carduus acanthoides*). This area of weed infestation was still present in 2005.
- 9) Other:
Potential Violations: In 2005, it was noted that an irrigation pipe at Milepost 382.52 was leaking. (This pipe had been fixed in 2004 but was leaking again.)



Conservation Area #8:

- 1) Construction of Buildings and/or Other Structures: No violations observed.
- 2) Fences: No violations observed.
- 3) New Crossings, Structures and/or Crossing Improvements: No violations observed.
- 4) Harvesting of Timber: No violations observed.
- 5) Mining: No violations observed.
- 6) Paving and Road and Trail Construction: No violations observed.
- 7) Trash: No violations observed.
- 8) Weeds: No violations observed.
- 9) Other: No violations observed.

Conservation Area #9:

- 1) Construction of Buildings and/or Other Structures:
Potential Violations: The following violations were noted in 2003:
 - a) Milepost 386.42: Riding ring constructed by adjacent landowner that was previously cited as a potential violation encroaching on corridor. This violation was still present during the 2005 Assessment:



The owner of the improvements is currently negotiating a crossing license with RFTA that will require him to remove these encroachments.

- b) Milepost 386.72: Turnaround and driveway placed on corridor. This violation was still present during the 2005 Assessment:



The trail is being relocated in this area by a private property owner and the pull-off will be incorporated into the driveway plan required by Pitkin County for emergency vehicle access

2) Fences:

Potential Violations: A fence that is a part of riding ring constructed by adjacent landowner that was previously cited as a potential violation encroaching on corridor at Milepost 386.42 (see photo at bottom of previous page). This violation was still present during the 2005 Assessment and will be removed under a negotiated access license with the property owner.

3) New Crossings, Structures and/or Crossing Improvements: No violations observed.

4) Harvesting of Timber: No violations observed.

5) Mining: No violations observed.

6) Paving and Road and Trail Construction: No violations observed.

7) Trash:

Potential Violations: Five piles of tree limbs and debris adjacent to the irrigation ditch crossing at Milepost 385.64 were noted in 2005. Three of these piles appear to be left over from the 2004 Assessment and is likely refuse placed from cleaning out the ditch:



- 8) Weeds: In 2004, 2 areas of weed infestation were observed along this section of the rail corridor: Common mullein (*Verbascum thapsus*) and Plumeless thistle (*Carduus acanthoides*) was evident in very sparse amounts at mile-marker 385.90 (2800-feet); and Plumless thistle was evident in sparse amounts at mile-marker 387.5 (1300-feet). These areas of weed infestation were still present in 2005.
- 9) Other: No violations observed.

Conservation Area #10:

- 1) Construction of Buildings and/or Other Structures: No violations observed.
- 2) Fences: No violations observed.
- 3) New Crossings, Structures and/or Crossing Improvements: No violations observed.
- 4) Harvesting of Timber: No violations observed.
- 5) Mining: No violations observed.
- 6) Paving and Road and Trail Construction: No violations observed.
- 7) Trash: No violations observed.
- 8) Weeds: In 2004, 3 areas of weed infestation were observed along this section of the rail corridor: Plumeless thistle (*Carduus acanthoides*) at mile-marker 390.81 (1000-feet); Common mullein (*Verbascum thapsus*) and Plumless thistle throughout the Pitkin Iron siding area at mile-marker 392.90 (1300-feet); and very sparse growths of Plumless thistle and Common mullein at mile-marker 393.75 (1900-feet). These areas of weed infestation were still present in 2005.
- 9) Other:
Potential Violations: In 2004 it was noted that a screening device was placed on the corridor near the Swersky driveway (mile-marker 390.81). This device has been removed.



Attachment VII

Rio Grande Trail Categorical Exclusion

CATEGORICAL EXCLUSION
FOR
RIO GRANDE TRAIL
GARFIELD, EAGLE AND PITKIN COUNTIES, COLORADO
Project #12118

**Prepared for: Colorado Department of Transportation
Region 3, Grand Junction, CO**

**Roaring Fork Transportation Authority
Carbondale, CO**

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June 2003

CATEGORICAL EXCLUSION

BACKGROUND

One of the main attractions of the Roaring Fork Valley is the beautiful mountain scenery and natural setting. Many people access these attractions by using the existing trail system to walk, jog, bike, rollerblade, cross-country ski, or engage in other recreational activities. Numerous trails are currently scattered throughout the Valley.

The Project Corridor extends from West Glenwood Springs (near 23rd Street) to Woody Creek Junction (outside of Aspen) and is centered on the historic Denver and Rio Grande Western Railroad right-of-way.

At the northwestern end of the Project Corridor is the 14.5 mile Glenwood Canyon Trail. This trail runs on the south side of Interstate 70 along the Colorado River, crossing over to the north side of Interstate 70 just before it enters Glenwood Springs. The concrete-surfaced trail is approximately eight feet wide. Connected to this trail via 6th Street and the Interstate 70 interchange, the Glenwood Springs River Trail follows the former Denver and Rio Grande Western (D&RGW), now RFTA, right-of-way, 1.5 miles south to 23rd Street.

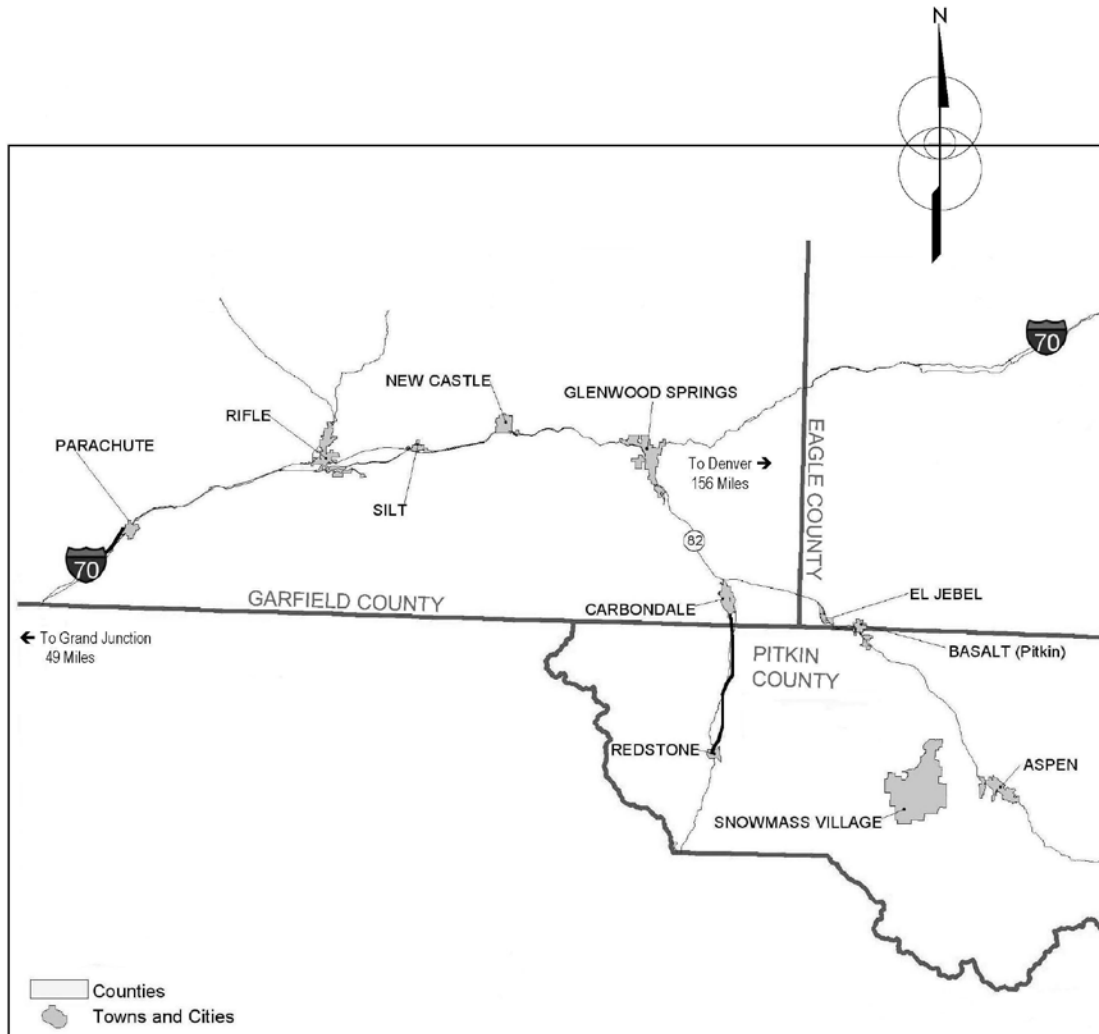
At the southeast end of the Project Corridor near Aspen, the existing Rio Grande Trail extends 7.3 miles from Woody Creek to Rio Grande Park in downtown Aspen along a portion of the old D&RGW right-of-way that was purchased by Pitkin County. This trail is approximately eight feet wide and asphalt paved.

Implementation of a continuous regional recreation trail is needed to connect these trail systems currently located at opposite ends of the Project Corridor. The purpose of this project is to provide that connection.

The opportunity for the continuation of the Rio Grande Trail from its previous terminus at Wood Creek Junction (outside of Aspen), an additional 32 miles north and west to Glenwood Springs, occurred when the portion of the Aspen Branch of the Denver and Rio Grande Western Railroad (D&RGW) that remained between Glenwood Springs and Woody Creek Junction became available for purchase as the result of the merger of the Southern Pacific and Union Pacific Railroads. On June 30, 1997, the D&RGW right-of-way corridor was purchased for \$8.5 million. The Roaring Fork Railroad Holding Authority (RFRHA) was established to purchase and manage the corridor. The purchase of this right-of-way presented an opportunity to explore both transportation and recreation solutions to Highway 82 congestion and trail connectivity challenges in the Roaring Fork Valley. *Figure 1* shows a regional context for the proposed project.

As a part of the agreement to purchase the right-of-way in 1997, it was required that a comprehensive plan be prepared that would determine the future uses of the corridor. A *Comprehensive Plan for the Aspen Branch of the Denver and Rio Grande Western Railroad Corridor* was submitted to the RFRHA Board and accepted on November 3, 1999. The plan

Figure 1 – Regional Map



included the following specific element: Location of a permanent, continuous public recreation trail running along the entire length of the RFRHA right-of-way (ROW).

When the Roaring Fork Transportation Authority (RFTA) was approved by voters as a Rural Transportation Authority under Colorado law in November 2000, it absorbed the responsibilities of RFRHA. References in the current document to RFTA right-of-way refer to the RFRHA right-of-way that was acquired as noted above.

