City of Gunnison
Non-Motorized Transportation Plan

Adopted April 23, 2013

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ACKNOWLEDGEMENT

The following were instrumental in the development of this *Plan*:

Bicycle and Pedestrian Advisory Committee

Members:

Dave Myers, Rock N Roll Sports
Dave Wiens, Gunnison Trails
Ellen Harriman, City Council
Gary Pierson, Western State Colorado University
Joellen Fonken, Gunnison Nordic
Jon Nelson, RE1J School District
Debby Phelps, Community at Large

City Staff:

Ken Coleman, City Manager
Dan Ampietro, Director of Parks and Recreation
Steve Westbay, Director of Community Development
Ken Bradford, Director of Public Works
Chris Wilson, Police Captain
Andie Ruggera, Planner

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CITY OF GUNNISON
NON-MOTORIZED TRANSPORTATION PLAN

I. INTRODUCTION

Planning is an integral step to creating healthy communities. The City of Gunnison adopted the *Trails Master Plan* on February 12, 2008. It consisted of a conceptual plan for implementing an "Inner Loop" and "Outer Loop" trail system. This *Non-Motorized Transportation Plan* ("*Plan*") has been prepared to update and expand upon the *Trails Master Plan*.

The ultimate goal for developing the 2008 *Trails Master Plan* and this *Non-Motorized Transportation Plan* is to create trails, recreational opportunities, and help facilitate development of an efficient multi-modal transportation system. This *Plan* incorporates the *Trails Master Plan* but rather than focusing on the "Inner Loop" and "Outer Loop" it contains recommendations for bikeways and pedestrian routes (Inner Loop) and multi-use trails (Outer Loop). Both plans support the transportation elements of the *City of Gunnison Master Plan (2007)*.

> ***City of Gunnison Master Plan (2007)* Chapter 8 – Transportation**. Gunnison's transportation system will emphasize alternative modes of travel including pedestrian, bicycle, and a well-integrated public transit system. Growth continues to be accommodated through a planned system of streets and trails which contributes to the vitality of the City.

A. PURPOSE

This *Non-Motorized Transportation Plan* is the conceptual framework for a transportation system that will promote a more healthful lifestyle and provide community members and visitors with efficient, multimodal transportation alternatives to locations within the City as well as convenient access to recreational opportunities beyond the City limits. The City of Gunnison has adopted the National Complete Streets Coalition philosophy of making the transportation network of the city safer and more accessible for all users—drivers, pedestrians, and bicyclists. This provides more transportation options for people of all ages and abilities.

B. BACKGROUND

In 2006 a survey of registered voters was conducted regarding development of a trails system. The respondents voiced overwhelming support of trails. In 2007 City of Gunnison voters passed a ballot measure approving a 1% sales tax increase to fund a new pool, ice rink, and trail system. One million dollars was dedicated to trail design and construction. A bond issue funded construction of the pool and ice rink and the sales tax revenue repays the bond. The funds were allocated in a staged process for trails; $131,124 was available in 2008 and an average of $128,670 has been available each year thereafter for design and construction and $25,000 for maintenance. Sales tax revenues in excess of the bond requirements, up to $1,000,000, are available for trails construction and $25,000 of the annual 1% sales tax revenues are dedicated to operations and maintenance of trails.

After passage of the ballot measure, Recreation Engineering and Planning Consultants (REP) was retained to develop a phased implementation strategy prioritizing various segments of the trails system based upon the social and economic benefits provided, land availability, and funding. Relevant excerpts from the REP *Comprehensive Trails Master Plan* were incorporated into the City's *Trails Master Plan*.

In July and August 2007 public meetings were held to provide opportunities for stakeholders and the public to review and comment on various options for trail alignments.

Following the public meetings, REP consultants and City staff conducted fieldwork and research to determine the delineation of the Outer Loop trail (Multi-Use Trails) which, when completed, will connect multiple City-owned parcels, the university, the public schools, outlying subdivisions the VanTuyl Ranch and Gunnison Rising. REP presented the City with a draft report in December 2007. The consultant's recommendations provided basic alignment information and City staff synthesized the information gathered to develop the *Trails Master Plan*.

In June 2008, the City successfully applied for a trails grant from the Great Outdoors Colorado Board (GOCO). The $667,501 grant combined with $420,252 partner match and $342,733 match from the City, was used for construction of the underpasses at the Twin Bridges and North Bridge, the bridge at the Whitewater Park and the County's match for construction of the pedestrian bridge over the Gunnison River on Hwy 135.

The need to update the *Trails Master Plan* has been necessitated by the annexation of Gunnison Rising and the VanTuyl Ranch, a number of recent improvements to the non-motorized facilities and the necessity to strategically plan for future pedestrian and non-motorized needs of the community. This strategic planning process is being directed by the Bicycle and Pedestrian Advisory Committee (BPAC) at the direction of City Council.

This Plan identifies priorities in the pedestrian facilities, bikeways, and multi-use trails so that projects can be incorporated into the City's capital expenditure plan each year.

The Bicycle and Pedestrian Advisory Committee was created by City Council resolution on December 14, 2010. The BPAC includes community stakeholders from local businesses; Gunnison Trails; City Council; Western State Colorado University; Gunnison Nordic; RE1J School District; and a Citizen-at-Large. The *Non-Motorized Transportation Plan* was created with input from the BPAC and City staff.

C. Community Benefits

The pedestrian and non-motorized transportation system will provide economic, social, access, environmental, and safety benefits to the community and this *Plan* has been developed to optimize those benefits by prioritizing implementation and construction. The City will continue to work with stakeholders and landowners during the implementation phases so that issues regarding easements and impacts to landowners are addressed. It is anticipated that full implementation will be ongoing well into the future although the community benefits are already being recognized.

1. Economic Benefits

The bikeways, pedestrian routes and multi-use trails provide access to the Central Business District and the Commercial zones to the north and west. Research has shown that trails stimulate development of "clean" industries such as coffee shops, bike shops, and bed and breakfasts. The multi-use trail system compliments economic development by creating a destination amenity for tourist and also attracting businesses wanting to locate in communities with diverse recreational opportunities. Evidence suggests that bicycling and walking projects create 11-14 jobs per $1 million spent, compared to just seven jobs created per $1 million spent

with highway projects. Surveys show that facilities for bicycling and walking attract tourists, event participants, and business. In addition, bicycling and walking are affordable investments that save commuters money and in turn equate to more money available for local economies. [1]

> ***City of Gunnison Master Plan*, 2007, Chapter 8 – Transportation.**
> 1.1 Designate, construct and sign bicycle lanes or bicycle routes in appropriate locations within the City, taking into consideration routes to Western State College, the public schools, outlying recreation areas and downtown.

Gunnison is on the Western Express Route of the Adventure Cycling Association's U.S. Bicycle Route System (USBRS). The Western Express Route is a 1,589 mile route from San Francisco, California to Pueblo, Colorado. This could have direct economic impact on tourism in the area.

2. Social Benefits

Pedestrian routes and bikeways enhance the social framework of the City of Gunnison by providing multiple gathering points for families, university students, and community activities, thereby providing an opportunity for people to interact in ways not facilitated by traditional motor vehicle transportation. The system may be used by pedestrians, bicyclists, wheelchair users, skateboarders, roller skaters, and other non-motorized travelers.

3. Access Benefits

Pedestrian routes and bikeways provide an efficient and safe multi-modal transportation option within the city. They provide access to amenities including the Community Center, parks, and sports fields as well as the university, airport, schools, library, retirement community, bus stops, and residential developments.

> ***City of Gunnison Master Plan (2007)***
> **Chapter 8 - Transportation**
> **Policy 1.** Encourage Multimodal Transportation and Recreation Opportunities. Realizing that a good portion of Gunnison's identity is based on recreation and healthy lifestyles, the City of Gunnison should encourage alternative travel methods.

The multi-use trail system provides access to amenities on the periphery of the city and connects the Airport Maintenance Trail, the Whitewater Park, Hartman Rocks Recreation Area, the VanTuyl Ranch, BLM lands west of the Gunnison River, north Gunnison neighborhoods, BLM lands east of the city and the Gunnison Rising annexation area. Extensive recreational opportunities exist along the multi-use trail system.

The Gunnison Valley Regional Transportation Authority provides transportation between Gunnison, Crested Butte, and Mt. Crested Butte. There are several bus stops located within the Inner Loop providing access to commuters and skiers. Pedestrian refuges and enhanced ADA accessible bus stops have been developed.

4. Environmental Benefits

Use of the pedestrian routes and bikeways rather than commuting in passenger vehicles reduces the environmental costs associated with oil production, automotive maintenance, and road construction. Studies suggest that most car trips are less than three miles, which is a distance that

[1] *2012 Benchmarking Report on Bicycling and Walking in the United States*, Alliance for Biking and Walking (2012).

can be traveled using alternative forms of transportation which minimize vehicular use.[2] Federal and State agencies involved with listing of the Gunnison Sage-grouse have identified the City's trail system as an essential element for protecting critical habitat. Specifically, the City working the Bureau of Land Management, Colorado Division of Parks and Wildlife and other agencies will work to provide recreation area within and adjacent to the city that avoid or minimize impact to Sage-grouse habitat. These agencies recognize that the City's system provides a venue for public recreation in a concentrated geographic area which reduces public access pressure on other critical habitat within the Basin.

5. Safety Benefits

Pedestrian routes and bikeways provide routes for school children and others. Many bike routes are designated on existing roadways. Striping, lane dimension, signage, and other design factors will comply with appropriate specifications to promote safe conditions. Safety education for bicyclists and pedestrians and outreach between the City, civic organizations, schools, and the community at large is important for implementing this plan.

Road crossings have been minimized to decrease the number of pedestrian/vehicle interactions. Specific design considerations include underpasses, raised crossings, and alternative alignments.

6. Health Benefits

Use of pedestrian routes, bikeways and multi-use trails provide community members with a healthy alternative to driving. Walking and other non-motorized travel provides low impact, moderate intensity activity that promotes healthful lifestyles. Multi-use trails will also provide key links to a network of trails on federal lands and access to outdoor recreational opportunities which provides an option for more intense physical activity.

D. Land Use Context

Land use functions play a critical role in the contemplation of facility needs to the City's non-motorized transportation system. For example, some existing neighborhoods have been developed with sidewalks while in other neighborhoods sidewalks are sporadic or missing altogether. Additionally, the spatial distribution of differing land use types affect route needs. Obviously, the Central Business District and campus perimeter of the university must be considered for higher intensity utilization of non-motorized facilities. Specific planning considerations should be directed toward spatial distribution of the facility needs of varying land uses found within the city.

1. Distribution of Employment Centers

The ease of access from residential land use areas to employment facilities is due to the fact that historic development in Gunnison is relatively compact and the business center is a focal point surrounded by residential neighborhoods. This idea is graphically depicted in Figure 1 by a GRASP mapping model.

[2] National Bicycle and Pedestrian Clearinghouse

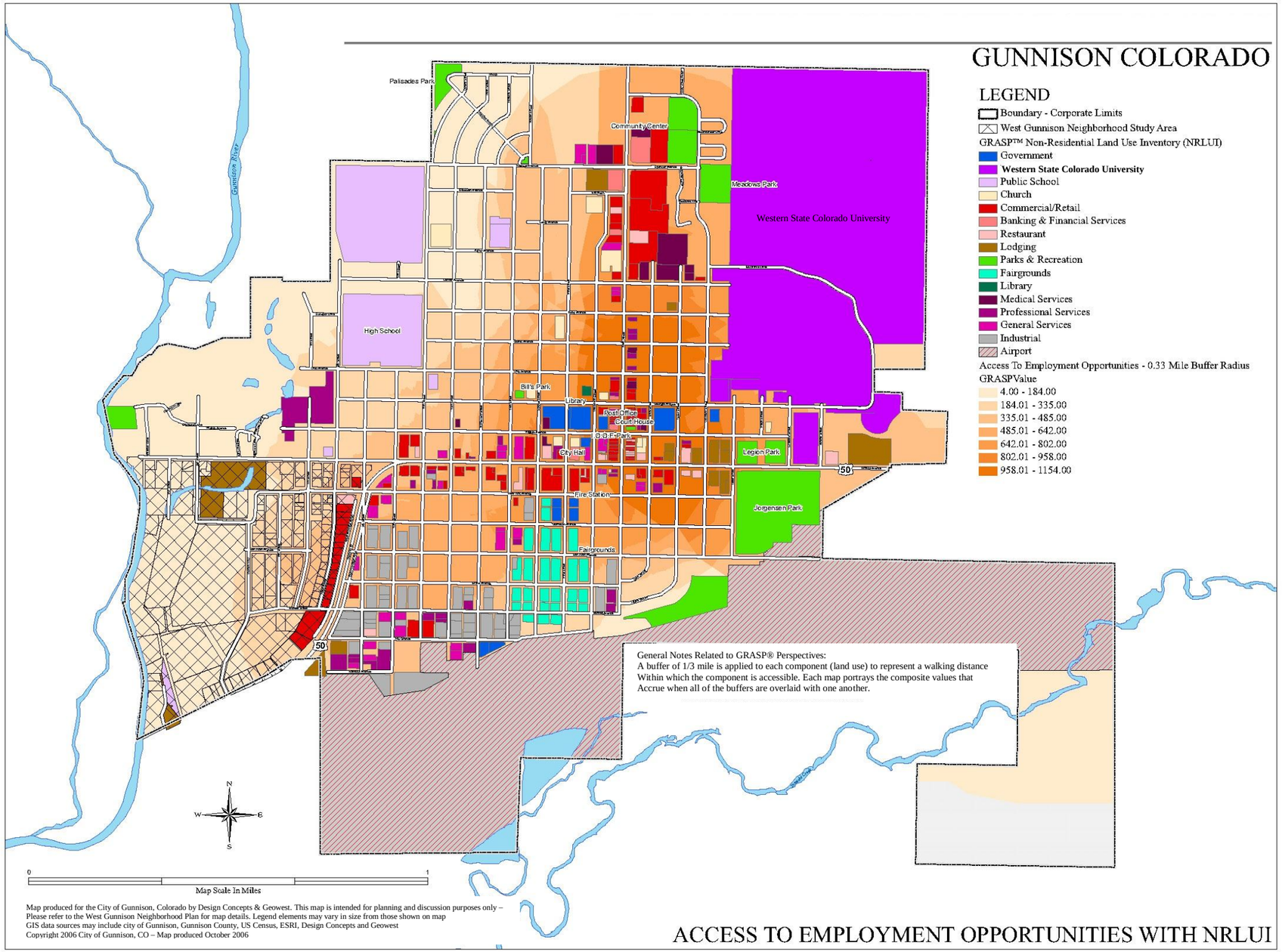

FIGURE 1 GRASP MAPPING MODEL

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2. Western State Colorado University

Western State Colorado University is a critical element to consider in relation to developing non-motorized transportation facilities. Linkage between the university and community is inadequate and missing in several sections. However, during the development of this plan it became clear that the nature of student/faculty travel behavior was not well understood.

In order to fill this information gap City staff spent two days at the University Center to conduct a survey of students about their transportation habits. The survey instrument included six questions and a map allowing students to define routes used within the community. Students were asked whether they live on- or off-campus, their mode of transportation from their residence to campus and their mode of transportation to town for shopping or entertainment. A total of 122 surveys were completed, while not statistically valid for the entire student population, the survey and conversations with the students provided some interesting insight. Of those students completing the survey, 99 indicated they live on-campus, which represented 13.5% of all students living on campus in fall 2012. The on-campus respondents indicated that 55% of the time they use a mode of transportation other than a private vehicle with walking (28%) and biking (23%) the major means of travel. When students were asked how often they go downtown, many stated that they "never go downtown." Many students use longboards for transportation and the condition of road surfaces also influences travel routes. A summary of the survey results is provided in Figure 2.

As part of the *Gunnison Rising Annexation Agreement*, improvements are proposed on Georgia Avenue that will direct pedestrian movement from the downtown area to the university. The agreement includes improvements to the streets and other facilities, but only the sidewalks on the north side of Georgia between Main Street and the Aspinall-Wilson Center are being addressed in this *Plan*. The Georgia Street expansion will be funded by a Real Estate Transfer Assessment when development occurs in Phase IV of Gunnison Rising. In the student survey the Georgia Avenue route was considered a secondary route to the downtown area and students indicate they most often use North Colorado Street, Spencer and Main Street. This traffic pattern is driven by the location of City Market and Wal-Mart. Students have also created a "social path" from North Colorado Street to City Market across the Gunnison Valley Hospital property.

