Adopted By:

Yellowstone County Planning Board  
May 11, 2004

Billings City Council  
May 24, 2004

Yellowstone County Commissioners  
June 1, 2004

Transportation Policy Coordinating Committee  
June 30, 2004
EXECUTIVE SUMMARY

Over the last decade, non-motorized transportation has become an increasingly important component of progressive growing communities like Billings and Yellowstone County. Increased levels of bicycling and walking result in significant benefits in terms of health and physical fitness, the environment, and transportation-related effects. Bicycle and pedestrian facilities are also often an expression of community pride and character, and in many cases a means of preserving the natural and historical resources of a region.

It is important for Billings and Yellowstone County to have an adopted plan for non-motorized forms of transportation in order to be eligible for federal funds, as well as to avoid missed opportunities for trail and bikeway development. Since the adoption of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991, and subsequent transportation bills (TEA-21), the federal government has legitimized walking and bicycling as transportation modes through higher levels of funding than ever before. Federal policy requires that communities develop and adopt a non-motorized element of their overall community transportation plan in order to be eligible for this funding. As the Planning Board, City Council, County Commission, and other bodies consider new land developments or public infrastructure projects, there is often only one opportunity to choose a solution that enhances non-motorized transportation – and that opportunity shouldn’t be missed.

_BikeNet_, the original non-motorized transportation plan for the City of Billings, was adopted in 1994. When this took place, Billings took a decisive first step toward achieving a community vision of a city where quality of life is paramount. This vision included implementing a system of trails and bikeways that would invite Billings’ citizens to get off their couches and out of their cars. It also included a set of recommendations that addressed policies, land use, education, enforcement and design. _BikeNet_ was truly a pioneering document for the Billings community, educating us on the importance of trails and leaving a lasting legacy of interest groups and trails that have set the stage for future development of the entire network. _Heritage Trail_ recognizes the work that was developed through the _BikeNet Plan_ and builds on a community-based planning process that had public participation and input as its cornerstone. _Heritage Trail_ builds on the foundation provided by _BikeNet_, and enhances it in a number of important ways:

**NEW IDENTITY.** The planning team explored opportunities for the trail system to be not just a functional and recreational system but also one that offered interpretive opportunities. As trail corridors were identified and evaluated, it became evident that there were numerous cultural and historical places and events that offered a look back to our rich “Heritage” that could be identified, accessed and interpreted. This idea grew into the driving force behind the new identity of the trails system – _Heritage Trail_.

**EXPANDED & UPDATED.** _Heritage Trail_ expands the concept of _BikeNet_ to embrace a larger constituency of users. No longer just a bike plan, _Heritage Trail_ embraces walkers and runners,
in-line skaters and skateboarders, equestrians and others. As a plan for the “Greater Billings Area,” Heritage Trail includes links to outlying areas including Laurel, the South Hills, and Lockwood. In addition, Heritage Trail includes specific policy recommendations that will move the community closer to achieving its vision of a cohesive system of linked trails and bikeways. More than just a way to get from A to B, Heritage Trail also includes an interpretive component that will become a community treasure. The Heritage Trail Plan updates the facility classifications that were included in the BikeNet Plan to be consistent with accepted national standards. While Heritage Trail stands alone as a plan for trails and bikeways in the Billings area, by reference it is part of the 2003 Growth Policy and will serve as the non-motorized component of the Billings Urban Area 2000 Transportation Plan.

PUBLIC INVOLVEMENT. Heritage Trail is the culmination of a process that involved many people and organizations. It was developed under the authority of the Yellowstone County Planning Board and funded by a transportation planning grant from the Federal Highway Administration. A team of consultants made up of planners, engineers, and landscape architects conducted the planning process. A project steering committee made up of City representatives from various departments and the City Council provided regular oversight of the consultant team. The public was involved through a series of open public meetings and numerous interviews with individuals and interest groups.

AMENITIES. Site amenities and landscaping offer a wonderful opportunity to enhance the character and identity of the Heritage Trail. Often overlooked, site amenities can offer trail users points of rest, interpretation, and contemplation resulting in a positive trail experience while providing continuity throughout the trail system. Landscaping also plays an important role in the overall character and feel of a trail. The Heritage Trail Plan suggests appropriate site amenities and landscaping that fit the character that is unique to the Yellowstone Valley.