The proposed Rio Grande Trail between West Glenwood Springs and Woody Creek Junction is also discussed in the *West Glenwood Springs to Aspen CIS* transportation document. As a result of analyses conducted for that study, a Categorical Exclusion (CE) appeared to be applicable for the Rio Grande Trail. The proposed Rio Grande Trail meets the definition contained in 40 CFR 1508.4 and does not involve significant environmental impacts as noted:

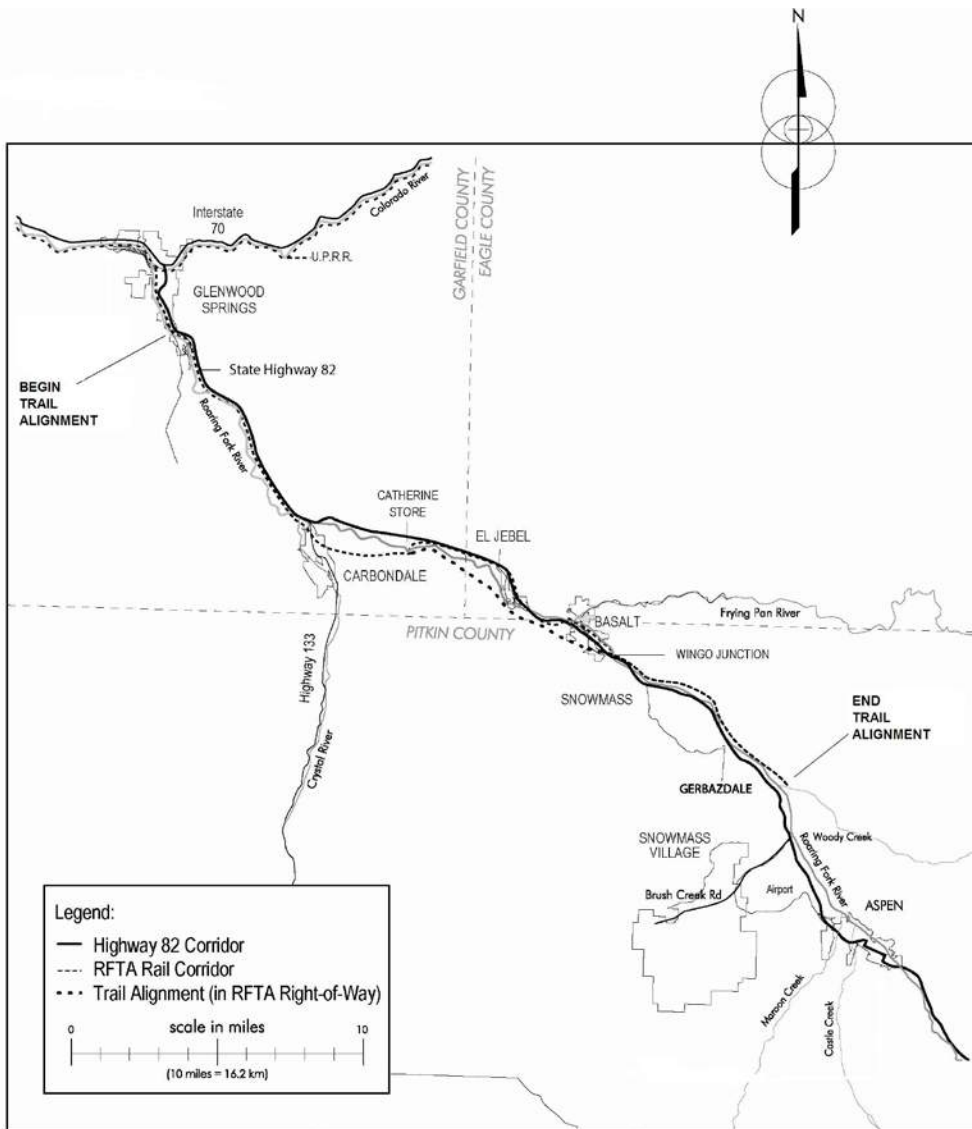
- Does not induce significant impacts to planned growth or land use for the area
- Does not require any relocations
- Does not have a significant impact on natural, cultural (historic or archaeological), recreational, or other resources
- Does not involve air, noise or water quality impacts
- Does not have a significant effect on travel patterns
- Does not otherwise, either individually or cumulatively, have any significant environmental impacts

RFTA (as RFRHA) initially received approval to construct the trail from the Surface Transportation Board, as a railbanking initiative. Railbanking preserves abandoned railroad lines through interim conversion to trail use. Under 49 CFR Chapter X., Section 1152.29, RFTA applied for, and received permission to build the trail. CDOT signed an intergovernmental agreement with RFRHA agreeing that the trail could proceed without environmental clearance. Later it was decided that Section 106 coordination requirements needed to be fulfilled. This has been completed as noted under Historic Preservation in the forthcoming discussion. The trail was also included in the Corridor Investment Study completed for the transit options along the corridor. (Note that even recently conversion of a railroad to interim trail use has been demonstrated as not subject to NEPA in *Citizens Against Rails to Trail v. Surface Transportation Board*, 267 F.3d 1144(D.C. Cir. 2001). In lieu of additional legal clarification of the need for NEPA compliance for the proposed Rio Grande Trail, this environmental analysis has been completed and is being submitted appropriately as a Categorical Exclusion.

PROJECT DESCRIPTION

The RFTA right-of-way was purchased as a possible transit corridor, and also to provide a continuous trail connection between the communities in the Project Corridor. The proposed trail begins at the terminus of the Glenwood Springs River Trail at 23rd Street in Glenwood Springs at RFTA mile marker 361.7. It ends 32 miles south and east, where it connects to the end of the existing Rio Grande Trail at Woody Creek at RFTA mile marker 393.7. The Rio Grande Trail provides a connection into Aspen. The trail is described in further detail in the document *Aspen Branch Denver & Rio Grand Western Railroad: Recreational Trails Plan Glenwood Springs to Aspen CIS/DEIS/CP* (Land Plan, 1999). **Figure 2** provides general map of the new Rio Grande Trail.

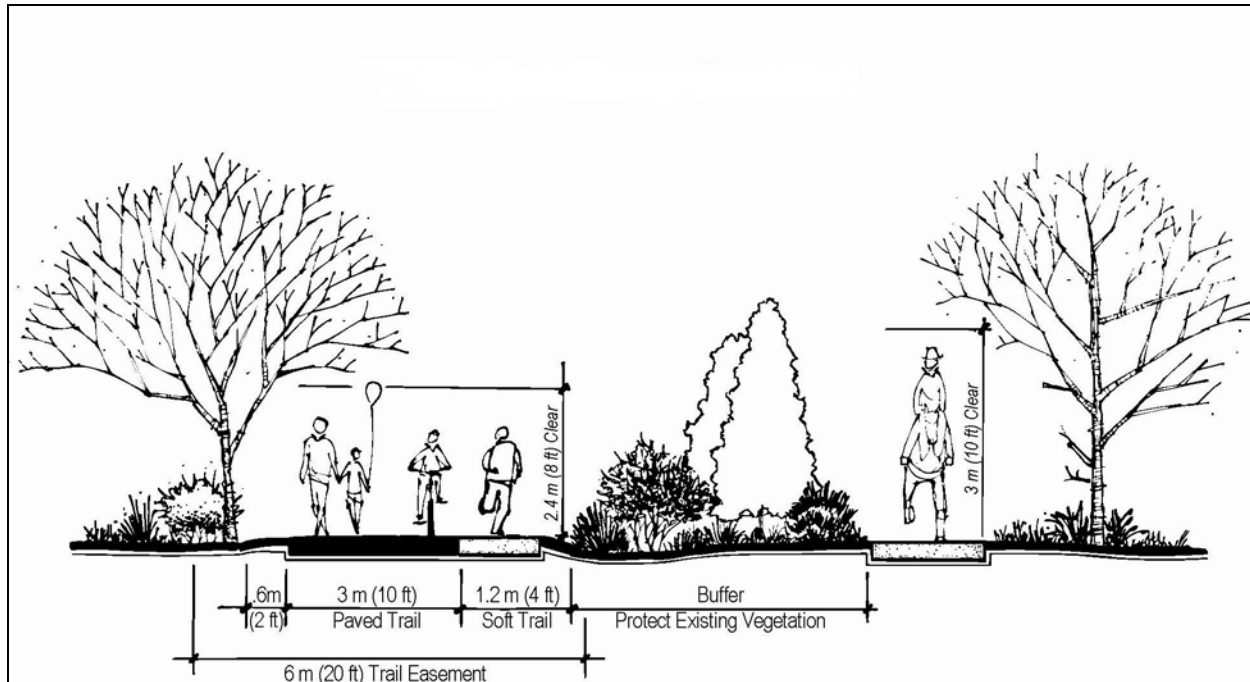
Figure 2 – General Area Map for Rio Grande Trail



Trail Alignment and Cross-Section. The trail alignment follows the RFTA rail right-of-way. The trail is proposed with ten-foot pavement width and a four-foot graded shoulder on one side. The pavement width may vary due to projected user volumes and physical constraints. The maximum grade is five percent. In lieu of use of the tracks by a rail line, the trail may be constructed over top of the existing rails to avoid environmental impacts within the right-of-way such as wetlands or geological hazard. *Figure 3* presents a typical trail section.

Highway Crossings. Grade-separated trail crossings are proposed for highway crossings at Highway 133 in Carbondale (as part of a planned transit station) and at Highway 82 at Wingo Junction. Existing underpasses adjacent to the corridor provide safe access across Highway 82

Figure 3 – Typical Trail Cross Section



near El Jebel and Emma. Proposed underpasses are also incorporated into planned transit stations at South Glenwood Springs, Colorado Mountain College, and Basalt adding grade-separated pedestrian access to the trail from population centers. These underpasses are associated with transit station construction and not the current trail project.

Bridges. The proposed trail alignment includes creek, gulch, and road crossings at several locations that require bridge structures for trail continuity. Rehabilitation of existing bridges is proposed at Cattle Creek, the Roaring Fork River at Satank, Sopris Creek, the Roaring Fork River at Wingo Junction, Arbaney Gulch in Snowmass Canyon, and potentially at the end of the corridor at Woody Creek.

Interpretive Signage. The Rio Grande Trail will include interpretive signing to provide relevant and appropriate information. Several means of providing information via signage are recommended:

- Information signs – mapping, regulations, safety information, resource protection etc.
- Interpretive signs – interpretive messages regarding historic, cultural, and natural resources
- Trailside signs – mileage, directions, distances, road intersections etc.
- Identify signs – graphic logo for trail definition
- Traffic control signs – regulatory signage and pavement markings

ENVIRONMENTAL ISSUES EVALUATED AND REVIEWED

As a result of analysis conducted for the potential transportation projects in the same corridor, the following resources were also analyzed for the Rio Grande Trail:

Social Environment

- Population
- Demographic characteristics
- Environmental Justice
- Services
- Recreation
- Land use
- Section 6(f) resources

Economic Environment

- Economic base
- Commercial growth trends
- Employment
- Income
- Housing
- Local government finance

Physical Environment

- Air quality
- Water resources – water quality
- Floodplains

- Geology and soils
- Upland and floodplain vegetation (and noxious weeds)
- Wetlands
- Fisheries
- Wildlife
- Wild and scenic rivers
- Threatened, endangered, candidate and other special concern species
- Historic Preservation
- Paleontological resources
- Section 4(f) resources
- Farmlands
- Noise and ground-borne vibration
- Visual character
- Potential hazardous waste sites
- Public Safety and Security
- Energy
- Construction

Social Environment. The implementation of the trail will create positive recreation impacts to the Project Corridor by providing needed trail connectivity. Section 6(f) refers to lands purchased under the Land and Water Conservation Fund Act of 1965 and is under the jurisdiction of the National Park Service. There are no Section 6(f) Resources associated with the proposed project.

