

# TOWN-TO-LAKES TRAIL MASTER PLAN



Pagosa Springs to Pagosa Lakes  
Archuleta County, Colorado  
Prepared by the Greenway Team, Inc.,  
DHM Design Corporation & Davis Engineering  
April, 2011



*"The influence of fine scenery, the presence of mountains, appeases our irritations and elevates our friendships."*

*--Ralph Waldo Emerson, The Conduct of Life, 1860*



The Pagosa community relaxes comfortably in the heart of the San Juan Mountains where spectacular vistas and myriad outdoor recreational opportunities shape the quality of life. Most of the people of Archuleta County live and work proximate to the U.S. Highway 160 corridor running roughly four miles between Downtown Pagosa Springs and Pagosa Lakes Estates. Many people reside, own homes and work in these two population centers and others live nearby in more rural enclaves such as Alpha subdivision.

For a number of years, engaged, community-minded folks here have visualized and planned for a better future—one that builds on unique natural assets and outdoor values. Equally important is the realization that, economically, the Pagosa area needs to invest in infrastructure that helps it remain competitive with other mountain and resort communities in order to thrive—especially in light of the current global real estate market and economic challenges.

A vital part of this vision is to create a high-quality multi-use trail system that offers a way for both residents and visitors to enjoy the area at a pace that matches a special local way of life. Currently, getting around the Pagosa area without a motor vehicle can be daunting, hazardous, and unpleasant. Over the years there have been a number of plans put forth and adopted that envisioned a trail link from Downtown to Pagosa Lakes—The Town-to-Lakes Trail.

The culmination is this plan that provides a specific roadmap for taking the Town-to-Lakes vision to reality. The goal is to create and realize a safe, reliable, pleasant and affordable multi-use trail system that can be used by everyone, from children to avid outdoor recreationalists, connecting the community and highlighting the area's innate natural beauty. It envisions an amenity that can be built over the next several years with great benefit to all both now and for many years to come.







#### Key Officials, staff and contributors

The participants in the public workshops included neighbors; corridor property owners and businesses; recreationalists and numerous other individuals who shared their advice and expertise.

#### Archuleta County-Plan Sponsor and Authoring Entity

Clifford Lucero, Commissioner  
 Steve Wadley, Commissioner  
 Michael Whiting, Commissioner  
 Karin Kohake, Project Manager

#### Assistance from

Greg Schulte, County Administrator  
 Todd Starr, County Attorney

#### Town of Pagosa Springs

James Dickhoff, Town Planner

#### Pagosa Lakes

Larry Lynch, Manager, Dept. of Property & Environment  
 Pagosa Lakes Property Owners Assoc

#### Planning Consultants

The Greenway Team, Inc.  
 Robert Searns, Principal Plan Author  
 Noah Searns & Frances Boulding, Interns' support

#### DHM Design Corporation

Bill Neumann, ASLA, Principal Plan Designer  
 Ryan Holdorf, Landscape Architect  
 Ken Abel, Report Layout and Graphics

#### Davis Engineering, Inc.

Mike Davis P.E., Engineer's perspective input, Base Mapping, Review/ Support

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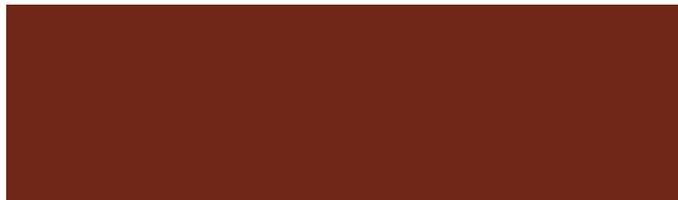
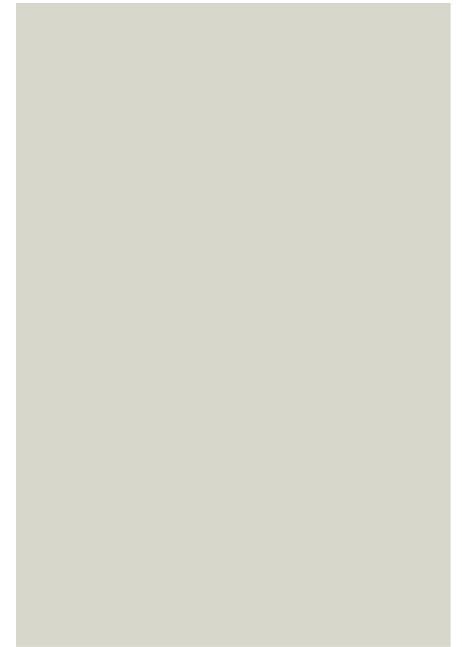
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# CHAPTER ONE: INTRODUCTION



Mission Statement  
Purpose of this Document  
and Background  
Study Area and Corridor Description  
The Planning Process and  
Community Engagement



### Mission Statement

Create a safe, affordable, practical and continuous, multi-use (10'-wide) trail alignment that connects the existing trail along the San Juan River, near downtown, to the trail network in Pagosa Lakes—roughly following the Hwy. 160 Corridor. The aim is to provide and promote enhanced recreational and fitness opportunities, access to safer and cleaner forms of transportation, increased community connectivity, business development and community identity.

### Purpose of this Document and Background

This document puts forth a master plan for the Town-to-Lakes corridor that includes specific feasible alignments for the trail system, trail cross section concepts, cost estimates and phasing priorities suitable for raising funds and support to future preparation of construction plans. It is intended to guide, step-by-step, the creation of a trail and “greenway” network along the four-mile urban corridor between the San Juan River in downtown Pagosa Springs and Pagosa Boulevard in Pagosa Lakes. The proposed route hopes to have anchors at pertinent locations such as the San Juan River Trail, the Hot Springs Resort and Downtown, Pagosa Elementary School, the Eagle Drive commercial district, Harman Park and the City Market Shopping Center. It also strives to access scenic and more rural areas proximate to the Hwy. 160 corridor.

With its ability to provide communal access to vital locales, the Town-to-Lakes-Trail will be a very substantial investment and asset, serving residents of the Pagosa area, visitors and tourists and the wider Archuleta County region. This project offers unique potential on a number of levels.

- It will provide a safe, reliable, outdoor, non-motorized avenue for users to travel throughout the town of Pagosa Springs as well as accessing adjacent residential areas, schools, and other amenities.
- It will provide trail access to a scenic corridor rich in history and interpretive value.
- It will help promote businesses, such as restaurants and shopping centers in Downtown Pagosa Springs and all along the corridor, as well as enhance community development as a distinct amenity.
- It will provide access to the Hot Springs, Pagosa Springs High School, Junior High School and Elementary School, The City Market Shopping Center and other destinations.



- It will offer an alternative for walkers, runners, cyclists, Nordic skiers and other users to avoid having to use automobiles and/or travel and traverse Highway 160.
- It will increase property values for adjoining properties, promote business development and enhancement, and assist Pagosa Springs in attracting visitors and relevancy as a mountain town destination.
- It will promote better community health through fitness and regular physical activity.
- It can potentially save on fuel costs—both to individuals and institutions such as the School District by offering an alternative mode of travel.
- This plan also proposes to promote—through increased public awareness and cooperative planning with adjacent landowners—the stewardship, clean-up and enhancement of the Hwy. 160 corridor environment, especially the scenic character, as well as the flora, fauna and habitat values.

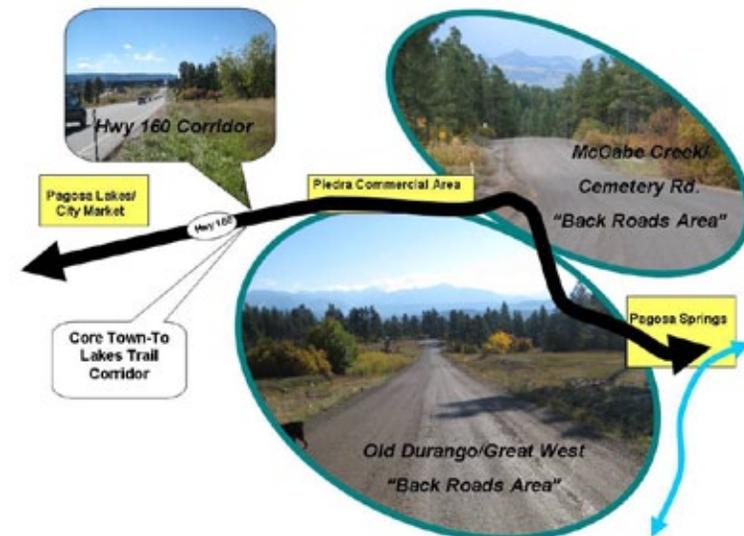
The vision for the Town-to-Lakes Trail grew out of a coordinated effort by Archuleta County, the Town of Pagosa Springs, Pagosa Lakes leaders, community members and activists. The trail concept has also been outlined in a number of current plans and studies including: the 2001 Archuleta County Community Plan; the 2004 Archuleta County Trails Plan, the 2006 Pagosa Springs Comprehensive Plan, the 2007 Archuleta County Regional Parks, Recreation Open Space and Trails Master Plan. It is very apparent that with the implementation of the Town-To-Lakes Trail an important and frequently articulated planning goal will be realized.

### Study Area, Corridor Description and Planning Elements

The study area runs approximately 4 miles primarily along U.S. Hwy. 160 beginning with an anchor at the San Juan River Confluence in Downtown Pagosa Springs running to Pagosa Boulevard. The corridor connects to residential and commercial districts along Hwy. 160. It also links to the trail network at Pagosa Lakes Estates at Pagosa Boulevard.

The Hwy. 160 corridor is largely urbanized including both population centers and strip commercial development. However, there is also substantial open space along Hwy. 160 with meadows, pastures, and evergreen groves. Scenic vistas of the San Juan Mountains make the corridor uniquely spectacular. The corridor also features a number of cultural and community features including: the Hot Springs Resort; the San Juan River Trail; the Old Durango Road; Fred Harman Museum; Old Cemetery Road; Pagosa Lakes Golf Course and other attractions and destinations.

In addition to the immediate Hwy. 160 corridor, the planning process also looked at the proximate network of rural “back roads” particularly in the Alpha subdivision to the south of the highway, but also the Cemetery Road corridor to the north. Approximately 11,000 people live along or within a few minutes’ travel distance from the study area.



Corridor Opportunity Areas



The planning area was divided into segments or “character districts” defined by logical connections of local destinations and the special character and distinguishing features of each reach. Ideally, each reach of the trail can be a complete, logical section in itself. The finished project will be a step-by-step process with each step being complete and useful in its own right. The character districts are:

- Reach One: Downtown—San Juan Trail to 7th Street
- Reach Two: Town-to-School Link—7th Street to 10th Street
- Reach Three: Putt Hill—S. 10th Street to Majestic Road
- Reach Four: Harman Park—Majestic Road to Piedra Road
- Reach Five: Pinon Lake—Piedra Road to Pagosa Blvd.
- The “Back Roads” and Peripheral Routes



## The Planning Process and Community Engagement

The planning process included six major elements:

- 1. Site Inventory and Reconnaissance** - A thorough inspection and inventory of the resources, challenges, and opportunities of the corridor. Site investigation included a number of field visits where the team walked the corridor from end-to-end. The planning team identified opportunities and constraints and reviewed potentials with community leaders, key staff and the public.
- 2. Draft Alignment Alternatives, Layout and Cross-Sections** - Working with County and Town staff and other stakeholders, the team laid out draft optimal trail alignments and prepared typical cross-sections, as well as cost estimates.
- 3. Technical Working Group** - Assembling and working with, step-by-step, an ad hoc Working Group, composed of representatives of Archuleta County, Pagosa Springs, Pagosa Lakes, CDOT and other stakeholders.
- 4. Public and Stakeholder Participation Process** - A public participation process that consisted of three open community forums held at Archuleta County Courthouse. Attendees consisted of individuals, property owners, user groups and business representatives who were invited to candidly review and discuss the trail vision. After the public review sessions a final draft plan was prepared and reviewed by the partnering agencies and posted on the Web for general public review and comment. To promote broad participation, printed notices were prominently posted in community announcement forums, on bulletin boards, in the local news and on-line.

Meetings were well attended with 20-50 participants at each. Nearly all of the participants were engaged and enthusiastically supportive, though some expressed concerns and many suggestions were received. Changes were made to the plan to accommodate the many good ideas as well as the concerns heard at the meetings.

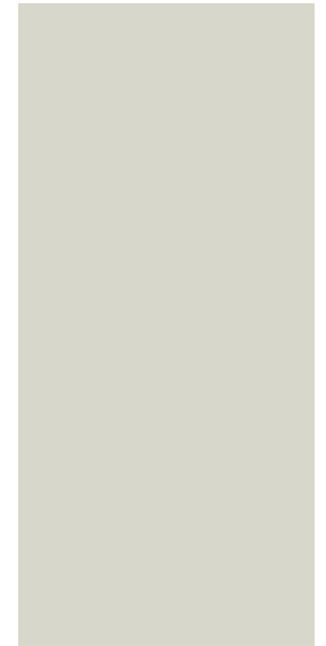


5. **Final Review and Implementation Strategies** - When the final draft and cost estimates were completed, the Working Group and the public (in an open house forum) reviewed the final plan, identified a phasing schedule that listed project priorities and time frames, and laid out organizational strategies for implementation, leadership and advocacy.

6. **Approval and Adoption** - Final presentation, approval and adoption of the plan by the Archuleta County Commissioners.



# CHAPTER TWO: GUIDING PRINCIPLES AND COMPONENTS

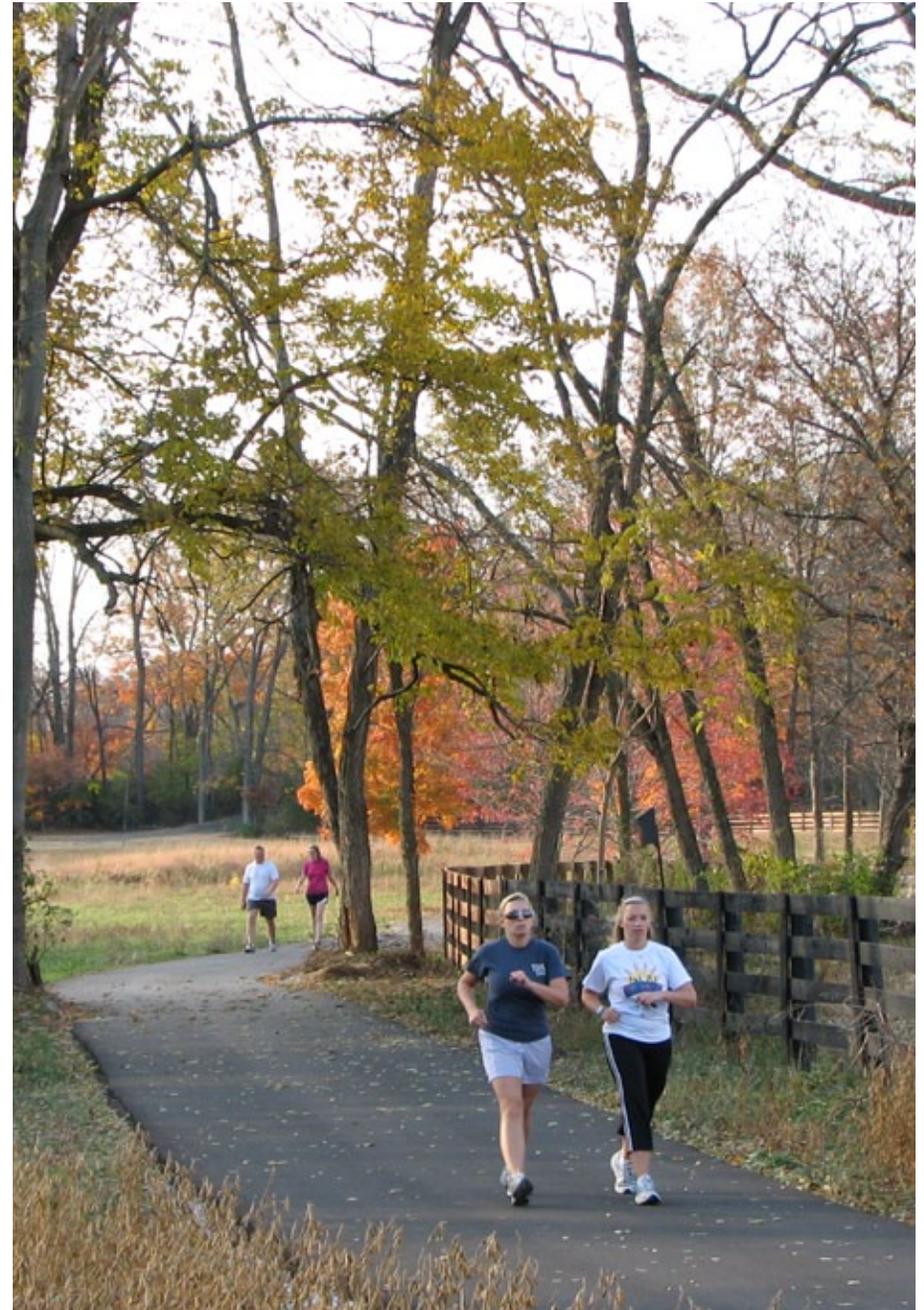


Guiding Principles  
Trail Components

With its unique character, central location and proximity to both residential and commercial districts, the Town-to-Lakes-Trail will be a substantial asset for present and future generations. The trail corridor will provide a reliable, efficient, scenic, non-motorized alternative for traveling in and around Pagosa Springs.

To fully benefit from the opportunities afforded by this trail corridor (the trail itself, improvements, scenic areas and commercial destinations) the project must result in a net improvement to the setting. That is, the trail improvements should enhance the corridor and character of the neighborhoods, offer an outstanding user experience, and continue to promote the beneficial use and enjoyment of adjacent properties. The ethic of leaving it better than we found it should prevail throughout the process.