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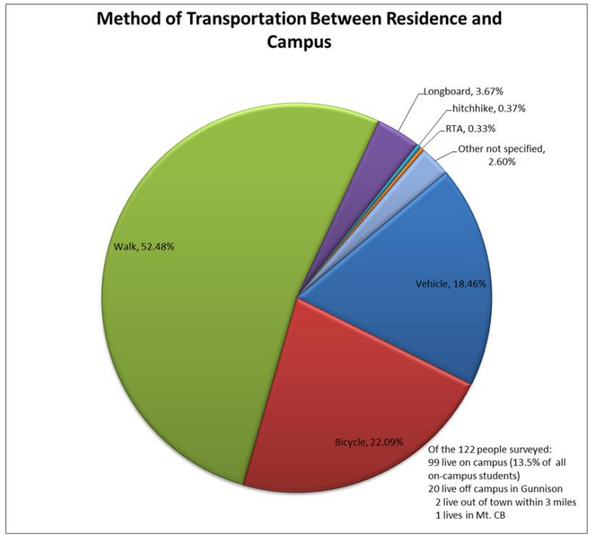
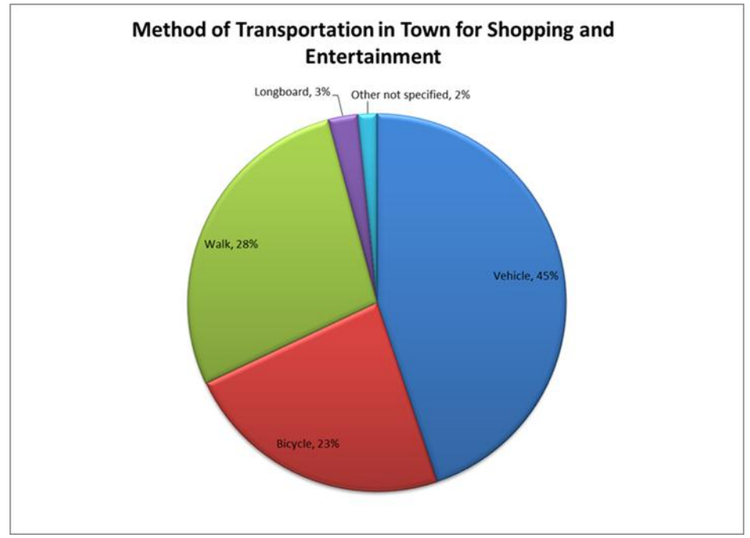
WSCU Transportation Survey

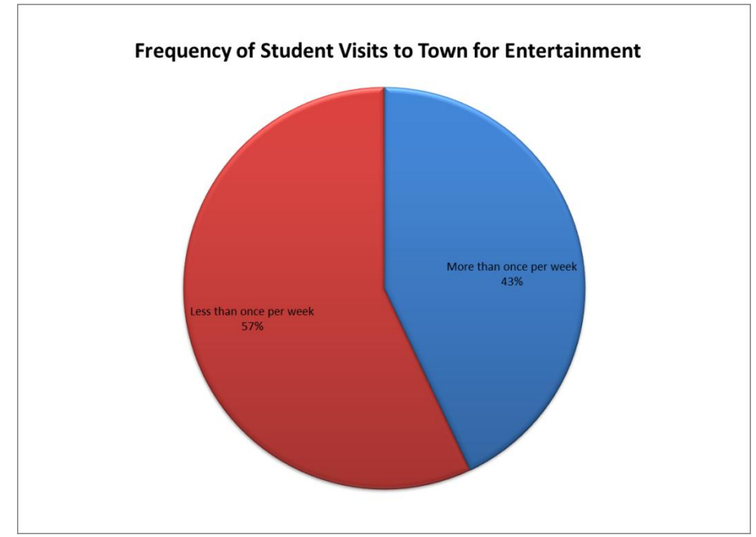
In 2012 City of Gunnison staff developed a survey to determine how WSCU students and staff travel to and from the campus and the routes they usually use. The survey was conducted at the University Center on November 6th and 7th. A total of 122 surveys were completed. Following are visualizations of the responses:



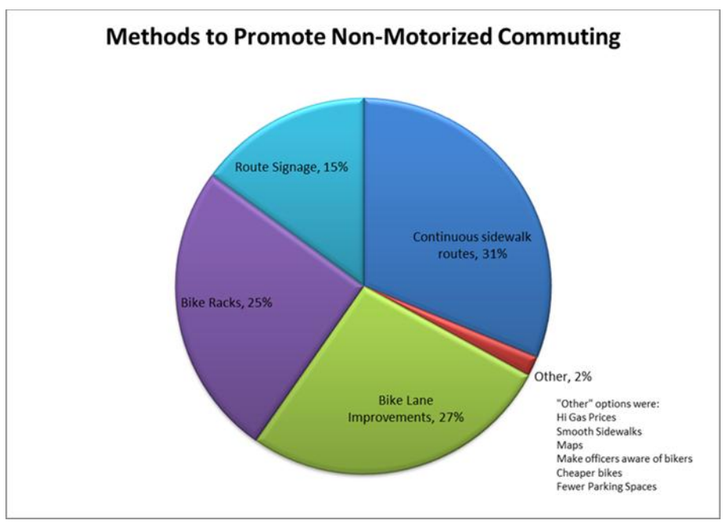
When traveling to and from the campus to your residence, what is your mode of travel? (This question was skewed, since 80% of the respondents live on-campus.)



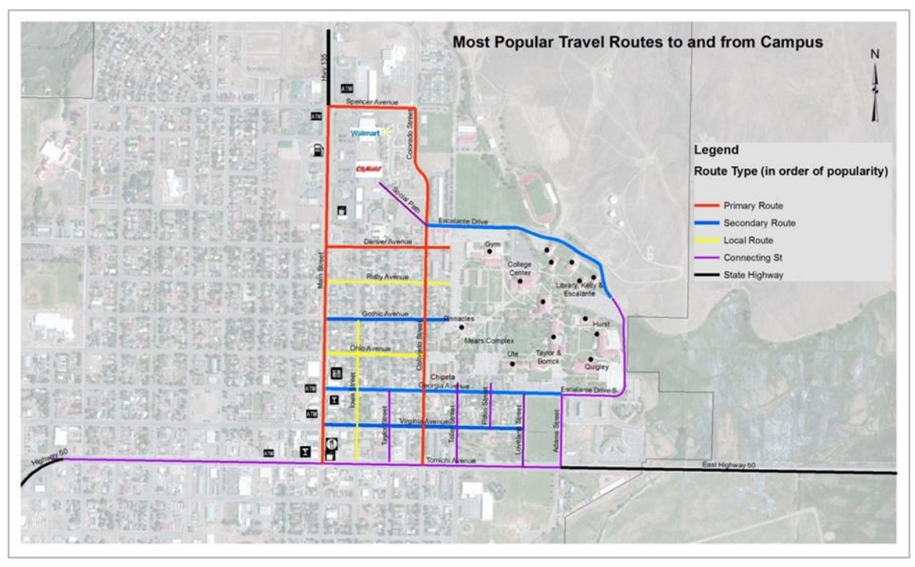
When traveling in town for shopping, entertainment, etc., what is your mode of travel?



How often do you go downtown for entertainment?



What can be done to promote non-motorized commuting?



Students were asked to draw their most frequently used travel route to and from the campus.

The map at the left is a visual summary of responses from the individuals who indicated their mode of transportation from the campus to town was 50% or more non-motorized. The legend lists the routes in order from most frequently listed route to the least frequently listed route. The preferred routes of travel correlate to shopping opportunities at the Mountain Meadows Mall (Wal-Mart and City Market). Students living in the Pinnacles Apartments use Gothic to connect to Main Street. Those who primarily walk use the Local Routes to connect from Colorado Street to Main Street; the students who live on the south side of campus use the Connecting Routes to downtown. The preferred route on Escalante Drive is from the Escalante Terrace residence halls to connect to North Colorado.

FIGURE 2 WSCU TRANSPORTATION SURVEY RESULTS

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Interestingly, it appears that recent construction activity on the WSCU campus could change students' travel routes. As can be seen in Figure 3, the sidewalk system on campus feeds students to the new campus entrance at Gothic Avenue and also to Ohio Avenue. The main entrance to the Field House, which is currently under construction, will be from the Gothic Street entrance. In late 2012 the university announced that it plans to extend East Denver Avenue into the campus which will create an additional entrance to campus. This entrance will provide safer access to the Tenderfoot Childcare Center and will also provide access to the Field House parking lot.

FIGURE 3 AERIAL OF CAMPUS SHOWING SIDEWALK NETWORK

II. PEDESTRIAN FACILITIES

Nearly one-third of the population is unable to drive including children, people with physical disabilities, seniors, and those unable to afford the cost of owning and operating a vehicle[3]. Walking is the least expensive and broadly accessible form of transportation and recreation. For those who cannot afford other modes of transportation, the ability to walk safely is essential.

> ***City of Gunnison Master Plan (2007)***
> **Chapter 8 - Transportation**
> **Policy 1.6** Require five-foot wide, detached sidewalks, as well as four-foot wide landscaped snow storage buffers on both sides of new streets and retrofit these amenities wherever feasible on existing streets.

A. EXISTING AND PROPOSED PEDESTRIAN FACILITIES

The decision to walk to a destination is affected by the condition of a sidewalk to be used. Sidewalks that are not properly planned, designed, constructed, or maintained are less likely to encourage pedestrian activity. Poor sidewalk conditions can be experienced in several ways, such as the following:

- gaps in sidewalks or discontinuous sidewalks;
- sidewalks that are too narrow to meet minimum requirements and/or ADA;
- uneven surfaces;
- crumbling or poor condition;
- obstacles (benches, lighting, trash receptacles, or sidewalk display of merchandise);
- traffic speed;
- misuse of sidewalks for parking.

City staff conducted an inventory of pedestrian facilities to determine existing conditions and identify areas in need of improvement (Figure 4). Most of the city is laid out in a grid pattern that provides the opportunity for safe pedestrian movement. Because the town was developed prior to the infrastructure, unlike new developments that can be found in large metropolitan areas, the existing sidewalks in Gunnison are not continuous throughout the street grid system. This makes improvements challenging because of varying right-of-way widths and private use of the right-of-way where sidewalks do not exist.

[3] *Fort Collins Pedestrian Plan*, February 15, 2011.

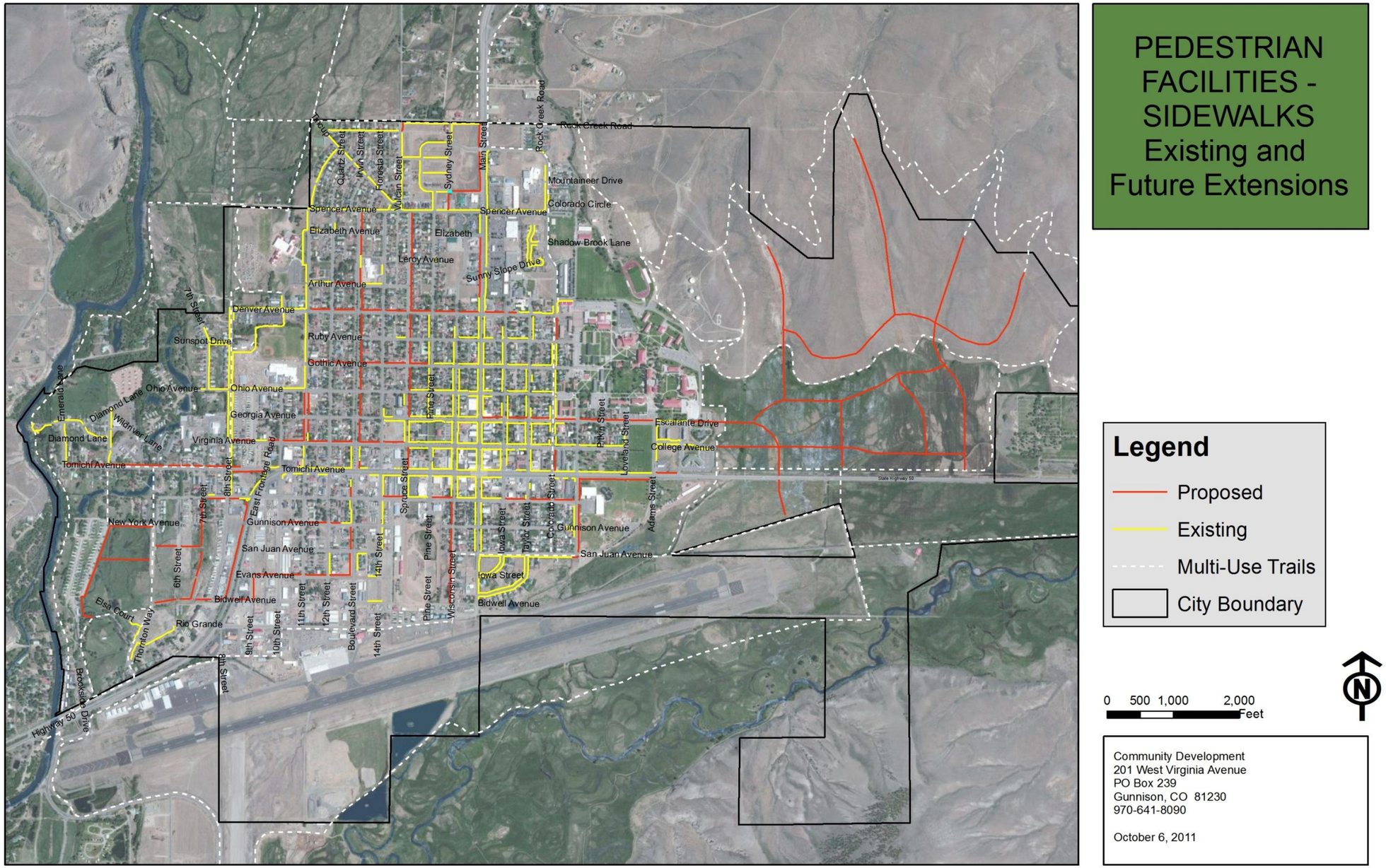

FIGURE 4 MAP OF EXISTING AND FUTURE PEDESTRIAN FACILITIES

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The City's draft *Land Development Code* (§4.5 Pedestrian Circulation Facilities) requires all new development and existing development which increase their gross floor area to provide pedestrian facilities and access. These new standards are integrated to ensure that new developments account for pedestrian and non-motorized facilities to serve community needs.

In order to identify where new sidewalks and pedestrian facilities are most needed, it is important to understand the areas of the city with the most pedestrian traffic.

1. **Downtown.** The downtown area has the highest level of pedestrian activity. Gunnison is unique in that Main Street is a state highway (Hwy 135). The street is very wide with a 70-foot crossing and it can be difficult for pedestrians to cross the street in the time allotted. Tomichi Avenue is a federal highway (US 50) with a 95-foot pedestrian crossing. At intersections without a traffic light, pedestrian safety becomes a concern with high traffic speed and the crossing distance. Bulb-outs on the first three blocks of North Main Street and center islands on the first two blocks east and west of Main Street on Tomichi Avenue could provide safer pedestrian crossings.

FIGURE 5 DOWNTOWN AREA

2. **Commercial Corridors/Community Center.** North Main Street provides access to large commercial shopping areas, services, the Community Center and neighborhood parks. This portion of Main Street is very wide and crossing the highway at signalized intersections is the safest option for pedestrians.

A paved trail exists on the east side of Main Street / Highway 135 north of Denver Avenue. Lack of adequate space and multiple driveways complicate installation of a sidewalk on the west side of the street. High visibility crosswalks at the corner of Main Street and Denver are recommended. A long-term goal is to install sidewalks on the west side of the street to Elizabeth.

FIGURE 6 MOUNTAIN MEADOWS MALL

As the survey of university students revealed, other main thoroughfares used to access the commercial area that includes the Mountain Meadows Mall, City Market, and Wal-Mart are North Colorado Street, Denver Avenue and Spencer.

3. **East Entrance of Town.** There is a great deal of pedestrian activity on East Tomichi Avenue near the City parks and recreation facilities and vehicles are often moving at a high rate of speed as they enter or leave town. The flashing pedestrian crossing signs and crosswalk at Teller and East Tomichi have improved safety but most pedestrian traffic is at mid-block further to the east. An overhead flashing beacon mid-block between Jorgensen Park and Legion Park would improve safety for the large number of people who use the area, especially children. There are many activities in this area that attract large numbers of people and there are no sidewalks on East Tomichi Avenue on the south side or on the north side from Adams Street to the hotel east of McDonalds. On South Teller Street there are no sidewalks adjacent to the baseball fields on the east side of the street, although the bleachers and dugout are in the right-of-way, which would inhibit installation of five-foot-wide sidewalks. These sidewalk sections are included in the phasing plan for the first five years.

FIGURE 7 TOMICHI AND TELLER CROSSWALK

4. **Southeast Residential Connection to Downtown and City Parks.** Many residents on the south side of Tomichi Avenue live in close proximity to the downtown commercial area and to the city parks, but sidewalks are missing. It is recommended that sidewalks be installed on New York Avenue from 14th Street to Wisconsin and from Iowa to Teller Street.

FIGURE 8 EXAMPLE OF PRIVATE USES OF THE RIGHT-OF-WAY ON EAST NEW YORK. NOTICE THE PEDESTRIAN WALKING IN THE STREET

5. **East/West Connections.** Sidewalks are recommended as part of the five year phasing plan for Virginia Street from 8th Street to Spruce on the north side. A sidewalk on the north side of West Tomichi from Highway 50 to Emerald Lane is recommended in the ten-year phasing plan and on Gothic from 11th Street to Pine Street in the 11-to-15 year phase.

FIGURE 9 WEST TOMICHI

6. North/South Connections. City staff held two community outreach sessions at a local coffee shop, which was advertised in the *Gunnison Country Times*. While not many people attended, some valuable insights were gained through discussion with those who did. The main concerns voiced by these community members had to do with North Colorado Street.

Residents living near the intersection of East Virginia and Colorado Street reported several safety concerns. On the southwest corner, placement of the stop sign is too far back from the intersection and vehicles stopping behind the sign do not have a clear line of sight. It is recommended that the stop sign be moved to address this issue.

On the northeast corner of this intersection, vehicles are frequently parked all the way to the corner, which also blocks vision from the intersection. This can be addressed by extending the yellow curb further from the corner.

It is also recommended that a speed limit sign and lane markings be installed on North Colorado Street because it is a main corridor for university students.

FIGURE 11 VIEW OF THE INTERSECTION ILLUSTRATING THE LINE OF SIGHT ISSUE BECAUSE OF THE PLACEMENT OF THE STOP SIGN

FIGURE 10 INTERSECTION OF VIRGINIA AND COLORADO SHOWING STOP SIGN PLACEMENT AND THE NEED FOR A SIDEWALK

FIGURE 12 EXTENDING THE YELLOW CURB PAINT AT THE NORTH EAST CORNER OF COLORADO AND VIRGINIA WOULD IMPROVE SIGHT VISIBILITY.

FIGURE 13 NORTH BOULEVARD BETWEEN TOMICHI AND SPENCER IS PART OF THE TEN-YEAR PHASING PLAN

Sidewalks on the first block of North Colorado, on North Spruce between Tomichi Avenue and Spencer and on North Boulevard between Tomichi and Spencer are part of the ten-year phasing plan and would improve north/south connections.

7. **Schools.** The Community School (grades 1-8) and High School are located along 11th Street; Lake School (preschool and kindergarten) is located two blocks east of 11th Street on Boulevard; the ORSCH School (K-12) is located at the corner of Main Street and Tomichi Avenue; and the Tenderfoot Daycare Center is located adjacent to the university on the corner of North Colorado and Escalante Drive. Schools generate a large amount of pedestrian and vehicle traffic in these vicinities and sidewalks and signage are important to improve safety.

FIGURE 14 11TH STREET SCHOOL ZONE

Sidewalk linkage is missing on the majority of the east side of 11th Street. A portion of the sidewalks on the west side south of the High School is narrow and should be widened. Sidewalks do not exist between Lake School and the Community School. Crosswalks direct pedestrians to the west side of 11th Street.