No other impacts are associated with the trail and resources identified under Social Environment. The trail will be constructed within the existing RFTA right-of-way. No additional discussion is applicable for these resources.

Economic Environment. No impacts are associated with the trail and resources identified under Economic Environment. No additional discussion is applicable for these resources.

Physical Environment. No impacts are associated with the following resources: air quality, floodplains, Wild and Scenic Rivers (none exist in the Project Corridor), farmland resources, noise and ground-borne vibration, public safety and security or energy. No additional discussion is applicable for these resources. Although no adverse impacts are associated with the following

resources, a discussion of applicable background research and/or Section 106 coordination is included: historic preservation, paleontological resources, Section 4(f) resources.

No mitigation will be required after implementation of best management practices (BMPs) to the following physical environment resources: water resources/water quality, geology and soils, upland and floodplain vegetation (and noxious weeds), fisheries, wildlife, threatened and endangered species, visual, and construction. BMPs are summarized by resource.

Mitigation will be required for minor impacts to wetlands and potential impacts from hazardous waste sites. Mitigation is noted.

HISTORIC PRESERVATION

Relevant Project Corridor History. Prosperity in the late 1800s also led to the building of two railroads into Aspen and through the Roaring Fork Valley – the Denver and Rio Grande (later the Denver and Rio Grande Western, D&RGW) and the Colorado Midland. These railroads prospered as long as Aspen’s mines remained profitable, but by 1900 both companies were feeling financial strains as the local and Colorado economies adjusted to the new century and the lack of large incomes from precious metal mining. By the second decade of the 1900s the Colorado Midland went out of business and the D&RGW was forced into stringent economic measures. The Aspen Branch of the D&RGW remained active from the 1920s through the 1960s, but with only occasional service and the line ending at Woody Creek rather than Aspen. The Aspen Branch between Woody Creek and Aspen was eventually purchased by Pitkin County and is the location of the existing Rio Grande Trail. The remainder of the line was purchased in 1997 by the Roaring Fork Transportation Authority (RFTA), formerly known as the Roaring Fork Railroad Holding Authority.

44 Project Corridor Sites. As the result of various surveys and studies performed for associated projects by CDOT, WCRM, Pitkin County and others, 44 cultural resource sites were identified in the general Project Corridor. These sites are not all in the Area of Potential Effect (APE) for the current project. The following discussion presents a definition of the APE, the discernment of sites located within the APE, and the eligibility status of these sites.

APE Definition. An APE is not based on the knowledge that any historic properties exist within the area, but rather an area where the project may cause changes to land or structures, or to their uses, whether beneficial or adverse, direct or indirect. For the current project, the APE has been defined as generally 100 feet on either side of RFTA right-of-way. The following barriers may modify this definition: Roaring Fork River, the railroad grade, Highway 82 roadway or associated roadways. The project will not result in any permanent disturbance beyond the RFTA right-of-way.

Twenty Sites Outside of APE. Of the 44 cultural resource sites identified, 20 have been determined to be outside the APE for the Rio Grande Trail based on the definition noted above. See Table 1.

**Table 1
Cultural Resource Sites Outside the Area of Potential Effect**

Site Number	Site Name/Location	NRHP Status
5GF398	Log House	Not Evaluated
5GF469/5PT324	Jerome Park Branch/Colorado Midland Railroad	Officially Eligible
5GF1356	Old Town Jail (S. 2 nd & Main - Moved to 8 th and Highway 133, Carbondale)	Not Evaluated
5GF2363	Sumers Lodge [1200 Mountain Dr., Glenwood Springs]	Listed
5EA56	Prehistoric Lithic Scatter	Not Evaluated
5EA58	Prehistoric Lithic Scatter	Not Evaluated
5EA64	Wagon Road	Not Evaluated
5PT113	Aspen Commercial Historic District (Certified Local Historic District)	Listed
5PT471	A.B. Foster Ranch	Officially Eligible
5EA659	Hook's Crossing (Bridge)	Not Evaluated
5EA660	Basalt- Town of	Not Evaluated
5PT475	Roadhouse on Aspen-Basalt Stage Road	Officially Not Eligible
5PT500	Rathbone, Town of - exact location unknown, NE of Aspen Airport - no standing structures.	Not Evaluated
5PT503.1	Woody Creek Toll Road	Officially Not Eligible
5PT542	Colorado Midland Railroad	Officially Eligible
5PT617.1	Walthen Ditch	Officially Eligible
5PT617.2	Walthen Ditch Lateral	Officially Not Eligible
5PT822	Swan's Snowmass Cottages/Emma Bradshaw Ranch (26801 Highway 82, Snowmass)	Not Evaluated
5PT823	Emma Bradshaw Property [26625 Highway 82, Snowmass]	Not Eligible
5PT875	Cozy Point Ranch / True Smith Homestead [34700 Highway 82, Snowmass]	Officially Not Eligible

Twenty-four Sites within the APE. Of the 44 sites identified, 24 have been determined to be within the APE for this project. Table 2 illustrates sites located within the APE as well as their eligibility status.

**Table 2
Historic Properties within the Project Area of Potential Effect**

Site Number	Site Name/Location	NRHP Status
5EA198/5GF1661/ 5PT123	D&RGW Railroad	Officially Eligible
5GF1167	Hardwick Bridge	Officially Eligible
5GF1282	Satank Bridge	Listed
5GF1457	Glenwood Ditch	Officially Not Eligible
5GF2129	White River Natl. Forest Supervisor's Warehouse [1101 School Street, Glenwood Springs]	Officially Not Eligible
5GF2698	Railroad Support Facilities Ruin	Officially Not Eligible

Table 2
Historic Properties within the Project Area of Potential Effect

Site Number	Site Name/Location	NRHP Status
5GF2818	Sanders Ranch	Officially Not Eligible
5PT27	Emma School	Officially Eligible
5PT57	Wheatley School	Officially Eligible
5PT323	Emma Historic District	Officially Eligible
5PT472	Ten Mile Stage Station	Officially Not Eligible
5PT474	Woody Creek School	Officially Not Eligible
5PT476	Woody Creek RR Siding	Officially Not Eligible
5PT477	Watson's Siding; Farmer's Alliance Hall	Officially Not Eligible
5PT504	Aspen to Basalt Stage Road	Officially Not Eligible
5PT594.1	Segment of Alexis-Arbany Ditch	Officially Not Eligible
5PT612	Three Stone Cairns/ Magazines	Officially Not Eligible
5PT630	Potato Cellar	Officially Not Eligible
5PT632.1	Grace An Shehi Ditch	Officially Not Eligible
5PT787	Philip/Ould/Gerbaz Ranch [1776 Emma Road, Basalt]	Officially Not Eligible
5PT792	Mather Residence [Emma Road, Basalt]	Officially Eligible
5PT851	Wingo Trestle; Bridge 384A [Hwy 82 and Hoaglund Ranch Road]	Officially Eligible
5PT864	Phillips Residence / Joseph Diemoz Homestead – 3558 Lower River Rd, Snowmass	Officially Not Eligible
5PT876	Aspen Valley Vet Hospital / Orest A. Gerbaz Residence [30875 Highway 82, Snowmass]	Officially Not Eligible

Of the 24 sites identified within the APE, 8 are officially eligible for or listed on the National Register of Historic Places. Each eligible site is described below.

Denver and Rio Grande Western Railroad (5EA198/5GF1661/5PT123). The D&RGW railroad has been recorded in all three counties. The Eagle County segment was originally recorded by Fredric Athearn of the BLM in 1971 (Athearn, 1994). It was reevaluated by Metcalf Archaeological Consultants (*Holland Hills to Old Snowmass Trail T8S, R86W, Section 21 Pitkin County, Colorado Class III Cultural Resource Inventory*, Spath, 1993) and determined eligible in 1994. Kim Gambrill of the CDOH recorded the railroad in Garfield County. This segment was not evaluated with regard to the NRHP. The Pitkin County portion of the railroad was originally recorded by Sally Pearce of the CDOH (1989) during the Basalt to Aspen Project. This segment was determined eligible in 1988. The D&RGW was re-evaluated by WCRM (Chambellan and Mehls, 2000a) and 226 features were recorded within the Project Corridor.

As a result of coordination with the OAH, re-evaluation site forms have been completed for each county's railroad segment within the Project Corridor. Features have been listed as associated with the appropriate segment. Individual site numbers have been given to bridges and trestles associated with the D&RGW Railroad as contributing elements. An

Table 3
Contributing Sites to the D&RGW Railroad

D&RGW RR Segment	Features	Bridges and Trestles
Garfield County: 5GF1661	F-1 to F-137	5GF3005 (F-9)
		5GF3006 (F-14)
		5GF3011 (F-63)
		5GF3012 (F-87)
Eagle County: 5EA198	F-138 to F-156	
Pitkin County: 5PT123	F-157 to F-226	5PT1084 (F-158)

additional five bridges or trestles have been evaluated, and their sites are summarized in Table 3 and in text below. Concurrence on the eligibility status of these bridges has been requested and received from the State Historic Preservation Officer (SHPO) in January, 2003. Irrigation ditches that parallel the corridor have been deleted from the list of features. Structures that carry irrigation ditches under the railroad have been retained as railroad features.

5GF3005, Bridge. The bridge was recorded as Feature 9 of the D&RGW (5EA198/5GF5GF1661/5PT123) by WCRM (Chambellan and Mehls, 2000a). This is a four span steel beam railroad bridge over the Roaring Fork River near downtown Glenwood Springs. Its estimated date of construction is sometime after 1890, when the narrow gauge railroad converted to standard gauge. The bridge was build as part of the D&RGW RR, Aspen Branch line. Although the bridge lacks the engineering qualities to be considered eligible to the NRHP, it is officially eligible under Criterion a for its association with the railroad.

5GF3006, Bridge. The bridge was recorded as Feature 14 of the D&RGW (5EA198/5GF5GF1661/5PT123) by WCRM (Chambellan and Mehls, 2000a). This is a single span steel beam railroad bridge over West 7th Avenue in downtown Glenwood Springs. The bridge is officially eligible to the NRHP under Criterion a for its association with the railroad.

5GF3011, Trestle. The trestle was recorded as Feature 63 of the D&RGW (5EA198/5GF5GF1661/5PT123) by WCRM (Chambellan and Mehls, 2000a). This is a framed bent, wooden railroad trestle over Cattle Creek, built sometime after 1890. The bridge is officially eligible to the NRHP under Criterion a for its association with the railroad.