PRIORITIZATION & IMPLEMENTATION. Ideally, Heritage Trail would be implemented in its entirety all at once. The realities of funding availability, however, make it necessary to consider the plan as a combination of many projects, both small and large, which ultimately will result in total implementation of Heritage Trail. As the process of developing the Heritage Trail Plan has evolved, an innovative method for prioritizing potential projects was developed. Many bicycle and pedestrian plans have defined criteria for comparison of proposed projects, but very few have developed a system of prioritization based on objective data and calculations. For the City of Billings, two separate prioritization methods were developed, one for proposed primary on-street bikeways and another for proposed multi-use trails. The goal throughout the development of these methods was to produce a ranking methodology that City/County staff could use as an on-going tool to compare one potential project to another. The criteria used for prioritizing on-street facilities were route continuity, non-motorized travel demand, bicycle compatibility index, and public opinion. The criteria that were used for prioritizing multi-use trails were safety, connectivity/accessibility, route continuity, aesthetics/recreational value, non-motorized travel demand, and public opinion.
Heritage Trail is a vision for Billings’ future, and this plan presents a strategy for implementing that vision over the next 10 to 20 years. It should serve as a guide for local governing bodies and City staff as they make decisions, set policy, and prioritize projects and their funding. This document is not intended to be a capital improvements plan, and it is not intended to provide an engineering design or even specific trail alignments. Heritage Trail, most importantly, should be a living document that adapts and changes along with the needs of the community. The success of the Heritage Trail system is dependent on many different factors. Perhaps the most important factor is broad-based community support from both public and private interests all working together to achieve a common vision. Even with the support of the majority, however, a well-conceived plan backed by real policies and programs is required to ensure implementation.
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ACKNOWLEDGEMENTS

From the planning team, thank you to everyone that contributed to the development of the *Heritage Trail Plan*. Many individuals and organizations gave time and other resources to this effort and all are appreciated. Many of the individuals and organizations that participated are listed below.

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1.0 INTRODUCTION

Over the last decade, non-motorized transportation has become an increasingly important component of progressive growing communities across America. Billings, like others, has seen that building more and wider roads to alleviate traffic congestion is a never-ending cycle. Montanans also are not immune to the degenerative effects of the sedentary lifestyle that seems to have become an American epidemic.

In 1994 Billings adopted BikeNet, a community-wide non-motorized plan. When it adopted BikeNet, Billings took a decisive first step toward achieving a community vision of a city where quality of life is paramount. This vision included implementing a system of trails, paths and bikeways that would invite Billings’ citizens to get off their couches and out of their cars. It also included a set of recommendations that addressed policies, land use, education, enforcement and design.

Since the adoption of BikeNet, significant achievements have been realized. The City hired an Alternate Modes Coordinator to oversee the implementation of BikeNet. Over 10 miles of paved trails have been constructed, and volunteer groups have improved many more miles of natural and soft surface trails along the Yellowstone River. New streets have been constructed with marked bike lanes, and the community has successfully supported the Ales for Trails Festival, which is now an annual event in Downtown Billings to raise money and awareness for trails.

As the number of available trail miles has increased, trail usage and community awareness have increased as well. This has raised new and significant issues related to trail development. How do trails fit within areas of existing development? What are the responsibilities of land developers to accommodate and construct trails in areas of new development? And who pays for trails and bikeways?

NATIONAL POLICY ON BICYCLES AND PEDESTRIANS

Passed in 1991, the Intermodal Surface Transportation Efficiency Act (ISTEA), expressly required Metropolitan Planning Organizations (MPO) across the nation to consider bicyclists in their long-range planning. Recognizing that bicycling and walking play an important role in creating a balanced transportation system, ISTEA set up a new framework for planning, programming, and funding transportation projects. A key provision of ISTEA was a 10% funding set aside from the Surface Transportation Program specifically to pay for “transportation enhancements,” including bicycle and pedestrian facilities. ISTEA also opened up several other funding programs previously unavailable to bicycle and pedestrian facilities. On a state and local level, ISTEA required that all states and MPOs prepare long range transportation plans that include bicycling and walking components, and that each state appoint a bicycle and pedestrian coordinator.
The reauthorization of ISTEA, called the *Transportation Equity Act for the 21st Century* (TEA-21), was completed in 1998. TEA-21 continued and improved upon the framework started under ISTEA, mandating that pedestrian and bicycle considerations be made an integral part of the transportation planning process. TEA-21 expires in 2003; the reauthorization of TEA-21, which is now being dubbed the *Safe, Accountable, Flexible and Efficient Transportation Equity Act of 2003* (SAFETEA), should be concluded in 2004.