It is recommended that sidewalks be completed on both sides of 11th Street between Virginia and Ohio and on the north side of Arthur between Boulevard and 11th. Electronically lit, pole mounted radar speed signs would improve safety at the corner of 11th and Georgia, 11th and Arthur, and on 8th Street.

High visibility crosswalks at the intersections of 11th Street and Spencer, Ohio, Arthur, and Virginia are recommended. The intersection of West Tomichi and 11th Street presents dangerous conditions for pedestrians because vehicles are entering town at a high rate of speed with decreased site distance. An overhead traffic signal device at the corner of 11th and West Tomichi would improve safety for pedestrians at this intersection.

It is recommended that a “school zone” sign be placed on North Colorado near the daycare center.

Because the ORSCH School students use Virginia Avenue to access the Legion Park, it is recommended that a crosswalk be installed at the corner of Virginia and Colorado.

8. **Denver Avenue.** A pedestrian route along the entirety of Denver Avenue would provide a direct link between the university and the schools. Extensions on West Denver are a challenge because of private landscaping and driveways in the right-of-way.

FIGURE 15 EXAMPLE OF PRIVATE USES IN THE RIGHT-OF-WAY ON WEST DENVER STREET

9. **Industrial Zone District and Airport.** Many streets in the Industrial zone district have unpaved sections, varying right-of-way widths, and missing sidewalks. To have a north/south route between the airport and Tomichi Avenue, it is recommended that a sidewalk be installed on the west side of Boulevard between Gunnison and Evans. While it would be more favorable to have the sidewalk extend to Rio Grande, the street width narrows between Rio Grande and Evans and installing a sidewalk would be possible, but problematic with some of the existing uses, as can be seen in Figure 16. Long-term recommendations include a sidewalk on South Wisconsin from New York to Bidwell and on the east frontage road from Bidwell to New York.

FIGURE 16 EXAMPLE OF VARYING STREET WIDTHS IN THE INDUSTRIAL DISTRICT

FIGURE 17 THIS RECENT SATELLITE IMAGE SHOWS THE VARYING STREET WIDTH OF SOUTH BOULEVARD

B. PRIORITIES AND IMPLEMENTATION

Sidewalks are either missing or incomplete in residential areas. To facilitate safe and effective pedestrian connections to the Central Business District, commercial centers, parks and schools, it will be necessary to replace existing sub-standard sections and to install sidewalks where they currently do not exist. The following sidewalk segments are prioritized based on urgency of safety concerns and access:

1. Years One through Five:
West side of Hwy 135 from CR 13 to Spencer
West side of 11th Street between Virginia and Ohio
North side of Arthur between Boulevard and 12th
East side of the 100 block of North Colorado and between Ruby and Denver
North side of Denver between Main Street and Taylor
North side of New York from 14th to Wisconsin and Iowa to Teller
East Tomichi adjacent to Jorgensen Park and from McDonalds to the Holiday Inn
South Teller, east side
North side of Virginia from 8th Street to Spruce

2. Years Six through Ten:
East side of 11th Street between Tomichi and Ohio
West Tomichi from Highway 50 to Emerald Lane
West side of North Main between Denver and Elizabeth
East side of North Spruce between Tomichi Avenue and Spencer with the exception of the 200 block
East side of North Boulevard between Tomichi Avenue and Spencer

3. Years Eleven through Fifteen:
West side of South Boulevard between Tomichi and Evans
North side of West Denver Avenue from Main Street to 11th Street
North side of Gothic from 11th Street to Pine
North side of Gunnison Avenue between 10th and Boulevard
East Frontage Road from Bidwell to New York
South Wisconsin from New York to Bidwell

4. Upon Development of Gunnison Rising:
North side of Georgia between Main Street and the Aspinall-Wilson Center
Sidewalks should be included in any development plans

5. West Gunnison Neighborhood:
Sidewalks should be included in any development plans

Figure 18 is a visual depiction of the sidewalk phasing plan.

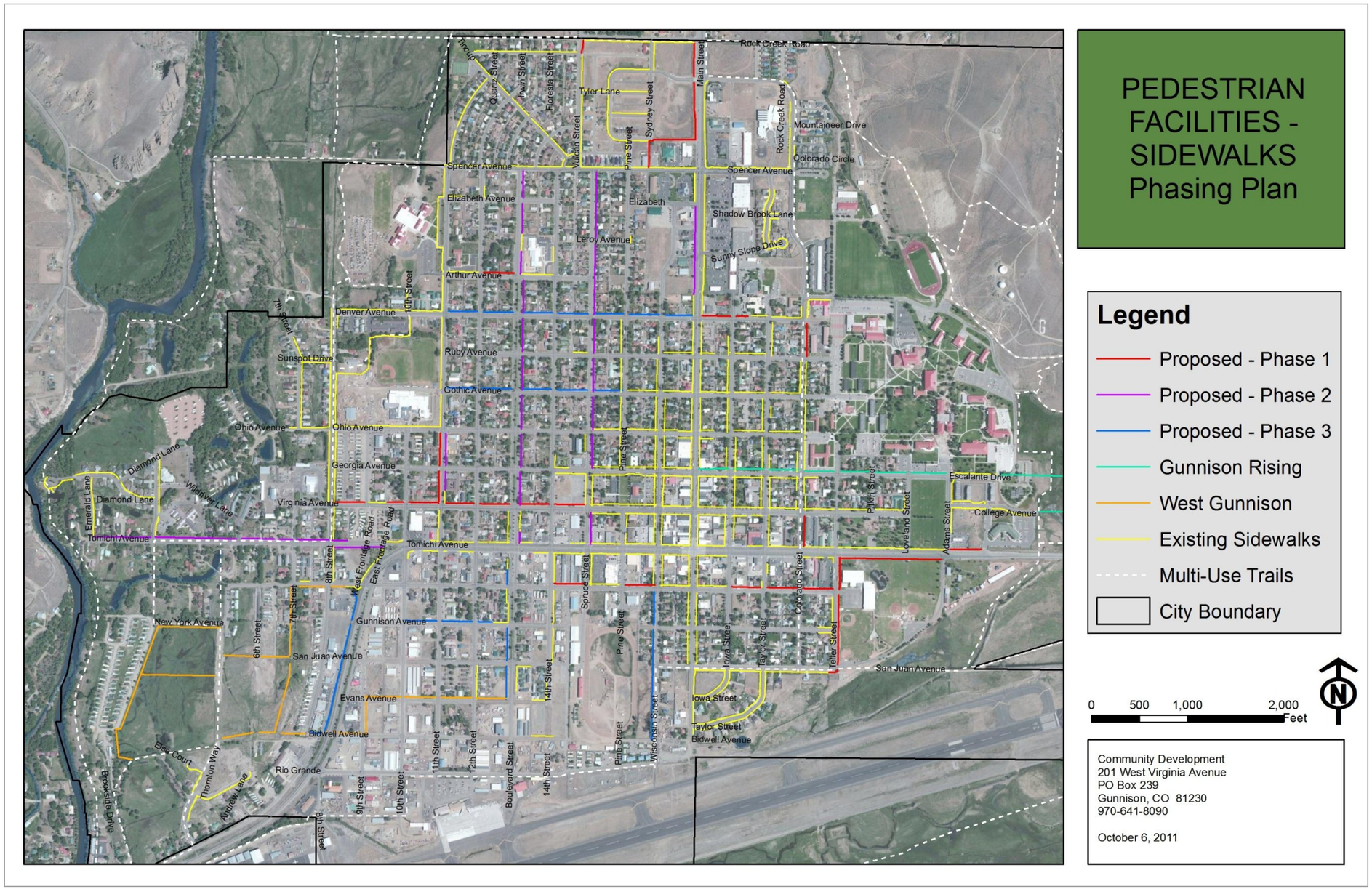

FIGURE 18 SIDEWALK PHASING PLAN

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C. MAINTENANCE PLAN

Where sidewalks do exist, heaving of sidewalk sections in many areas creates tripping hazards. The City owns a grinding machine that is used to correct faulty sections of sidewalk. This reduces the number of sidewalk sections that must be replaced. The City should survey sidewalks annually to correct heaving sidewalks.

D. CAPITAL ALLOCATION, PHASING PLAN AND CONCEPTUAL COST ESTIMATE

The conceptual cost estimate is based on the following assumptions:

Sidewalk Width:	five feet, unless otherwise noted
Sidewalk Depth:	four inches
Subgrade Cost:	$2.00-$2.50 per linear foot
Concrete Cost:	$160-$170 per cubic yard
Form/Finish/Pour:	$1.80 per linear foot
Relocate Irrigation System on East Tomichi:	$6,000

This *Plan* recommends 30,991 lineal feet of sidewalk improvements. Using the cost estimates above, the total estimated cost of installing these sidewalks ranges from $717,712 to $818,185, depending on the cost of subgrade and concrete. Because the City has been allocating $30,000-$50,000 per year for sidewalks it will be necessary to increase the annual allocation to be able to complete the recommended sidewalk sections in fifteen years.
The conceptual cost estimate is contained in Appendix 1.

E. PEDESTRIAN FACILITY DESIGN GUIDELINES

1. **Road Construction Standards.** The *City of Gunnison Land Development Code* (*LDC*) is currently being revised by the Planning and Zoning Commission. The draft *LDC* contains General Road Construction Standards (§4.2) that guide the development of subdivisions and development in the city. The *City of Gunnison Construction Standards* as amended and *Complete Street Standards* are also incorporated by reference. Design and construction shall conform to the typical cross sections portrayed in Figure 19 and Figure 20 and will include sidewalks between four and eight feet wide, depending upon the street type designation.

FIGURE 19 ROAD CONSTRUCTION STANDARDS

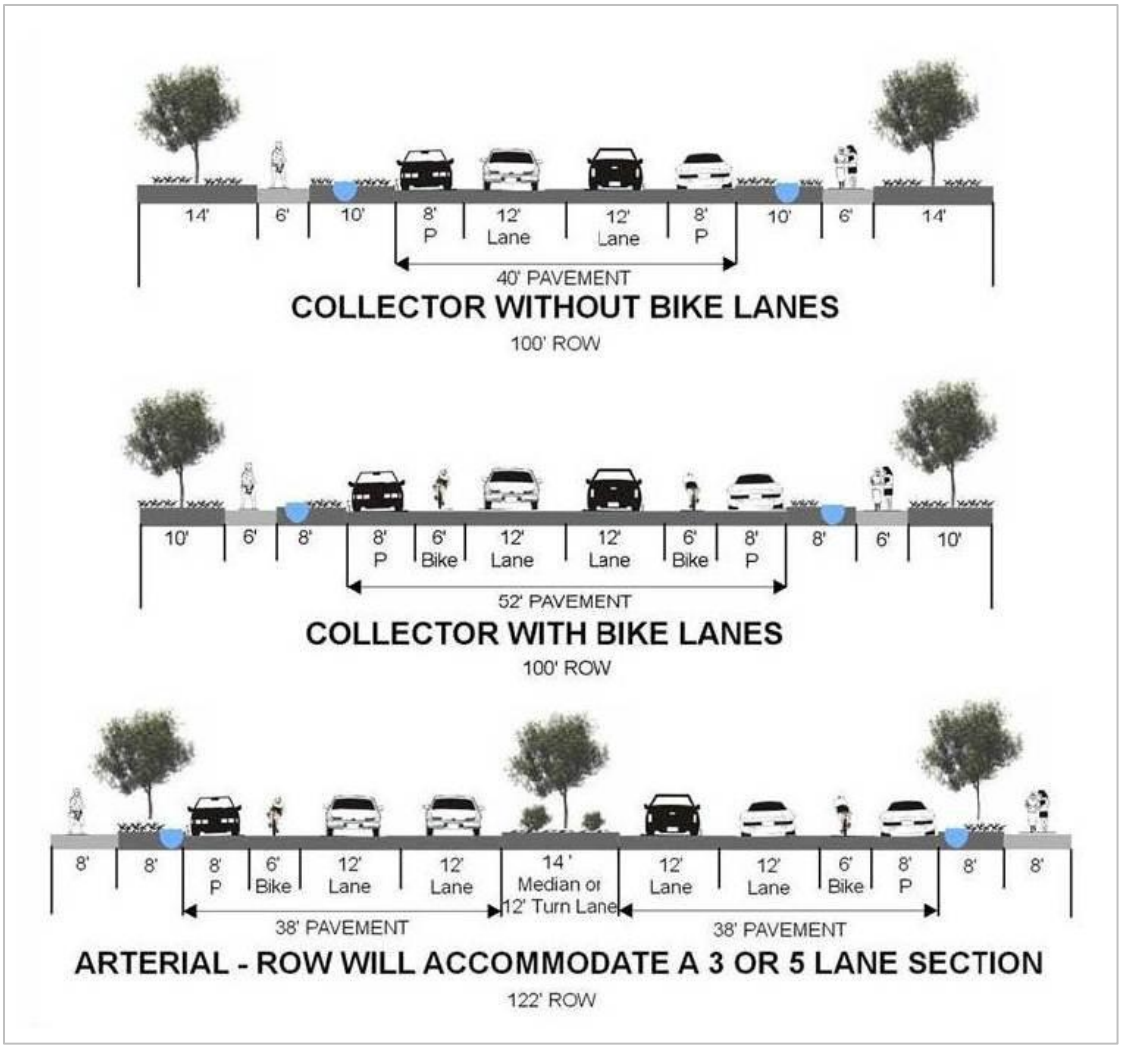

FIGURE 20 ROAD CONSTRUCTION STANDARDS (CONTINUED)

2. **High Visibility Crosswalks.** The *Model Traffic Code* requires vehicles to yield the right-of-way to pedestrians crossing at any intersection, however, at the same time; pedestrians are required to wait until it is safe before attempting to cross. Consequently, motorists and pedestrians share responsibility for safe street crossings. The main function of a marked crosswalk is to channel pedestrians. Crosswalks also prepare drivers for the likelihood of encountering a pedestrian and create an atmosphere of walkability and accessibility for pedestrians. Marked crossings reinforce the location and legitimacy of a crossing.

This section will guide decisions about where marked crosswalks and crosswalks with special treatments, such as flashing beacons and other special features, should be employed; and where crosswalks will not be marked due to safety concerns resulting from volume, speed, or sight distance issues.

a. Pedestrian Treatments at Uncontrolled Intersections and Mid-Block Locations. Crossings should be marked where all of the following occur:
   - sufficient demand exists to justify the installation of a crosswalk;
   - the location has sufficient sight distance[4] or sight distance will be improved prior to crosswalk marking;
   - safety considerations do not preclude a crosswalk; and,
   - distance from another designated crosswalk intersection.

b. Crossing Demand Considerations. Uncontrolled and mid-block crossing should be avoided but locations may be identified as candidates for marking if there is a demonstrated need for a crosswalk. Need may be demonstrated by any of the following:
   - proximity to existing or proposed pedestrian generators, such as schools or parks;
   - existing pedestrian volumes;
   - a history of pedestrian-vehicle collisions at the location;
   - location of nearest adequately marked or controlled crosswalk; and
   - citizen surveys, requests, walking audits, etc.

c. Crossing Treatment Options. A variety of treatments to improve pedestrian mobility, visibility, and safety are recommended. While the strategies reflect Best Management Practices (BMPs) and local priorities, these cannot replace engineering judgment. Each situation is unique and pedestrian safety improvements must be applied on a case-by-case basis. Caution must be used to avoid overuse of crosswalks and crossing treatments which can lead to reduced compliance, effectiveness, and safety.

3. **Marked Crosswalks.** Marked crosswalks may be installed to provide designated pedestrian crossings at signalized intersections and other unsignalized crossing locations in accordance with the crossing treatment identification process.

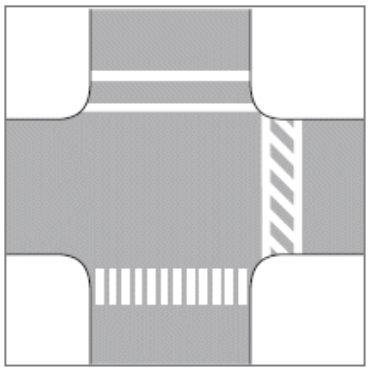

FIGURE 21 MARKED CROSSWALKS

[4] sight distance in feet should be greater than 10 times the speed limit

4. **Curb Extension/Bulb Out.** Also known as a pedestrian bulb-out, this traffic-calming measure consists of an extension of the curb into the street, making the crosswalk shorter.

FIGURE 22 CURB EXTENSION / BULB OUT

F. PEDESTRIAN WAYFINDING

Because pedestrians can approach signs more closely, the sign can contain much more detail than is possible with signs directed at motorists or bicyclists.

There is no national standard for pedestrian wayfinding signs. Pedestrian wayfinding signs are general directional signs or maps. Directional signs are usually simple signs with an arrow indicating direction, a destination name, and sometimes distance to the destination. Maps usually show the pedestrian their location, the surrounding streets and destinations.

1. **High-Visibility Signs.** High-visibility signs may be used to supplement crosswalk markings to increase the visibility of a pedestrian crossing.

FIGURE 23 HIGH-VISIBILITY SIGNS

2. **Overhead Flashing Beacons.** Flashing amber lights are installed on overhead signs in advance of the crosswalk or at the entrance to the crosswalk.

FIGURE 24 OVERHEAD FLASHING BEACON

3. **Rapid Flash Beacon.** The Rapid Flash Beacon is enhanced by replacing the traditional slow flashing incandescent lamps with rapid flashing LED lamps. The beacons may be pushbutton activated or activated with pedestrian detection.

FIGURE 25 RAPID-FLASH BEACON

III. SHARED ROAD FUNCTIONS

Roadways should be useable by not only automobiles, but also non-motorized wheeled transportation and pedestrians. Non-motorized wheeled transportation includes two- and three-wheeled bikes, skateboards, and wheelchairs. For ease of reference "biking" will be used herein. Biking is the primary means of transportation for many residents, a desired means of transportation for many, and a form of recreation for many more. Bicycling in Gunnison accommodates and encourages all ages and all levels of cycling ability. The energy and commitment of the City, as well as local organizations and businesses, are primary forces behind local bicycle efforts. The City continues to develop multi-use trails and bicycle lanes for shared roadway use. Several local bicycle shops provide ongoing support and crucial services to Gunnison's bicyclists and various advocacy, education, and riding organizations enhancing community efforts. Gunnison is becoming a biking destination due to regional and national attention from events such as the Pro Cycling Challenge, the Growler, Ride the Rockies, Colorado Bike Tour, and National Bike Challenge. In May 2012 the League of American Bicyclists designated Gunnison as a Bicycle Friendly Community at the silver level due to its commitment to cycling.