5GF3012, Bridge. The bridge was recorded as Feature 87 of the D&RGW (5EA198/5GF5GF1661/5PT123) by WCRM (Chambellan and Mehls, 2000a). This single span Pratt Truss deck bridge with trestle approaches at both ends, built sometime after 1890, is located just outside of Carbondale. The bridge is officially eligible to the NRHP under Criterion a for its association with the railroad.

5PT1084, Trestle. The trestle was recorded as Feature 158 of the D&RGW (5EA198/5GF5GF1661/5PT123) by WCRM (Chambellan and Mehls, 2000a). This structure, built sometime after 1890, is a pile bent wooden trestle of three bents that crosses over the Sopris Creek. The bridge is officially eligible to the NRHP under Criterion a for its association with the railroad.

Hardwick Bridge (5GF1167). The bridge and one acre surrounding it were surveyed in 1983 by Rebecca Herbst of the Colorado Department of Highways. The original (no date given) structure was destroyed when an excessive number of cattle were driven over it. Subsequently, a new bridge was constructed by the Monarch Engineering Company in 1923 to serve as a vehicular bridge. It is one of the earliest constructed rigid Pratt through truss bridges, however, it was not evaluated as significant because this construction style was not unique. The bridge was determined not eligible on November 15, 1983. It has since been re-evaluated by Fraser Design in 2000 as part of the Colorado Bridge Inventory. The bridge qualifies under Criterion a as a well-preserved example of county-level bridge construction using state design standards. It is also technologically significant as one of the last remaining examples of what was once a common structural type. The SHPO has concurred in the eligibility of this resource (SHPO, 2003).

Satank Bridge (5GF1282). This bridge was recorded by Clayton Fraser and Susan Cason of Fraser Design during a survey of Colorado bridges conducted by the Colorado Department of Highways (1983). The timber/steel Pratt through truss bridge was constructed by the Pueblo Bridge Company in 1900. It is one of the older roadway trusses in Colorado and the only remaining timber Pratt through truss in public use in the state. It was listed on the NRHP on February 4, 1985 and represents a significant vehicular bridge of the late 19th and early 20th centuries under Criterion a.

Emma School (5PT27). This one story rectangular frame school was originally noted in the OAHF files in 1977; no evaluation was made. It is estimated that the building was constructed sometime around 1900 and served as a focus of community events for local ranching families. It is associated with the history of education in the rural communities of Colorado and represents rural schools of the early 20th century. It has been re-evaluated in the 1999-2000 Pitkin County Historic Buildings Survey as eligible to the NRHP under Criterion a. The SHPO concurred with this finding and determined that the school was officially eligible in 2003.

Wheatley School (5PT57). Originally, the school was a one-room schoolhouse built of brick before 1920. Its dimensions are 24 feet by 16 feet. It is currently used as a residence and has been substantially modified. The school was originally recorded by Dykeman in 1974 and was subsequently reevaluated by Metcalf Archaeological Consultants (MAC) in 1996 during a survey for the Holy Cross Basalt to Aspen 115kV Rebuild Project (Spath, et al, 1996) and WCRM (Chambellan and Mehls 2000b) during the historic resources survey of the Lower River Road detour. Both MAC and WCRM concurred with the original official determination of not eligible in 1988. In 2000 the Wheatley School was reevaluated by a Pitkin County Historic Buildings Survey. Pitkin County recommended the school as potentially eligible for its association with a the multiple property submission for rural schools, although alterations have compromised its integrity. This property has been determined officially eligible to the NRHP under Criterion a.

Emma Historic District (5PT323). Emma was established as a railroad section stop and was reportedly named after Mrs. Emma Robinson Shehi, who cooked for railroad crews. Charles Mather was a postmaster at Emma who also operated a successful general store. The district was recorded by the Department of Highways in 1976 and officially determined eligible in 1977. It consists of the Mather Buildings, mercantile stores, a warehouse, residences and outbuildings. Eligibility of this district is based on events or patterns under Criterion a.

Mather Residence (5PT792). The Mather house is a two-story painted brick building constructed in 1898 by Charles H. Mather. Mather was the second man to become the Emma postmaster. He also operated a general store and was a businessman associated with the history of Emma and the settlement of Pitkin County. The house is one of the more architecturally sophisticated 19th century buildings in the area. It was recorded and evaluated by the Historic Buildings Survey sponsored by Pitkin County from 1999-2000. Note: the Mather Residence is included in the Emma Historic District (5PT323).

Wingo Trestle (Bridge 384A - 5PT851). The Wingo Trestle is a deck truss 222-foot railroad bridge carrying one standard gauge track across the Roaring Fork River. The D&RGW constructed the Aspen Branch in 1887, and the current bridge was installed in 1917. The bridge was fabricated from parts of structures originally located on other parts of the D&RG system. The bridge was recorded as Feature 178 of the D&RGW (5EA198/5GF5GF1661/5PT123) by WCRM (Chambellan and Mehls 2000a) for the current CIS. It was subsequently recorded and evaluated as a site by the Historic Buildings Survey sponsored by Pitkin County in 2000. As part of the D&RGW system, which was determined eligible in 1988, the trestle is a contributing element. Pitkin County recommended that the bridge is eligible for inclusion in the NRHP under Criterion a for its association with the railroad. The SHPO concurred in this finding in May 2002.

Miscellaneous Archaeological Resources. During October of 1998, WCRM conducted an intensive pedestrian inventory of approximately 48 acres. The project area was defined by a corridor of 80 to 100 feet wide and 41.3 miles in length along either side of the existing D&RGW railroad tracks and extending west of Glenwood Springs to approximately three miles northwest of Aspen. No prehistoric properties were recorded. This inventory recorded three historic period archaeological sites (5EA1560, 5GF2698, 5PT710), however, none were deemed to be significant or eligible for inclusion in the NRHP. Fifteen isolated historical artifacts were recorded during the survey and are considered archaeological in nature (Chambellan and Mehls, 2000a). Isolated finds, by definition, are not considered eligible to the NRHP.

Trail Impacts. Eight NRHP eligible or listed historic properties noted in Table 4 are within the APE for the construction of the new Rio Grande Trail.

The SHPO concurred with CDOT's finding that the trail location would have no adverse effect on the historic Denver and Rio Grande Western Railroad Grade and right-of-way. The no adverse effect finding was based on the following rationale:

- The railroad is significant as a historic transportation corridor (Criterion a), and any proposed trail improvements would retain the corridor for transportation purposes and thus would not adversely affect the qualities that make the railroad eligible for the

National Register of Historic Places (NRHP). The trail will result in no adverse effect to the setting and features of the railroad line, as it won't diminish the qualities that make the railroad eligible to the National Register.

- Under the federal legislation cited above (49 CFR Chapter X., Section 1152.29), rail banking is actually considered a beneficial use, as it preserves the rail corridor from abandonment that would have caused the right-of-way to revert back to adjacent property ownership. Abandonment could have resulted in the loss of portions of or all of the historic Aspen Branch railroad grade.
- Even in areas where the trail results in paving on top of the rail bed or a siding, it can be said that the alignment and profile of the existing rail bed or siding are being preserved from potentially erosive forces. The action does not alter any of the significance of the corridor, and will allow it to remain recognizable as a former railroad grade.

Except for the location of the trail on the historic Denver and Rio Grande Western Railroad grade and right-of-way, the trail will simply run in the vicinity of the other properties. Of the five bridges identified for their association with the D&RGW RR, the trail will only potentially affect three: 5GF3011, 5GF3012 and 5PT1084. There will be no physical intrusion on any of the adjacent cultural properties, nor indirect impacts. None of the eight sites will be adversely affected by the proposed trail construction. No additional actions are required regarding sites for which there is no adverse effect.

Table 4
NRHP Eligible or Listed Resources Potentially Affected by New Rio Grande Trail

Site Number	Site Name/Location	Determination of Effect
5EA198/5GF1661/5 PT123	D & RGW Railroad	No Adverse Effect. See discussion in text.
5GF3011	Trestle— for association with D&RGW RR	No Adverse Effect. See discussion for D&RGW RR in text.
5GF3012	Bridge – for association with D&RGW RR	No Adverse Effect. See discussion for D&RGW RR in text.
5PT1084	Trestle –for association with D&RGW RR	No Adverse Effect. See discussion for D&RGW RR in text.
5GF1167	Hardwick Bridge	No Effect. The bridge is separated from the trail by CR 154.
5GF1282	Satank Bridge	No Adverse Effect. This bridge across the Roaring Fork River is less than 100 feet from the trail project. Trail construction and use will not affect this resource, adjacent to the right-of-way.
5PT27	Emma School	No Adverse Effect. Trail construction and use will not affect this resource, which is adjacent to railroad right-of-way.
5PT57	Wheatley School	No Adverse Effect. Trail construction and use will not affect this resource, which is adjacent to the railroad right-of-way.
5PT323	Emma Historic District	No Effect. The buildings in this District are separated from the trail by Highway 82.
5PT792	Mather Residence - within the Emma Historic District	No Effect. The buildings in the District are separated from the trail by Highway 82.
5PT851	Wingo Trestle	No Adverse Effect. Handrails and decking have been constructed over this existing trestle for trail use.

Determinations of No Effect have been made for the Hardwick Bridge (5GF1167), the Emma Historic District (5PT323) and associated Mather Residence (5PT792). Existing roadways separate the proposed trail location on the RFTA right-of-way from these resources.

Determinations of No Adverse Effect have been made for the Satank Bridge, Emma School, Wheatley School and the Wingo Trestle. Trail construction will not affect the bridge or schools as it will remain within the adjacent RFTA right-of-way. The Wingo Trestle has been altered to include handrails and decking for trail use for a previously constructed and approved trail element. The SHPO has made a determination of No Adverse Effect for this location (SHPO, 2002).

Mitigation. The construction of the new Rio Grande Trail along the D&RGW Railroad (5EA198/5GF1661,5PT123) grade and right-of-way will affect this NRHP eligible property even though a determination of No Adverse Effect has been made.

While mitigation is not required for a determination of No Adverse Effect, a full photographic recordation of the line as it currently exists has been completed. RFTA will also implement a program of public interpretation and education in stations along the line per recommendations contained in *Reading the Roaring Fork Landscape: An Ideabook for Interpretation and Environmental Education* (SAIC, 1999a). This plan includes provision for interpretation and public education regarding the Roaring Fork Valley's cultural heritage. In addition, CDOT has recommended specific topics on the significance the historic railroad had on the Roaring Fork Valley. These interpretive topics include:

1. The D&RGW RR as a prospecting railroad, going to promising mining camps all over Colorado, including Aspen.
2. The heritage of bridge engineering in the valley, including the Satank Bridge, the Wingo Trestle, and the Hardwick Bridge.
3. Carbondale as the rail hub of the valley, including the D&RGW RR, Colorado Midland RR, and the Crystal River RR.
4. Selling the valley and the railroad's role in enticing settlers during the early 1900s.
5. "Wealth from the earth," the role of the railroad in transporting precious minerals (silver, coal, marble, etc.)
6. The "rich and famous" who used the railroad, including Teddy Roosevelt and other celebrities.

Applicable Section 106 coordination letters are found in Appendix A.