The trail must be safe (within the parameters of state-of-the-art design standards), functional, and convenient for trail users and nearby residents. It must also be affordable to build and maintain. The guiding principles, components, and design standards presented below are benchmarks used to achieve these goals. These principles grew out of consultation with citizens, property and business owners, and government agencies in concert with the technical expertise and experience of the planning and design team.





### Guiding Principles

1. The trail system should offer an outstanding experience including natural vistas and, wherever feasible, gentle grades and solace from motor vehicle noise and fumes. It should also offer an enjoyable practical option for non-motorized commuting.
2. Where applicable, provide a trail that promotes child-friendly transportation and safe access to schools.
3. The trail system should accommodate a full range of uses (and be readily accessible per the Americans with Disabilities Act) including but not limited to runners, bikers, walkers, skaters, skateboarders, wheelchairs and other non-motorized uses including a full range of abilities.
4. Promote trail connectivity to nearby neighborhoods and to the regional trail network.
5. The project must be affordable to build and maintain and appeal to potential outside funders, both public and philanthropic.
6. Promote non-motorized community connectivity and fitness through physical activity.
7. Provide an attraction for tourism, helping to make the Pagosa area more competitive as a recreational destination as well as fostering identity as a home for outdoor recreation enthusiasts.
8. The trail and conservation improvements should be feasible to accomplish in the near term with expansion in the future.

- 9. The trail must be designed and maintained to respect private property and to be a good neighbor!
- 10. All improvements should promote the preservation and enhancement of flora, fauna, habitat and cultural resources.
- 11. Offer opportunities for youth, student and volunteer stewardship activities.
- 12. Offer educational/interpretive opportunities (ecology, history, culture)



### Trail Types, Components and Cross Sections

This plan recommends several key elements or components which function as building blocks for the trail system. A list of components was generated considering field conditions, the wishes expressed at community meetings and other input. The descriptions, plans, and cross section drawings below specify, in general, the recommended elements. Note that these are for planning and budgeting purposes and not engineering drawings. Specific designs, specifications and detailing will occur during the design and construction phase\*.

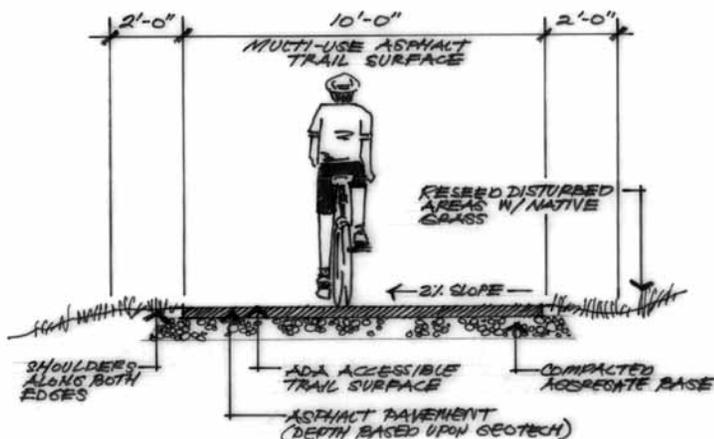
\* For more details, standards and design references see: *Guide for the Development of Bicycle Facilities*, American Association of State Highway and Transportation Officials (AASHTO); *Trails for The 21st Century*, Rails to Trails Conservancy and Island Press; *Trail Planning Design and Development Guidelines*, Minnesota Department of Natural Resources; and [www.americantrails.org](http://www.americantrails.org); See also *Manual of Uniform Traffic Control Devices (MUTCD)* U.S. FHWA, [mutcd.fhwa.dot.gov/](http://mutcd.fhwa.dot.gov/) (for signage and other traffic regulation-related features for both automobile and bicycle facilities), Note too that, as of late 2009, new guidelines for accessibility per the Americans with Disabilities Act were in the process of update see [www.access-board.gov](http://www.access-board.gov)



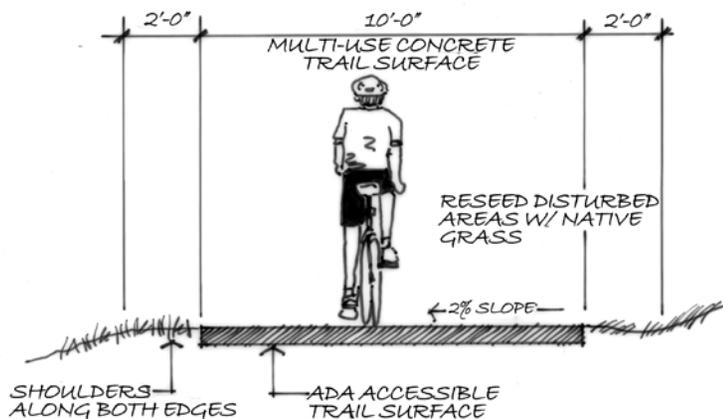
TYPICAL ELEMENTS

Paved Multi-Use (Shared-Use) Trail

There are two paved trail surface options—*asphalt* and *concrete*. Typically, for cost and other reasons, *asphalt* has been the surface of choice on many mountain community trails in Colorado. However, it should be noted that because of its durability and lower maintenance requirements, *concrete* has certain advantages for trail projects. Generally, *concrete* is recommended for areas subject to frequent inundation or erosion such as along a stream.

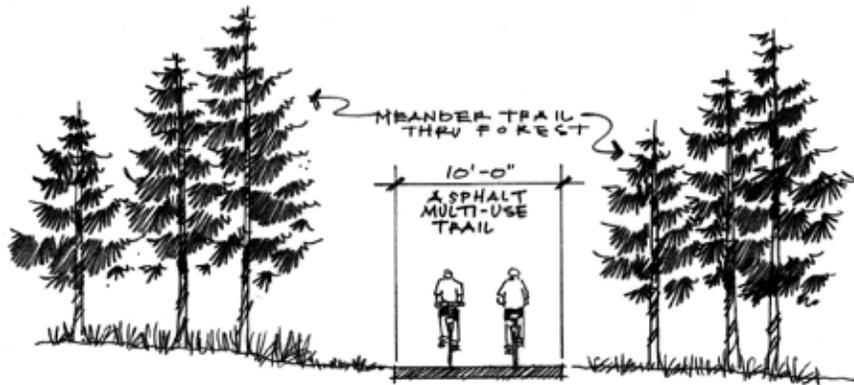


Typical Cross Section - Asphalt Multi-Use Trail



Typical Cross Section - Concrete Multi-Use Trail



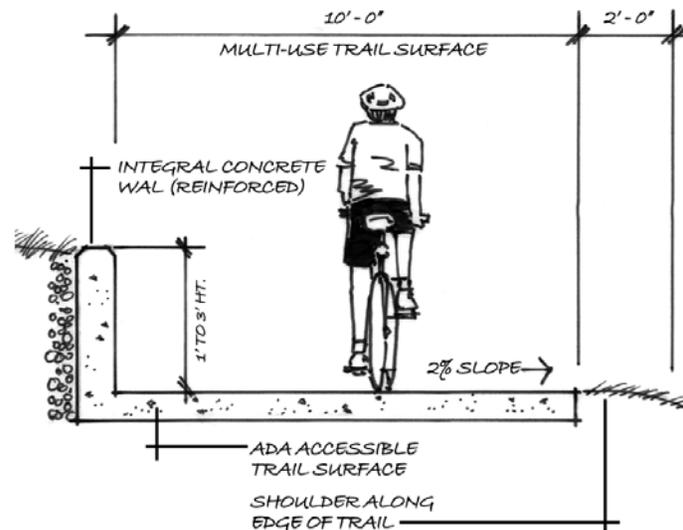
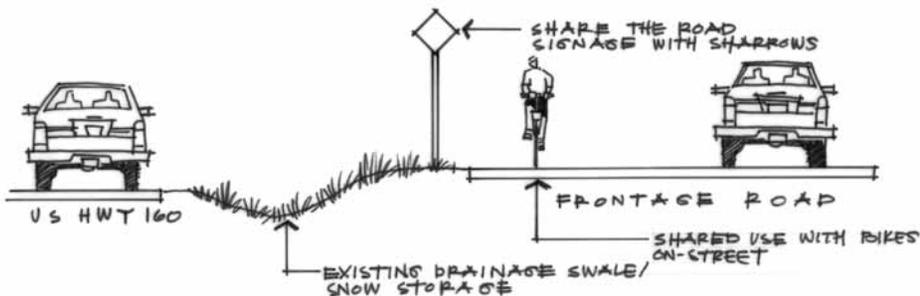


Paved trail surfaces accommodate pedestrian, bicycles, skates, and wheelchairs. Typically the paved surface is 10'-wide and designed to national engineering (AASHTO for Bicycles) and Americans with Disability Act accessibility standards. There is a graded trail edge on either side between 30" and 5'-wide with 5' preferred. This shoulder area should be mowed and kept free of debris though the width of the mowed area may undulate for improved aesthetics. Typically, grades do not exceed 5% with up to 10% for very short distances. For purposes of this plan, the shared-use path, when adjacent to a roadway includes a 5' to 10'-wide landscaped buffer between the trail and the adjacent road. There should be a 3' minimum buffer between the trail edge and adjacent fences, walls or other obstructions.



Roadside (Shared-Use) Trail

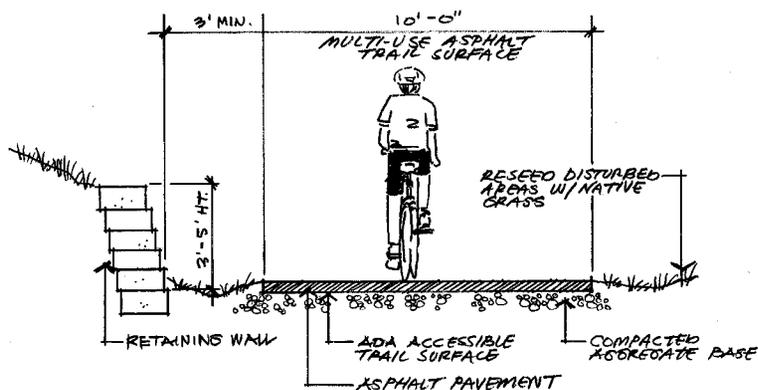
In a number of places, such as certain locations along Hwy.160, and along future access roads, the paved multi-use trail will run parallel and proximate to a roadway. Typically this consists of a 10'-wide "paved" surface with a vegetated or landscaped buffer (5' or more in width preferred) between the edge of the road and the trail. The trail allows for two-way bicycle and pedestrian traffic. If a 5'-wide buffer cannot be achieved than a minimum 42"-high safety barrier should be provided per AASHTO guidelines.



Trail with Integrated Retaining Wall

Paved Trail with Retaining Wall

This is a paved trail with an integral retaining wall. This wall may be 3' to 5' high. Where the trail surface is asphalt, the wall is a separate structure. In some instances, where the trail surface is concrete, the wall is typically built as an integrated unit where it is "keyed" into the trail surface and/or connected with re-enforcing steel rods. The trail surface is typically 10'-wide and there may be a safety guardrail with a steep drop-off or where other hazards exist.

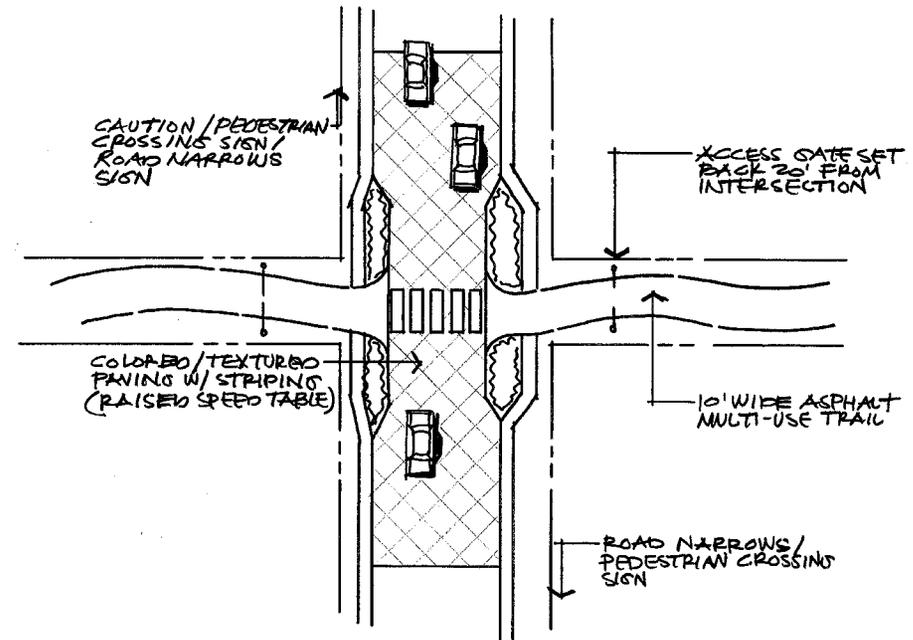


### At Grade Street Crossings and "Traffic Calming" Street/Trail Intersection

There will be several instances where the trail system will cross streets - perhaps at intersections controlled by either a traffic light or by stop signs. In the instances of busier roads, like Hwy 160, crossings should always be traffic-light controlled, with a pedestrian activated signal for trail users. ADA accessible curb ramps should be provided.

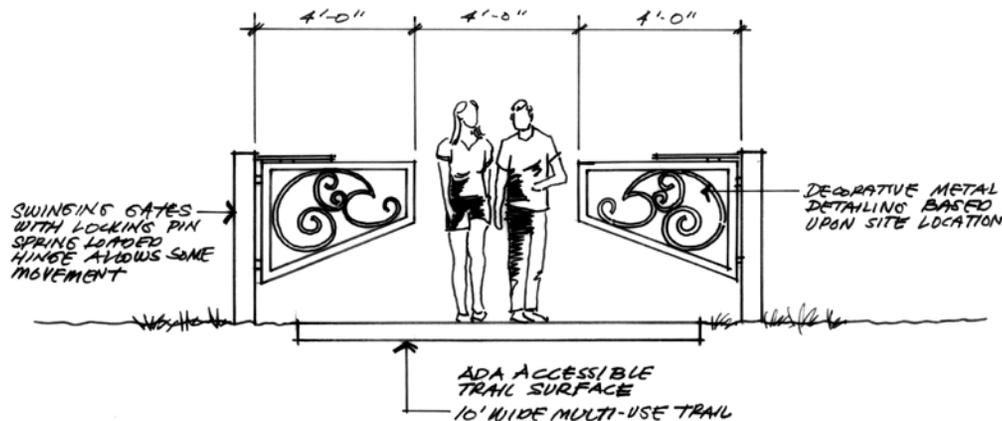
Where the crossing will serve only pedestrians, a "HAWK" pedestrian activated stoplight might be substantially less costly and more appropriate for the conditions. HAWK facilities have been installed in a number of communities including Fort Collins, CO and Tucson, AZ. Examples and technical information about the "HAWK" pedestrian crossing system can be viewed on the Web.

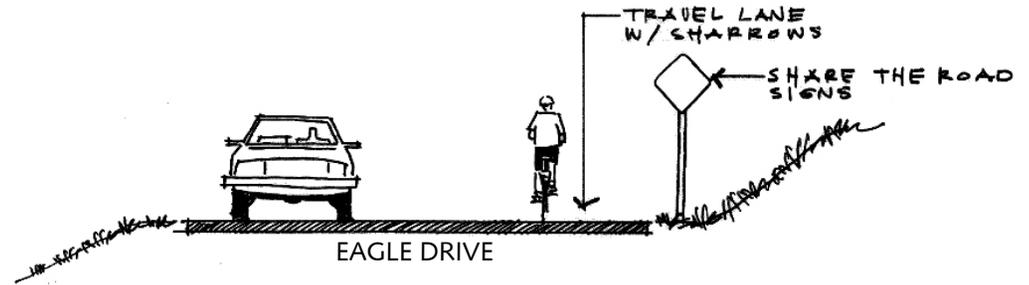
There might also be trail crossings along lower volume streets. In these instances, particularly mid-block, a layout that promotes a safe interaction for both bike and pedestrian trail users should be provided. This consists of warning signs and striped crossing markings on the pavement per the Manual of Uniform Traffic Control Devices MUTCD, a neck down that narrows the traffic lane, special texturing of both the street and the trail approach and/or possibly a raised pavement "speed bump" or "speed table" to alert and slow motorists.



### Access Gates

Access gates restrict automobile entry to trail corridors. The gate is designed with a lock and is hinged for easy entry by authorized personnel. Typically the gate is set back from the adjoining street with enough clearance to allow most vehicles to safely pull off the street to open the gate. The gate is substantial enough to discourage removal or damage. A gap is left in the gateway that allows a bicyclist or pedestrian to pass through, but not a motor vehicle. Safety and regulatory signage, in compliance with the Manual of Uniform Traffic Control Devices (MUTCD), used on the street, alerts motorists just as similar signage on the trail alerts trail users to the gateway. Signage is placed an adequate distance ahead to allow response time and is designed per the MUTCD.





#### On-Street Shared-Use Routes

In addition to the “backroads” network, there are a number of low volume streets such as Eagle Drive and Rosita Street. Typically these are where bicyclists and pedestrians share a lower volume, lower speed (25 mph) street with automobiles. This may consist of “share-the-road” yellow diamond caution signs with a bicycle symbol and placards that “spell out” “share the road”. In some instances, there may be a designated bike lane defined by either a solid white paint strip or painted bicycle symbols applied to the pavement to designate bicycle use. Designs are per the US Manual of Uniform Traffic Control Devices (MUTCD) and the AASHTO Guide to the Development of Bicycle Facilities. Optimally, a shared lane is 14'-wide, not including the gutter pan if there is no parking lane and where there is not a designated bike lane.