This *Plan* presents information on existing conditions as well as recommendations for improvements that will result in a more efficient and effective bicycle network, with the intent of supporting existing bicyclists and encouraging more people to ride more frequently. The current bicycle network consists of approximately 8.5 miles of bicycle lanes, 18 miles of hard-surfaced, multi-use paths, and many more miles of local-street bicycle routes. Future bike lane projects will take place with new street construction or reconstruction of existing facilities, per the City's *Master Plan*, *Land Development Code* and *Construction Standards*.

> *Gunnison Master Plan, 2007* – Chapter 8 – Transportation
> Policy1. Encourage Multimodal Transportation and Recreation Opportunities
> 1.1 Designate, construct and sign bicycle lanes or bicycle routes in appropriate locations within the City, taking into consideration routes to Western State College, the public schools, outlying recreation areas and downtown.
> 1.3 Create multi-use pathways (for example, the VanTuyl River Trail and the Spencer Ave. bicycle extension) that access recreation areas and school areas and that can be used by pedestrians, bicyclists, wheelchair users, skateboarders, roller skaters, and other non-motorized travelers.
> 1.4 Develop or enhance bicycle and pedestrian crossings, including refuges throughout the City, such as a pedestrian amenity at Spencer and 11th Street, or a pedestrian overpass.

The word "bikeway" will be used in this section to refer to bicycle lanes and signed bike routes. Bikeways provide enormous benefits to both the cycling and non-cycling public. Bikeways attract more bicyclists, resulting in cleaner air, less noise pollution, and overall quality of life benefits. Bikeways use public dollars efficiently by reducing road maintenance costs and enhancing economic development. Bikeways increase the carrying capacity of the transportation system by lessening the demand for motor vehicle capacity. Well-established bicycle facilities

improve safety for all users; bicyclists feel they have a secure space on the road and motorists are aware of bicyclists' presence and right to be on the road.

A. Existing and Proposed Bikeways

Since it was adopted in 2008, many recommendations from the *Trails Master Plan* have been implemented. These trail segments and bikeways have provided access to recreational amenities for residents of the city, as well as a safe route to the schools and the city core for residents of the outlying neighborhoods. There are a few remaining segments from the *Trails Master Plan* that have yet to be implemented as well as some new trail alignments contemplated as part of this *Plan*.

Gunnison Master Plan (2007), Chapter 8 - Transportation
1.3 Create multi-use pathways (for example, the VanTuyl River Trail and the Spencer Ave. bicycle extension) that access recreation areas and school areas and that can be used by pedestrians, bicyclists, wheelchair users, skateboarders, roller skaters, and other non-motorized travelers.

Gunnison Master Plan (2007), Chapter 10 – Parks and Recreation
Policy 1. Adapt City Parks – action items:
1.2 Update the 1996 Parks, Recreation and Open Space Master Plan, including a well-developed plan for the VanTuyl Ranch.

FIGURE 26 GUNNISON MIDDLE SCHOOL STUDENTS ON A BICYCLE OUTING

North Colorado Street was built before City Market was relocated to its current location. City Market had a large influence on traffic patterns in the city and North Colorado was not designed to accommodate as many vehicles, pedestrians, bicycles, and longboards that currently use it.

While surveying WSCU students, staff heard many concerns about Colorado Street north of Escalante Drive. The street is very narrow and curved. Although there is a detached, paved path, there is no signage indicating that the path is intended for bicycles and pedestrians. Consequently, bicyclists use the street, which is too narrow to accommodate bicycles and vehicles. Signage could address this issue and the path should be widened.

Staff also heard similar concerns from the community members who attended the coffee house public outreach sessions. They also stated that the existing detached path is rough and the transitions from the path to streets are not conducive to safe travel for bikes, longboards, or pedestrians. Additionally, the path is surrounded by tall weeds in some places, making it hard to see.

FIGURE 28 NEITHER THE STREET NOR THE DETACHED PATH ARE WIDE ENOUGH TO ACCOMMODATE SHARED USES

FIGURE 27 IT IS NOT EASILY APPARENT THAT THE DETACHED TRAIL ON NORTH COLORADO IS MEANT FOR NON-MOTORIZED TRAFFIC

FIGURE 31 THE PATH IS OVERGROWN WITH WEEDS IN MANY AREAS

FIGURE 30 THE PATH IS FALLING APART IN MANY PLACES, MAKING BICYCLE AND PEDESTRIAN TRAVEL HAZARDOUS

FIGURE 29 TRANSITIONS FROM THE PATH TO THE STREET ARE NOT CONDUCIVE TO SAFE TRAVEL

The following maps depict the bikeways by quadrant of the city. The bicycle lanes in the northwest quadrant provide connections between the schools, the VanTuyl Ranch, the adjacent neighborhoods, the downtown area and the commercial corridor.

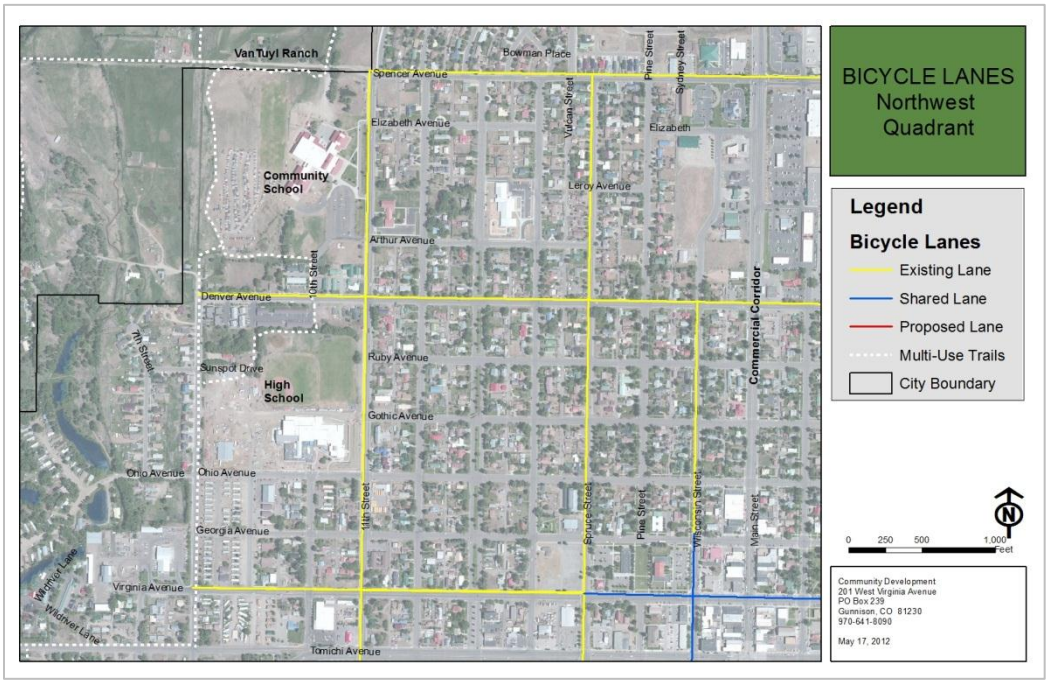

FIGURE 32 NORTHWEST QUADRANT BICYCLE LANES

In the southwest quadrant of the city, bicycle lanes provide connections between the airport, rodeo grounds, West Gunnison Neighborhood, and the downtown commercial corridor.

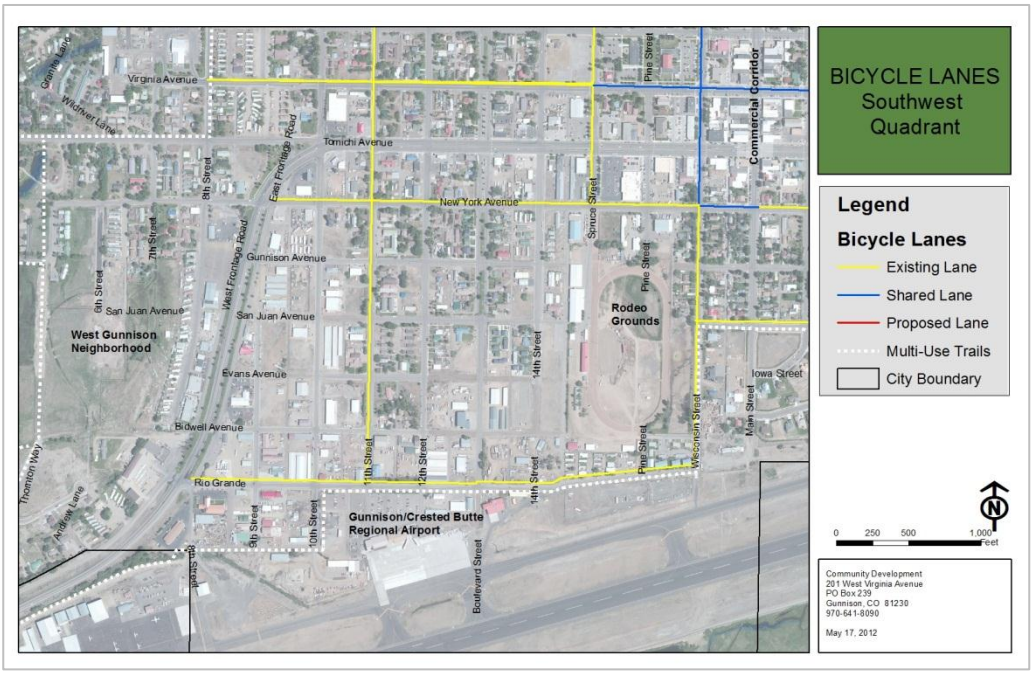

FIGURE 33 SOUTHWEST QUADRANT BICYCLE LANES

In the northeast quadrant of the city, bicycle lanes provide connection between the university, the community center, adjacent neighborhoods, downtown area and the commercial corridor, and multi-use trails north of the city limits.

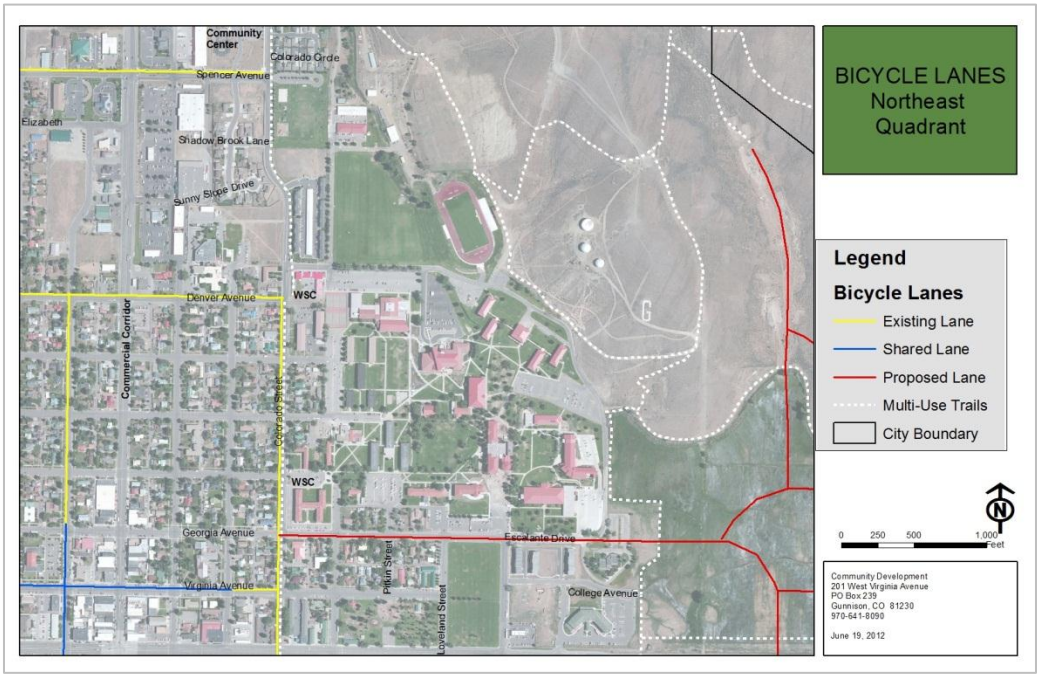

FIGURE 34 NORTHEAST QUADRANT BICYCLE LANES

Connections between the university, adjacent neighborhoods, City parks and multi-use trails to the south of town are provided by the bicycle lanes in the southeast quadrant of town.

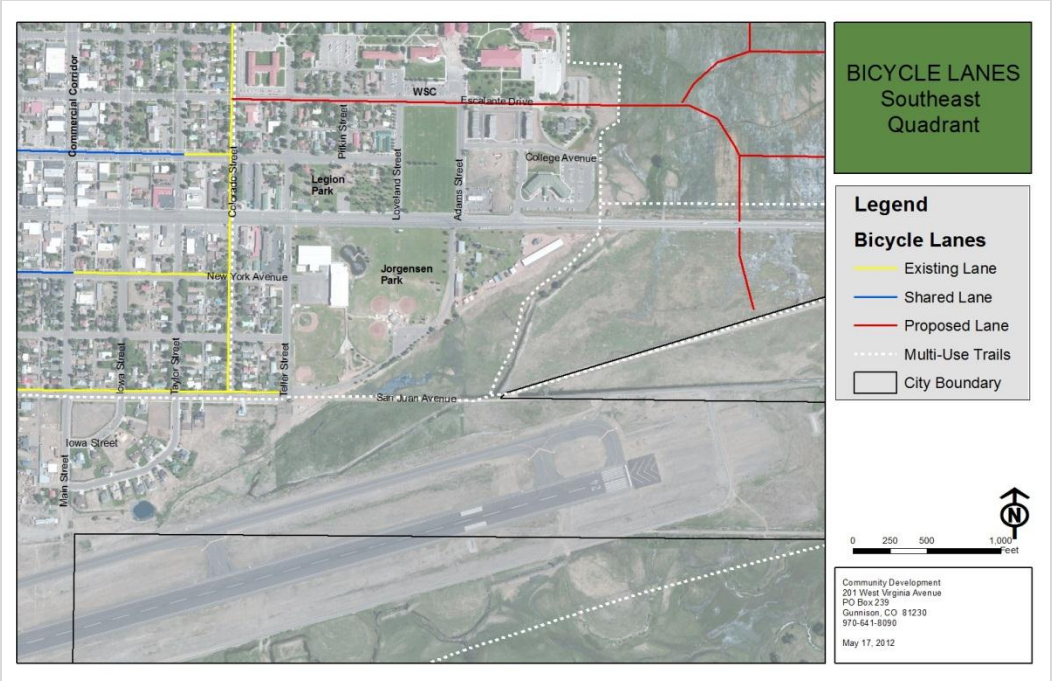

FIGURE 35 SOUTHEAST QUADRANT BICYCLE LANES

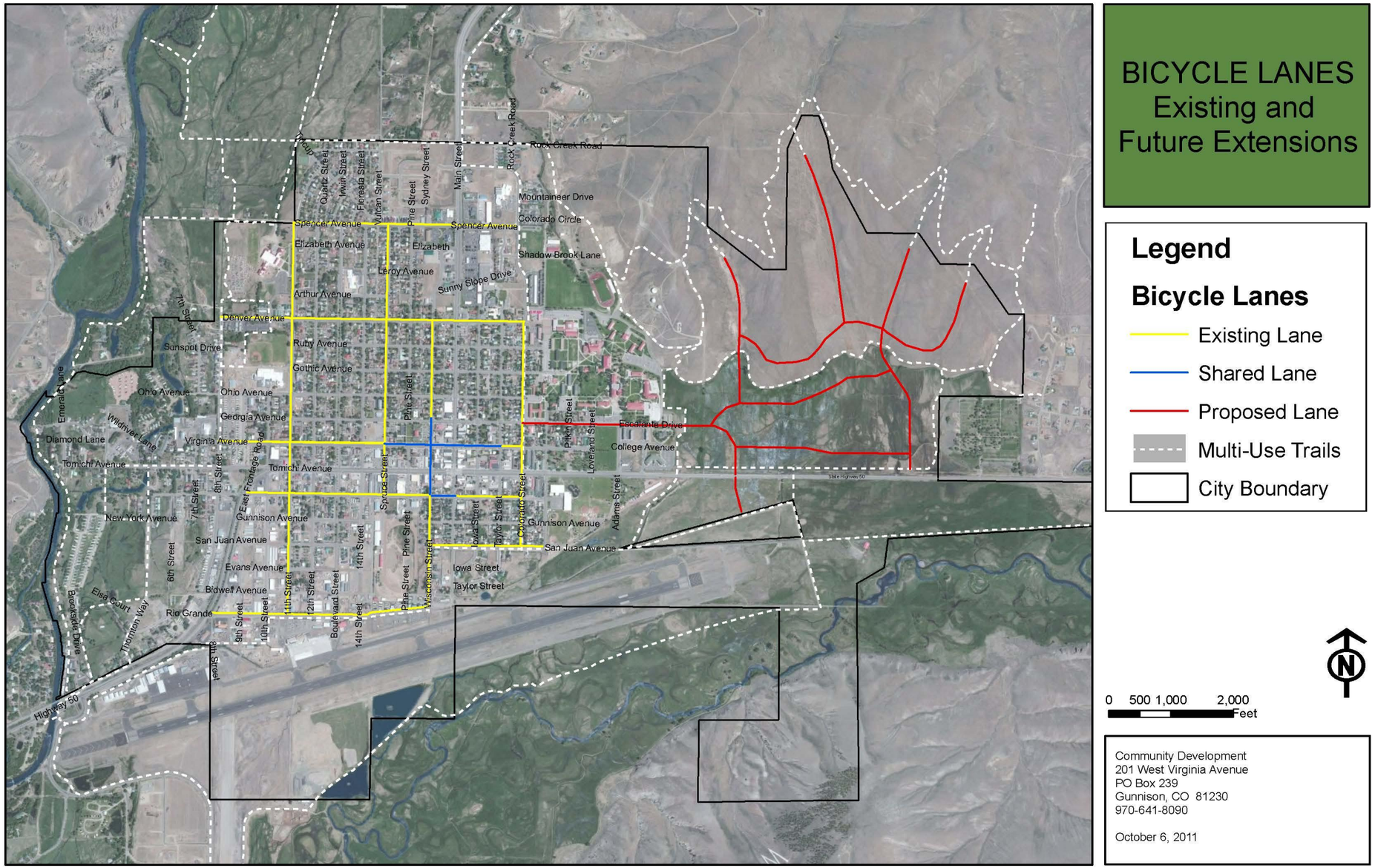

FIGURE 36 EXISTING AND PROPOSED BIKEWAYS

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B. Priorities and Implementation

The bikeway system is in place within the developed portion of the city. Because it is unknown when Gunnison Rising will be developed, bikeways into the area east of the university are conceptual. The developer will be responsible for developing bikeways and multi-use trails.