Native American Consultation. As mandated by Section 106 of the National Historic Preservation Act (as amended) and the revised Advisory Council on Historic Preservation regulations (36 CFR 800), in October 2002 four federally recognized Native American tribes with an established interest in Eagle, Garfield and/or Pitkin Counties, Colorado were notified of the project and invited to participate in cultural resources consultation with FHWA, FTA, and CDOT, at their discretion. The tribes contacted included the Ute Mountain Ute Tribe, Southern Ute Indian Tribe, Ute Tribe of the Uintah and Ouray Agency (often known as the Northern Ute Tribe), and the White Mesa Ute Tribe.

Consultation with Native American tribes recognizes the government-to-government relationship between the federal government and tribal groups, and federal agencies must be sensitive to the fact that historic properties of religious and cultural significance to one or more tribes may be located on ancestral, aboriginal, or ceded lands beyond modern reservation boundaries.

By initiating and facilitating the Native American consultation process, FHWA and CDOT are fulfilling their legal obligations in this regard as outlined in the Section 106 and Advisory Council regulations. See applicable coordination letter in Appendix A.

PALEONTOLOGICAL RESOURCES

Only two fossil localities were located within the project area, neither were rated as significant. The first is a Pennsylvanian aged paleobotanical resource on the U.S. Geological Survey Cattle Creek 7.5 foot quadrangle. It consists of a poorly preserved plant stem impression of *Calamites* and its significance should be rated as low. The second paleontological resource was located on the U.S. Geological Survey Woody Creek 7.5 foot quadrangle. There were several poorly preserved plant stem casts and impressions with carbonaceous residue in the Cretaceous aged Dakota Sandstone and its significance should be rated as low. The coarse-grained nature of the Dakota Sandstone in this area indicates low potential for significant terrestrial paleobotanical resources.

The trail will have no significant environmental consequences for these paleontological resources. If additional resources are uncovered during trail construction, work in the immediate vicinity will cease. The CDOT staff paleontologist will be notified and the material will be evaluated and coordinated with the Denver Museum of Nature and Science.

SECTION 4(f) RESOURCES

Section 4(f) of the Department of Transportation Act, 49 U.S.C. 303 permits the use of land for a transportation project from a significant publicly-owned park, recreational area, wildlife or waterfowl refuge, or any significant historic site only when it has been determined that:

1. There is no feasible and prudent alternative to such use, and
2. The project includes all possible planning to minimize harm to the property resulting from such use.

The purpose of Section 4(f) is to preserve parkland, recreation areas, refuges, and historic sites by limiting the conditions under which these lands can be used for transportation projects. Specific types of resources, which are relevant to the Roaring Fork Valley Transit Corridor, are clarified below.

The new Rio Grande Trail will provide connections with other existing trails in the Project Corridor. This is viewed as a beneficial impact of the trail construction and is not subject to Section 4(f). The new trail will not adversely affect any of the eight NRHP-eligible or listed historic properties along its route.

The construction of the new Rio Grande Trail is fully within the RFTA right-of-way, which is also the right-of-way from the old D&RGW RR. The SHPO has concurred with the finding of No Adverse Effect for the construction of the trail on this historic corridor. The right-of-way was purchased under the rail banking program to preserve the corridor. The use of this historic location preserves the profile and alignment of the existing rail bed from potentially erosive forces. There will be no permanent or substantial impairment to the resource and therefore, no use. There is no change of use. The corridor remains a transportation corridor, although the mode of transportation is different. No Section 4(f) exists and no evaluation is required.

WATER RESOURCES – WATER QUALITY

The new Rio Grande Trail, at an estimated pavement width of ten feet, will add approximately 38.8 acres of impervious surface over the length of the Project Corridor. This added impervious surface will comprise less than one percent of the total surface area of the watershed and is not expected to generate measurable effects to water resources. The trail is not expected to result in adverse direct or indirect impacts to ground water in the Roaring Fork Valley.

The new Rio Grande Trail will include new stream crossings at Cattle Creek, over the Roaring Fork River at Carbondale, and at Prince Creek near Emma. Further, the existing rail line on the RFTA right-of-way has been out of service for more than ten years. The condition of the line has deteriorated, and it is expected that cross drains may be clogged with debris, and erosion of surface and side slopes may be adversely affecting water quality. Rehabilitation of these existing structures or construction of new structures for the trail are expected to positively benefit water quality by re-establishing hydrologic connections and minimizing sediment delivery to the Roaring Fork River and other waters of the U.S.

Existing state law requires consultation with the Colorado Division of Wildlife (CDOW) when project activities may affect streams and wetlands in Colorado. Per CDOT and CDOW Memorandum of Agreement (MOA), Senate Bill 40 Certification requires attention to projects involving permanent or temporary stream re-alignment, bank stabilization activities, stream encroachment and potential effects to Gold Medal fishing waters. Should any of the proposed stream crossings activate SB 40 requirements, mitigation will be implemented per the MOA. SB 40 certification will be applied for on a project by project basis when applicable.

Construction, operational and maintenance BMPs may include both non-structural and structural erosion control measures as needed along the RFTA right-of-way, including stream crossings.

GEOLOGY AND SOILS

The new Rio Grande Trail will be constructed over predominantly stable alluvial terrace deposits consisting of well-rounded gravel to cobble-sized material. The *Pre-Acquisition Environmental Site Assessment* (SRK, 1996) identified specific areas with associated geology that are potentially subject to geological impacts. SRK determined that the Eagle Valley Evaporite Formation posed substantial risk and presented potentially “serious engineering problems” for

these specific areas of the project. The physical characteristics and orientation of the evaporite outcrop include steep hillsides and bluffs adjacent to the track, which make it prone to failure, resulting in unstable slopes. In addition, the movement of groundwater and surface water can dissolve evaporite minerals within the formation leading to serious subsidence problems. Other concerns include the colluvium deposits. These deposits are relatively thin (less than 100 feet), occur along the edges of the Roaring Fork Valley at the base of slopes and embankments, and consist of poorly-sorted sediments and rock debris that are commonly unstable, poorly drained, and susceptible to erosion and hydrocompaction. Geologic hazards associated with colluvium include landslides, mudflows, rock falls, rock glaciers, slumps, and talus (SRK, 1996).

Geologic hazards will be minimized by site avoidance and design characteristics as defined by best engineering practices. When movement of a site location is not possible, it may be economically feasible to bridge small sections of rail line that are adjacent to steep banks to allow slides to flow over them. Additional measures to reduce the consequences of slope instability would include chain-link fencing draped over exposed rock to protect the railway from rock fall, and the use of rock bolts to stabilize very steep walls. The application of subsurface drainage techniques would be advantageous where rock and soil is fine-grained, drains slowly, or is highly permeable. Possible moisture reduction methods may include systems of underground boreholes drilled to increase drainage to accompanying pipelines that carry unwanted water away from slide-prone areas. Moisture reduction works to reduce pore pressure and increase frictional resistance to sliding.

Mitigation for soil impacts should consist of using BMPs, as defined by the Natural Resources Conservation Service (NRCS, 1993), to promote the use of this land within its capabilities to protect natural resources and to ensure public health, safety, and welfare.

UPLAND AND FLOODPLAIN VEGETATION, AND NOXIOUS WEEDS

The new Rio Grande Trail will have little to no impact on upland and floodplain vegetation. The trail will be contained fully within the RFTA right-of-way. Noxious weed management along the new Rio Grande Trail, which is completely contained within the RFTA right-of-way, will follow the RFTA Integrated Weed Management Plan or the Pitkin County Noxious Weed Management Plan. Application of weed control techniques identified in the management plans is expected to control the spread of invasive species within or beyond the corridor and eliminate potential impacts from invasive species associated with this alternative. There are no project-specific impacts for this resource since management practices are already in place for the RFTA rights-of-way.

FISHERIES

The new Rio Grande Trail will include new stream crossings at Cattle Creek, over the Roaring Fork River at Carbondale, and at Prince Creek near Emma. Although new stream crossings are associated with trail construction, the impact potential after completion of trail construction is negligible. BMPs include:

- providing vegetated buffer zones between project areas and streams or wetlands;
- installing catchment basins or artificial wetlands to collect run-off;
- using silt fences or baling to control sedimentation induced changes to stream substrate structure;
- placing bridge supports outside of streambeds;
- timing construction in or near trout habitat to occur in August and September to minimize adverse effects on spawning habitat.

WILDLIFE

Determination of the significance of potential impacts to biological resources is based on:

1. importance (i.e., legal, commercial, recreational, ecological, or scientific) of the resource;
2. sensitivity of the resource to proposed activities;
3. proportion of the resource that would be affected relative to its occurrence in the region; and
4. duration of activities affecting the resource.

Impacts to wildlife are significant if species or habitats of high concern are adversely affected over relatively large areas, or if disturbances cause reductions in population size or distribution of a species of high concern. Potential for impact is directly proportional to the number of crossings or habitat encounters identified.

Construction activities will be focused on a relatively small percentage of the overall Project Corridor. Consequently, negligible habitat loss and associated impacts to wildlife populations is anticipated.

Construction activities for the new Rio Grande Trail would affect wildlife resources through permanent loss or alteration of small sections of habitat and through temporary disturbance from construction, noise, and human presence. Noise and ground-clearing activities would temporarily displace wildlife from habitat in the immediate vicinity of construction, even within project-owned rights-of-way, with some wildlife possibly returning after construction is complete. Seasonal timing of construction activities to avoid wildlife migrations or seasonal habitat use would minimize these conflicts. The total permanent loss of habitat will be similar to the estimated 38.80 acres of new impervious surface for the entire length of the Project Corridor. Based on the criteria for determination of the significance of potential impacts to biological resources, no population-level effects are anticipated for this minimal linear impact. Specific activity restrictions are outlined below for sensitive species (protected under the Migratory Bird Treaty Act) as appropriate.

An active red-tailed hawk nest (SAIC 1999c) lies adjacent to RFTA right-of-way and may be affected by construction and use of the new Rio Grande Trail. An active great horned owl nest currently adjacent to the RFTA right-of-way may be similarly affected. Based on the criteria for determination of the significance of potential impacts to biological resources, no population-level effects are anticipated for these species occurring along the Project Corridor. Rick Lofarro of the

Roaring Fork Conservancy indicated that these nests appeared to be reasonably separated from the proposed trail location and that impacts are not likely (Lofarro, 2002).

Even without implementation of BMPs, none of the impacts noted will affect species population levels. BMPs for activity around nest sites may include observing CDOW-recommended buffer zones and seasonal human activity restrictions, as Buffer size and construction and maintenance activity restriction dates may be adjusted based on site-specific knowledge and consultation with the local CDOW District Wildlife Manager prior to project construction or significant maintenance activities. Restrictions are species specific. For example, red-tailed hawks have guidelines for human activity restrictions from March 1 to July15. No restrictions exist for the great horned owl.

Trail construction will include the implementation of signage and interpretive sites throughout the corridor emphasizing the wildlife and historic context for the area. Where appropriate seasonal closures, leash requirements for dogs, and appropriate protection of sensitive areas is possible.