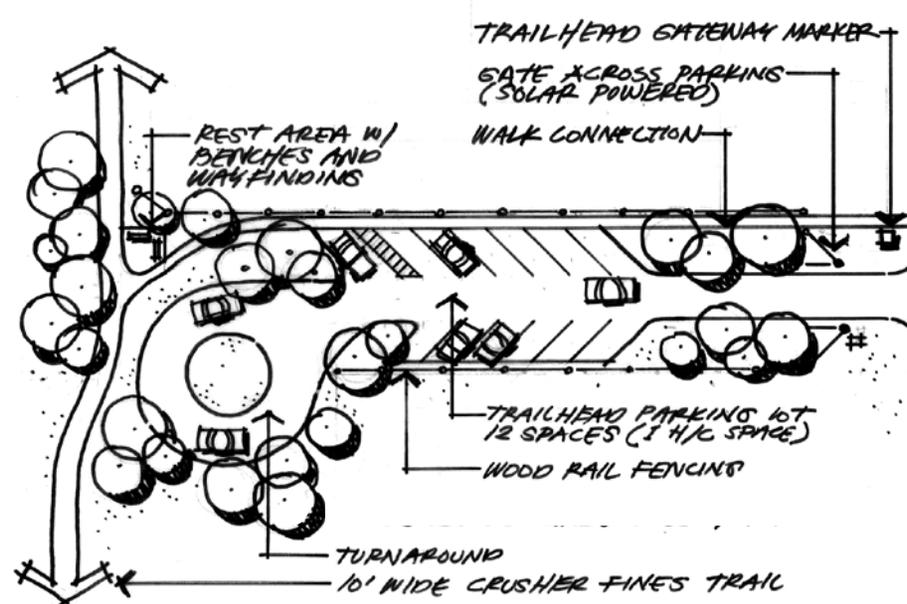
### Trailheads and Entry Features

Trailheads should be strategically located where users might logically want to access the corridor by automobile and park to bike or hike. Typically these could accommodate 10 to 30 automobiles and could have a paved or gravel surface. Trailheads should also include an entry monument or sign that includes a trail system map, with “you are here” marker, and applicable user courtesy/regulations and other information. These locations could also include restrooms, shade structures and drinking water.

In some instances entry points might be more elaborately improved to enhance trail visibility to the public. These entry features might include special landscaping, trim elements, shade structures, and sculptural elements.

In other instances the trail entry point might not offer parking, serving rather as a “walk-up” or “bike-up” point of entry. These should include an accessible ramp from the street where applicable and neighborhood-appropriate signs or small pylons indicate the entry point. A small system map at these locations will also help with wayfinding.

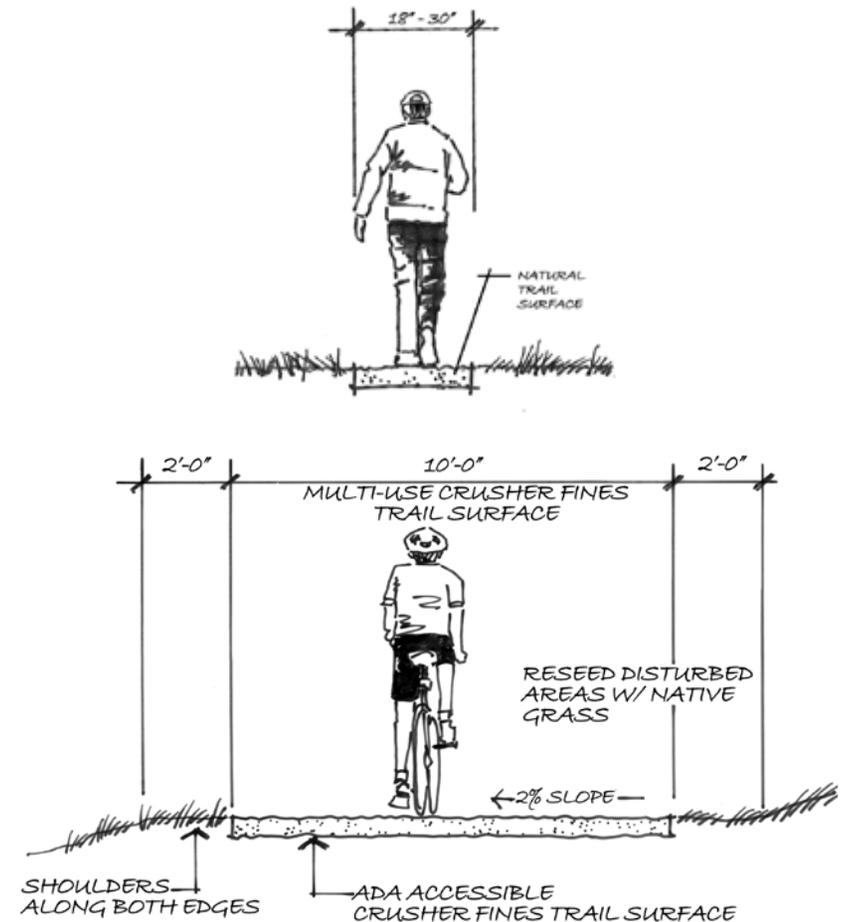
Typically, trailheads, entry features, and other points where people can park or congregate, should not be placed proximate to residences. A gate that closes the area at night can be provided. A number of communities have used solar-activated automatic gates that close at sunset preventing access after dark.





### Natural Surface Trail

This is a graded dirt surface with appropriate erosion control and stabilization. Width may vary from 18" to 72". Depending on permitted use, this trail accommodates hikers, mountain bikes, all-terrain wheelchairs, and equestrians. It does not meet national (AASHTO) standards for bicycles. Typically grades do not exceed 5% with 12.5% the maximum for short distances.



*Signage; Safety, Courtesy, Interpretive and Wayfinding System*

A number of informational, educational, interpretive and way-finding devices are recommended for the trail corridor. These include:

**Safety Signs**

These signs and/or pavement markings address or promote trail user and bicycle safety. For ease of understanding, these signs should follow standard formats for traffic control devices (See Manual of Uniform Traffic Control Devices). Signs address both bicycle and automobile traffic signage with respect to both trails and shared on-street routes.



**Wayfinding/Directional Signs**

Includes signs and markers, some with maps showing trail users how to reach their destinations, distance from a destination, and location signs such as mile markers, and street signs placed on bridges to identify cross streets. The wayfinding system should include overview signs and maps used at major entries (The system map should also be readily accessible on the Web). They address comprehensive issues such as system-wide trail maps, location of rest areas, degree of difficulty, accessibility and system trail rules and regulations. Due to the amount and importance of the information conveyed on system signs, it is best to place them in locations where users are encouraged to safely stop and review the information represented. Markers may have a specific logo, or they may be as simple as blaze, using pieces of brightly colored tape attached to sign posts to indicate the corridor (used extensively in France and other places).

**Credit Signs**

Provides information about those who contributed to the development of the trail and/or amenities along the trail.

**Interpretive signs and displays**

Addresses natural and/or cultural features. Important topics include ecological and geophysical interpretation and history.





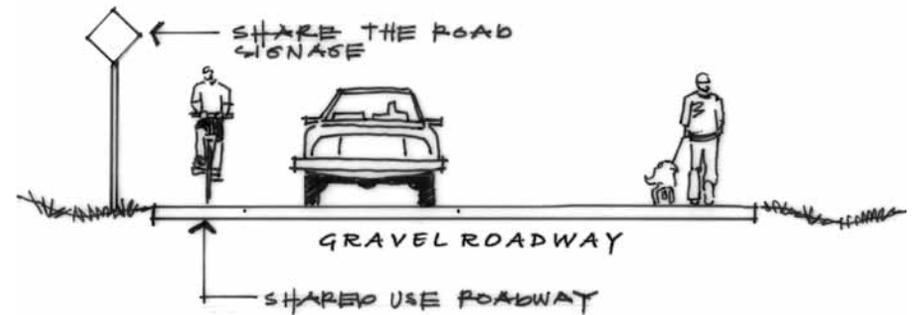
### Rest Areas and Overlooks

The system should include strategically placed rest areas and overlooks. This might consist of a single bench or more improved sites with restrooms and other amenities. Generally these should be available within a mile of any point on the trail.



“Backroad” Shared Use of Gravel Road Corridors

The Pagosa area enjoys the benefit of a network of rural back roads. Most of these have low traffic volumes and speeds, are well maintained and wide enough to accommodate bike (wider tire hybrid and mountain bikes) and pedestrian use. This road network might function better with the addition of “share-the-road” yellow diamond traffic safety signs (per the U.S. Manual of Uniform Traffic Control Devices) and distinct wayfinding “mile markers” that help guide users from point-to-point. It would be helpful to place the mile markers with a ½-mile spacing in both directions and/or at least at any key decision points such as where the road forks and other intersections.

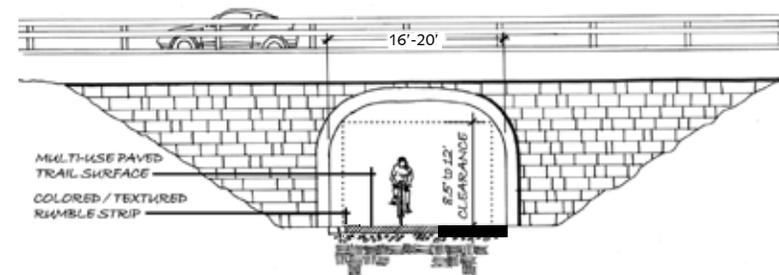


Caption

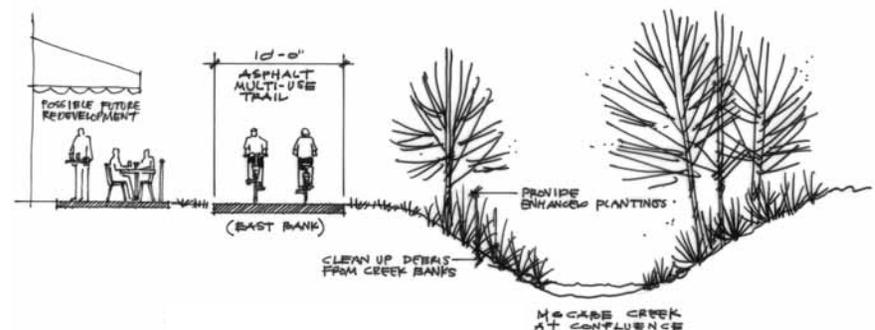


### McCabe Creek/Confluence Area Improvements

There is an opportunity to restore the reach of McCabe Creek from upstream of San Juan Street (Hwy. 160) to the confluence with the San Juan River. This would include re-exposing the natural creek—part of which is buried in a culvert—expanding and enhancing riparian and wetland habitat—especially where the creek empties into the river—and creation of a new linear park/redevelopment area along the creek. This cross section envisions opportunities for a multi-use trail, green space and new creek oriented commercial development such as shops and restaurants. Improvements should also include an attractive new pedestrian underpass beneath San Juan Street, providing both better flood conveyance and a safer, more usable link between neighborhoods to the north and the San Juan River.



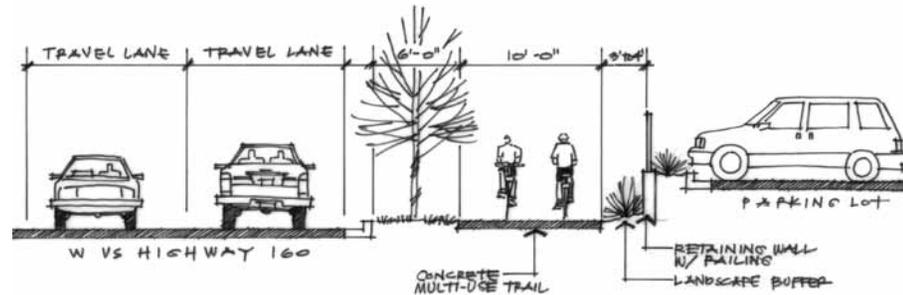
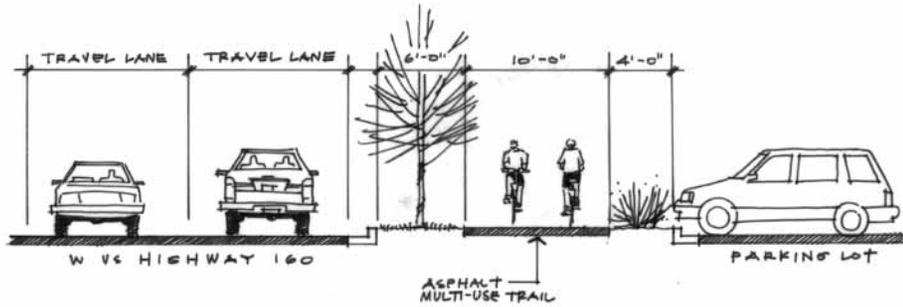
Underpass Concept

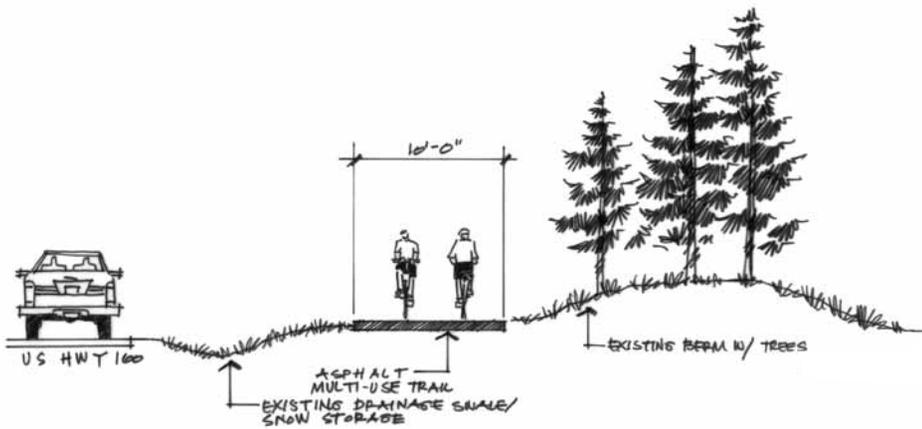


Trail Section at Confluence

New Trail/Streetscape Along San Juan Street

There are opportunities to both improve the visual character of San Juan Street (Hwy. 160) where it enters downtown from the west (between 10th St and 7th Street) and provide much better pedestrian and bicycle access. Widening the sidewalk to a 10'-12' -wide shared use trail and installing a landscaped median between the road and the new pathway can accomplish this. The sections below suggest how this might be accomplished by modifying the travel/turn lanes and using retaining walls where needed, and landscaped buffers.





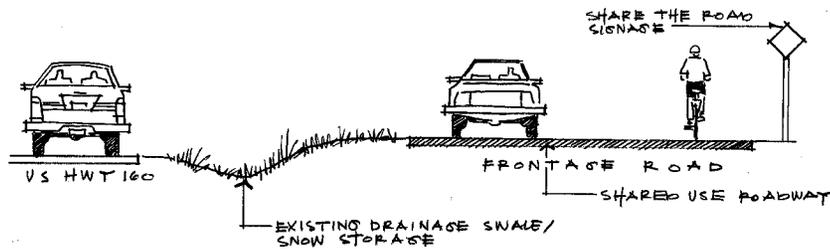
### Trail Segments Adjacent to Hwy. 160

There are a number of places where the trail might be located adjacent to Hwy. 160, either in the highway right-of-way, or with landowner cooperation, in the frontage strip adjacent to the highway right-of-way. In some instances the path might be closer to the highway and wherever right-of-way permits, it could meander away from the active roadway, ideally through the wooded areas that front the highway corridor in many places. In all cases that path should be placed as far as feasible—ideally at least 15'—from the edge of the roadway and always far enough back to accommodate storage of plowed snow.



Eagle Drive Shared-Use Frontage Road

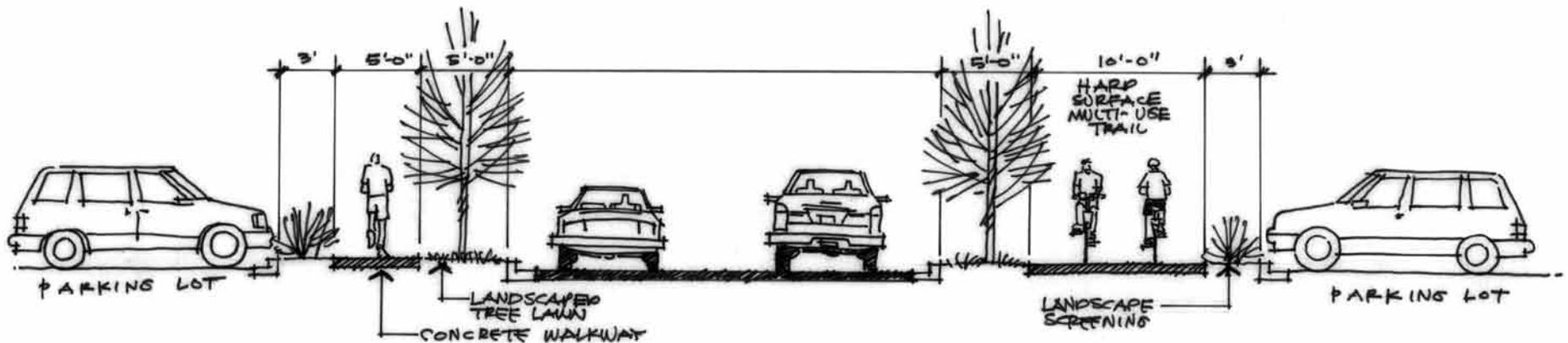
A portion of the trail corridor network will include the shared use of Eagle Drive between Piedra Road and Pike Road. In the interim this may be the only passage through this area until a paved path is built on the south side of Hwy. 160. Because it is a shopping and employment center, it will always be part of the bicycle and pedestrian circulation system and share the roadway with automobiles, unless at some point a separate path can be built in this somewhat narrow strip. The section below suggests placing yellow diamond “share the road” signage along this reach. Wayfinding posts or markers should also be installed to help guide trail users.