The League of American Bicyclists suggests that the City ensure that the standards for bike parking conform to the Association of Pedestrian and Bicycle Professionals (APBP) standards: http://www.apbp.org/resource/resmgr/publications/bicycle_parking_guidelines.pdf.

C. Maintenance Plan

The bike lanes are repainted annually. Bikeway designations should be changed, where necessary, when it is time to repaint the bike lanes. Bicycle route signs should be installed on the priority bikeways.

D. Capital Allocation and Phasing Plan

The bike lanes and signage are in place so phasing isn't necessary. The lanes and markings are repainted annually.

E. Conceptual Cost Estimate

The City has 8.5 miles of painted bike lanes and .6 miles of shared bike lanes. The annual cost of re-painting the bike lanes is $8,300 at a rate of 6.5cents per foot. The paved bike lane symbols are about $4,500 per year.

The cost estimate in Appendix 2 is based on a paint cost of 6.5cents per foot for long lines. Each bike lane requires two lines. Bike lane symbols are $10 each. Painting contractors charge a "mobilization" fee to drive their equipment to Gunnison. The mobilization fee is split between the trails budget and the streets budget for painting. The mobilization fee is $200 for lane symbols, and $350 for long line painting.

F. Bikeway Design Guidelines

Design standards are intended to ensure an overall harmony of appearance and function of individual projects as they are undertaken. Design guidelines for each bikeway segment should include compliance with street standards of the draft *Land Development Code*, the *Trails Design Guideline for Portland's Park System (May 2009)*[5], and any other applicable codes as a basis for evaluation and design of trail projects. Trail segments should also include way-finding signage and bicycle parking facilities. The League of American Bicyclists suggests that new and improved bicycle facilities conform to current best practices and guidelines such as the *NACTO Urban Bikeway Design Guide* or the *AASHTO Guide for the Development of Bicycle Facilities*. Wayfinding signage should be installed at strategic locations.

In addition, the following general guidelines should be followed in the development of specific bikeway segments. Bikeways are grouped into two categories: Priority Bikeways and Local-Service Bikeways. Figure 38 identifies the bikeway designation for the existing bikeways and for future bikeways in Gunnison Rising.

[5] http://atfiles.org/files/pdf/DesignGuidelinesPortland09.pdf

1. **Local Service Bikeways.** Local-Service Bikeways serve as local circulation routes for bicyclists and provide access to adjacent properties and neighborhood centers. With the exception of controlled access roadways and state highways, all streets not classified as Priority Bikeways are considered Local-Service Bikeways.

FIGURE 37 PAVEMENT MARKINGS FOR BICYCLE ROUTE

Design treatments to be considered for Local-Service Bikeways are shared roadways, signed bicycle routes, traffic calming, bicycle lanes, and extra-wide curb lanes.

2. **Priority Bikeways.** Designed to establish direct and convenient bicycle access to all significant destinations within the city, Priority Bikeways are usually found on streets designated as arterials or collectors within the street network. Areas that are served by Priority Bikeways include employment centers, commercial districts, transit stations, schools, institutions, recreational destinations, and local/regional centers.

Design treatments that should be considered for Priority Bikeways include:

- bicycle lanes, extra-wide curb lanes, wide shoulders, bicycle boulevards, and way-finding signs for local street connections;
- on-street motor vehicle parking may be removed on Priority Bikeways to provide bicycle lanes, except where it is essential to serve adjacent land uses; and,
- all destinations along a Priority Bikeway should have sufficient end-of-trip facilities (i.e. bicycle parking) to meet and support bicyclist's needs.

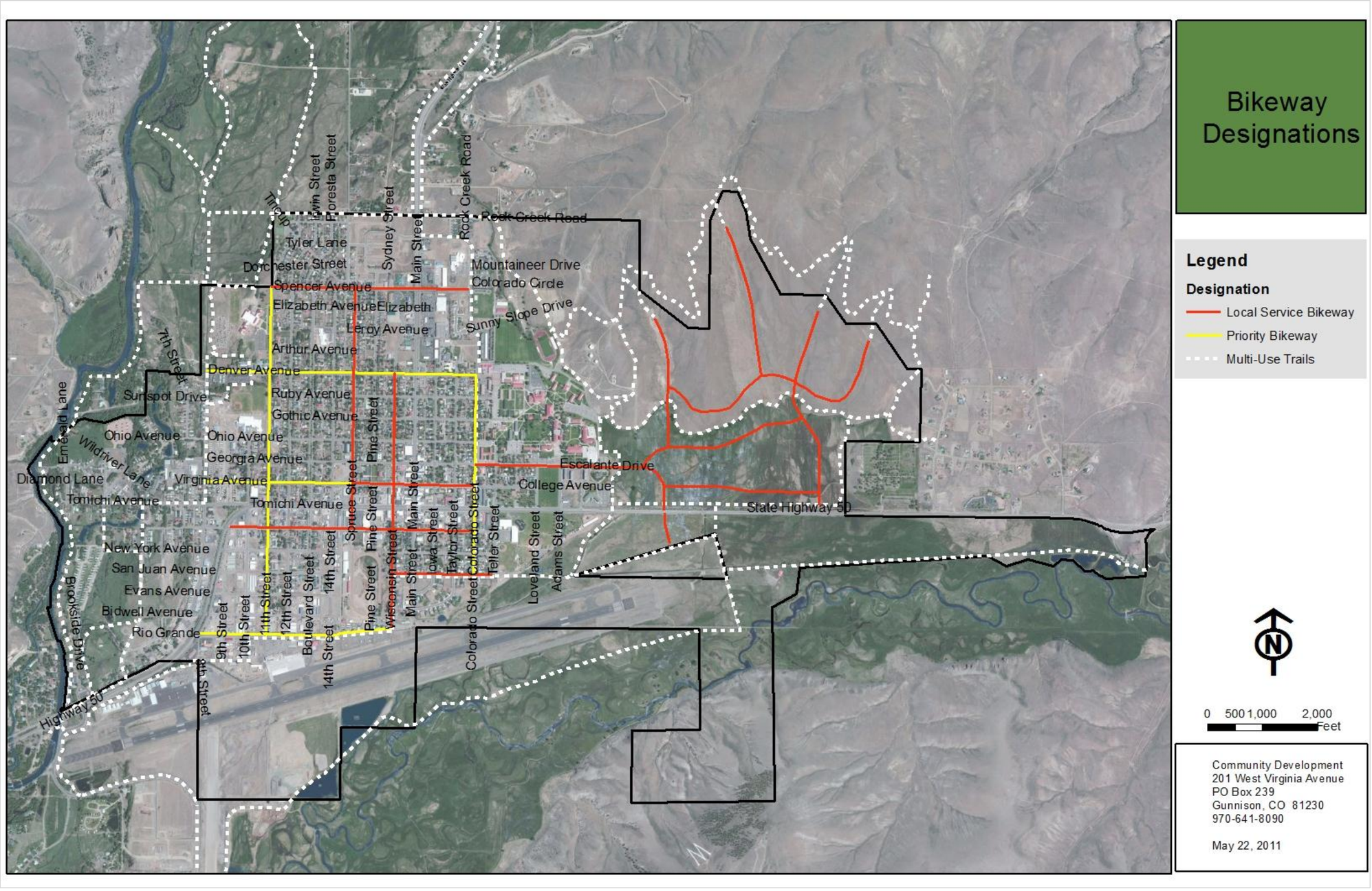

FIGURE 38 BIKEWAY DESIGNATIONS

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The appropriate treatment for a bikeway depends on the street classification, anticipated bicycle destinations, motor vehicle traffic volumes, speeds, and street widths. Design treatments designating bicycle facilities in the City of Gunnison are categorized and defined below.

3. **Bicycle Lane.** A bicycle lane is a portion of the roadway designated by roadway striping and bicycle pavement markings for the exclusive or preferential use of bicycles. Bicycle lanes can be, and have been, implemented by:

- narrowing existing lanes;
- removing a travel lane;
- removing parking, except where it is essential to serve adjacent land uses; and
- shoulder widening.

Bicycle lanes may be implemented through stand-alone bikeway projects, through reconstruction or construction of roadways, and through routine resurfacing of roadways.

Although bicycle lanes may be the preferred alternative, the City's *Land Development Code* requires 6-foot bike lanes and the configuration of some streets makes installation of this standard width very difficult. These circumstances include, but are not limited to:

- harm to the natural environment or character of the natural environment due to additional pavement;
- severe topographical constraints;
- economic or aesthetic necessity of retaining parking on one or both sides of the street;
- existing buildings or development that are adjacent to the public right-of-way; and,
- high levels of traffic congestion that would result from eliminating travel lanes or reducing travel-lane widths.

These circumstances, as well as public opinion, should be evaluated carefully before a decision is made to implement bicycle lanes.

G. Road Sharing Wayfinding

Roadway signs, markings, and signals are governed by the Federal Highway Administration *Manual on Uniform Traffic Control Devices (MUTCD)* (2009). The City of Gunnison will use all federally-accepted traffic cueing signs and will include the City of Gunnison logo for signs designating bicycle routes and directional signs.

1. **Bicycle Route.** A bicycle route is a bikeway upon which signage or pavement markings are placed to indicate nearby destinations or another bikeway. Bike route signs show a symbol and destination and are used on straight sections to inform bicycles that they are on a bicycle route. A separate panel showing the destination name can also be used.

Signed connections are used primarily on shared lanes or local, low-volume streets where bicycle lanes are not needed. Some streets that are already signed as bicycle routes can be upgraded with bike lanes or way-finding aids that provide directional information about destinations and

connecting bikeways. Alternative methods, when bicycle lanes are not possible, may include but are not limited to wider outside lanes, wider sidewalks, and shared roadways.

Bicycle route signs may be provided to inform bicyclists of bicycle route direction changes and to confirm distance, direction, and destination.

2. **Street Marking Standards.** The following street marking standards are recommended by the *MUTCD:*

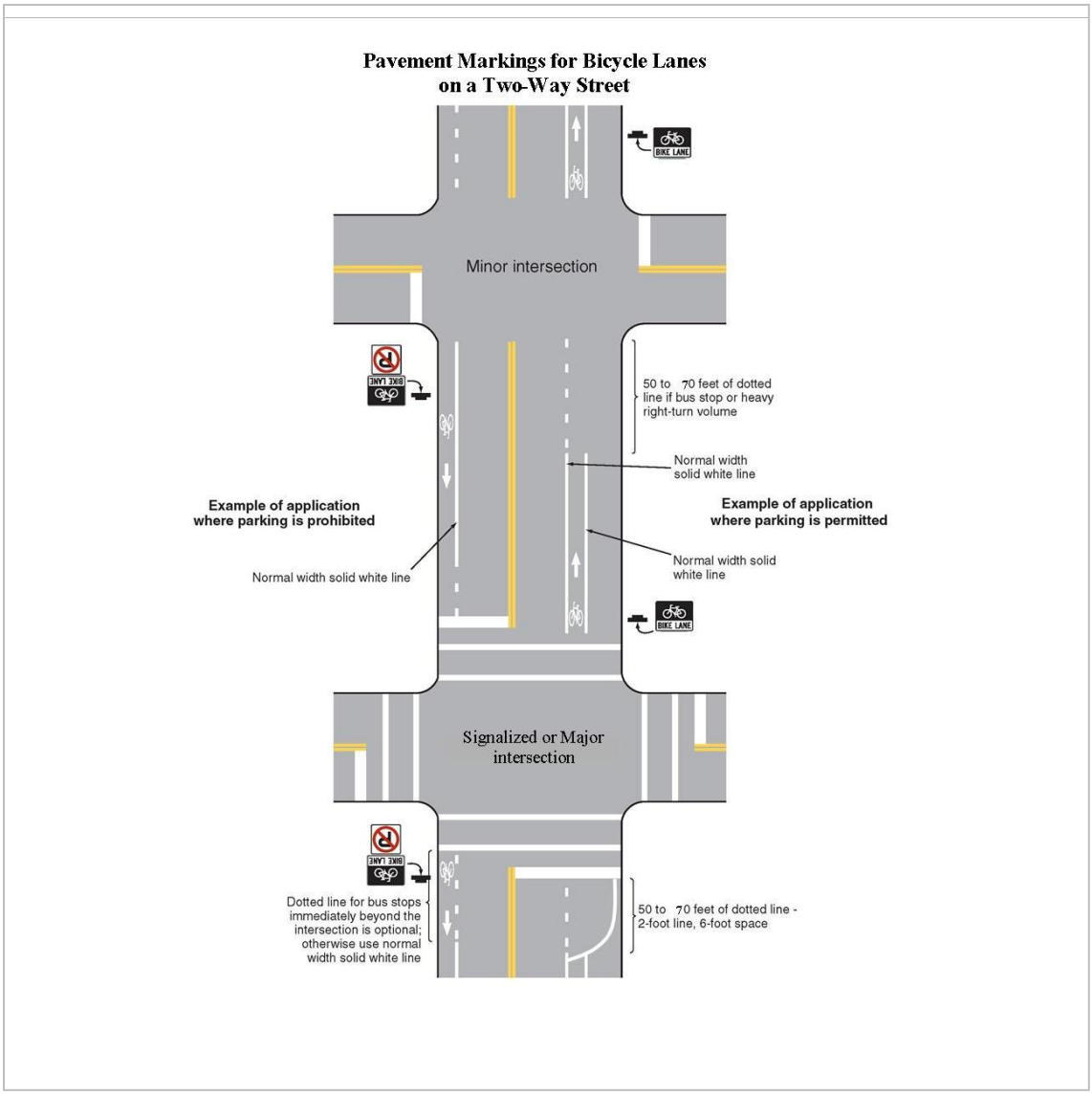

FIGURE 39 PAVEMENT MARKINGS FOR BICYCLE LANES

IV. MULTI-USE TRAIL SYSTEM

A. EXISTING AND PROPOSED SEGMENTS

1. **Existing Multi-Use Trails.** Many trail segments recommended in the *Trails Master Plan* have been implemented and residents and visitors to Gunnison are taking full advantage of the added amenities. The implemented segments are:

a. The **Twin Bridges** multi-use trail includes an underpass allowing bicycles and pedestrians to cross under Highway 50. The underpass was completed in 2010.

FIGURE 40 TWIN BRIDGES UNDERPASS

b. The **Whitewater Park** multi-use trail is a pedestrian / bicycle bridge over the Gunnison River providing access to the Whitewater Park for recreational opportunities. This segment was completed in 2010.

FIGURE 41 WHITEWATER PARK BRIDGE

c. The **West Gunnison Neighborhood** multi-use trail alignment through the West Gunnison Neighborhood utilizes existing roadways to connect the Twin Bridges underpass with the existing Thornton Way trail alignment. The *West Gunnison Neighborhood Plan* contains a Preferred Alternative map which suggests an alignment providing greater access to neighborhood services, employment opportunities and outdoor recreation.

FIGURE 42 THORNTON WAY MULTI-USE TRAIL

d. **The Railroad Grade** multi-use trail is a 12-foot wide trail segment that was completed in 2009 and is a favorite walking and biking trail for community members. It connects the Community Schools to the Gunnison River on the northern boundary of VanTuyl Ranch, providing opportunities for recreation, outdoor education, and physical fitness.

FIGURE 43 THE RAILROAD GRADE MULTI-USE TRAIL

e. **The VanTuyl Ranch** multi-use trail was a recommendation in the *VanTuyl Ranch Management Plan*. Constructed in early 2012, the alignment of the trail through the VanTuyl Ranch skirts the Habitat Protection area to avoid impacts to the riparian habitat and connects to the Colorado Parks and Wildlife (CPW) fishing easement with the northern extension of the Railroad Grade Trail. This multi-use trail is used extensively by community members as well as the Community School for fitness activities.

FIGURE 44 THE VANTUYL RANCH MULTI-USE TRAIL ON THE CPW EASEMENT

f. The **County Road 13** and VanTuyl Village multi-use trail will provide connection to the VanTuyl Ranch from Highway 135. The VanTuyl Village segment will connect County Road 13 to Spencer via Bowman Place. This segment is waiting permitting from the Colorado Department of Transportation and will probably be implemented in 2013.

FIGURE 45 COUNTY ROAD 13 TRAIL

g. The **North Bridge** multi-use trail was completed in 2010 and consists of an underpass under Highway 135. Gunnison County constructed a pedestrian / bicycle bridge that provides access over the Gunnison River without utilizing the highway. This provides an important linkage to residents of outlying subdivisions as well as bicycling enthusiasts.

FIGURE 46 THE NORTH BRIDGE PEDESTRIAN BRIDGE

2. **Proposed Trail Segments.** The following multi-use trail segments are priorities to provide access to schools and recreation areas.

a. **5th Street Multi-Use Trail.** The *West Gunnison Neighborhood Plan* contains a Preferred Alternative map which suggests a trail alignment from the existing Thornton Way trail to the paved West Tomichi.

FIGURE 47 5TH STREET MULTI-USE TRAIL

b. **3rd Street Connector.** A hard surface, detached trail on Third Street, south from West Tomichi and east on Gunnison to Thornton Way will enhance the West Gunnison Neighborhood by providing residents with a year-round walking and biking route for exercise, and access to the downtown area as well as to the Twin Bridges underpass and outlying recreation areas.

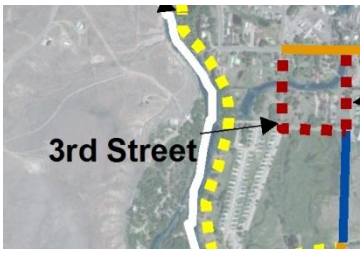

FIGURE 48 THIRD STREET CONNECTOR

c. **Gunnison River Multi-Use Trail and West Gunnison Connector.** The Gunnison River Multi-Use Trail is a long-term goal and will provide a valuable connection between the existing Twin Bridges underpass, through the West Tomichi Riverway, to the VanTuyl Ranch. Acquisition of easements along this segment is necessary for completion. The City will look for opportunities to collaborate with land owners and resolve issues in a mutually beneficial manner. The West Gunnison trail provides a connection from Brookside Drive to Thornton Way.