Legacy Project Grant Agreement. A portion of the funding to purchase the project rail right-of-way was acquired from the Legacy Project Grant Agreement, between the State Board of Great Outdoors Colorado Trust Fund and RFRHA. A significant portion of this grant came from the wildlife quadrant of this funding source. As a result wildlife, wildlife habitat and wildlife programs are important to the trail design and operation for the proposed project.

Subsequent to this grant agreement, a substantial portion of these wildlife quadrant funds were de-authorized, switched to another funding quadrant. Regardless, the project continues its commitment to wildlife issues in the Project Corridor.

Relevant to the Legacy Grant is the commitment to design a wildlife compatible trail, to protect the integrity of the natural systems while teaching users about wildlife and natural features. An attempt will be made to balance human impact to wildlife while enhancing visitor experience and education. To some extent, the development of the trail corridor within the historic railroad right-of-way, that happens to parallel the Roaring Fork River and associated habitats, is not the ideal wildlife situation. A meandering trail right-of-way that occasionally cuts through this sensitive riparian area would be more ideal. However, the preservation of the railroad corridor with associated trail use is preferable to abandonment and the potential for the absorption of the property into adjacent land uses and developments.

THREATENED AND ENDANGERED SPECIES

Within the Project Corridor three species of concern are known to occur and one species potentially could travel through the corridor. These species are the bald eagle (federally protected under the Endangered Species Act, Bald and Golden Eagle Protection Act, and Migratory Bird Treaty Act), great blue heron (State Species of Concern), and river otter (State Endangered). No river otter habitat will be adversely impacted by trail construction, and river otter populations are not likely to be affected. Recent observations indicate that the Canadian

lynx (federally protected under the Endangered Species Act) may move through the Project Corridor, even though suitable lynx habitat is not found within the corridor.

Bald eagle. The proposed new Rio Grande Trail intersects one inactive bald eagle nest (Ireland, 2002) and three roost sites. Construction and trail use between November 15 and April 1 has the potential to affect nesting and roosting bald eagles.

The bald eagle nest site is currently affected by existing development, including an active golf course and residential development, inside the recommended buffer zone. The RFTA right-of-way is generally behind an earthen berm, approximately 1,250 feet from the nest. Coordination with USFWS indicates that there has been no productivity (eggs laid or young eagles fledged) at this nest for eight years (Ireland, 2002). Aspen Glen has documented this for the past five years. Future productivity at this nest is questionable. Due to the proximity of existing development to this nest site, the construction and use of the trail is not expected to create further impacts to the nest site.

The three bald eagle roost site buffer zones intersected by the proposed trail include Cattle Creek, Wheatley Gulch, and Catherine Store. The Cattle Creek roost buffer is tangentially intersected by the proposed trail. The Wheatley Gulch and Catherine Store roost site buffers are intersected by the trail alignments. Minimal to no impacts are anticipated.

Impacts to roost sites from trail construction or trail use can be nullified by including seasonal restrictions on construction and trail closures from November 15 through April 1 or until it is determined that eagles are not using roost sites. Planting a natural vegetation buffer screen, restriction of disturbance activities, signage, and environmental education will also help to ensure that bald eagles are not affected. Design of the trail alignments can avoid removal of roost trees. Final design for any project related activity that could affect bald eagle nesting or roosting sites will be coordinated with U.S. Fish and Wildlife Service. These actions will ensure that the proposed project will have 'no effect' on bald eagles.

Great blue heron. Two known great blue heron nesting colonies (heronries) occur along the Roaring Fork River adjacent to the RFTA right-of-way. The heronries are locally known as the Rock Bottom Ranch site and Sanders Ranch site (Lofarro, 1999). The Colorado Division of Wildlife recommends a buffer zone of 1,640 feet around active heronries to avoid disturbance and subsequent impacts.

The **Sanders Ranch** heronry buffer will be intersected by the trail where the RFTA right-of-way is adjacent to existing Highway 82 on a bluff approximately 1,500 feet away from and above the heronry. The distance and topographic relief between the trail alignment and the heronry, are sufficient to avoid impacts to this heronry.

Despite the distance between the heronry and the trail alignments, avoidance or modification of construction activities during the sensitive breeding season is necessary to ensure compliance with the Migratory Bird Treaty Act. Trail use during the breeding season will be monitored to ensure no impact to the heronry. Additionally implementation of a leash requirement for all dogs

passing through this portion of the trail during nesting would help protect the heronry. Minor fencing may also be useful along the trail in this area.

The **Rock Bottom Ranch** heronry contained 22 active nests in June 1999 (SAIC 1999c). The active nests are spread in a linear fashion for about 0.5 mile along a riparian cottonwood forest parallel to RFTA right-of-way. Observer Rick Lofarro, Roaring Fork Conservancy, noted that this heronry was the result of ditch work conducted by local landowners several years ago. The result was the creation of new meanders and shallow waters for fisheries that attracted the herons. Recently, the water patterns have changed and the number of nests has declined to approximately six (Lofarro, 2002).

Colonial nesting birds species are particularly sensitive to disturbance (Tremblay and Ellison 1979, Vos et al. 1985). Human activities can cause adults to flush from their nests; this increase the probability of egg or nestling mortality from exposure (i.e., heat stress cold stress) trampling or predation, nest desertion, or premature departure from the nest by young. In extreme cases, there may be displacement of the colony to less suitable habitats, reduced productivity (resulting from not re-nesting), or complete colony abandonment (Vos et al. 1985). The new Rio Grande Trail alignment will pass within the recommended buffer zone. According to *Managing Development for People and Wildlife: A Handbook for Habitat Protection by Local Governments*, the average flushing distance for a great blue heron, when a person is walking directly towards the nest, is 105 feet (Clarion and Associates, no date). The approximate distance from the new Rio Grande Trail to the nearest heron nest is estimated at over 400 feet. Vos et al. (1985) reported that herons habituated to repeated, non-threatening activities such as fishing. The interpretation of the flushing distance implies that trail use would not have an effect. Based on current observation on the decline of the heronry related to the changes in river patterns and food source, it is reasonable to conclude that the proposed project is not a key factor at this location.

Monitoring during construction and trail operation will be conducted to ensure no impact to the heronry. Additionally implementation of a leash requirement for all dogs passing through this portion of the trail during nesting would help protect the heronry. Minor fencing may also be useful along the trail in this area. Implementation of protective measures will ensure that there is no impact on the great blue herons.

Canada lynx. The Project Corridor lies in close proximity to several Lynx Analysis Units as mapped by the U.S. Forest Service. In several places, the habitat is immediately adjacent to the Project Corridor. Reintroduced individuals (from 2000) with satellite collars have used the Project Corridor. The project will increase the amount of human disturbance, however, this increase in human disturbance will not impact lynx since most recreational activity will occur during day light hours and lynx are crepuscular or nocturnal. This project will have 'no effect' on lynx.

Except as noted, additional coordination with the U.S. Fish and Wildlife Service is not necessary. No further coordination is required for findings of 'no effect'. Relevant correspondence is found in Appendix A.

VISUAL

The new Rio Grande Trail will create minimal visual effects since it will follow the pre-existing railroad grade. Best management practice visual impact mitigation measures include but are not limited to:

- revegetation of all disturbed areas with natural species to reduce soil erosion and minimize color contrasts caused by exposed soil surfaces;
- creating slopes that approximately match existing slopes;
- using building materials that approximate the natural tones and textures of the area being traversed;
- using aesthetically pleasing poles, station designs, and embedded track pavement surfacing, where applicable, to reflect and enhance the landforms and character of the area; and
- coordination with local communities of above-mentioned measures.

These mitigation measures would directly benefit the design quality of the Rio Grande Trail.

CONSTRUCTION

The trail will be constructed totally within RFTA right-of-way. Trail construction impacts are expected to be minimal. BMPs for air quality, water quality, traffic safety at roadway crossings, soils and geology, noise and ground-borne vibration, utilities, and hazardous waste sites or construction related spills, will be implemented as appropriate.

WETLANDS

Wetlands within the Roaring Fork River Valley principally occur along the river, creeks and irrigation ditches. They may also occur as a result of subsurface irrigation by groundwater, and/or in depressional areas that tend to collect and hold water for extended periods of time during the growing season.

Jurisdictional wetlands are those subject to regulatory authority of the Clean Water Act Section 404 and jointly administered by the U.S. Army Corps of Engineers (Corps) and the U.S. Environmental Protection Agency. These wetlands are created or supported in some way by waters of the U.S. Non-jurisdictional wetlands, those not regulated by the Corps, exhibit all three wetland criteria, but the sole water source may be a man-made irrigation ditch, for example. CDOT policy requires equal treatment to both jurisdictional and non-jurisdictional wetlands.

Wetlands are delineated using three criteria: 1) Of the dominant species, occurrence of more than fifty percent hydrophytic vegetation; 2) Existence of hydric soils; and 3) Presence of wetland hydrology. A site is generally considered to exhibit wetland hydrology if soil saturation occurs continuously for a minimum of five percent of the growing season. The growing season within

the Project Corridor ranges from 141 days near Glenwood Springs (SCS 1985) to only 105 days near Aspen (SCS 1992), making the number of consecutive days required to meet the wetland hydrology criteria seven days near Glenwood Springs and five days near Aspen.

Hydrophytic vegetation is defined as plant life growing in water, soil, or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content. *Hydric soils* are defined as soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic (without oxygen) conditions in the upper part of the soil profile. Generally, to be considered a hydric soil, there must be saturation at temperatures above freezing for at least seven days. Wetland hydrology is defined as permanent or periodic inundation, or soil saturation to the surface, at least seasonally.

Relatively narrow, fringe wetlands typically exist along the banks of irrigation ditches in the Roaring Fork Valley. These fringe wetlands vary from two to ten feet in width and may occur on either, or both, sides of a given ditch. The Corps considers wetlands solely supported by agricultural irrigation systems non-jurisdictional. The important and obvious distinction is the sole artificial source for wetland hydrology. Despite the non-jurisdictional status, these wetland systems exhibit similar characteristics (i.e., prevalence of hydrophytic vegetation, wetland hydrology, and hydric soils) as jurisdictional wetlands. Non-jurisdictional wetlands are mitigated the same as jurisdictional wetlands as per CDOT and FHWA policy in accordance with Executive Order 1190.

Wetland Community Types. Using the Cowardin classification system, palustrine and riverine wetlands were identified in the Project Corridor (Cowardin et al. 1979). Palustrine wetlands are marshy areas that may occur around seeps and springs as well as adjacent to streams and rivers. Within the Project Corridor, palustrine wetlands occur in the form of wet meadows, willow shrublands, and the cottonwood/alder/spruce forests that occur within the floodplains and outside the banks of the Roaring Fork River. Riverine wetlands refer to linear wetlands that occur within the banks of the Roaring Fork River, its tributaries, and irrigation channels.