Typical Shared Use Path Section

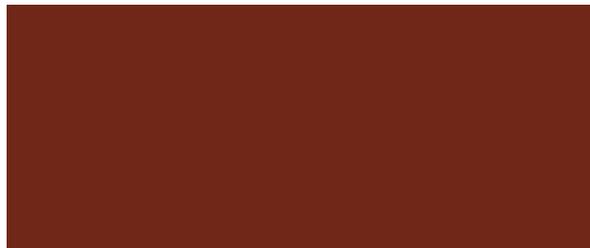
New Shared Use Paths Next to Future Access Roads

A significant portion of the trail system, particularly on the south side of Hwy. 160 between Majestic Road and Pagosa Boulevard, will include new paved shared use side pathways next to the road. Typically these are 10'-wide with an asphalt or concrete surface, are set back at least 5' from the roadway with a vegetated or landscaped median and are adequately buffered from nearby land uses and structures such as fences and parking lots to ensure there are no conflicts such as car bumpers in nearby parking lots protruding into the trail. In more populated busy areas, a multi-use path is recommended on one side of the road and a sidewalk on the other. In all cases development should be planned to consolidate and minimize driveway cuts that might conflict with trail use. Appropriate safety signage should be installed at driveway cuts.



Typical Access Road Section

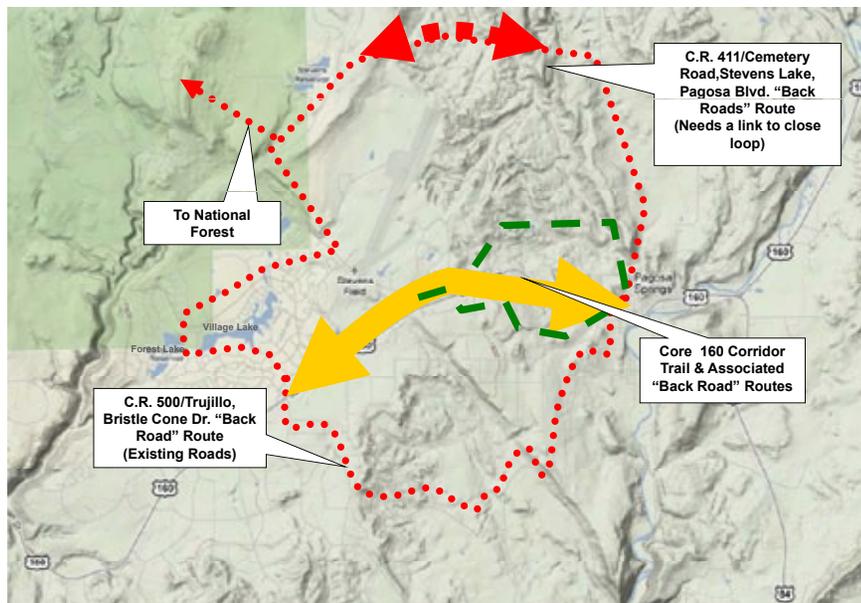
# CHAPTER THREE: RECOMMENDED LAYOUTS AND ALIGNMENTS



Overview: The Opportunity Areas and Corridors  
The Integral Project Segments  
Downtown—San Juan Trail to 7th Street  
Town-to-School Link—7th Street to 10th Street  
Putt Hill—S. 10th Street to Majestic Road  
Harman Park—Majestic Road to Piedra Road  
Pinon Lake—Piedra Road to Pagosa Blvd.  
The “Back Roads” and Peripheral Routes

This chapter describes the specific recommended trail alignments and corridors. It consists of a core trail—primarily an off-road paved multi-use hike/bike path—and a network of associated “back roads” routes that access scenic areas and link key destinations between downtown Pagosa Springs and the Pagosa Lakes Community. The “back roads” routes consist primarily of unpaved, low traffic corridors and include both closer-in routes (shown below in green) and peripheral roads (shown in red) that presently interconnect—or could feasibly be made to interconnect.

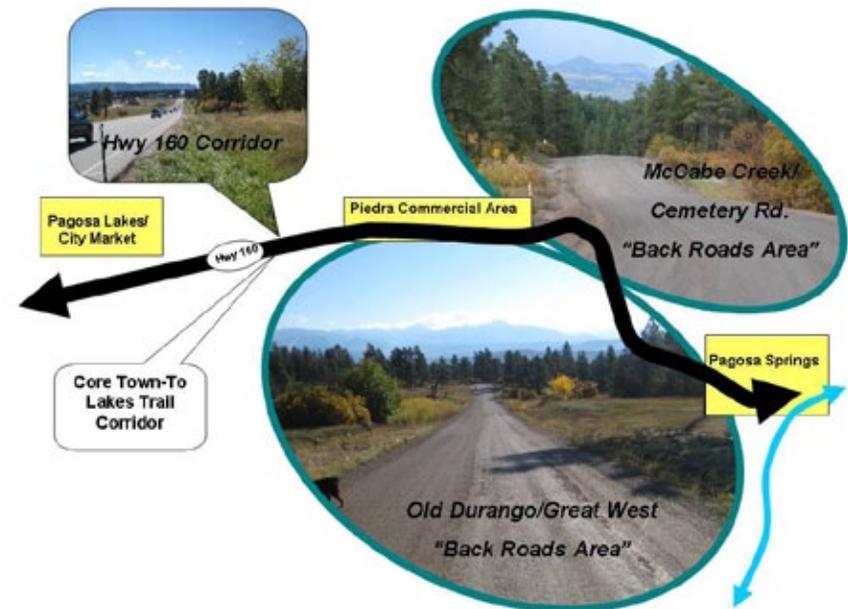
The core trail layout is presented in a series of five integral segments. Each segment represents a logical trail link that can both stand on its own as a usable amenity and form part of the larger complete Town-To-Lakes Trail as additional segments are funded and constructed. With respect to the paved multi-use trail, the layout and alignment map shows an optimal route (highlighted in yellow on the map). The descriptions below primarily describe the optimal routes.



Overview of Planning Corridor and Associated Peripheral Routes

### Overview: The Opportunity Areas and Corridors

The study area for this plan extends from Downtown Pagosa Springs—beginning at the existing San Juan River Trail—to Pagosa Boulevard in the community of Pagosa Lakes—where connections can be made to the existing trails network there. In evaluating the corridor, and with community input in public meetings, it became evident that there is a range of connectivity options and unique scenic/recreational opportunities beyond a single trail connecting downtown to Pagosa Lakes. These elements include: the core Hwy 160 corridor and a related network of interconnected scenic and rural backcountry areas with low-traffic back roads, large-lot parcels, “conservation parks” and scenic vistas. These areas are integral to a vision of a larger complex of lands both privately and publicly held that could constitute a special legacy area along the larger Hwy. 160 corridor.



Opportunity Areas and Corridors

The Integral Project Segments

The following reaches define logical, usable trail pieces that can ultimately connect to complete a continuous trail corridor from the San Juan River to Pagosa Lakes.

1. "Downtown" - San Juan Trail to 7th Street
2. "Town-to-School Link" - 7th Street to 10th Street
3. "Putt Hill" - S. 10th Street to Majestic Road
4. "Harman Park" - Majestic Road to Piedra Road
5. "Pinon Lake" - Piedra Road to Pagosa Blvd.



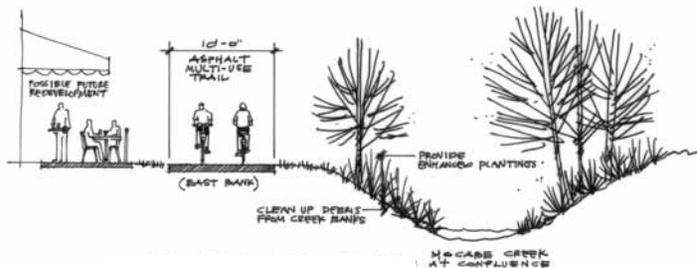
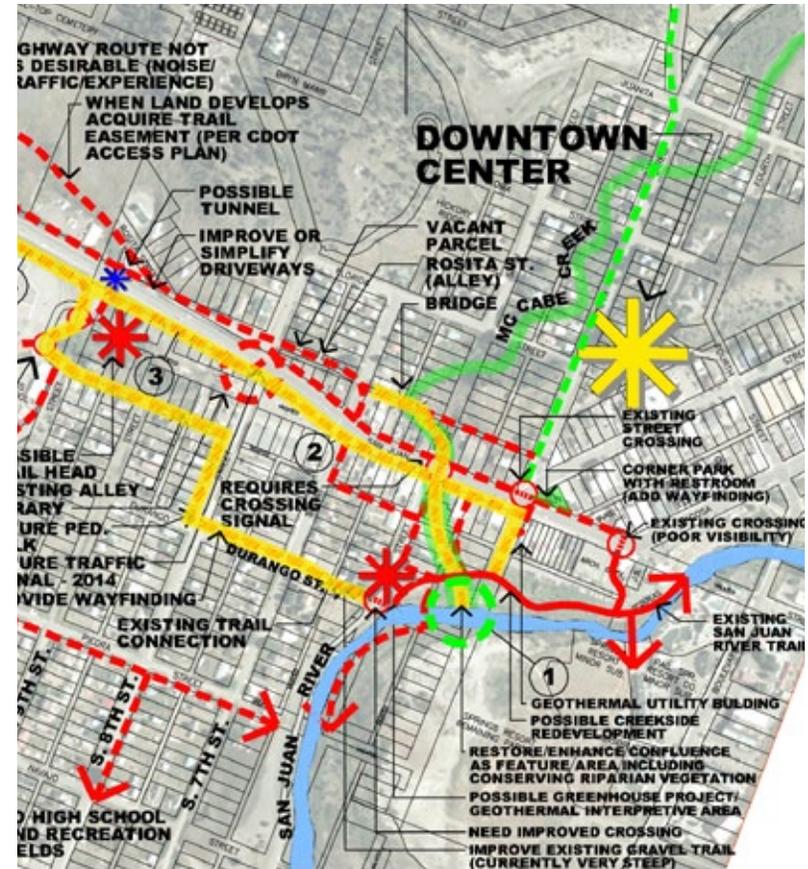
**PAGOSA TOWN TO LAKES - TRAIL MASTER PLAN  
IMPLEMENTATION STRATEGY  
PAGOSA SPRINGS, COLORADO**

### Reach 1: "Downtown" - San Jan Trail to N. 7th Street

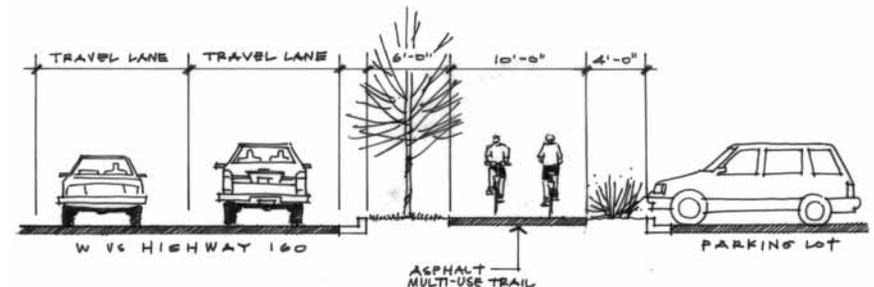
This segment begins in Downtown Pagosa Springs near the confluence with McCabe Creek (proximate to S. 5th Street). The optimal trail routing follows the bank of McCabe Creek with a 10'-wide paved pathway from the Confluence to San Juan Street {See section 1}. From there three options extend west to 7th Street. One envisions a new attractive pedestrian/creek underpass {See tunnel concept on page 23} beneath San Juan Street (Hwy. 160) connecting to Rosita Street. Another follows the south side of San Juan Street along a new streetscape corridor with a paved 10'-wide trail continuing to S. 7th Street {See section 2}. A third corridor uses an existing gravel trail ramp connecting to Durango Street. Pending improvement to the ramp at Durango Street to lessen grades, the route along San Juan Street could provide a more universally accessible option. Trail entry and wayfinding signage, mile posts, furnishings, landscaping, including shade trees and riparian/wetland enhancements, will greatly improve the quality of this area and create a better trail experience.

This concept also envisions a new "Confluence Park" along McCabe Creek from the San Juan River to 7th. This new park will offer improved creek habitat, a new trail and underpass, and opportunities for new creekside development including shops and restaurants focusing on the creek. This concept also envisions integrating a new Geothermal/Community Greenhouse interpretive area.

In addition to the identified optimal trail corridors several alternative/interim routes are shown on the map (with red dashed lines) that could provide connections, primarily along existing streets and alleys.



Section 1 - Trail Section at Confluence



Section 2 - San Juan Street Section



San Juan River



McCabe Creek



San Juan Street (HWY 160)



Existing Paved Trail





South Side San Juan Street (HWY 160)



San Juan Alley - Safe-Router-To-School Corridor



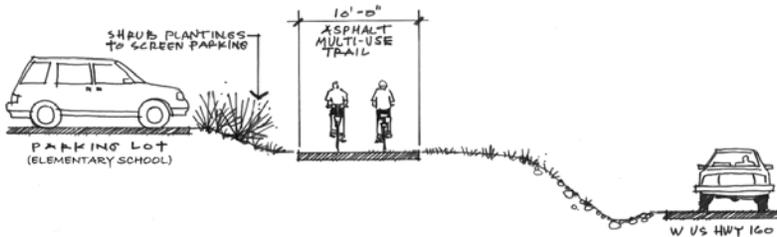
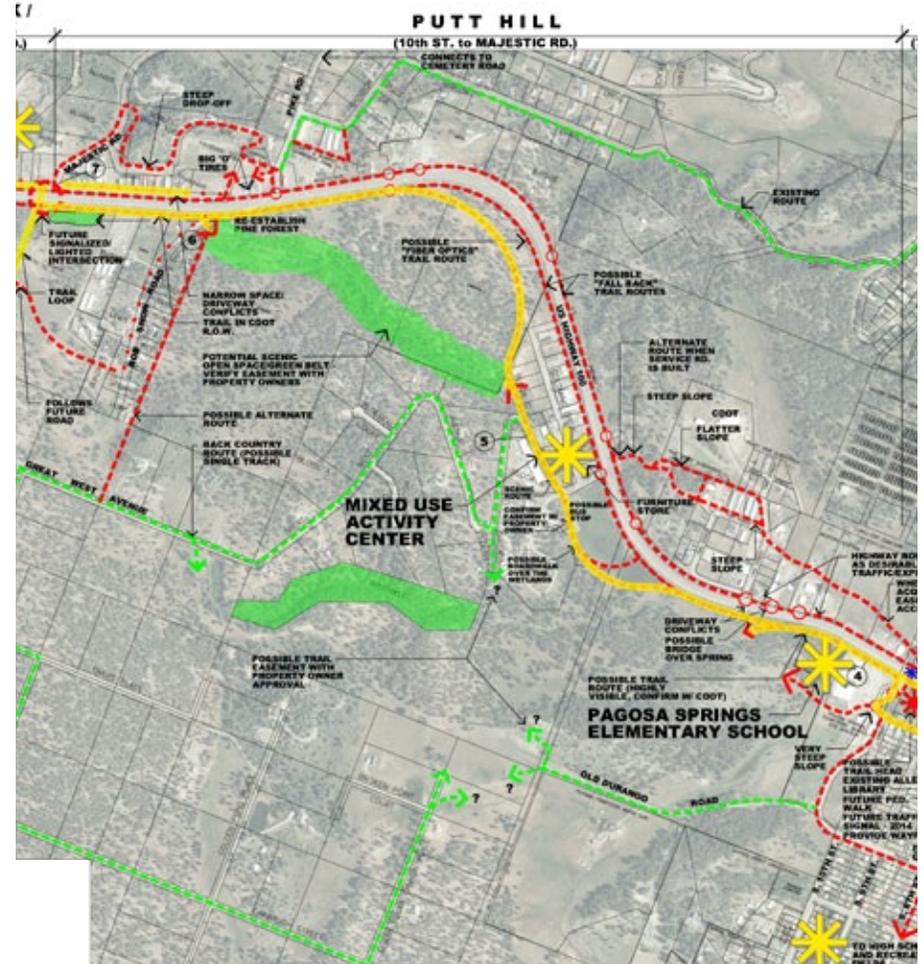
Rosita Street Connection

Reach 3: "Putt Hill - S. 10th Street to Majestic Road

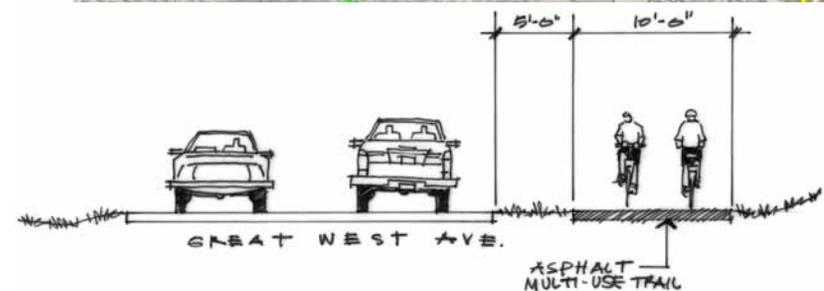
This segment runs from Pagosa Springs Elementary School at 10th and Hwy 160 to Harman Park and the commercial district at Majestic Road. Most of the preferred trail alignment follows—if landowners approve—a scenic corridor of grassy meadows and pine groves proximate to, but not immediately adjacent to Hwy. 160.

Immediately west of the school, the trail is located along the edge of the highway right-of-way separated by a grass median {See Section 4}. At Great West Road, the trail will run adjacent to the road separated by a grass median {See Section 5}. Next, the trail would pass through—again with property owner approval—a second conservation area featuring evergreen forest, meadows and scenic terrain. Alternatively, it could run along the edge of the Hwy. 160 right-of-way. In certain places it might be necessary to build short pedestrian spans or decks to traverse local springs. Finally, the trail would again run adjacent to Hwy. 160 along the edge of the right-of-way to Majestic Road where it would access the Harman Park area and users could cross the highway, using a specialized HAWK pedestrian crossing device, to the Eagle Drive commercial district using a push-button stoplight.

Alternative routes, shown with red dashed lines, run along the edge of the right-of-way for the entire length of this segment. One potential alternative route runs north of the highway corridor along a proposed future access road that could be constructed when the area develops. This corridor, again with landowner's approval, would also feature greenbelt conservation linear open spaces along the trail, helping to protect views, wetlands and wildlife movement routes.