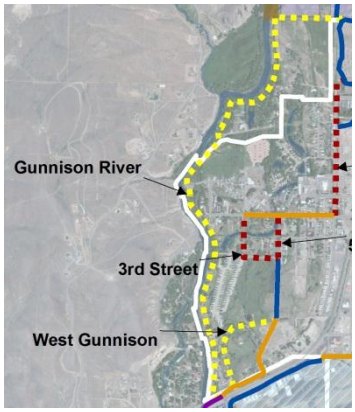

FIGURE 49 GUNNISON RIVER MULTI-USE TRAIL AND WEST GUNNISON CONNECTOR

d. **Access to Public Lands.** The Gunnison Trails organization and other outdoor enthusiasts hope that someday the VanTuyl Ranch will provide access to federal lands on the west side of the Gunnison River. This segment will require cooperation between the Colorado Division of Parks and Wildlife, the Army Corp of Engineers, and the Bureau of Land Management.

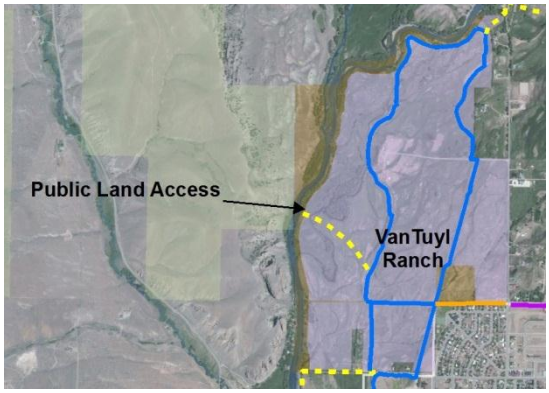

FIGURE 50 ACCESS TO PUBLIC LANDS

e. **Riverwalk Estates Multi-Use Trail**. An easement along the southern boundary of the Riverwalk Estates would allow the trail to connect the Railroad Grade Trail on the VanTuyl Ranch with the North Bridge and bicycle path along Hwy 135; however, private property issues from the north boundary of the VanTuyl Ranch to the property boundary of the Riverwalk Estates have prevented implementation of this alignment. An alternative alignment would be along the west right-of-way of Hwy 135 to County Road 13.

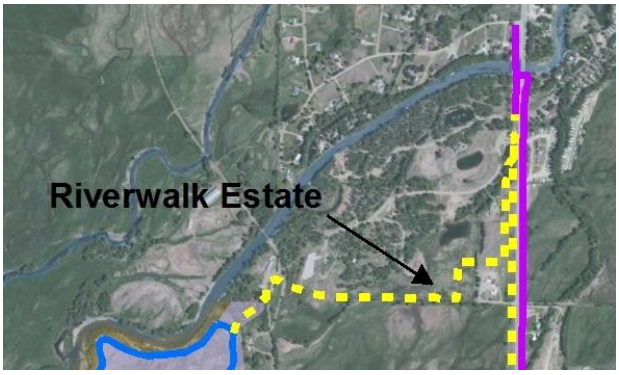

FIGURE 51 RIVERWALK ESTATES MULTI-USE TRAIL

f. **Highway 135 Multi-Use Trail.** This trail alignment on the west right-of-way of Highway 135 will connect the North Bridge to the VanTuyl subdivision and the VanTuyl Ranch. It will also allow an "out and back" loop for riders utilizing the North Bridge underpass.

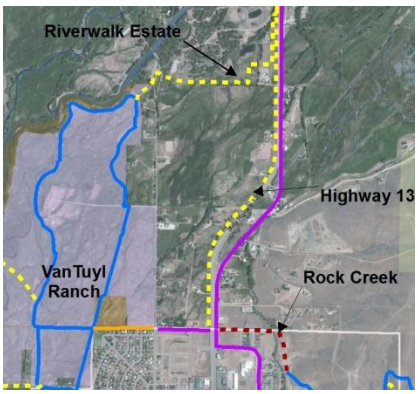

FIGURE 52 HIGHWAY 135 MULTI-USE TRAIL

g. **Rock Creek Multi-Use Trail (**Figure 53**).** This trail connects the existing paved path along Highway 135 and provides access to the Contour Loop Trail, Colorado Trail spur, and Gunnison Rising. The trail extends to the east along the City boundary crosses the O'Fallon ditch and proceeds south to connect to the road/trail on the east side of Mountaineer Bowl.

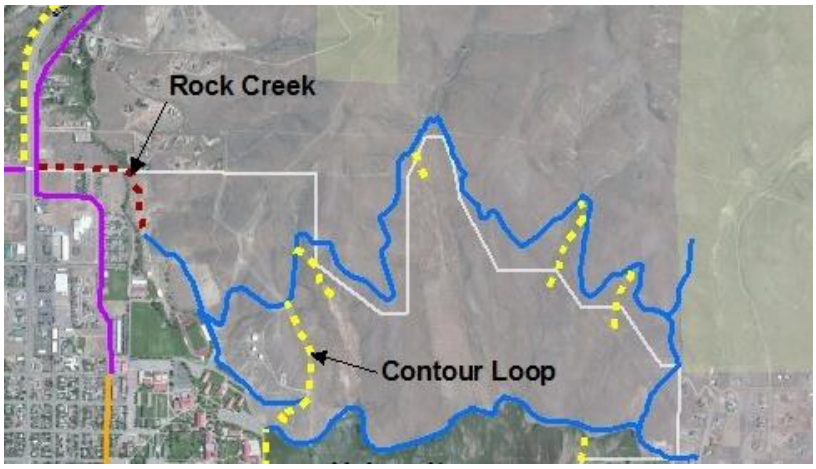

FIGURE 53 ROCK CREEK TRAIL, CONTOUR LOOP TRAIL

h. **The Contour Loop Multi-Use Trail** (Figure 53) follows an existing small path that connects the existing Contour Trail and the south leg of the Contour Loop. The trailhead is at Mountaineer Bowl which connects this segment to the existing trial north of Escalante Drive. These trails provide linkage to Signal Peak and federal land managed by the BLM. Access management will be coordinated with the BLM, County and CDPW following directives of the *Gunnison Sage Grouse Candidate Conservation Agreement* (CCA, 2013).

i. **The University Multi-Use Trail** (Figure 54) will connect the system around the university from the south leg of the Contour Loop Trial to the Highway 50 Underpass Segment and follow the property fence line of Western State Colorado University and Gunnison Rising.

FIGURE 54 THE UNIVERSITY MULTI-USE TRAIL AND HIGHWAY FRONTAGE TRAIL

j. **Highway Frontage Multi-Use Trail (**Figure 54**)** extends to the east along Highway 50 and Gunnison Rising. The extension loops to the north to tie into the south leg of the Contour Loop Trail.

k. **The Highway 50 Underpass Multi-Use Trail** consists of an existing box culvert under Highway 50 and will connect to the Airport Maintenance, University and Highway Frontage Multi-Use Trails.

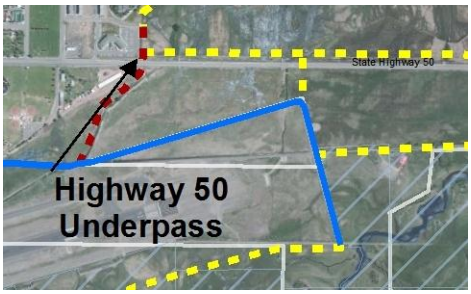

FIGURE 55 HIGHWAY 50 UNDERPASS MULTI-USE TRAIL

l. **Discovery Center Multi-Use Trail.** This segment extends from the Gunnison-Crested Butte Regional Airport to the east along the southern portion of Gunnison Rising. The trail alignment follows the railroad grade and terminates at the eastern boundary of Gunnison Rising.

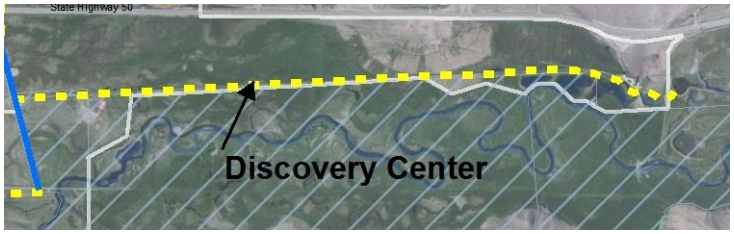

FIGURE 56 DISCOVERY CENTER MULTI-USE TRAIL

m. **The Airport Maintenance Multi-Use Trail.** This large segment is vital for connecting the eastern portion of the City southwest around the airport to Gold Basin Road. Gold Basin Road provides access to Hartman's Recreational Area, the Whitewater Park and the western border of the city. This portion has considerable wetlands and will require careful design. Design will involve many crossings including boardwalks and bridges.

FIGURE 57 AIRPORT MAINTENANCE MULTI-USE TRAIL

n. **Gold Basin Multi-Use Trail.** A detached trail following Gold Basin Road (CR 38) would connect the existing detached trail that terminates at Mergleman Pond, to the painted bike lane on Gold Basin Road. This section will be secluded and pristine and the improvements to this segment will increase safety for users.

FIGURE 58 GOLD BASIN MULTI-USE TRAIL

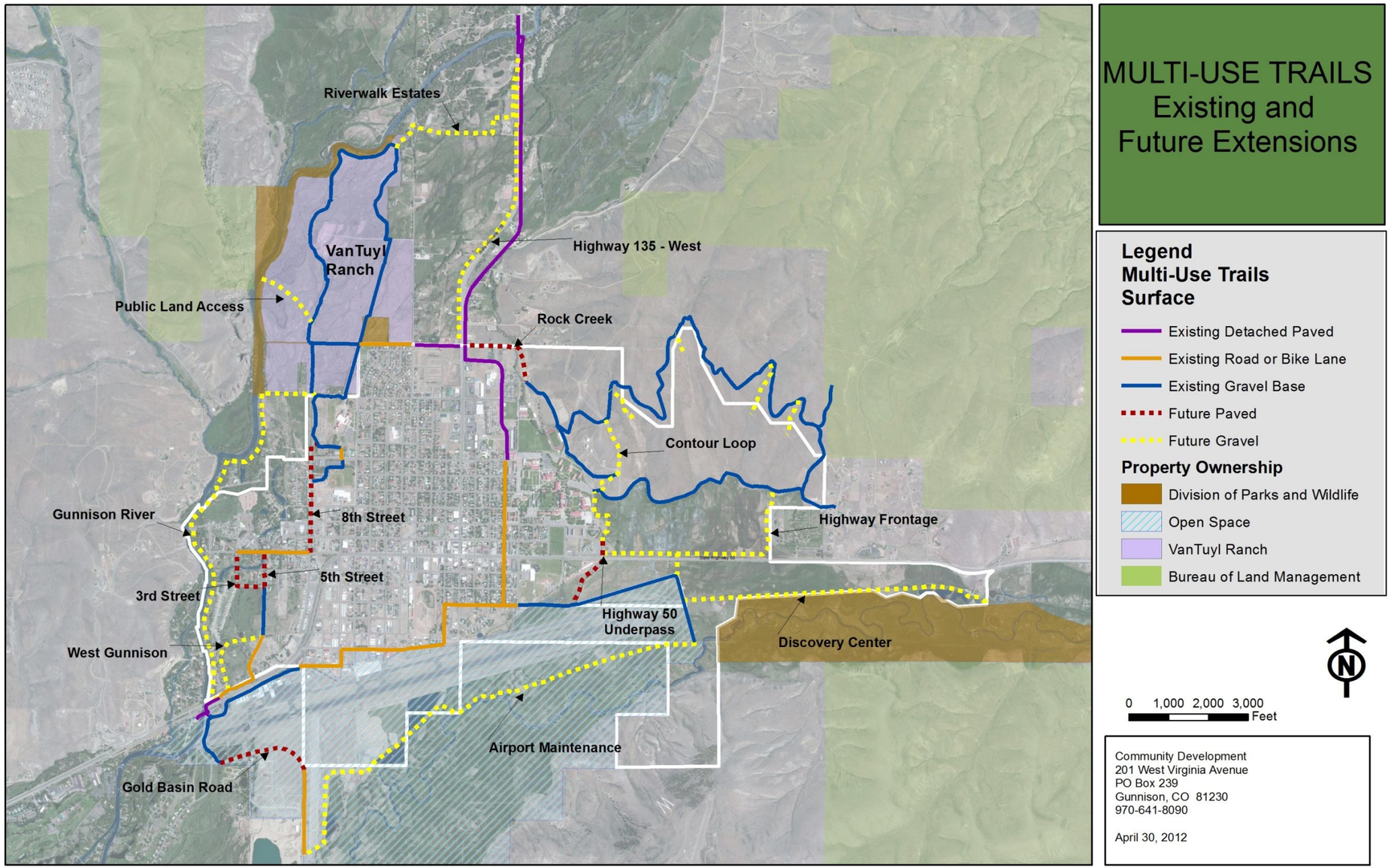

FIGURE 59 MAP OF EXISTING TRAILS AND FUTURE EXTENSIONS

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B. PRIORITIES AND IMPLEMENTATION

Implementation of the *Non-Motorized Transportation Plan* will require cooperation between the City, County, Western State Colorado University, the RE1J School District, non-profit organizations, state and federal agencies, developers, property owners, and citizens over a number of years. Because the *Plan* involves segments crossing a wide range of terrain, implementation can proceed in various locations simultaneously. Incremental improvements will link the segments ultimately resulting in a completely connected trail system.

> *Gunnison Master Plan, 2007*, Chapter 8 – Transportation: Policy 1. Encourage Multimodal Transportation and Recreation Opportunities
> 1.2 Collaborate with the Gunnison County Trails Commission to, for example:
> a. implement trails policies on the City's perimeter, including improvements to S.H. 135 and U.S. 50 for non-motorized travel;
> b. provide connections to outdoor recreation areas such as Hartman Rocks, Curecanti National Recreation Area, the proposed Gunnison Loop;
> c. install "share the road signs"; and
> d. develop greenways in the Gunnison River floodplain, and the Tomichi Creek corridor.
> 1.7 Develop trailheads where appropriate.
>
> *Gunnison Master Plan, 2007*, Chapter 8 – Transportation: Policy 1. Encourage Multimodal Transportation and Recreation Opportunities. Chapter 10, Parks and Recreation - Goal Community parks and facilities will provide year-round, affordable recreational opportunities for residents and visitors balancing open space with private property rights. The City will collaborate with public and private entities to provide access to public lands.

Total implementation and integration will require:

- cooperation between the City and County to jointly construct trails that benefit everyone;
- adequate staff support to oversee implementation;
- involvement of citizens, volunteers, property owners, and land developers;
- acquisition of public easements as necessary across private property;
- coordinate trail development with other local, state and federal agencies to ensure Sage-grouse habitat impact are avoided or minimized.
- improvements that are designed to respect private property and owners' rights;
- trail corridors and construction as part of the public infrastructure in new developments, prior to construction of homes;
- identification of, and application for, creative funding and financing mechanisms, including:
  - leveraging of existing City funds with grants and cooperative County projects;
  - subdivision improvement agreements that include requirements for land and trail construction;
  - GOCO grants, state trails grants, TE (Federal Travel Enhancement) grantsT-21 (CDOT) grants, and "Safe Route to School" state grants;
  - trails projects that are consistent with this Plan incorporated into public and private capital projects; and,
  - volunteer projects, private foundation grants, and donations.

C. MAINTENANCE PLAN

Although some maintenance is inherent once the trails are constructed, design considerations should minimize maintenance requirements through proper drainage, access, construction, stabilization, and location. Multi-use trails that provide interconnectivity within the City core will have year-round access and will be plowed during the winter months. The *Maintenance*

Checklist for Greenways and Urban Trails[6] provides guidelines for maintenance staff. Approximately $20,000 will be allocated annually for maintenance of the trails system.

D. Capital Allocation and Phasing Plan

This Phasing Plan was developed based on ease of implementation, staffing limitations, derived benefits, land availability, environmental considerations and public impact. While this phasing plan assigns a timeline for implementation for specific segments there may be "opportunity" projects where land or funding is currently available and should take precedence.

Capital allocation will be determined annually in conjunction with the City's budget cycle. Funding of trails is predicated upon sales tax revenues, the general fund, and future grants. Handling trail facility improvements through the City's budget process allows the City to integrate flexible and realistic management factors into the trail development program.

Short Term (1-5 Years)	Long Term (6-10 Years)
3rd Street Connector	Gunnison River Trail
5th Street Trail	Discovery Center Trail
Hwy 135 Trail	Contour Loop Trail
Rock Creek Trail	Airport Maintenance Trail
University Trail	Riverwalk Estates Trail
Highway Frontage Trail	West Gunnison Trail
Highway 50 Underpass Trail	VanTuyl Ranch Public Access Trail
Gold Basin Road Trail	

E. Preliminary Cost Estimate

Cost estimates include construction, crossings, acquisition, landscaping and fencing. A detailed cost estimate for the priority Multi-Use Trails is contained in Appendix 3. A summary of the cost estimates follows:

Trail Segment	Cost Estimate
3rd Street Connector	$137,319
5th Street Segment	$364,213
Highway 135 Trail	$171,437
Rock Creek Trail	$ 85,524
University Trail	$154,589
Highway Frontage Trail	$135,207
Highway 50 Underpass	$140,795
Gold Basin Trail	$ 43,560
Gunnison River Trail	$710,466
Discovery Center Trail	$228,622
Contour Loop Trail	$ 40,929
Airport Maintenance Trail	$947,979
Riverwalk Estates	$515,026
West Gunnison Trail	$ 52,976
VanTuyl Ranch Public Access Trail	$274,466

[6] http://www.americantrails.org/resources/greenways/MaintCheck.html

F. MULTI-USE TRAIL DESIGN GUIDELINES

Design standards are intended to ensure an overall harmony of appearance and function of individual projects as they are undertaken. The City of Gunnison will rely on the *Trail Design Guideline for Portland's Park System* (May 2009) and any other applicable codes as a basis for evaluation and design of trail projects.