A total of 100 wetlands 23.0 acres were identified in the Project Corridor. Sixty-two of these wetlands, 17.1 acres, are jurisdictional waters of the U.S. Sixty-four jurisdictional and nonjurisdictional wetlands were classified as Palustrine Persistent Emergent Seasonally Flooded in the Project Corridor. Thirty Palustrine Scrub-Shrub Broad-leaved Deciduous Seasonally Flooded wetlands and fringe wetlands were documented. Six Palustrine Forested Seasonally Flooded wetlands were found.

Wetland Survey Methodology. A wetland survey of the project area was conducted in July 1999 (SAIC 1999b) for both the proposed Rio Grande Trail and potential commuter rail alignment that would utilize portions of the RFTA right-of-way. A 100-foot right-of-way on either side of the trail (and rail) alignment (200-foot total width) was assumed. Hydrophytic vegetation was used as the first step in identifying potential wetland areas. When hydrophytic vegetation was found to occur within the right-of-way, the site was then evaluated for the presence of wetland hydrology. If both criteria were met, a determination of the presence, or absence, of hydric soils was made. When determined to be a wetland, each site was mapped in the field (Aero-Metric, 1997). Wetland mapping conducted for this document is approximate. A land survey of wetland boundaries will be required prior to final trail design. All 100 wetland

sites found within the Project Corridor are shown in *Wetland Assessment, West Glenwood Springs to Aspen, Colorado CIS/DEIS/CP*, December 20, 2000.

Palustrine Persistent Emergent Wetlands (PEMIC): A total of 13.2 acres were determined to be Palustrine Persistent Emergent Wetlands. These sites were typically dominated by reed canary grass (*Phalaroides arundinacea*), broad-leaf cattail (*Typha latifolia*), wiregrass (*Juncus arcticus*), Nebraska sedge (*Carex nebrascensis*), beaked sedge (*Carex utriculata*), woolly sedge (*Carex lanuginosa*), and creeping spike rush (*Eleocharis palustris*). Emergent wetlands often occurred adjacent to the railroad tracks or Highway 82. When irrigation water was the primary source of water, either through seepage or overflow, the resultant emergent wetlands generally exhibited low species diversity. Conversely, naturally occurring emergent wetlands had much higher species diversity.

Palustrine Scrub-Shrub Broad-Leaved Deciduous Wetlands (PSSIC): A total of 8.1 acres were determined to be Palustrine Scrub-Shrub Wetlands. Scrub-shrub wetlands were typically dominated by coyote willow (*Salix exigua*), shining willow (*Salix lutea*), red-osier dogwood (*Cornus stolonifera*), and speckled alder (*Alnus incana ssp. tenuifolia*). This wetland type typified the fringe wetlands located along the Roaring Fork River, its tributaries, and irrigation ditches of the valley. As expected, speckled alder was more common from Emma to Aspen than at lower elevations, and only occur in relationship to rivers or naturally occurring water sources. Coyote willow, on the other hand, is very common throughout the Project Corridor and frequently found in non-wetland areas, often associated with irrigation ditches and seeps.

Palustrine Forested Broad-Leaved Deciduous Wetlands (PFOIC): This wetland type occurs in only six locations within the proposed right-of-ways and had a total size of 1.7 acres, primarily adjacent to the Roaring Fork River. River birch (*Betula fontinalis*), and narrow-leaf cottonwood (*Populus angustifolia*) are the dominant overstory species present. Other associated species included speckled alder, coyote willow, woolly sedge, and red-osier dogwood.

Wetland Functions. Wetlands perform a variety of important functions within the environment. These functions include groundwater discharge and recharge, fish and wildlife habitat, sediment trapping, nutrient retention and removal, downstream food chain support, and flood storage/attenuation. Specific functions a wetland provides, and the degree to which it performs those functions, depends on a number of factors including the type, size, diversity, and location of the wetland.

Typically, human-induced wetlands in the Project Corridor are associated with irrigation ditches, or are small, have low species diversity, and are in close proximity to Highway 82 or the RFTA right-of-way. Functionality for such wetlands is limited. The functions these non-jurisdictional wetlands perform, therefore, are limited to some ground water recharge, wildlife habitat, and to a limited extent, nutrient retention/removal. Wetlands positioned to intercept irrigation return flow waters can remove excess nutrients and other pollutants prior to water entering the Roaring Fork River or its tributaries. Naturally-occurring wetlands in the project area are typically larger, more diverse, exhibit a more natural hydrologic regime, and are slightly removed from Highway 82 or the RFTA right-of-way; such wetlands typically have a higher functionality than man-made wetlands associated with irrigation ditches.

Impacts. Impacts caused by the trail were originally calculated by assuming a maximum cut-and-fill distance of 20 feet on either side of the centerline of the abandoned railroad when the trail does not share the right-of-way with the proposed rail line. Subsequent field checks, in May 2003, based on current trail design have resulted in identification of a total of 13 wetlands that could be affected by trail construction. Table 5 lists all of these wetland polygons. Only polygons 368-1B and 371-4 are jurisdictional wetlands, the others are irrigation ditch related and are non-jurisdictional. These locations are also identified in *Figure 4*.

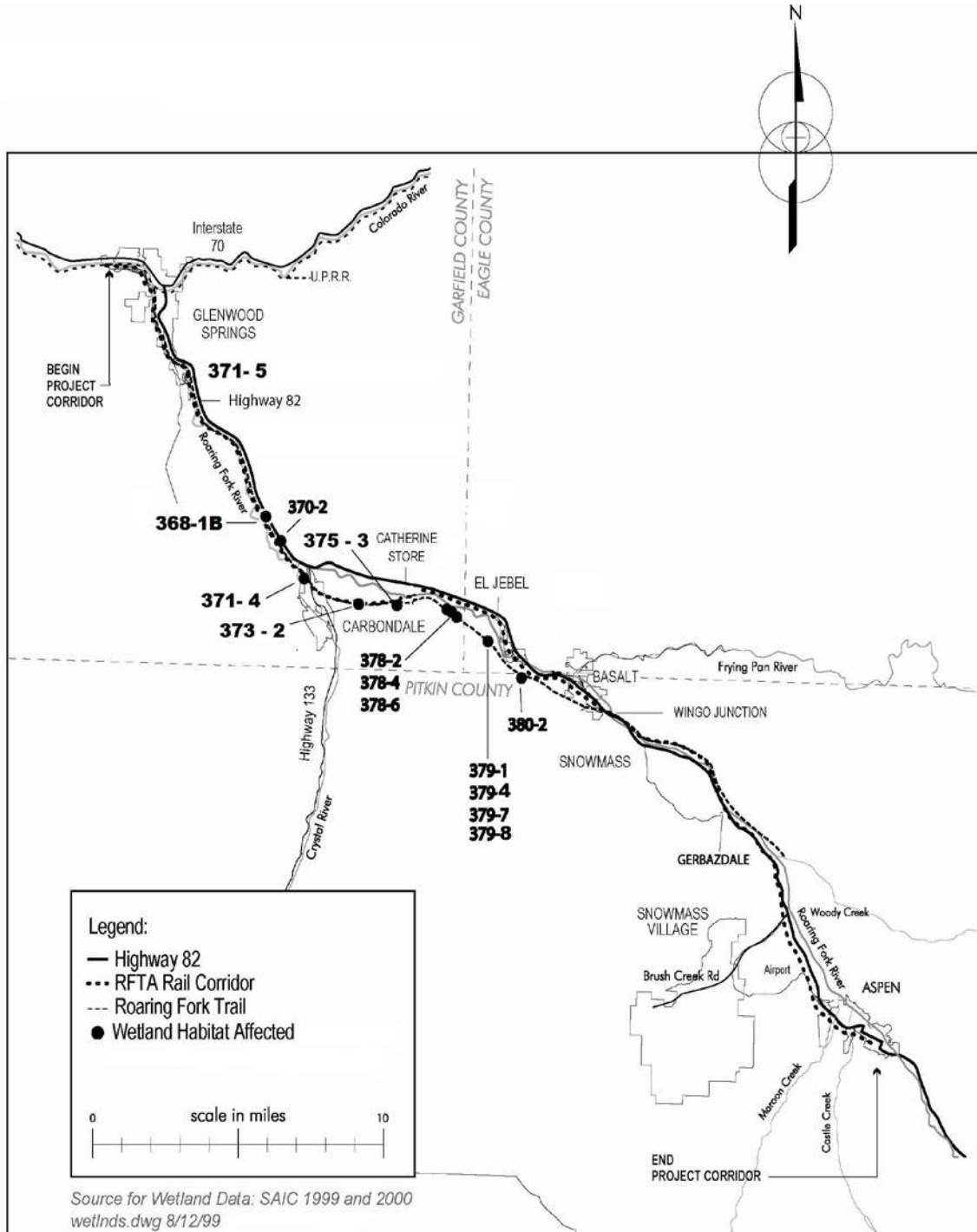
Table 5
Wetlands that may be affected by the Rio Grande Trail

Wetland ID ¹	Wetland Type - Description ²	Potential Impact square feet	Avoidance Possibility
368-1B	PEM1C – Cattle Creek bridge abutments	400	No option
370-2	PSS1C- Aspen Glen – both sides of tracks	1,900	No option
371-4	PEM1C – Roaring Fork bridge abutments	500	No option
373-2	PSS1C – Hobo Gulch	9,000	Move trail to other side of tracks
375-3	PSS1C - Log Home Construction	14,100	Move trail to other side of tracks.
378-2	PEM1C – below Rock Bottom Ranch, both sides of tracks	1,680	No option
378-4	PEM1C- above Rock Bottom Ranch, both sides of tracks	3,360	No Option
378-6	PEM1C- Above Rock Bottom Ranch, both sides of tracks	12,000	No Option
379-1	PEM1C- Above Rock Bottom Ranch, both sides of tracks	3,885.0	No Option
379-4	PFO1C- Above Rock Bottom Ranch, both sides of tracks	1,575	No Option
379-7	PEM1C- Above Rock Bottom Ranch, both sides of tracks	2,700	No option
379-8	PEM1C- Above Rock Bottom Ranch, both sides of tracks	450	No option
380-2	PEM1C- Above Hooks Lane Irrigation Ditch in ROW	5,850	No Option
TOTAL	Potential Impacts--	57,400	--

¹ Wetland ID's are polygon numbers indicating RFTA ROW mileposts followed by a plot number (SAIC, 1999).

² Wetland type are defined as follows. PEM1C = Palustrine Persistent Emergent Persistently Flooded, PSS1C = Palustrine Scrub-Shrub Broadleaved Deciduous Persistently Flooded, PFO1C = Palustrine Forested Broadleaved Persistently Flooded Deciduous.

Figure 4 – Wetland Habitat Potentially Affected by Trail Construction



Avoidance and minimization. Within the constraints of the project, the design of the trail reflects an effort to avoid wetland impacts when practicable, and to minimize the extent of unavoidable impacts. Avoidance and minimization have been accomplished by reducing the size of the footprint and by maximizing the use of existing infrastructure (e.g. the existing rail line). Based on 2003 alignment examination, wetlands can be avoided by locating the trail on the opposite side of the tracks in two locations (polygons 373-2 and 375-3), avoiding 23,100 square feet of wetland impacts. A maximum of 34,300 square feet or .787 acre of wetlands may be affected by the construction of the trail. The full analysis will be included in the Wetland Finding. A CDOT Wetland Finding will be prepared as a separate document for this project at the same time application is made for a Nationwide 23 Section 404 Permit.