Section 4 - Trail Section Near Elementary School



Section 5 - Trail Section at Great West Avenue



View Looking East Towards Elementary School



Meadows Area South of HWY 160



South Edge of HWY 160 Near 10th Street

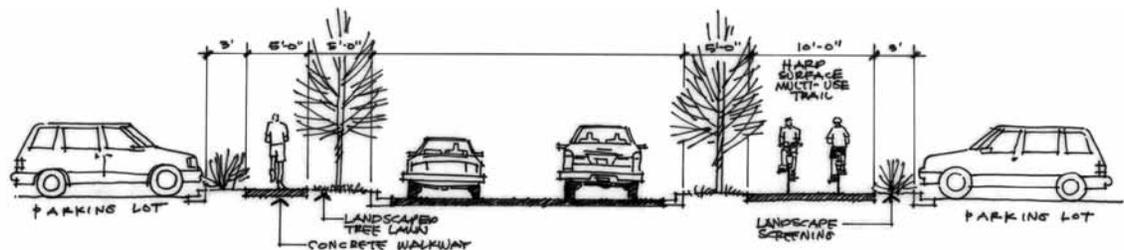
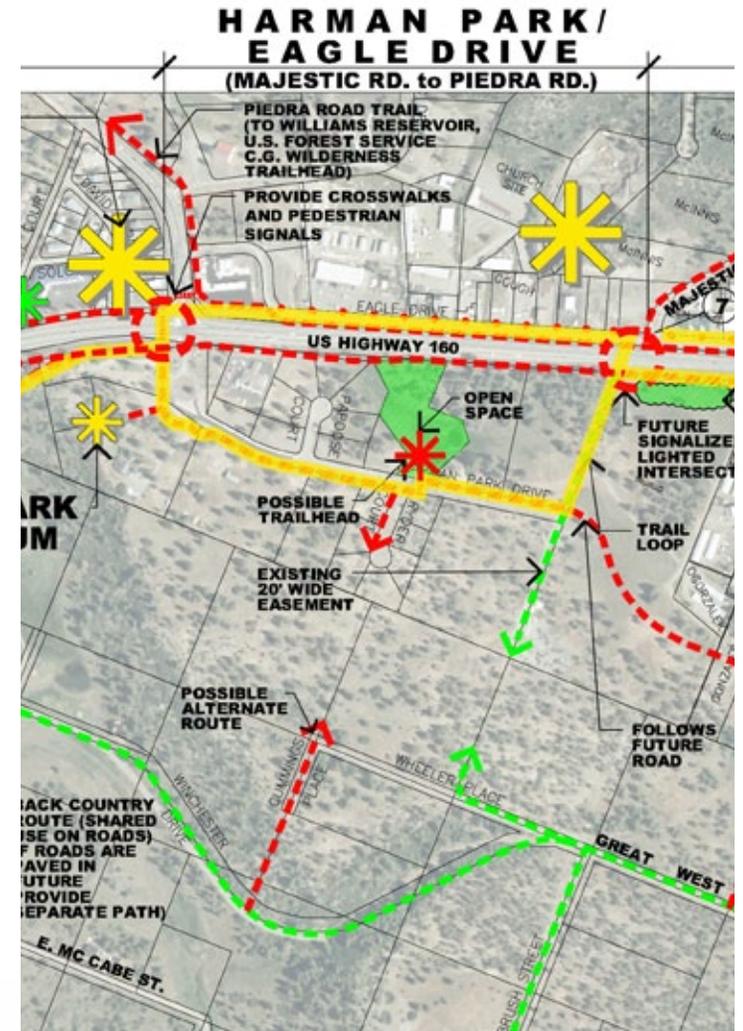


View East Along Great West Road

#### Reach 4: Harman Park - Majestic Road to Piedra Road

Here the trail corridor runs along both sides of Hwy. 160 for the length of this segment. The proposed trail on the south side of Hwy. 160 follows Harman Park Drive, initially on-street, with bike signage and “sharrows” (painted bike symbols on the street pavement) and later on a separate 10'-wide path surface next to the Harman Park Drive from Majestic to Piedra (See section 10). This segment runs through an attractive wooded area where a number of historic structures can be viewed. Along with wayfinding, landscaping and furnishings, this reach could feature an open space park/trailhead on the dedicated site on the Harman Park side of Hwy. 160.

The route on the north side of 160 follows the Eagle Road access street through the commercial district west from Majestic Road to just short of Piedra Road, where a short trail section would be constructed for a few hundred feet along the edge of Hwy.160 right-of-way connecting to Piedra Road and the Piedra Road Trail. The portion along Eagle Road will be on-street sharing the road with low-speed vehicles. Wayfinding signage, “share the road” caution signs and “sharrows” will denote the shared use. At a later point in time, a separate paved trail may be constructed adjacent to the service road. In addition, a similar segment of trail could be created running east from Majestic Road facilitating bike/pedestrian use along Eagle Road to Pike Road. This segment could be accessed from the south side at the stoplight at Piedra Road, using the proposed “HAWK” crossing at Majestic, although crossing the highway is not a pleasant task in this area.



Section 10- Typical Access Road Section



Harman Park Drive



Open Landscape Near Majestic Road



Harman Park



View Looking West on Eagle Road





View looking East on Highway 160 at Pierdra Road



Cornerstone Drive



View looking East on Highway 160 near Pagosa Blvd.



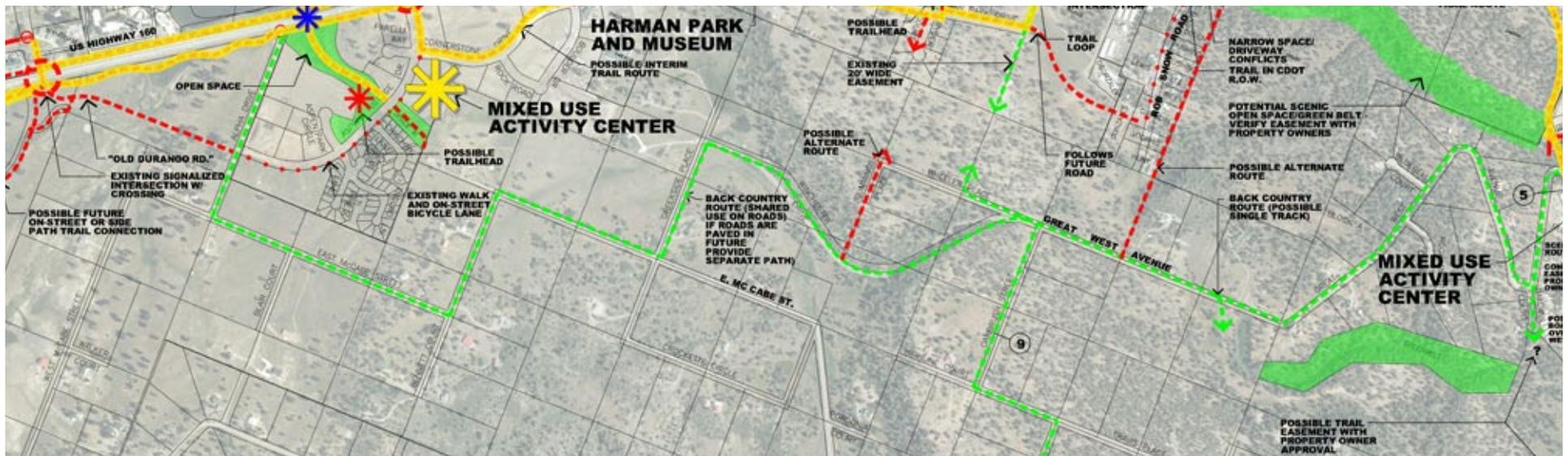
View looking East at Pinon Lake

### The “Back Roads” Network

In addition to the proposed core paved Town-To-Lakes Trail there is an opportunity to enhance a network of scenic “back road” corridors. These low traffic, low speed, gravel roads allow opportunities for enjoyable bicycling and walking along through sparsely developed areas to the south and north of the core Hwy. 160 corridor. To the south, this network primarily follows Old Durango, Great West, McCabe and Oakbrush. To the north, the network primarily follows Cemetery Road, Crestview, and Pike. These roads can also form attractive travel loops interconnecting with the proposed paved trail system.

It should be noted that the “back road” network includes areas with steeper grades and longer distances to travel—so they may not be optimal for all users and would not offer a direct commuting route for Downtown to Pagosa Lakes non-motorized travel. Nonetheless they offer an opportunity to create an exceptional and unique recreational and fitness network serving both residents and visitors to the area.

Much of this “backroads” network, indicated by green dashed lines on the map, is already in place though there are a few gaps that should be closed by creating short trail links such as Old Durango Road to Great West Avenue. These trail links could be a single-track or similar dirt surfaced trails as users would be on “mountain” and “cross-track” bikes or on foot. Simple mapping and wayfinding markers could enhance and facilitate use of this network along with closing the gaps to form a better integrated network.





Scenic Views



Oakbush Street



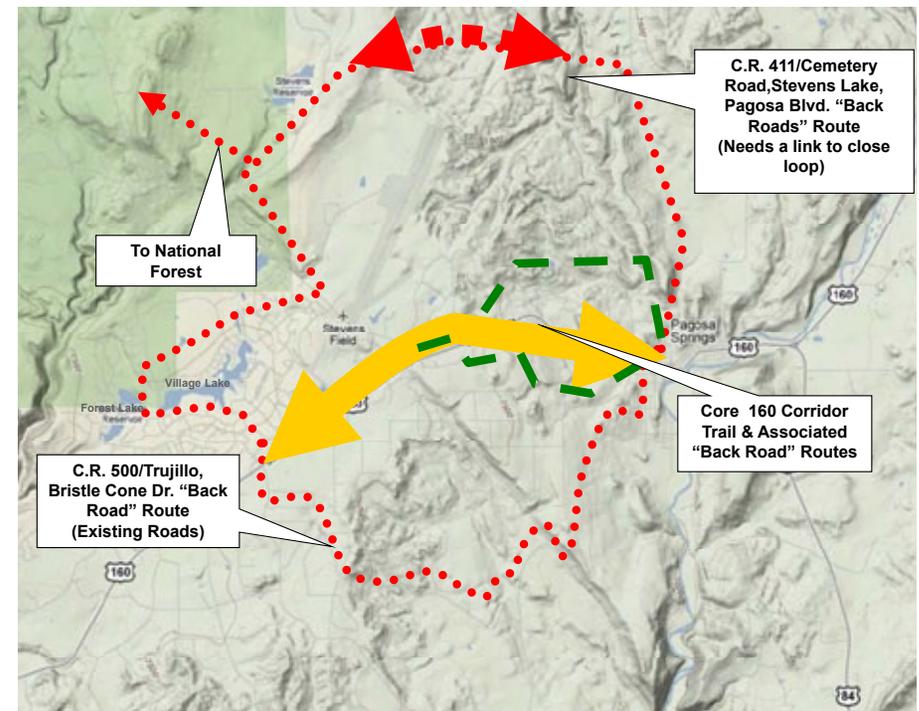
Great West Road



Cemetary Road

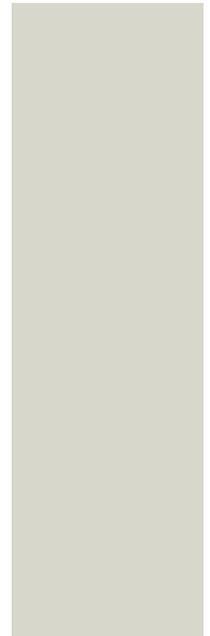
### The Peripheral Routes

In addition to these closer-in roads there are opportunities to immediately create usable routes along existing roads. To the south of Hwy. 160, a corridor could be designated that would follow the Trujillo Road and Bristlecone Drive. A loop could also be completed in the region north of Hwy. 160 using C.R. 400 and Stevens Lake Road. This would be better facilitated by closing a gap with a trail link (dirt surface trail) between C.R. 400 and Stevens Lake Road.



Peripheral Routes

# CHAPTER FOUR: IMPLEMENTATION



Organizational Structure for Effective Implementation  
Community Participation  
Rights-of-Way and Permitting  
Phasing and Next Steps  
Fundraising and Budget Strategy  
Operations and Maintenance Considerations

### Organizational Structure for Effective Implementation

The Town-to-Lakes Trail will become an important asset as the segments related improvements are completed. Numerous studies have shown that green infrastructure—especially trails—are vital, supporting both livability and economic development. This trail corridor can also become the main spine for a larger regional network of trails and scenic values shaping the character and quality of the Pagosa area for generations to come.

Many leading mountain and resort communities in Colorado and around the nation have recognized this and have invested over the past several decades in these kinds of improvements. The elements laid out in this report also offer a vital step in expanding the existing trails along the San Juan River and in Pagosa Lakes creating a significant integrated system helping Pagosa Springs and Archuleta County continue to compete as a world-class place to live and do business.

The success of the vision in this plan requires timely implementation of the components. Starting in 2012, and each year thereafter, a “ribbon should be cut” on logical, usable and inspiring trail segments and conservation agreements. This calls for putting in place an effective and enduring organizational structure providing leadership and strong community engagement. There will be a need to forge a cooperative effort among the parties to see all of the improvements through to completion. Skills in community advocacy, working with property owners, design, engineering, right-of-way acquisition, fundraising and overall coordination will be needed. Staff, consultants, political leaders and other champions for the project must be engaged in the process.

A key to this is having a designated entity and “point person” charged with managing the project and accomplishing completion of the project segments on time and within budget. There also needs to be a designated entity with authority to accept grants, appropriate funds, accept right-of-way conveyances, retain contractors, monitor construction and take on long-term operations and maintenance.



There are several models for accomplishing this, ranging from public agency management to private sector leadership to a public/private partnership. The Pagosa area is fortunate to have an engaged, articulate population and a willingness of residents and business people to commit time and resources to completing the trail system. This was clearly evident in the community meetings and field tours where citizens enthusiastically shared their ideas and willingness to contribute. It was also impressive to see the skills and commitment of the staff and elected officials in the process. At this point, the community does not have an existing private entity such as a non-profit though there has been considerable discussion about creating an entity or engaging an existing entity in the region to help champion the trail.

Based on observations of current capabilities and stakeholder input, it became evident to the consultants that a public/private partnership should be put in place. This effort should be led by a coalition of County and Town staff representatives working in coordination with a citizens or “friends of the trail” group. Initially, the “friends” group could be informal, but there is value in the group evolving into an incorporated non-profit with tax-exempt status under Section 501 (c)(3) of the U.S. Internal Revenue Code. This would allow the group to accept private donations, possibly hold conservation easements and provide other services to the effort. It is strongly recommended that the “friends” group focus strictly on completing the improvements in the Town-To-Lakes corridor—as opposed to having multiple activities and missions—until the work is largely completed.

There are a number of excellent models of this in Colorado and around the nation including: The South Suburban Park Foundation, Inc. in Littleton, CO, The Poudre River Trail Corridor, Inc. in Larimer and Weld Counties, CO and the Platte Parkway Trust in Casper, WY. Durango also has an example of strong leadership in this area..

In this scenario, the County and Town key representatives form a “leadership council” consisting of key agency staff and elected officials to coordinate project management and development activities, each responsible for work in their respective jurisdictions. Coordinating with





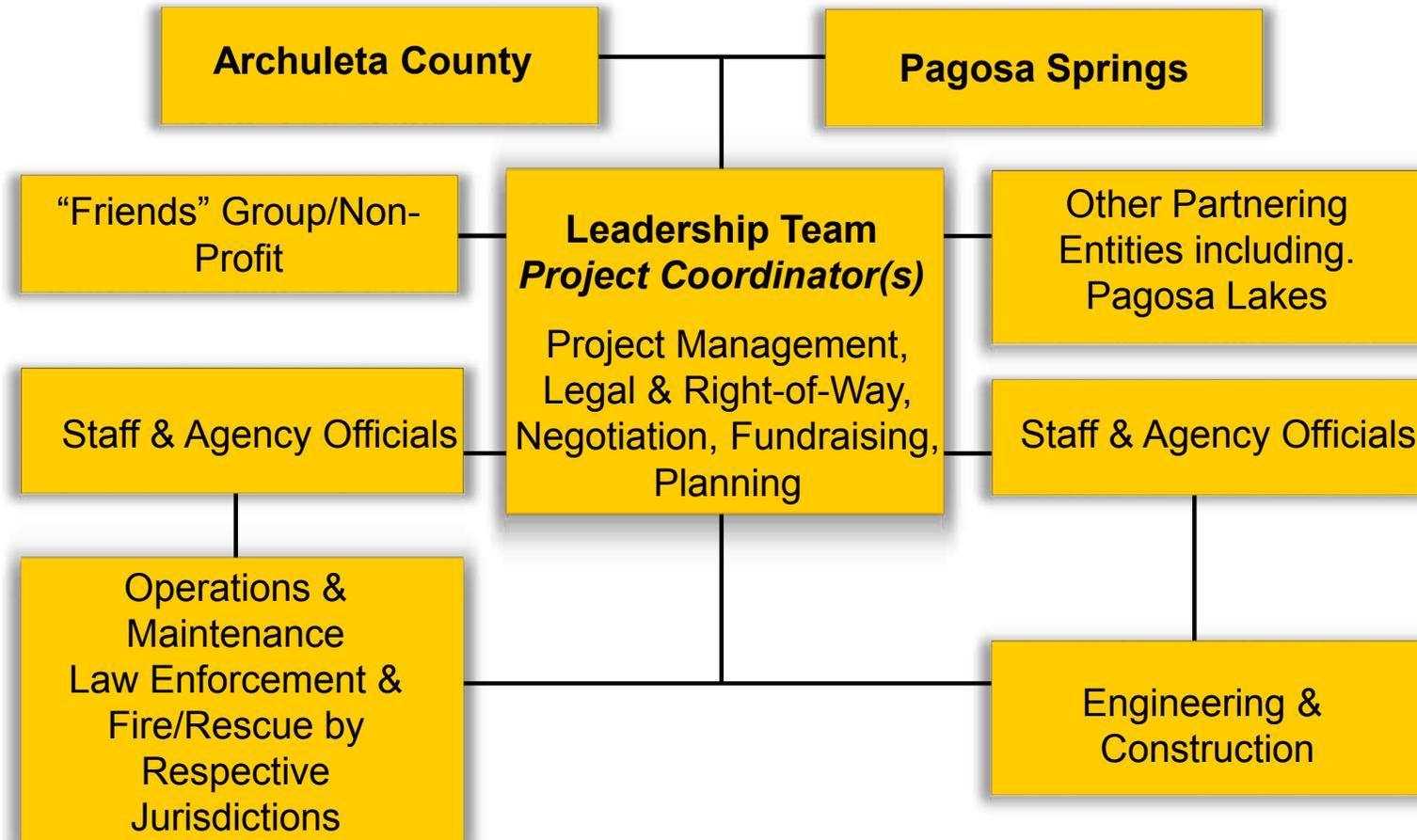
Pagosa Lakes will also be essential. This group could be led by Project Coordinator(s) to chair the overall effort—one from the County and one from the Town. These officials lead the development process, providing staff services to pursue rights-of-way, raise funds, coordinate planning, design and construction, and otherwise oversee and lead key implementation activities. This, of course, is carried out in close cooperation with the other partnering entities—particularly the “friends” group.