Multi-use trails are designed to establish efficient, convenient, and comfortable routes for bicycling, walking, and other non-motorized uses. Multi-use trails are often appropriate in corridors not well served by the street system to create short cuts linking urban destinations and origins along continuous greenbelts such as rivers or other scenic corridors, and as elements of a city-wide recreational trail plan that provides access to public lands.

Given specific location constraints, it often takes creativity to implement the most effective transportation system; however, in general Multi-Use Trails should be;

- designed as separate facilities that can be shared with pedestrians and other non-motorized users;
- protected or grade-separated at crossings, rivers, and intersections with major roadways; and
- identified through appropriately placed signage.

G. MULTI-USE TRAIL WAYFINDING

Signage for multi-use trails includes directional signs and educational signs. Components include trail maps, distances of segments, information about terrain, interpretive information about flora and fauna of the area and information about respecting wildlife and agricultural animals and managing domestic animals.

Following are examples of signs for use on multi-use trails:

V. STRATEGIES FOR ENCOURAGING NON-MOTORIZED TRANSPORTATION

A. EDUCATION

One of the most effective ways to increase bicycling in a community is to improve the bicycle facilities. Although several recommendations for bicycle facility improvements have been recommended, bikeway improvements cannot be the only facet of a community-wide bicycle plan.

There is also a need for proper education, encouragement, and enforcement in order to address safety, quality, and efficiency of bicycling. Education goes hand-in hand with encouragement to increase cycling; together they improve skills and raise awareness. For example, a Bike to Work day encourages more people to ride for transportation purposes: it also teaches urban-riding skills, the importance of wearing a helmet and the necessity of using lights at night. Teaching children cycling skills and the importance of wearing a helmet builds their confidence as bicyclists and encourages them to ride more often.

Education is an important element in increasing bicycling while also improving safety. People often assume that as cycling increases, so will the number of crashes. This need not be the case as has been demonstrated in other cities. The word "education" has many facets when it comes to bicycling. Bicycle education is concerned with developing safe cycling skills in children, teaching adult bicyclists their rights and responsibilities, and educating motorists on how to safely and effectively share the road with bicyclists.

This section will address several educational components:

- developing safe cycling skills in children;
- teaching adult bicyclists their rights and responsibilities; and,
- teaching motorists how to more effectively share the road with bicyclists.

1. **Youth Bicyclists.** School children are most effectively reached when an action-oriented teaching approach and repetitive practice process are coupled with awards and incentives. Awards and incentives can consist of certificates of completion or bicycle/pedestrian licenses, free or reduced cost bicycle helmets and other accessories (such as bicycle lights or bells), or discount coupons from area bicycle shops.

The following guidelines should be used in education programs:

- Wear a helmet. In a bicycle crash wearing a helmet reduces the risk of serious head injury by up to 85%;
- Obey all traffic laws. Bicyclists have the same rights and consequently the same responsibilities as others users of the roads;
- Look both ways before crossing streets;
- Always ride with the flow of traffic;
- Be predictable, always signal your intentions;
- Be visible, wear light colored, bright, or reflective clothing;
- Always use a front light and rear reflector at night;
- Use the bike map, look for a route that is suitable to your comfort and skill level;
- Very young children should ride with a parent;
- When riding with a group of children, it's strongly advised that an adult ride in both the front and behind to monitor disparate abilities.

2. **Adult Bicyclists.** Adult bicyclists fall into several different categories of riders. Some adults are comfortable riding on busy streets and mixing with traffic while others prefer quieter streets or multi-use paths. There are adults who ride a bicycle only a few times a year and those who ride often, both for transportation and/or recreation.

Each type of adult bicyclist has their own concerns and philosophy about how bicycles fit into the transportation system. The following safe bicycling guidelines should be used by adult bicyclists:

- Be alert. Watch for other users and sudden behavior changes and pay careful attention to potential road hazards such as potholes and gravel;
- Adjust speed to maintain control of the bicycle;
- Obey all traffic laws. Although it is tempting to run through traffic signals and stop signs, do not do it. Bicyclists have the same rights and responsibilities as motorists. Disobeying traffic laws gives bicyclists a bad reputation and is potentially dangerous.
- Always ride with the flow of traffic, ride where motorists and others expect bicyclists, and never ride against traffic;
- Be predictable, signal your turns, do not weave in and out of traffic, and stay as far to the right as possible, except when:
  - traveling the same speed as traffic;
  - avoiding hazardous conditions;
  - preparing to make a left turn;
  - passing another vehicle;
  - the roadway is too narrow for a bicycle and a motor vehicle to travel safely side-by-side;
  - riding alongside another bicyclist in a manner that does not impede the normal flow of traffic.
- Be visible. Wear light-colored, bright, or reflective clothing and always use front and rear lights. Rear reflectors are also advised when cycling at night.
- Wear a helmet.
- Use the bike map. Look for a route that is suited to your comfort and skill levels.
- Stay off sidewalks whenever possible. In Colorado, bicycles are legally classified as vehicles and should behave as such. Unless specifically signed for shared use, as on bridge sidewalks or multi-use paths, sidewalks are primarily intended for pedestrians. In some cases it is appropriate for young or less experienced bicyclists to ride on the sidewalk although bicyclists must always be watchful of pedestrians on the sidewalk. When using sidewalks, bicyclists are required to warn pedestrians audibly when passing (verbally or by bell), yield the right-of-way in conflict situations, and travel at a walking speed at driveways and intersections when a motor vehicle is approaching. Remember, that motorists are not expecting bicyclists to approach them at driveways or approaches.
- Do not drink alcohol and ride.

3. **Motorists.** The main goal in educating motorists is to foster a broad range and general public awareness and respect for bicycling. What would amount to a minor fender bender between two motor vehicles could result in serious injury in a bicyclist/motor vehicle crash. Good driving behavior includes:

- Be alert. Watch for other users and sudden behavior changes, especially at intersections.
- Obey all traffic laws. Driving the speed limit and coming to a full stop at red lights creates a safer environment for all.

- Be predictable. Signal your turns well before an intersection. The law requires use of turn signals in advance of intersections and bicyclists depend on turn signals to judge where to be.
- Be patient. Passing bicyclists just before a stop sign or signal creates an atmosphere of unnecessary hostility.
- Do not honk unless necessarily. Bicyclists can see and hear motor vehicles; honking may cause unnecessary alarm.
- Give room. Bicyclists have to react to hazards that a motorist may not see (e.g., glass, storm grates, dogs, car doors).
- Follow and pass at a safe distance.
- Following appropriate intersection etiquette.

B. ENCOURAGEMENT

Bicycle encouragement includes holding community promotional events and providing information such as maps of recommended bicycling routes. Additional recommendations to foster an increase in alternative modes of transportation include:

- Expand the Safe Routes to School program to include more local partnerships.
- Continue development and implementation of innovative and unique education and encouragement programs, campaigns, and events.
- Continue sponsoring special events such as the Growler, USA Pro Cycling Challenge, and Rage in the Sage.
- Foster relationships between non-profits, advocacy, and community groups that will strengthen public-private partnerships to initiate bicycle programs and infrastructure.
- Work with Western State Colorado University on bicycling education, encouragement, and enforcement programs, as well as coordinating on bicycle maps for both on and off campus.
- Expand coordination with local businesses, initiate an incentive program to improve bicycling facilities, and encourage programs that influence more employees to bike to work.
- For all education and encouragement efforts, it is recommended that continued efforts be made to encourage additional demographics to take up bicycling including but not limited to: senior citizens, minorities, business executives, parents of elementary school children, and university students.
- Support national and state programs such as:
    - Bike to Work Month
    - Ride to School Month
- Increase way-finding signage
- Continue holding the City's bike sale.

Cyclists and pedestrians come in all ages, sizes and backgrounds, and have a variety of origins and destinations. Accommodations for children, seniors, tourists should be included in new trail alignments.

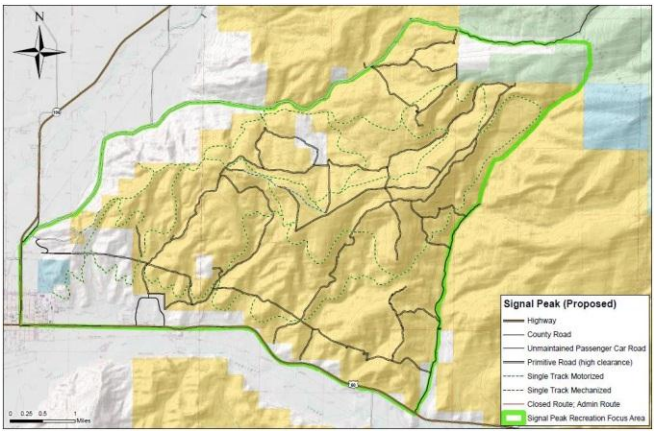
When asked to prioritize methods of promoting non-motorized commuting WSCU students indicated the following prioritization:

1. continuous sidewalks
2. bike lane improvements
3. bicycle racks
4. route signage

Sidewalks, bike lane improvements and route signage have already been addressed. In addition, consideration should be given to adequate bike parking at all destinations. Comb, toast, schoolyard, and other wheel bending racks that provide no support for the bicycle frame are NOT recommended[7]. Some cities have hosted contests for artists to design bicycle racks that double as street art. To encourage children to bicycle more, the City of Loveland, Colorado hosted a competition for children to paint bicycle racks. One way to make the downtown sidewalks more accessible and reduce impediments caused by sandwich board signs, sculptures, and bike racks would be to combine the three into bike rack art that is advertising a business. An option for funding the bicycle racks would be to invite businesses to cost share in the racks. The following bike rack sculptures are good examples:

[7] *Bicycle Parking Guidelines*, Association of Pedestrian and Bicycle Professionals (2002)

C. REGIONAL COORDINATION – SAGE-GROUSE PROTECTION



On January 11, 2013 the Fish and Wildlife Service published Proposed Rules to list the Gunnison Sage Grouse and its Critical Habitat as Endangered, under the *Endangered Species Act*. As a prelude to the proposed listing, the *Candidate Conservation Agreement for the Gunnison sage-grouse, Centrocercus minimus, Gunnison Basin Population (Gunnison CCA)* was adopted by the following agencies.

- Colorado Parks and Wildlife
- Gunnison County
- Saguache County
- U.S. Bureau of Land Management
- U.S. Fish and Wildlife Service
- U.S. Forest Service
- U.S. National Park Service
- U.S. Natural Resources Conservation Service

While the City is not a part of the *Gunnison CCA*, the City's trails system is critical element for recreation access, especially at the VanTuyl Ranch, Hartman Rocks, and the Signal Peak area. Appendix B of the *Gunnison CCA* contains the following statement:

> *Developing a stacked loop trail system* [Signal Peak] *would keep people on designated trails and allow the BLM to successfully close routes—and gain public compliance with the closures— in areas where human presence is undesirable from a wildlife perspective. This may require trail construction or designation in Tier 1 habitat. While the proposed condition includes a greater number of open route miles, increased compliance with closures are expected via well-defined loop systems*

The BLM, Gunnison Trails, Gunnison Valley Properties LLC and the City have been working to ensure this plan is consistent with the directives of the Gunnison CCA for the Signal Peak area. The City will continue to work with agencies to provide recreational functions for the Community.

D. ENFORCEMENT

Enforcement is a very important part of the holistic strategy of educating people on how to bicycle and provide an environment in which they want to bicycle. While it is important to educate citizens about safe biking and driving habits, there must be effective enforcement of the rules of the road.

Enforcement measures should complement the other facets of the bike plan, specifically, the Education component. Education initiatives combined with enforcement measures ensure the success of many programs. It is recommended that implementation of enforcement measures not be done in isolation; but rather, be designed in a comprehensive approach utilizing other major components of the plan such as education and encouragement.

Further recommendations include:

- Disseminate current and appropriate bicycling information to and from local enforcement agencies. This is an important aspect in order to maintain consistent City messaging regarding local ordinances and to bridge the gap of understanding between bicyclists and police officers.
- Continue to work closely with local enforcement agencies to create innovative, pro-active education campaigns including enforcement that foster the safety of bicyclists, pedestrians, and motorists.
- Encourage and coordinate official trainings for local enforcement agencies to ensure all City personnel are knowledgeable of current local, regional, and national bicycle policies and ordinances.
- Review and potentially update enforcement techniques for handling special events such as critical masses and other protests to further bridge the communication gap between bicyclists and local enforcement agencies.
- Promote a constructive process to determine what types of behavior require enforcement agency involvement.
- Explore the creation of a Share the Road Safety Class. The class could be offered as an educational activity or for first-time law violators, whether driving, bicycling, or walking, to educate on specific laws related to bicycle and pedestrian safety.
- Bicycle safety tips and laws flyer.

VI. CONCLUSION

In 2009, 40% of trips in the United States were shorter than two miles and 27% were shorter than one mile.[8] Since bicycling can accommodate trips of up to two miles and most people can walk at least one mile, the opportunity to increase non-motorized transportation in the community is very good; as has been seen with the trails on the VanTuyl Ranch, "build it and they will come."

The citizens of Gunnison are committed to an active lifestyle, including walking and biking to their destinations and taking advantage of recreational opportunities that can be accessed by multi-use trails. This commitment was demonstrated by passage of the sales tax increase to fund the trails system. Unfortunately, the cost of completing the trails system, improving the pedestrian system and maintaining the bikeways, combined with other needs for the pool and ice rink, exceed the sales tax revenue that is available.

The total cost to implement this *Non-Motorized Transportation Plan* will be $4.6 million over fifteen years, plus $13,000 annually for street painting. Implementation will require additional allocations for trails in the capital budget each year. Recognizing the large financial commitment required to fulfill this plan, the goal of the capital phasing is to spread the cost of implementation as evenly as possible over fifteen years, for an average of $310,415 per year.

With so many needs in the City competing for resources, it will be necessary for the City to pursue other funding sources such as grants and donations to fully implement this *Plan*.

Federal Highway Aid Programs[9] are funds that are allocated to the states for distribution to specific projects. Some examples of funding are:

[8] *NHTS, National Household Travel Survey*, U.S. Department of Transportation and Federal Highway Administration, 2001, 2009.
[9] http://www.fhwa.dot.gov/environment/bicycle_pedestrian/overview/bp-broch.cfm

- The **Transportation Enhancement (TE)** program is the best known funding source for bicycle and pedestrian infrastructure improvements.
- **Surface Transportation Program (STP)** funds may be used for either the construction of bicycle transportation facilities and pedestrian walkways, or non-construction projects (such as maps, brochures, and public service announcements) related to safe bicycle use and walking. TEA-21 added "the modification of public sidewalks to comply with the Americans with Disabilities Act" as an activity that is specifically eligible for the use of these funds.
- **Recreational Trails Program** funds may be used for all kinds of trail projects. Of the funds apportioned to a State, 30 percent must be used for motorized trail uses, 30 percent for non-motorized trail uses, and 40 percent for diverse trail uses (any combination).
- **High Priority Projects and Designated Transportation Enhancement Activities** identified by Section 1602 of TEA-21 include numerous bicycle, pedestrian, trail, and traffic calming projects in communities throughout the country.
- **Safe Routes to School (SRTS)** is the newest federally funded program that is 100% dedicated to funding bicycle and pedestrian capital, education, promotion, and enforcement projects

Other Federal Funding Sources:

- Bureau of Land Management Take it Outside Program: http://www.blm.gov/pgdata/content/wo/en/prog/more/Children_and_Nature.html

State Funding Programs/Sources:

- Colorado State Trails: http://www.parks.state.co.us/Trails/Grants/Pages/Grants.aspx
- Great Outdoors Colorado Board: http://www.goco.org/apply-for-a-grant/

Private Funding Programs/Sources:

- American Trails: http://www.americantrails.org/resources/funding/index.html
- Bikes Belong: http://www.bikesbelong.org/grants/apply-for-a-grant/
- Gates Family Foundation: http://www.gatesfamilyfoundation.org/www/gates.php?section=news&p=foundation_news
- International Mountain Biking Association and CLIF Bar Trail Preservation Grants: http://www.imba.com/resources/grants/2011-imba-clif-bar-grants
- Kodak American Greenways Program: http://www.conservationfund.org/kodak_awards
- National Trails Fund: http://www.americanhiking.org/our-work/national-trails-fund/

APPENDICES

APPENDIX 1 COST ESTIMATE FOR PEDESTRIAN FACILITIES

APPENDIX 2 COST ESTIMATE FOR BIKEWAYS

APPENDIX 3 COST ESTIMATE FOR MULTI-USE TRAILS

APPENDIX 4 TOTAL ANNUAL COST OF IMPLEMENTATION

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Construction Cost Estimate for Pedestrian Facilities (Based on 2012 Construction Costs)