Wetland replacement. Non-jurisdictional wetlands are mitigated the same as jurisdictional wetlands as per CDOT and FHWA policy in accordance with Executive Order 1190. Where practicable, mitigation will occur on site at a replacement ratio of 1:1. Functional replacement of more than 1:1 may be required to allow an adequate margin of safety to reflect the expected degree of success associated with the mitigation. Specific mitigation and monitoring requirements for permanent and temporary impacts will be established as part of the Nationwide 23 Section 404 permit for the project. Water rights issues, if any, will be considered during the final selection of mitigation sites. Replacement wetlands for this project will be a combination of re-creation on site and purchase from an area wetlands bank.

Senate Bill 40 Certification. Existing state law requires consultation with the Colorado Division of Wildlife (CDOW) when project activities may affect streams and wetlands in Colorado. Per CDOT and CDOW Memorandum of Agreement, Senate Bill 40 Certification is needed for single location wetland impacts that exceed .25 acre when stream-associated and .5 acre for other locations. When total wetland impacts exceed one acre SB 40 is also applicable. Based on the current information, SB 40 will not apply to wetlands for this project.

HAZARDOUS WASTE

Studies performed along the Project Corridor identified 32 potential hazardous waste sites in the Project Corridor, that may affect or be affected by the proposed project due to proximity to the project or the need to acquire additional property. This analysis also considered the potential for a commuter rail project within the Project Corridor. Of those 32 potential sites, ten were eliminated based on visual inspection, interviews, evaluation of existing data, or clean-up documentation. The remaining 22 sites required further investigation. Of these sites, eleven had additional site investigation work performed, such as drilling, surface sampling, or reviews of existing analytical data. Eleven sites were found to pose no significant threat, requiring no special materials handling, or extra health and safety precautions during construction due to hazardous substances in the areas investigated. Of the remaining eleven sites, two sites may be associated with the construction of the new Rio Grande Trail:

Site 9: Surficial soil staining at the 4th Street crossing in Carbondale, and

Site 13: The Former Lumber Yard

Site 9: Surficial Soil Staining at 4th Street. Soil staining was observed in Carbondale to the south of the 4th Street crossing within 50 feet of the south side of the trackage. The stained areas exhibit a petroleum hydrocarbon odor and the horizontal extent of the multiple stains is approximately 20 to 100 square feet. This material represents a potential hazardous waste site that may affect the trail alignment. Additional sampling with indicated health and safety planning or mitigation will be performed at site 9 if this portion of the right-of-way is affected by trail construction. Additional analysis will occur prior to construction activities

Site 13: Former Lumberyard and Monitor Well. This site is a former lumberyard near RFTA mile marker 385. The property contained at least one underground storage tank (UST) during occupation by Boise Cascade and BMC Corporation. Colorado Department of Health (CDH) records indicate that all tanks were removed from the property on November 6, 1989.

A monitor well was observed on the former lumberyard property during the site visit. Telephone conversations with Shelton Drilling Inc. of Basalt and Roger Moore of Storage Tank Technology, Inc., indicated that a site assessment was conducted for the former owner, BMC, Inc. of Boise, Idaho. The investigating firm (Walsh, 1992) was unable to obtain a copy of the site assessment from CDH or the former owner. The property was not investigated during the site survey because the current owner did not permit access. This property warrants further investigation, including the need to review existing data and possible drilling and sampling if additional right-of-way is required. Although this site represents a potential hazardous waste site for the proposed trail, no right-of-way is needed in the vicinity of site 13 for the construction of the trail; therefore, no additional work is recommended.

Any bridges that may be altered will be sampled for lead based paint prior to any activities that would allow humans or the environment to be exposed. Any bridge that will be removed or reconstructed will be evaluated for the presence of lead paint and if present, appropriate worker and environmental safeguards and protocols will be specified per CDOT Specification 250.

TRAIL SAFETY

General safety can be obtained by following these BMPs:

- Provide sufficient trail width to minimize use conflict.
- Provide barrier fencing at convergence areas to protect property, privacy, or livestock.
- Utilize discrete or unobtrusive barriers to direct the trail use away from hazard and sensitive natural areas.
- Recommend grade-separated trail crossings of rail and major roadways.

Construction of the trail along the entire RFTA right-of-way does not present any unusual safety concerns. Should a commuter rail line or other rail use be returned to any portion of the RFTA right-of-way, safety becomes a concern. Maintenance and operation for the trail when it runs along an operating rail line should create minimal impact on the rail operations and create a safe and enjoyable trail user experience. Recently published *Rails-with-Trails: Lessons Learned*

(Alta Transportation Consulting for USDOT, 2002), includes the following operational recommendations:

- Coordination between rail operations personnel and trail staff.
- Consideration of the maintenance and access needs of the rail operator. In areas with a narrower than 25-foot setback, the trail likely will be used as a shared maintenance road.
- Develop appropriate phasing and management plans for the trail.
- Education and outreach plans should be part of the trail implementation process.
- Trail managers should develop, in coordination with local law enforcement and the rail operators, a security and enforcement plan.
- Trail managers should develop and post trail user regulations.
- Trail managers should follow recommended design practices, such as signing to warn trail users to stay on the trail and off the tracks.

The ideal trail cross-sections include a 10 foot minimum buffer from the nearest rail track. In areas where topography reduces the buffer width, physical barriers such as fencing can be included. Barrier fencing can be provided at convergence areas to protect trail users from transit hazards.

PUBLIC INVOLVEMENT

As a part of the larger Comprehensive Plan (CP) for the RFTA right-of-way, the trail was a part of extensive agency public involvement activities between 1997 and 2001. The public involvement process went far beyond National Environmental Policy Act (NEPA) requirements. The goal of the process was to identify public issues and priorities at the start, and to provide an opportunity for citizens to participate in resolution of those issues throughout the course of study.

Included in this process was a Trails Workshop held in May 1998 and a series of six Trails Task Force Meetings held between October 1998 and April 1999. At the initial workshop attendees were introduced to the project and the Project Corridor through presentations and a hands-on work session utilizing aerial maps of the Project Corridor. Participants helped identify key goals, issues, constraints and opportunities to be considered in the planning process. Interested trail supporters volunteered to serve on the Trails Task Force, involving attendance at future meetings and gathering of information pertinent to trail planning.

AGENCY INVOLVMENT

Consistent with the CP goal of coordination with planning efforts of local agencies, trail planning has included county and local governments, trail open-space and recreation groups in the public review process. Consultations with the following agencies and interest groups in a positive, cooperative approach has helped guide the plan toward meeting local objectives for parks, open space and trails:

- City of Glenwood Springs Planning Department
- Garfield County Planning Department
- Eagle County Planning Department
- Town of Carbondale Planning Department
- Town of Basalt Planning Department
- Mid-Valley Trails Committee
- Pitkin County Open Space and Trails Board
- Glenwood Springs River Commission
- Colorado Department of Transportation

State and Federal agencies involved in project coordination activities include:

- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- Colorado Division of Wildlife
- Colorado State Historic Preservation Office (Office of Archaeology and Historic Preservation)

ADDITIONAL TRAILS PLANNING DOCUMENTS

Colorado Department of Transportation. 2003. *West Glenwood Springs to Aspen Corridor Investment Study/Draft Environmental Impact Statement* - unpublished internal review draft (CDOT Project NH 0821-049, Denver)

Landplan Design Group, Inc. December, 1999. *Aspen Branch Denver & Rio Grand Western Railroad: Recreational Trails Plan Glenwood Springs to Aspen CIS/DEIS/CP*. Prepared for the Roaring Fork Railroad Holding Authority, Pitkin, Eagle, Garfield County.

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Chambellan, Collette C. and Mehls, Steven F. 2000b, October 5, 2000. *A Historic Resources Survey of the Lower River Road in Pitkin County, Colorado.* Prepared for the Colorado Department of Transportation. Prepared by Western Cultural Resource Management, Inc., Thomas J. Lennon, Principal Investigator.

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Office of Archaeology and Historic Preservation. Correspondence to Colorado Department of Transportation, Rebecca D. Vickers, Environmental Program Manager from State Historic Preservation Officer, Georgianna Contiguglia. May 21, 2002.

Office of Archaeology and Historic Preservation. Correspondence to Colorado Department of Transportation, Rebecca D. Vickers, Environmental Program Manager from State Historic Preservation Officer, Georgianna Contiguglia. January 23, 2003

Pitkin County Open Space. 2001. *Pitkin County Noxious Weed Management Plan*, Ordinance #99-48 and #01-066. Fall 1999. Revised February 2001.

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- SAIC. 1999c. "Roaring Fork Valley Field Analysis of Sensitive Wildlife Areas." June 24 – July 10, 1999.
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PROJECT CATEGORIZATION

Based on the full range of activities completed for the Rio Grande Trail, including the individual environmental studies, the development of mitigation plans, and the public and agency coordination, the project qualifies as a Class II Categorical Exclusion.

No impacts have been identified that would either individually or cumulatively result in significant effects to the environment. Furthermore, no issues have been identified that suggest the significance of the environmental impacts have not been clearly established. Therefore a CDOT Form 128 is appropriate for documenting compliance with NEPA and FHWA's *Environmental Impact and Related Procedures*, 23 CFR 771.

REQUEST FOR CONCURRENCE IN CATEGORICAL EXCLUSION

Since it has been determined that no significant impacts will occur as a result of construction of this project, that there are no other unusual circumstances disqualifying this project under CE criteria as defined in 23 CFR 771.117, we request your concurrence in this CE for the Rio Grande Trail Project. The attached CDOT forms 463 and 128 reflect this proposed approach. Please review and sign the attached CDOT Form 128 if you concur with the category designation.

Attachments:

Appendix A: Project Coordination Letters
CDOT Form 463
CDOT Form 128

CC: Eva LaDow, FHWA
Monica Pavlik, FHWA
Joe Elsen, CDOT
Owen Leonard, CDOT
Tammie Smith CDOT
Dan Blankenship, RFTA
Mike Hermes, RFTA
Alice Hubbard, RFTA

Appendix A:

Section 106 Coordination Letters:

- SHPO letter to CDOT, January 23, 2003
- CDOT letter to SHPO, January 10, 2003
- CDOT letter to Ute Mountain Ute Tribe, October 9, 2002
- CDOT letter to SHPO, June 25, 2002
- SHPO letter to CDOT, May 21, 2002
- SHPO letter to CDOT, September 10, 2001

Wildlife and Threatened and Endangered Species Coordination Letters:

- CDOT letter to FHWA, April 30, 2002
- USFWS letter to CDOT, April 19, 2002
- CDOW letter to CDOT, December 13, 1999

Wetland Delineation Letter:

- USACE letter to SAIC (project wetland consultant), November 20, 2000
- Approved Jurisdictional Determination Form, November 20, 2000