In most cases, as appropriate, depending on funding sources and other considerations, the respective public agencies take on responsibility for contracting and supervising construction services and engineering. The respective jurisdictions, in cooperation with the partners and the “friends” group oversee operations and maintenance. The appropriate police, fire and rescue authorities will have responsibility for law enforcement and security along the trail and on associated properties.

At some point if the “friends” group decides to formalize its structure, this organization might decide to contract with a professional “Project Developer” who would take on leading the implementation effort. This partnering structure could evolve through an intergovernmental agreement—formal or informal—amongst the entities and in this instance the governmental entities would contribute all or part of the funding to hire development services. This model has worked quite successfully in the South Suburban example in Metro Denver and other places. Initially, however, the jurisdictions need to commit the staff and resources to manage the effort.

Regardless of the structure, it is essential that all activities be carefully coordinated through the designated lead entity and a key individual(s)—the Project Coordinator(s). This is especially important as the project involves negotiations with private property owners, applying and administering state and federal grants, public information and other activities that call for the group speaking with a singular voice. The following table might best describe the management structure and working relationships.

## Implementation Organizational Framework





### Community Involvement

This trail plan includes a community participation process. Area residents, trail recreationalists, schools, businesses and others along the corridor all have a stake in the outcome. These individuals and entities should be kept well abreast of progress on the trail in a timely manner and their input openly received and responded to. The Project Coordinators should keep a list of the contacts and regularly brief them. This might also include holding public update meetings at key junctures in the implementation process.



### Rights-of-Way and Permitting

To expedite the process—and because right-of-way and permitting can be a lengthy process—right-of-way and permitting efforts should continue expeditiously. In addition to trail and conservation easements on willing private properties, right-of-way license agreements will likely be required from CDOT in certain areas. Permits including possible approvals under Sec 404 of the Clean Water Act might be required for any trail work that impacts wetlands.

Typically, easements provide the best acquisition instrument. Easements are a permanent land ownership instrument that does not include the entire property—just the right-of-way to a trail and any associated landscaping and/or conservation areas. The process will require surveying, legal descriptions, negotiation, appraisals and legal services. If outside funding is involved, such as federal transportation enhancement funds, more stringent steps may be required and must be carefully adhered to. While there are no known environmental hazards (i.e. contaminants) proper due diligence is always recommended that may include a site evaluation by a qualified environmental consultant.





### Phasing and Next Steps

A conceptual cost estimate was prepared as part of this plan. Please see Appendix "A". It is, however, a "planning level" estimate useful for initial budgeting, phasing and fundraising. It is anticipated that design consultants will prepare more detailed cost estimates during the construction phase. Based on available funding and other considerations, it is suggested the project be divided into several phases and funds budgeted with the goal of completing a logically usable phase (which can stand on its own) each year.

### PROJECT PHASING AND NEXT STEPS

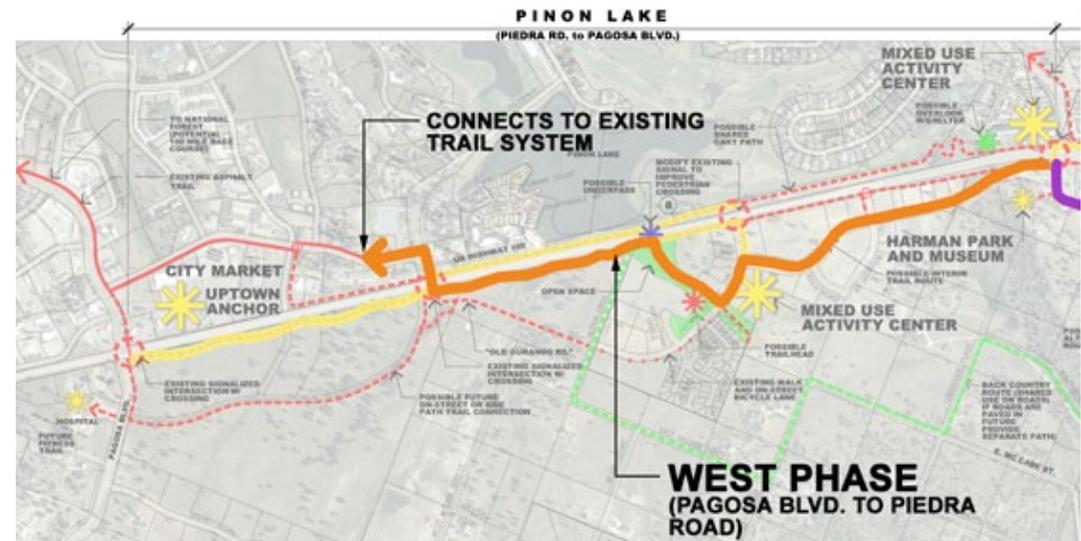
**Phasing of projects is best guided by several criteria including:**

- An immediate opportunity where a logical, usable connection can be made with current or readily available resources.
- Availability of rights-of-way and permitting.
- Availability of funding and/or grants to build and maintain improvements
- Catalytic projects that demonstrate the value of the project, build public support and help promote further community support and fundraising
- Opportunity to include a trail with a current private or public development project such as a highway improvement, access road or new subdivision.
- Projects that can be completed using volunteers or in-kind labor and resources.
- Segments that offer an exceptional experience and/or are highly visible to the public.

In strategizing implementation, several early action projects or “low hanging fruit” phases were defined. The goal is to complete these in the next 1-3 years. Based on the above criteria field conditions, cost and right-of-way considerations, the key logical phases appear to be:

### The “West” Phase - Complete link from Piedra Road to Pagosa Boulevard

- Build a trail segment on the south side of Hwy. 160 between Piedra Road and Cornerstone Drive. Follow Cornerstone Drive and Aspen Village Drive to the existing open space. Construct a trail through the open space and then along the south side of Hwy 160 to Pinon Causeway crossing to the north side of Hwy. 160 using the existing stoplight. Then follow Pinon Causeway a short distance connecting to the existing Pagosa Lakes trail system. Possibly include a trailhead on the north side of Aspen Village Drive at the gateway to the open space.



### The “Central Phase” - Complete Link From Piedra Road to 10th Street (Elementary School)

- Pursue and secure key rights-of-way and conservation corridors working with willing property owners. Follow, on-street, Harman Park Drive. Working with willing property owners, complete a trail connection to 10th Street. Depending on rights-of-way this route may pass through scenic open spaces. Portions will run in or adjacent to Hwy. 160 right-of-way. Also prioritize acquiring right-of-way from cooperating property owner(s) that links Old Durango Road to North Squaw Canyon Road forming a network. This link could be as simple as a single-track dirt path built by volunteers.

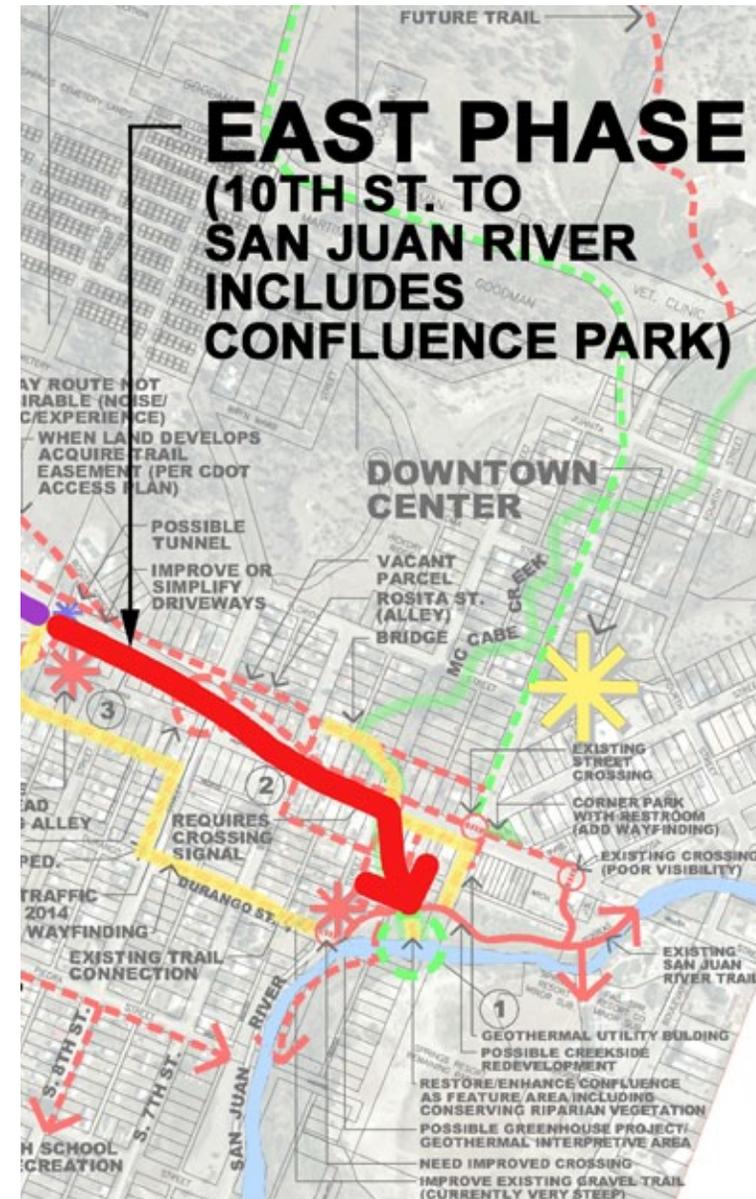


### The “East” Phase—Complete link from San Juan River to 10th Street

- Construct the new trail/gateway streetscape along the south side of Hwy. 160 from 6th Street to the Elementary School at 10th Street, the Confluence Park/Redevelopment Area, and also the links from downtown Pagosa Springs Neighborhood to the Elementary School.
- Create new “Confluence Park” Redevelopment Area with a trail/linear park along McCabe Creek from the San Juan River to N. 7th Street. Pursue a pedestrian underpass along McCabe Creek under San Juan Street (Hwy. 160). At a minimum, work with CDOT to ensure that when the drainage structure is replaced it will be designed to accommodate a trail underpass in an aesthetically pleasing manner.

### The “Backroads” Phase—On-road links via old Great West, Old Durango Road, Oakbrush and other roads in the network.

- Create a “low key” wayfinding system (route maps at key intersections and simple trail blaze markers along the way) that defines the “backroads” network. Also place pedestrian/bike safety “share-the-road” yellow diamond signs per the Manual of Uniform Traffic Control Devices. Prioritize acquiring right-of-way from cooperating property owner(s) that links Old Durango Road to North Squaw Canyon Road forming a network. This link could be as simple as a single-track dirt path built by volunteers.
- Could also place “share the road” and wayfinding mileposts along the existing Old Cemetery Road Crestview Drive on road route.
- And implement the “Perimeter Road” network as proposed at the public forums. Again this would consist of share-the-road signs and way finding markers.



### Next Steps

There are several actions that can and should be taken immediately to initiate moving beyond this plan into concrete actions. These include:

1. Identify the key staff project coordinators to continue implementation activities.
2. Engage elected officials in the plan and move toward timely adoption of the plan.
3. Refine a schedule and “roster of projects” for logical phased implementation of the full trail plan. Develop a cost estimate and a realizable right-of-way acquisition plan for a 2012 pilot project.
4. Convene representatives of the jurisdictions and “friends of the trail” to agree with and assemble an organizational structure.
5. Work to solidify a “friends group” to promote the trail project and build liaisons with key stakeholders such as business people, land owners, developers and public spirited citizens who might be willing to contribute to the effort.
6. Create a public information program including a Web site to keep community posted on the plans, accomplishments, volunteer activities, etc. Consider developing a trail logo and wayfinding marker.
7. Immediately pursue negotiation of rights-of-way along the corridor.
8. Pursue state, and if available, federal funding including GOCO State Trails funding in the next grant rounds.
9. Explore potentials for a long-term funding source such as an open space sales tax.
10. Review current development regulations and identify ways to improve ordinances such as, open space and trail corridor dedications, set-back requirements along roads to leave room for trails, and incentives to promote trail and greenway benefits.



### Funding Strategy

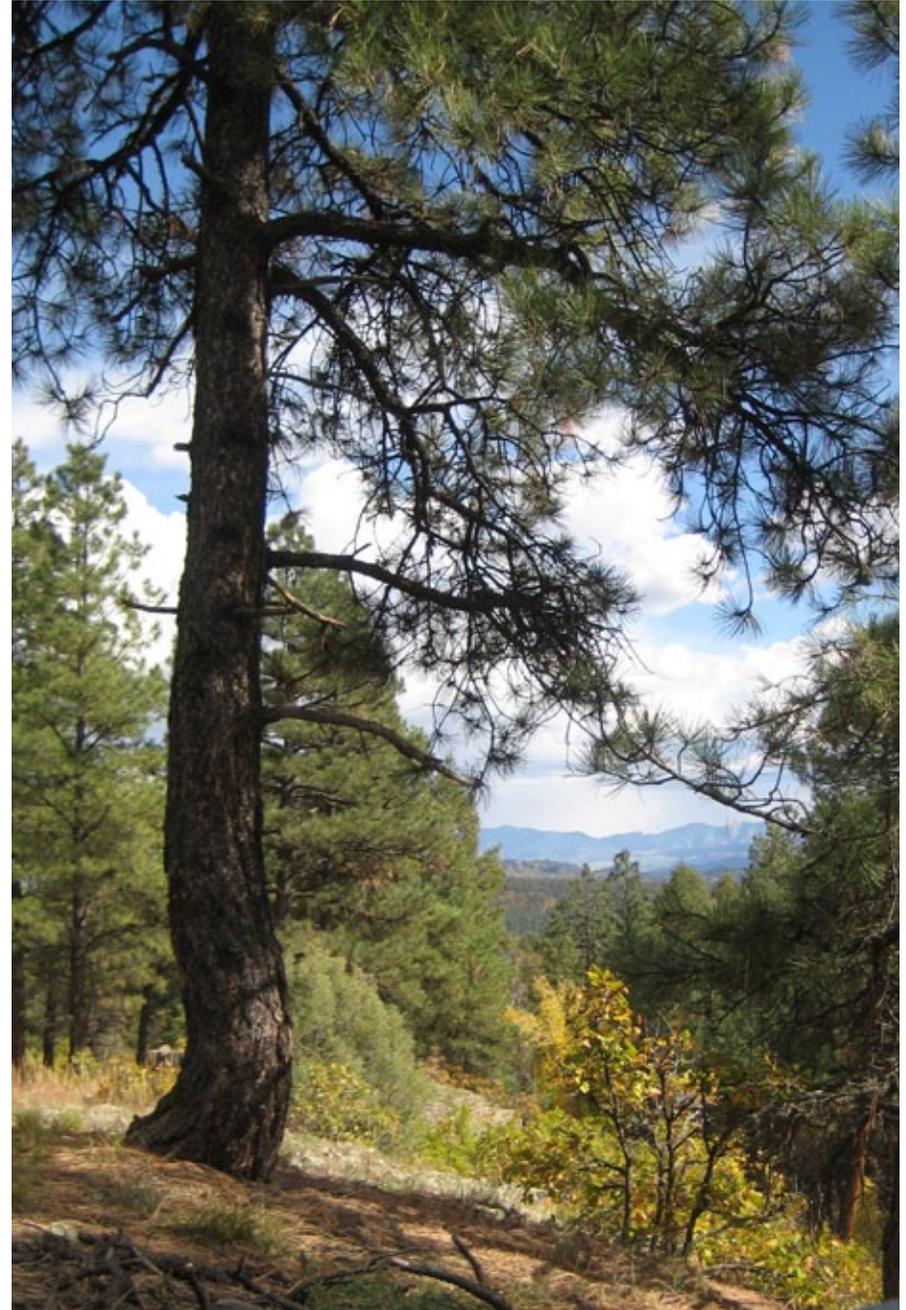
There are several potential funding sources likely to be available over the next several years. These include:

*Local Appropriations* - These funds come from County and local revenues (property taxes, restaurant and lodging taxes) and other sources and appropriations. This local commitment is key to providing match money and helping leverage potential outside funding.

*Create a Designated Fund* - There are numerous examples of special taxes, typically a sales tax increment at the County level, dedicated to open space, trails, parks and other similar community investments. These projects have been phenomenally successful along the Colorado Front Range, in Summit County and other locations where a very small increment on sales can generate substantial funds that can be invested in infrastructure vital to the long-term health and economic well being of the community. This type of tax is especially beneficial in tourism-based places where a substantial portion of the revenue comes from outside the area.

*Local Development* - As new development comes on line a number of communities have been successful in funding trails and greenway improvements through the sub-division process. As an example, Commerce City has been extremely successful working with developers to set aside open space corridors and build trails and parks in the developing area west of Denver International Airport. A key to this success was having a sound master plan in place. However, with the slowing of real estate development, less money is available for trail construction from these sources in the near term, though there may be opportunities for land and right-of-way designation on lands zoned for mixed use development. It should be noted that many developers want these improvements because they recognize them as essential benefits for the future marketability of their lands.