Rank	Sidewalk Section	Dimensions						Subgrade Cost ($/sq ft)		Total Subgrade Cost		Concrete Cost ($/cubic yard)		Total Concrete Cost		Form/Finish/Pour		Special Finishes			Total Sidewalk Cost	
		Length (feet)	Width (feet)	Area (sq ft)	Depth (feet)	Area (cubic feet)	Area (cubic yards)	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	$/linear ft	Total Form/Finish/Pour	Item Number	Quantity	Cost	Lower	Upper
1	11th Street - Virginia to Ohio west side	681	8	5,448	0.3	1,634.40	60.53	$2.00	$2.50	$10,896	$13,620	$160	$ 170	$9,685	$10,291	$1.80	$1,226	1 3	2 2	$9,010 $400	**$31,217**	**$34,546**
1	Vulcan Street City Open Space	135	5	675	0.3	202.50	7.50	$2.00	$2.50	$1,350	$1,688	$160	$ 170	$1,200	$1,275	$1.80	$243				**$2,793**	**$3,206**
1	County Road 13 to Spencer	1,443	5	7,215	0.3	2,164.50	80.17	$2.00	$2.50	$14,430	$18,038	$160	$ 170	$12,827	$13,628	$1.80	$2,597				**$29,854**	**$34,263**
1	Arthur - Boulevard to 12th - north side	318	5	1,590	0.3	477.00	17.67	$2.00	$2.50	$3,180	$3,975	$160	$ 170	$2,827	$3,003	$1.80	$572	1 3	2 2	$9,010 $400	**$15,989**	**$16,961**
1	North Colorado 100 block and between Ruby and Escalante - east side	661	5	3,305	0.3	991.50	36.72	$2.00	$2.50	$6,610	$8,263	$160	$ 170	$5,876	$6,243	$1.80	$1,190				**$13,675**	**$15,695**
1	South Teller, east side	1,058	5	5,290	0.3	1,587.00	58.78	$2.00	$2.50	$10,580	$13,225	$160	$ 170	$9,404	$9,992	$1.80	$1,904				**$21,889**	**$25,122**
1	East Tomichi adjacent to Jorgensen Park and McDonalds	1,393	5	6,965	0.3	2,089.50	77.39	$2.00	$2.50	$13,930	$17,413	$160	$ 170	$12,382	$13,156	$1.80	$2,507	2 4	1 1	$16,000 $6,000	**$50,820**	**$55,076**
1	New York from 14th to Wisconsin and Iowa to Teller - north side	1,567	5	7,835	0.3	2,350.50	87.06	$2.00	$2.50	$15,670	$19,588	$160	$ 170	$13,929	$14,799	$1.80	$2,821				**$32,419**	**$37,208**
1	Denver Avenue between Main and Taylor	418	5	2,090	0.3	627.00	23.22	$2.00	$2.50	$4,180	$5,225	$160	$ 170	$3,716	$3,948	$1.80	$752				**$8,648**	**$9,925**
1	Virginia from 8th Street to Spruce - north side	2,060	5	10,300	0.3	3,090.00	114.44	$2.00	$2.50	$20,600	$25,750	$160	$ 170	$18,311	$19,456	$1.80	$3,708				**$42,619**	**$48,914**
1 Total		9,734																		40,820	249,924	280,915
2	11th Street Virginia to Ohio- east side	533	5	2,665	0.3	799.50	29.61	$2.00	$2.50	$5,330	$6,663	$160	$ 170	$4,738	$5,034	$1.80	$959				**$11,027**	**$12,656**
2	West Tomichi from Highway 50 to Emerald Lane	2,918	5	14,590	0.3	4,377.00	162.11	$2.00	$2.50	$29,180	$36,475	$160	$ 170	$25,938	$27,559	$1.80	$5,252				**$60,370**	**$69,286**
2	North Spruce between Tomichi Avenue and Spencer except 200 block - east side	3,133	5	15,665	0.3	4,699.50	174.06	$2.00	$2.50	$31,330	$39,163	$160	$ 170	$27,849	$29,589	$1.80	$5,639				**$64,818**	**$74,391**
2	Hwy 135 after first 100 block to Elizabeth	910	5	4,550	0.3	1,365.00	50.56	$2.00	$2.50	$9,100	$11,375	$160	$ 170	$8,089	$8,594	$1.80	$1,638				**$18,827**	**$21,607**
2	North Boulevard between Tomichi and Spencer East Side	3,009	5	15,045	0.3	4,513.50	167.17	$2.00	$2.50	$30,090	$37,613	$160	$ 170	$26,747	$28,418	$1.80	$5,416				**$62,253**	**$71,447**
2 Total		10,503																		$0	**$217,295**	**$249,388**
3	South Boulevard 100 block and Gunnison and Evans - west side	1,617	5	8,085	0.3	2,425.50	89.83	$2.00	$2.50	$16,170	$20,213	$160	$ 170	$14,373	$15,272	$1.80	$2,911				**$33,454**	**$38,395**
3	Denver Avenue from Main to 11th north side	2,172	5	10,860	0.3	3,258.00	120.67	$2.00	$2.50	$21,720	$27,150	$160	$ 170	$19,307	$20,513	$1.80	$3,910				**$44,936**	**$51,573**
3	Gothic from 11th to Pine on north side	1,549	5	7,745	0.3	2,323.50	86.06	$2.00	$2.50	$15,490	$19,363	$160	$ 170	$13,769	$14,629	$1.80	$2,788				**$32,047**	**$36,780**
3	South Wisconsin from New York to Bidwell	1,483	5	7,415	0.3	2,224.50	82.39	$2.00	$2.50	$14,830	$18,538	$160	$ 170	$13,182	$14,006	$1.80	$2,669				**$30,682**	**$35,213**
3	East Frontage Road from Bidwell to New York in the median	1,462	5	7,310	0.3	2,193.00	81.22	$2.00	$2.50	$14,620	$18,275	$160	$ 170	$12,996	$13,808	$1.80	$2,632				**$30,247**	**$34,714**
3 Total		8,283																		$0	**$171,366**	**$196,675**
4	Georgia Avenue Extension - Main to Aspinall-Wilson Center - north side (Funded by RETA Tax and Gunnison Rising Developer)	2,471	8	19,768	0.3	5,930.40	219.64	$2.00	$2.50	$39,536	$49,420	$160	$ 170	$35,143	$37,340	$1.80	$4,448				**$79,127**	**$91,207**
4 Total		2,471																		$0	**$79,127**	**$91,207**
Grand Total		30,991																			717,712	818,185

Special Finishes		
Item #	Item	Cost (per unit)
1	Solar Powered Pole Mounted Radar Speed Signs	$ 4,505
2	Overhead Beacon (estimated cost)	$ 16,000
3	Signs, poles, mounting brackets	$ 200
4	Move Irrigation System	$ 6,000

Phasing Plan

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	unknown
$ 17,273	$ 17,273														
$ 3,206															
$ 34,263															
	$ 16,961														
	$ 15,695														
		$ 25,122													
		$ 55,076													
			$ 37,208												
			$ 9,925												
				$ 48,914											
54,742	49,929	80,198	47,133	48,914	-	-	-	-	-	-	-	-	-	-	-
					$ 12,656										
					$ 34,643	$ 34,643									
							$ 74,391								
								$ 71,447							
									$ 71,447						
$ -	$ -	$ -	$ -	$ -	$ 47,299	$ 34,643	$ 74,391	$ 71,447	$ 71,447	$ -	$ -	$ -	$ -	$ -	$ -
										$ 38,395					
											$ 51,573				
												$ 36,780			
													$ 35,213		
														$ 34,714	
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 38,395	$ 51,573	$ 36,780	$ 35,213	$ 34,714	$ -
															$ 91,207
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 91,207
54,742	49,929	80,198	47,133	48,914	47,299	34,643	74,391	71,447	71,447	38,395	51,573	36,780	35,213	34,714	91,207

Appendix 2

Cost Estimate for Bikeway Painting and Markings

Item		# Per Year	Total
Linear Foot of Striping	0.065	152,292	$9,899
Bike Lane and Arrow Symbols	$20	128	$2,560
Bike Lane Arrows	$10	4	$40
Bike Lane Stop Symbols	$10	30	$300
Mobilization for Lane Lines	$175	1	$175
Bike Lane Symbol Mobilization	$100	1	$100
Total Pavement Markings			$13,074

Costruction Cost Estimate for Priority Multi-Use Trails (Based on 2011 Construction Costs)

Priority	Trail Name	Length (miles)	Length (feet)	Trail Width (feet)	Area (sq ft)	Trail Construction Cost ($/sq ft)		Total Construction Cost		Total Cost of Crossings		Acquisition Cost		Total Landscaping and Fencing Cost		Total Trail Cost	
						Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	**Lower**	**Upper**
1	5th Street	0.16	843	8	6744	$8.00	$11.00	$53,952	$74,184	$0	$0	$250,000	$287,500	$2,023	$2,529	**$305,975**	**$364,213**
2	3rd Street Connector	0.29	1509	8	12072	$8.00	$11.00	$96,576	$132,792	$0	$0	$0	$0	$3,622	$4,527	**$100,198**	**$137,319**
3	Hwy 135 Trail	1.40	7409	8	59272	$2.00	$2.50	$118,544	$148,180	$896	$1,030	$0	$0	$17,782	$22,227	**$137,222**	**$171,437**
4	Rock Creek	0.42	2233	10	22330	$2.00	$2.50	$44,660	$55,825	$20,000	$23,000	$0	$0	$5,359	$6,699	**$70,019**	**$85,524**
5	University	1.04	5500	10	55000	$2.00	$2.50	$110,000	$137,500	$512	$589	$0	$0	$13,200	$16,500	**$123,712**	**$154,589**
6	Highway Frontage	1.09	5737	8	45896	$2.00	$2.50	$91,792	$114,740	$1,344	$1,546	$0	$0	$15,137	$18,921	**$108,273**	**$135,207**
7	Highway 50 Underpass	0.30	1560	8	12480	$2.00	$2.50	$24,960	$31,200	$90,448	$104,015	$0	$0	$4,464	$5,580	**$119,872**	**$140,795**
8	Gold Basin Road	0.46	2420	6	14520	$2.00	$2.50	$29,040	$36,300	$0	$0	$0	$0	$5,808	$7,260	**$34,848**	**$43,560**
9	Discovery Center	1.49	7864	8	62912	$2.00	$2.50	$125,824	$157,280	$896	$1,030	$0	$0	$60,630	$70,312	**$187,350**	**$228,622**
10	Contour Loop	0.41	2172	6	13032	$2.00	$2.50	$26,064	$32,580	$0	$0	$0	$0	$6,679	$8,349	**$32,743**	**$40,929**
11	Airport Maintenance	1.48	7823	6	46938	$2.00	$2.50	$93,876	$117,345	$612,804	$704,725	$0	$0	$110,331	$125,909	**$817,011**	**$947,979**
12	Gunnison River	1.98	10450	6	62700	$2.00	$2.50	$125,400	$156,750	$81,536	$93,766	$300,000	$345,000	$99,798	$114,950	**$606,734**	**$710,466**
13	Riverwalk Estate	1.01	5316	10	53160	$2.00	$2.50	$106,320	$132,900	$1,024	$1,178	$300,000	$345,000	$30,633	$35,948	**$437,977**	**$515,026**
14	West Gunnison	0.40	2102	8	16816	$2.00	$2.50	$33,632	$42,040	$896	$1,030	$0	$0	$8,262	$9,906	**$42,790**	**$52,976**
15	VanTuyl Ranch Public Access	0.32	1704	8	13632	$2.00	$2.50	$27,264	$34,080	$181,344	$208,546	$0	$0	$27,978	$31,840	**$236,586**	**$274,466**
																$3,361,309	$4,003,108

Crossings

Priority	Trail Name	# of Board-walks	Total Length (feet)	Cost / ft	Cost of Boardwalks		# of Bridges	Total Length (feet)	Cost / ft	Cost of Bridges		# of Misc Crossings	Total Length (feet)	Total Cost of Misc Crossings		Total Cost of all Crossings	
				Lower	Lower	Upper			Lower	Lower	Upper			Lower	Upper	Lower	Upper
1	5th Street	0	0	$300	$0	$0	0	0	$1,000	$0	$0	0	14	$0	$0	$0	$0
2	3rd Street Connector	0	0	$300	$0	$0	0	0	$1,000	$0	$0	0	14	$0	$0	$0	$0
3	Hwy 135 Trail	0	0	$300	$0	$0	0	0	$1,000	$0	$0	2	14	$896	$1,030	$896	$1,030
4	Rock Creek	0	0	$300	$0	$0	1	20	$1,000	$20,000	$23,000	0	14	$0	$0	$20,000	$23,000
5	University	0	0	$300	$0	$0	0	0	$1,000	$0	$0	1	16	$512	$589	$512	$589
6	Highway Frontage	0	0	$300	$0	$0	0	0	$1,000	$0	$0	3	14	$1,344	$1,546	$1,344	$1,546
7	Highway 50 Underpass	1	300	$300	$90,000	$103,500	0	0	$1,000	$0	$0	1	14	$448	$515	$90,448	$104,015
8	Gold Basin Road	0	0	$300	$0	$0	0	0	$1,000	$0	$0	0	12	$0	$0	$0	$0
9	Discovery Center	0	0	$300	$0	$0	0	0	$1,000	$0	$0	2	14	$896	$1,030	$896	$1,030
10	Contour Loop	0	0	$300	$0	$0	0	0	$1,000	$0	$0	0	12	$0	$0	$0	$0
11	Airport Maintenance	5	1315	$300	$394,500	$453,675	5	216	$1,000	$216,000	$248,400	6	12	$2,304	$2,650	$612,804	$704,725
12	Gunnison River	0	0	$300	$0	$0	2	80	$1,000	$80,000	$92,000	4	12	$1,536	$1,766	$81,536	$93,766
13	Riverwalk Estate	0	0	$300	$0	$0	0	0	$1,000	$0	$0	2	16	$1,024	$1,178	$1,024	$1,178
14	West Gunnison	0	0	$300	$0	$0	0	0	$1,000	$0	$0	2	14	$896	$1,030	$896	$1,030
15	VanTuyl Ranch Public Access	0	0	$300	$0	$0	1	180	$1,000	$180,000	$207,000	3	14	$1,344	$1,546	$181,344	$208,546

Landscaping

Priority	Trail Name	Landscape Length (feet)	Width of Landscape Area (ft)	Landscape Area (sq ft)	Landscaping Cost ($/sq ft)		Total Landscaping Cost		Fencing Length (feet)	Fencing Cost ($/foot)		Total Fencing Cost		Total Landscaping and Fencing Cost	
					Lower	Upper	Lower	Upper		Lower	Upper	Lower	Upper	Lower	Upper
1	5th Street	843	10	8430	$0.24	$0.30	$2,023	$2,529	0	$7.15	$8.00	$0	$0	$2,023	$2,529
2	3rd Street Connector	1509	10	15090	$0.24	$0.30	$3,622	$4,527	0	$7.15	$8.00	$0	$0	$3,622	$4,527
3	Hwy 135 Trail	7409	10	74090	$0.24	$0.30	$17,782	$22,227	0	$7.15	$8.00	$0	$0	$17,782	$22,227
4	Rock Creek	2233	10	22330	$0.24	$0.30	$5,359	$6,699	0	$7.15	$8.00	$0	$0	$5,359	$6,699
5	University	5500	10	55000	$0.24	$0.30	$13,200	$16,500	0	$7.15	$8.00	$0	$0	$13,200	$16,500
6	Highway Frontage	6307	10	63070	$0.24	$0.30	$15,137	$18,921	0	$7.15	$8.00	$0	$0	$15,137	$18,921
7	Highway 50 Underpass	1860	10	18600	$0.24	$0.30	$4,464	$5,580	0	$7.15	$8.00	$0	$0	$4,464	$5,580
8	Gold Basin Road	2420	10	24200	$0.24	$0.30	$5,808	$7,260	0	$7.15	$8.00	$0	$0	$5,808	$7,260
9	Discovery Center	7864	10	78640	$0.24	$0.30	$18,874	$23,592	5840	$7.15	$8.00	$41,756	$46,720	$60,630	$70,312
10	Contour Loop	2783	10	27830	$0.24	$0.30	$6,679	$8,349	0	$7.15	$8.00	$0	$0	$6,679	$8,349
11	Airport Maintenance	7823	10	78230	$0.24	$0.30	$18,775	$23,469	12805	$7.15	$8.00	$91,556	$102,440	$110,331	$125,909
12	Gunnison River	10450	10	104500	$0.24	$0.30	$25,080	$31,350	10450	$7.15	$8.00	$74,718	$83,600	$99,798	$114,950
13	Riverwalk Estate	5316	10	53160	$0.24	$0.30	$12,758	$15,948	2500	$7.15	$8.00	$17,875	$20,000	$30,633	$35,948
14	West Gunnison	2102	10	21020	$0.24	$0.30	$5,045	$6,306	450	$7.15	$8.00	$3,218	$3,600	$8,262	$9,906
15	VanTuyl Ranch Public Access	1704	10	17040	$0.24	$0.30	$4,090	$5,112	3341	$7.15	$8.00	$23,888	$26,728	$27,978	$31,840

Construction Cost Estimates

Road Base with Crusher Fine Surface = $2.00 to $2.50 per Square Foot

Concrete Surface = $8.00 to $11.00 per Square Foot

Resurface with Crusher Fine = $1.50 to $2.00 per Square Foot

Appendix 3

Costruction Cost Estimate for Priority Multi-Use Trails (Based on 2011 Construction Costs)

Priority	Trail Name	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Total
1	5th Street	$364,213												$ 364,213
2	3rd Street Connector		$137,319											$ 137,319
3	Hwy 135 Trail		$171,437											$ 171,437
4	Rock Creek		$85,524											$ 85,524
5	University			$154,589										$ 154,589
6	Highway Frontage				$135,207									$ 135,207
7	Highway 50 Underpass					$140,795								$ 140,795
8	Gold Basin Road					$43,560								$ 43,560
9	Discovery Center						$228,622							$ 228,622
10	Contour Loop							$40,929						$ 40,929
11	Airport Maintenance							$ 473,989	$473,989					$ 947,979
12	Gunnison River									$355,233	$355,233			$ 710,466
13	Riverwalk Estate											$515,026		$ 515,026
14	West Gunnison											$52,976		$ 52,976
15	VanTuyl Ranch Public Access												$274,466	$ 274,466
		$364,213	$394,280	$154,589	$135,207	$184,355	$228,622	$514,918	$473,989	$355,233	$355,233	$568,002	$274,466	$4,003,108

Total Estimated Annual Cost of Implementation

Appendix 4

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
Sidewalks	$ 54,742	$ 49,929	$ 80,198	$ 47,133	$ 48,914	$ 47,299	$ 34,643	$ 74,391	$ 71,447	$ 71,447	$ 38,395	$ 51,573	$ 36,780	$ 35,213	$ 34,714
Multi-Use Trails	$ 364,213	$ 394,280	$ 154,589	$ 135,207	$ 184,355	$ 228,622	$ 514,918	$ 473,989	$ 355,233	$ 355,233	$ 568,002	$ 274,466			
Total Pavement Markings	$ 13,074	$ 13,074	$ 13,074	$ 13,074	$ 13,074	$ 13,074	$ 13,074	$ 13,074	$ 13,074	$ 13,074	$ 13,074	$ 13,074	$ 13,074	$ 13,074	$ 13,074
Total Annual Cost	$ 432,029	$ 457,283	$ 80,198	$ 195,413	$ 246,343	$ 288,995	$ 562,635	$ 561,455	$ 439,754	$ 439,754	$ 619,471	$ 339,113	$ 49,854	$ 48,287	$ 47,788
Sales Tax Commitment	$100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 49,854	$ 48,287	$ 47,788
Additional Appropriation Needed	$ 332,029	$ 357,283	$ (19,802)	$ 95,413	$ 146,343	$ 188,995	$ 462,635	$ 461,455	$ 339,754	$ 339,754	$ 519,471	$ 239,113			