*Conservation Set-Aside Tax Benefits* - Under Colorado Law, landowners who agree to set aside developable lands for conservation purposes can reap substantial tax benefits directly, or cash benefits, by re-marketing the tax benefits to others in need of a state tax deduction. The Southwest



Land Alliance is an outstanding resource with a strong history of land conservation success in Archuleta County.

*Great Outdoors Colorado and the Conservation Trust Fund*—This program generates substantial funding each year both in terms of per capita annual distributions to jurisdictions and grant programs including the State Trails Program and other GOCO grant programs such as large scale and special opportunity grants. The latter may be a strong potential funding source for this project.

*Federal Funding* - Though the near-term and long-term future of these programs may be in doubt due to cutbacks, there are a number of potential federal programs that could become available. These include transportation enhancement monies; trail monies; Land and Water Conservation funds; “ARRA Stimulus” –type programs; health and fitness and community development programs. It may be helpful to monitor federal web sites to identify programs. American Trails ([www.americantrails.org](http://www.americantrails.org)) typically posts alerts about various programs. Possible time delays or more stringent grant terms and requirements and associated administrative costs should be weighed in considering certain federal programs. The benefit of larger grants (\$500,000 or more) and lower matching requirements may offset the higher application and administrative costs of some programs.

*Individual, Philanthropic and Corporate Giving* - There are several possible sources of private sector funding for trail projects. Programs and levels of sponsorship vary. Here, the “Friends Group” may be in the best position to seek and accept funds from private donors. These might include: gifts, grants, bequests, fundraising events and other forms of giving.

*In-Kind and Volunteerism* - There are opportunities to engage in-kind services from public agencies or private participants both in land donations and possibly use of equipment, labor or materials. This might also include youth programs, scout projects and volunteerism.



### Operations and Maintenance Considerations

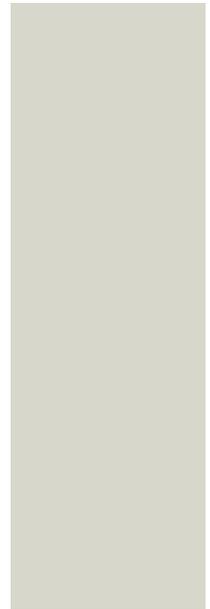
Key maintenance activities will include:

- Trail maintenance patrol and monitoring
- Snow removal as feasible and appropriate
- Trail sweeping
- Trail corridor weed and vegetation management
- Trail surface, fixture and furnishings routine repair
- Watering trees and landscape materials
- Application of fertilizer and pest management
- Litter and debris removal
- Remedial repair of improvements such as fixing washouts, erosion
- Public safety and rescue patrol, enforcement and emergency services

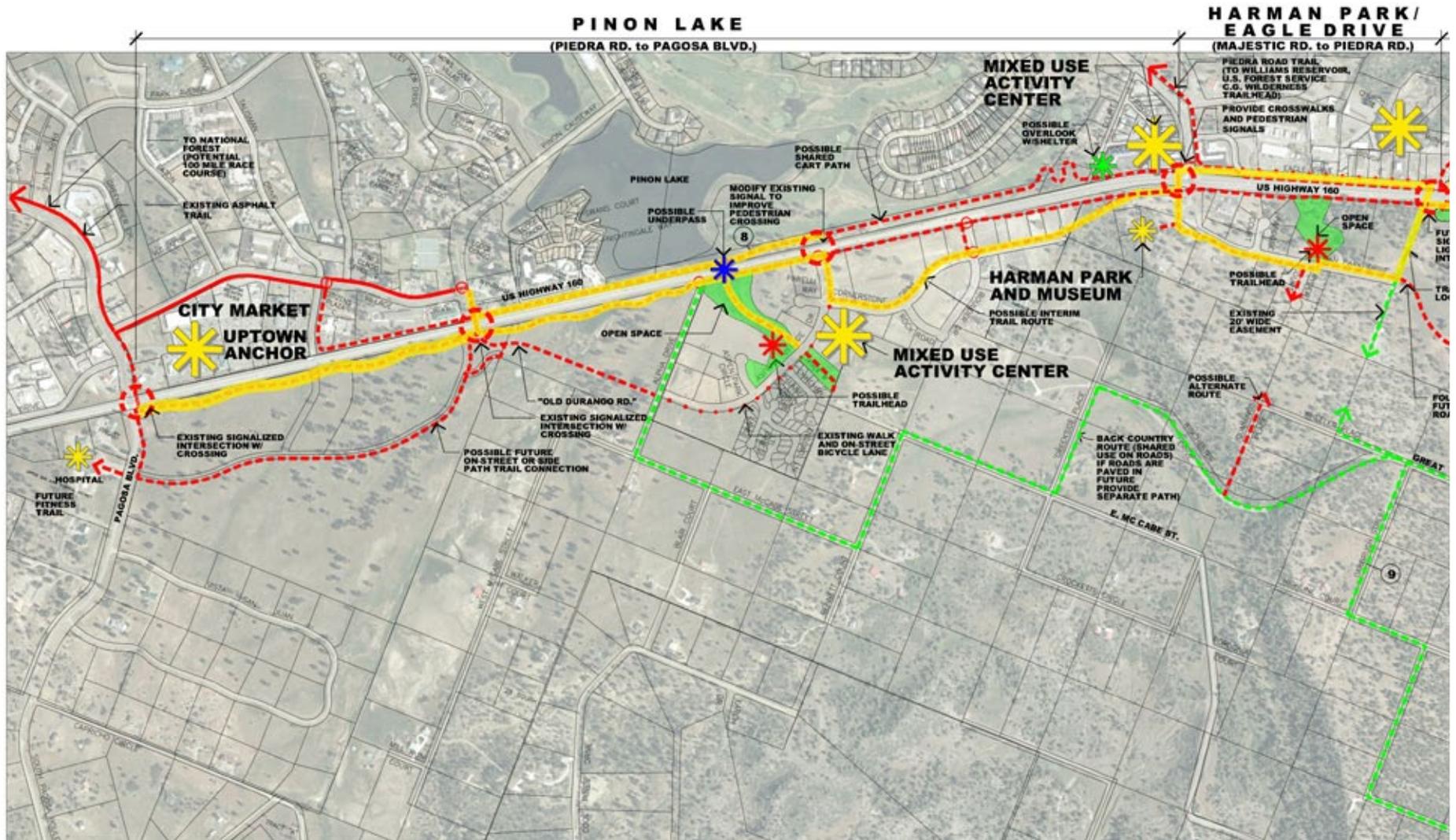
Annual operations and maintenance costs are estimated to run between \$2,500 and \$8,000 per mile depending on the level of improvement and maintenance. Maintenance of the on-road/backroads network would be next to nil assuming the road agencies continue to maintain the roads for vehicular use. Volunteers may be able to adopt sections of the trail and provide some support maintenance such as litter pick up and upkeep of wayfinding signs and other improvements not requiring heavy equipment or special skills. The partners may choose to each maintain their respective segments or may plan to cooperatively pool maintenance resources and management through working agreements.



# APPENDIX

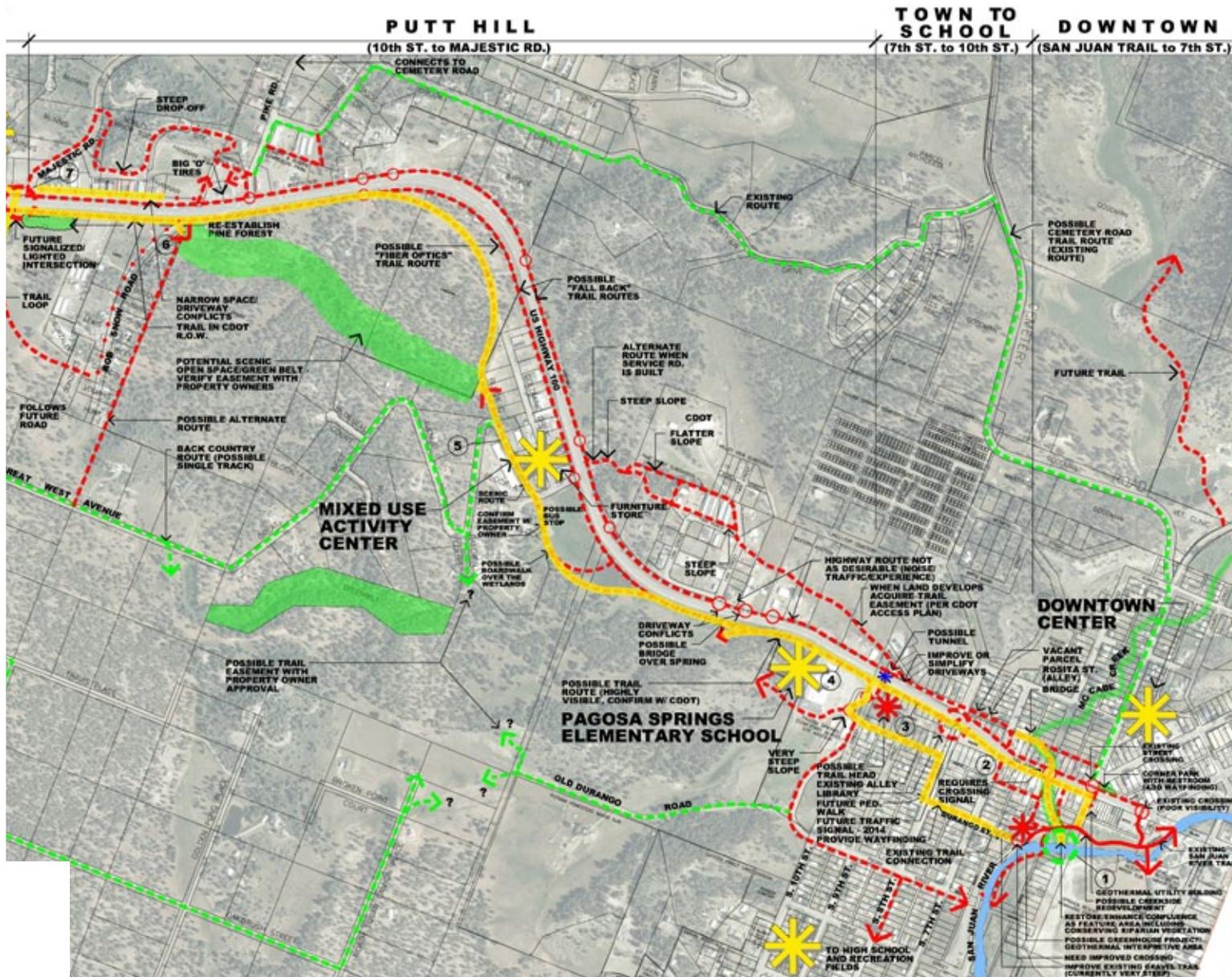


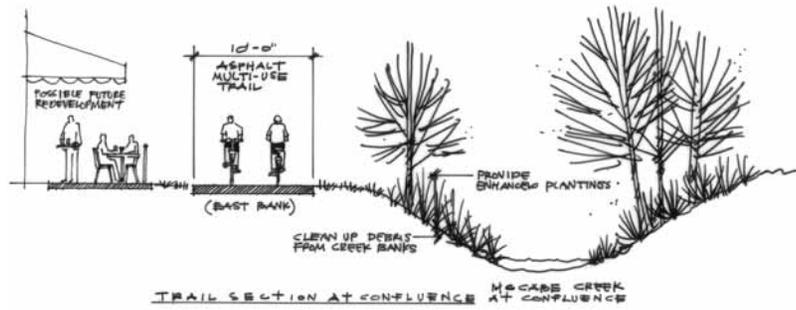
A. Plan Layout and Cross Sections  
B. Cost Estimates



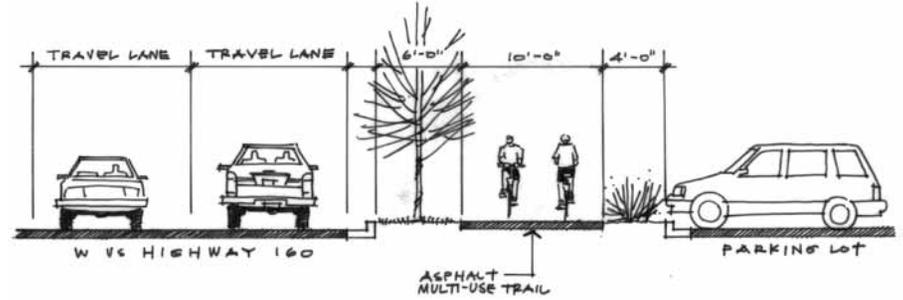
# PAGOSA TOWN TO LAKES - TRAIL MASTER PLAN

## PAGOSA SPRINGS, COLORADO

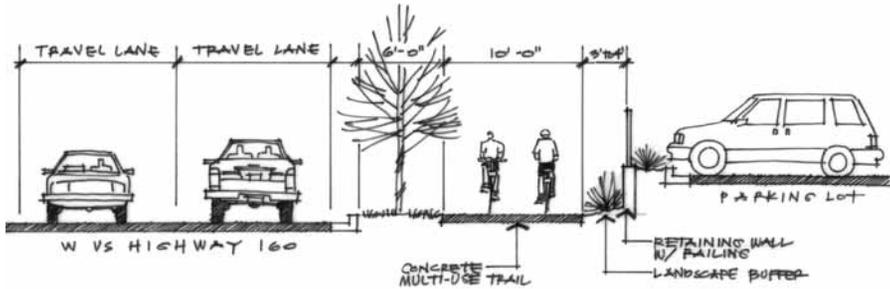




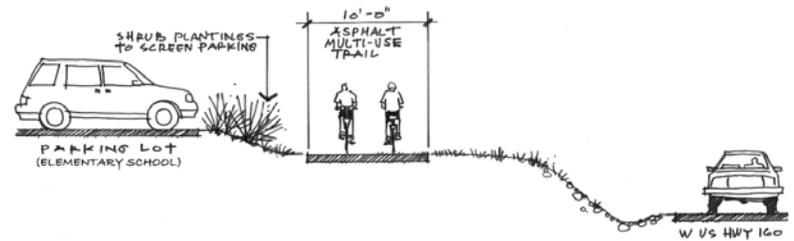
Section 1 - Trail Section at Confluence



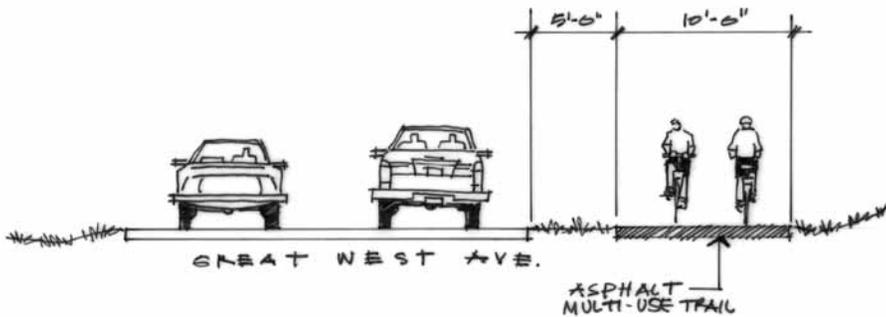
Section 2 - San Juan Street Section



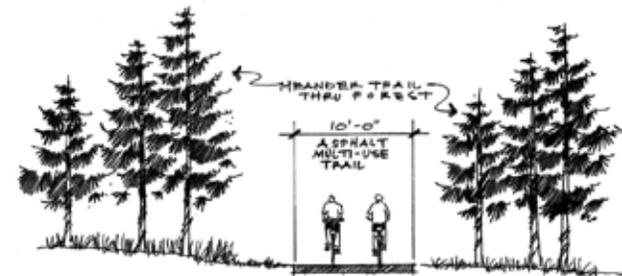
Section 3 - San Juan Street Section



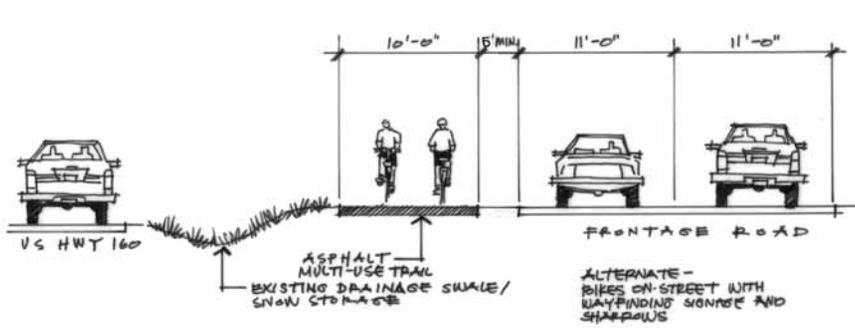
Section 4 - Trail Section Near Elementary School



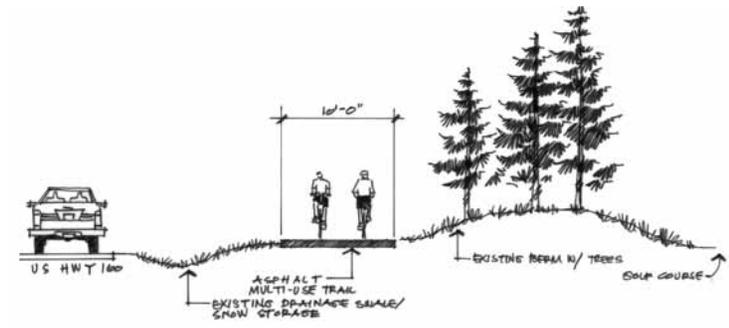
Section 5 - Trail Section at Great West Avenue



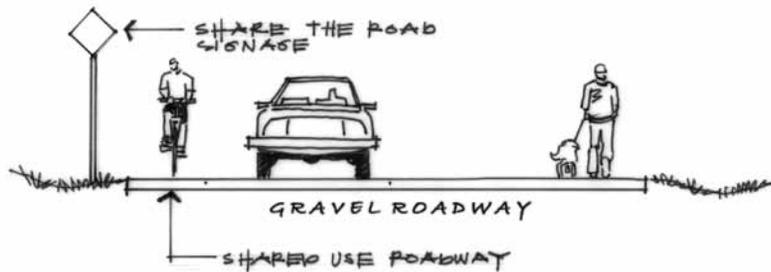
Section 6 - Typical Paved Trail Section



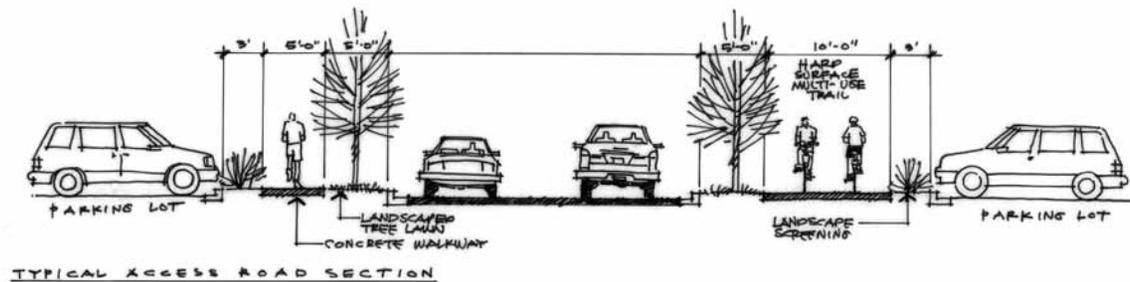
Section 7 - Typical Roadside (Shared-Use) Trail



Section 8 - Trail Section Adjacent to Hwy 160



Section 9 - Shared use of Gravel Road Corridors



Section 10- Typical Access Road Section

### Town-to-Lakes Trail and Greenway

Greenway Team/DHM Design

#### Trail Master Plan- Conceptual Estimate of Costs - For the Optimal Trail Layout

Based upon recent Pagosa Springs area projects and similar projects in Colorado (source DHM Design and Davis Engineering)

Note: The estimates that follow are conceptual for planning purposes. They do not include land acquisition, permitting and other possible compliance costs. They may vary significantly depending on engineering, future prices and other factors.

1	Per Foot Cost	Comment
Asphalt Trail on Grade	75.00	Basic 10'-wide paved trail on stable dry grade
Asphalt or Concrete Trail with Extra Sub-base or Grading	135.00	Such as through lower muddy floodable areas or creek bottom
Trail with Low Wall	250.00	Basic 10'-wide paved trail with 2'-4' wall
Trail with High Wall	500.00	Basic 10'-wide paved trail with 4'-8' wall
Road Modification for Trail	300.00	Widen sidewalk, narrow lane add wall or railing
Traffic Light to Accommodate Pedestrians	200,000.00	Ranges from a HAWK Ped. Crossing to Full Traffic Light
Bridge, Tunnel or Deck	2,000.00	Prefabricated pedestrian span, wood deck or 10' x10' tunnel
On-Street Bike Route	1.00	Signed or striped bike lane on existing paved street
Crusher Fine Trail on Grade	35.00	10'-wide crushed gravel path on stable dry grade
Dirt Foot Path on Grade	2.50	2'-wide graded natural surface trail w occasional wood foot bridges or decks
Trailhead with Parking	85,000.00	Trailhead with parking for 25 cars, solar gate, entry monumentation, toilet
"Backroads" Route Uses existing gravel roads--includes wayfinding and share the road signage	0.40	Possible volunteer or road crews provide labor
Park, Plaza or Special Feature Area	150,000.00	New 5-acre turfgrass park or restoration area
Over Look/Rest Area with Bench	3,000.00	
Interpretive Display	3,000.00	
Larger Rest Area Mini Plaza	15,000.00	At trail junctures and other key locations
Sun/Storm Shelter	25,000.00	

#### Part I: Primary Core Paved Trail

DESCRIPTION	Linear Feet:	1000	Approx	UNIT COST	TOTAL	Category Sub-Totals
DESCRIPTION	Note	QTY	UNIT	UNIT COST	TOTAL	Category Sub-Totals
<b>Reach One: Downtown--San Juan Trail to 7th Street</b>						
<b>Basic Trail</b>						
Asphalt Trail on Grade		0.0	lf	75.00		0
Asphalt or Concrete Trail with Extra Sub-base or Grading		1000.0	lf	135.00		135,000
Trail with Low Wall		300.0	lf	250.00		75,000
Trail with High Wall		400.0	lf	500.00		200,000
Road Modification for Trail		0.0	lf	300.00		0
Traffic Light Modification		0.5	ea	200000.00		100,000
Bridge Tunnel or Deck		150.0	lf	2000.00		300,000
On-Street Bike Route		0.0	lf	1.00		0
Surveying/Design/Administration				0.20		162,000
				<b>Sub-Total:</b>		972,000
				20% contingency items		194,400
<b>Segment Total Basic Trail:</b>						<b>1,166,400</b>
<b>AMENITIES- Special Features and Furnishing Upgrades</b>						
Trailhead with Parking		0.0	ea	85000.00		0
Over Look/Rest Area with Bench		1.0	ea	3000.00		3,000
Interpretive Display		1.0	ea	3000.00		3,000
Larger Rest Area Mini Plaza		0.0	ea	15000.00		0
Sun/Storm Shelter		0.0	ea	25000.00		0
Park, Plaza or Special Feature Area		2.5	ea	150000.00		375,000
Surveying/Design/Administration				0.20		1,200
				<b>Sub-Total:</b>		382,200
				20% contingency items		76,440
<b>Segment Total Amenities:</b>						<b>458,640</b>
<b>SEGMENT TOTAL TRAIL &amp; AMENITIES COMBINED:</b>						<b>1,625,040</b>

Cost per linear Foot of Trail Only: 1,166.40

Reach Two--"Town to School Link": 7th St. to 10 St.					
DESCRIPTION	Note	QTY	UNIT	UNIT COST	TOTAL Category Sub-Totals
<b>Basic Trail</b>					
Asphalt Trail on Grade		0.0	lf	75.00	0
Asphalt Trail on Grade with Extra Sub-base or grading		0.0	lf	135.00	0
Trail with Low Wall		0.0	lf	250.00	0
Trail with High Wall		500.0	lf	500.00	250,000
Road Modification for Trail		400.0	lf	300.00	120,000
Traffic Light Modification		0.0	ea	200000.00	0
Bridge Tunnel or Deck		0.0	lf	2000.00	0
On-Street Bike Route		0.0	lf	1.00	0
Surveying/Design/Administration				0.20	74,000
				<b>Sub-Total:</b>	444,000
				20% contingency items	88,800
<b>Segment Total Basic Trail:</b>					<b>532,800</b>
<b>AMENITIES- Special Features and Furnishing Upgrades</b>					
Trailhead with Parking		1.5	ea	85000.00	127,500
Over Look/Rest Area with Bench		0.0	ea	3000.00	0
Interpretive Display		0.0	ea	3000.00	0
Larger Rest Area Mini Plaza		0.0	ea	15000.00	0
Sun/Storm Shelter		0.0	ea	25000.00	0
Park, Plaza or Special Feature Area		0.0	ea	150000.00	0
Surveying/Design/Administration				0.20	0
				<b>Sub-Total:</b>	127,500
				20% contingency items	25,500
<b>Segment Total Amenities:</b>					<b>153,000</b>
<b>SEGMENT TOTAL TRAIL &amp; AMENITIES COMBINED:</b>					<b>685,800</b>
Cost per linear Foot of Trail Only: 484.36					
Reach Three: Putt Hill--10th St. to Majestic Rd.					
DESCRIPTION	Note	QTY	UNIT	UNIT COST	TOTAL Category Sub-Totals
<b>Basic Trail</b>					
Asphalt Trail on Grade		5000.0	lf	75.00	375,000
Asphalt or Concrete Trail with Extra Sub-base or Grading		0.0	lf	135.00	0
Trail with Low Wall		1800.0	lf	250.00	450,000
Trail with High Wall		0.0	lf	500.00	0
Road Modification for Trail		1200.0	lf	300.00	360,000
Traffic Light Modification		0.5	ea	200000.00	100,000
Bridge Tunnel or Deck		0.0	lf	2000.00	0
On-Street Bike Route		0.0	lf	1.00	0
Surveying/Design/Administration				0.20	257,000
				<b>Sub-Total:</b>	1,542,000
				20% contingency items	308,400
<b>Segment Total Basic Trail:</b>					<b>1,850,400</b>
<b>AMENITIES- Special Features and Furnishing Upgrades</b>					
Trailhead with Parking		0.0	ea	85000.00	0
Over Look/Rest Area with Bench		2.0	ea	3000.00	6,000
Interpretive Display		2.0	ea	3000.00	6,000
Larger Rest Area Mini Plaza		0.0	ea	15000.00	0
Sun/Storm Shelter		1.0	ea	25000.00	25,000
Park, Plaza or Special Feature Area		0.0	ea	150000.00	0
Surveying/Design/Administration				0.20	7,400
				<b>Sub-Total:</b>	44,400
				20% contingency items	8,880
<b>Segment Total Amenities:</b>					<b>53,280</b>

SEGMENT TOTAL TRAIL & AMENITIES COMBINED:						1,903,680
Cost per linear Foot of Trail Only:						210.27
Reach Four: "Harmon Park/Eagle Drive"--Majestic Rd. to Piedra Rd.						Linear Feet: 2000 Approx
DESCRIPTION	Note	QTY	UNIT	UNIT COST TOTAL	Category Sub-Totals	
<b>Basic Trail</b>						
Asphalt Trail on Grade		380.0	lf	75.00	28,500	
Asphalt or Concrete Trail with Extra Sub-base or Grading		0.0	lf	135.00	0	
Trail with Low Wall		0.0	lf	250.00	0	
Trail with High Wall		0.0	lf	500.00	0	
Road Modification for Trail		0.0	lf	300.00	0	
Traffic Light Modification		0.0	ea	200000.00	0	
Bridge Tunnel or Deck		0.0	lf	2000.00	0	
On-Street Bike Route		1620.0	lf	1.00	1,620	
Surveying/Design/Administration				0.20	6,024	
				<b>Sub-Total:</b>	36,144	
				20% contingency items	7,229	
<b>Segment Total Basic Trail:</b>						<b>43,373</b>
<b>AMENITIES- Special Features and Furnishing Upgrades</b>						
Trailhead with Parking		0.0	ea	85000.00	0	
Over Look/Rest Area with Bench		0.0	ea	3000.00	0	
Interpretive Display		0.0	ea	3000.00	0	
Larger Rest Area Mini Plaza		0.0	ea	15000.00	0	
Sun/Storm Shelter		0.0	ea	25000.00	0	
Park, Plaza or Special Feature Area		0.0	ea	150000.00	0	
Surveying/Design/Administration				0.20	0	
				<b>Sub-Total:</b>	0	
				20% contingency items	0	
<b>Segment Total Amenities:</b>						<b>0</b>
SEGMENT TOTAL TRAIL & AMENITIES COMBINED:						43,373
Cost per linear Foot of Trail Only:						21.69
Reach Five--"Pinon Lake": Piedra Road to Pagosa Boulevard						Linear Feet: 9000 Approx.
DESCRIPTION	Note	QTY	UNIT	UNIT COST TOTAL	Category Sub-Totals	
<b>Basic Trail</b>						
Trail on Grade		9000.0	lf	75.00	675,000	
Asphalt or Concrete Trail with Extra Sub-base or Grading		0.0	lf	135.00	0	
Trail with Low Wall		0.0	lf	250.00	0	
Trail with High Wall		0.0	lf	500.00	0	
Road Modification for Trail		0.0	lf	300.00	0	
Traffic Light Modification		0.5	ea	200000.00	100,000	
Bridge Tunnel or Deck		0.0	lf	2000.00	0	
On-Street Bike Route		0.0	lf	1.00	0	
Surveying/Design/Administration				0.20	155,000	
				<b>Sub-Total:</b>	930,000	
				20% contingency items	186,000	
<b>Segment Total Basic Trail:</b>						<b>1,116,000</b>
<b>AMENITIES- Special Features and Furnishing Upgrades</b>						
Trailhead with Parking		1.0	ea	85000.00	85,000	
Over Look/Rest Area with Bench		2.0	ea	3000.00	6,000	
Interpretive Display		1.0	ea	3000.00	3,000	
Larger Rest Area Mini Plaza		0.0	ea	15000.00	0	
Sun/Storm Shelter		1.0	ea	25000.00	25,000	
Park, Plaza or Special Feature Area		0.0	ea	150000.00	0	
Surveying/Design/Administration				0.20	6,800	
				<b>Sub-Total:</b>	125,800	
				20% contingency items	25,160	
<b>Segment Total Amenities:</b>						<b>150,960</b>

Cost per linear Foot of Trail Only:	124.00	<b>SEGMENT TOTAL TRAIL &amp; AMENITIES COMBINED:</b>	<b>1,266,960</b>
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<b>GRAND TOTAL TRAIL ALL SEGMENTS:</b>	<b>\$</b>	<b>4,708,973</b>
<b>GRAND TOTAL AMENITIES:</b>	<b>\$</b>	<b>815,880</b>
<b>PROJECT TOTAL ALL ITEMS:</b>	<b>\$</b>	<b>5,524,853</b>

<b>Total Linear Feet of Trail:</b>	<b>21,900.00</b>
<b>Cost per Linear Foot of Trail Only:</b>	<b>215.02</b>
<b>Cost per Linear Foot of Amenities:</b>	<b>37.25</b>
<b>Combined Cost Per Linear Foot:</b>	<b>252.28</b>

**Part II: "Backroads" On-Road Network**

Old Durango/Great Western "Backroads" Area	Linear Feet:	25000	Approx.		
DESCRIPTION	Note	QTY	UNIT	UNIT COST TOTAL	Category Sub-Totals
<b>Basic Trail</b>					
Asphalt Trail on Grade		0.0	lf	75.00	0
Asphalt or Concrete Trail with Extra Sub-base or Grading		0.0	lf	135.00	0
Crusher Fine Trail on Grade		0.0	lf	35.00	0
Dirt Foot Path on Grade		6700.0	lf	2.50	16,750
Trail with Low Wall		0.0	lf	250.00	0
Trail with High Wall		0.0	lf	500.00	0
Road Modification for Trail		0.0	lf	300.00	0
Bridge Tunnel or Deck		0.0	ea	2000.00	0
On-Street Bike Route		0.0	lf	1.00	0
"Backroads Route (Using Exist Roads with Wayfinding and Safety Signage		18300.0	lf	0.40	7,320
Surveying/Design/Administration				0.20	3,350
				<b>Sub-Total:</b>	27,420
				20% contingency items	5,484
<b>Segment Total Basic Trail:</b>					<b>32,904</b>
<b>AMENITIES- Special Features and Furnishing Upgrades</b>					
Trailhead with Parking		0.0	ea	85000.00	0
Over Look/Rest Area with Bench		0.0	ea	3000.00	0
Interpretive Display		1.0	ea	3000.00	3,000
Sun/Storm Shelter		0.0	ea	25000.00	0
Surveying/Design/Administration				0.20	600
				<b>Sub-Total:</b>	3,600
				20% contingency items	720
<b>Segment Total Amenities:</b>					<b>4,320</b>
<b>Cost Per Linear Foot of Trail Only:</b>				<b>1.32</b>	<b>SEGMENT TOTAL TRAIL &amp; AMENITIES COMBINED:</b>
				<b>37,224</b>	

McCabe Creek Cemetery Road "Back Roads" Area	Linear Feet:	13300	Approx.		
DESCRIPTION	Note	QTY	UNIT	UNIT COST TOTAL	Category Sub-Totals
<b>Basic Trail</b>					
Asphalt Trail on Grade		0.0	lf	75.00	0
Asphalt or Concrete Trail with Extra Sub-base or Grading		0.0	lf	135.00	0
Crusher Fine Trail on Grade		0.0	lf	35.00	0
Dirt Foot Path on Grade		0.0	lf	2.50	0
Trail with Low Wall		0.0	lf	250.00	0
Trail with High Wall		0.0	lf	500.00	0
Road Modification for Trail		0.0	lf	300.00	0
Bridge Tunnel or Deck		0.0	lf	2000.00	0
On-Street Bike Route		0.0	lf	1.00	0
"Backroads Route (Using Exist Roads with Wayfinding and Safety Signage		13300.0	lf	0.40	5,320
Surveying/Design/Administration				0.20	0
				<b>Sub-Total:</b>	5,320
				20% contingency items	1,064
<b>Segment Total Basic Trail:</b>					<b>6,384</b>

<b>AMENITIES- Special Features and Furnishing Upgrades</b>				
Trailhead with Parking	0.0	ea	85000.00	0
Over Look/Rest Area with Bench	0.0	ea	3000.00	0
Interpretive Display	0.0	ea	3000.00	0
Sun/Storm Shelter	0.0	ea	25000.00	0
Surveying/Design/Administration			0.20	0
			<b>Sub-Total:</b>	0
			20% contingency items	0
<b>Segment Total Amenities:</b>				<b>0</b>

			<b>SEGMENT TOTAL TRAIL &amp; AMENITIES COMBINED:</b>	<b>6,384</b>
<b>Cost Per Linear Foot of Trail Only:</b>	<b>0.48</b>			

**GRAND TOTAL "BACKROADS" AREAS: 39,288**  
**GRAND TOTAL "BACKROADS" AMENITIES: 4,320**  
**PROJECT TOTAL "BACKROADS" AREAS: 43,608**

<b>Total Linear Feet of Trail:</b>	<b>38,300.00</b>
<b>Cost per Linear Foot of Trail Only:</b>	<b>1.03</b>
<b>Cost per Linear Foot of Amenities:</b>	<b>0.11</b>
<b>Combined Cost Per Linear Foot:</b>	<b>1.14</b>