It is now Federal transportation policy to promote the increased use and safety of bicycling and walking as viable modes of transportation. In 1994 the U.S. Department of Transportation published the *National Bicycling and Walking Study*, which translated this policy into two specific goals: “(1) to double the percentage of total trips made by bicycling and walking from 7.9% to 15.8% of all travel trips; and (2) to simultaneously reduce by 10% the number of bicyclists and pedestrians killed or injured in traffic crashes.” (*National Bicycling and Walking Study: Five Year Status Report*, US Dept. of Transportation April 22, 1999.)

**STATE AND LOCAL POLICY**

As a result of the ISTEA and TEA-21 mandates, state and local transportation plans have over the past decade become more inclusive of bicycles and pedestrians as viable transportation modes. The *Billings Urban Area 2000 Transportation Plan* provides support to development of bicycle and pedestrian facilities through many of its stated **Community Transportation Guiding Principles**, including the following:

3. The physical organization of the City will be supported by a framework of transportation alternatives that maximizes access and mobility throughout the City, while **reducing dependence on the private automobile.**

6. The City will provide a balanced transportation system recognizing the needs of the wide variety of transit users, drivers, **pedestrians, bicyclists** and all users of the transportation system.

7. Billings will develop and maintain a high quality transportation system incorporating many modes of travel and related systems, including:
   - Roadway network
   - Public parking
   - Transit and paratransit systems
   - **Pedestrian and bikeway facilities**
   - Freight movement – rail and truck

11. Street standards and site planning requirements for development and redevelopment will ensure **direct accessibility by pedestrians, bicyclists**, transit vehicles and cars.

15. **The City will implement the BikeNet program, encourage bicycling as a viable alternative to automobile use for all trip purposes, and ensure safe and convenient facilities with good access to residential neighborhoods and major activity centers.**
25. Billings’ transportation system will enable **safe and efficient travel for non-motorized modes** including sidewalks, safe school routes and bicycle networks.

29. Billings will ensure that the transportation system is **sensitive to and mitigates impacts to the environment**, especially in the areas of air quality and noise.

**Subdivision and Zoning Policy**

Land use and development patterns have a significant impact on mode choice. Development patterns that proliferated during the latter half of the twentieth century included complete segregation of land uses with no intermixing of commercial and residential properties. During this period and in most cases continuing today, residential neighborhood design often includes many cul-de-sacs connected by uninterrupted neighborhood collectors. These types of automobile-centric land use policies and development practices have made alternate modes of transportation – walking, cycling, and public transportation – unrealistic options for most people.

**Dolan vs. Tigard.** Local governments, and Billings is no exception, often acquire rights-of-way and finance public improvements by exaction of land or cash from developers. This approach, which can be used for trail development as well, has been upheld by the courts as being within the power of local governments. However, the Supreme Court of the United States ruled in *Dolan vs. City of Tigard*, 114 S.Ct. 2309 (1994), that the Government cannot force some people to bear a burden for public improvements that should rightfully be borne by the public as a whole. The Court held that local government could exact property and improvements as long as it demonstrated a “roughly proportional” quantitative relationship between the dedication requirements and the increased demands from the proposed development.

**Purpose of Heritage Trail**

*Heritage Trail* is the non-motorized transportation element of the *Billings Urban Area 2000 Transportation Plan*, and serves to update and supersede the former plan known as *BikeNet*. *Heritage Trail* builds on the foundation provided by *BikeNet*, and enhances it in a number of important ways:

- **Larger User Group** – *Heritage Trail* expands the concept of *BikeNet* to embrace a larger constituency of users. No longer just a bike plan, *Heritage Trail* embraces walkers and runners, in-line skaters and skateboarders, equestrians and others.

- **Larger Area** – As a plan for the “Greater Billings Area,” *Heritage Trail* includes links to outlying areas including Laurel, the South Hills, and Lockwood.
- **Stronger Policy** – *Heritage Trail* includes specific policy recommendations that will move the community closer to achieving its vision of a cohesive system of linked trails and bikeways.

- **Celebrates Billings’ Heritage** – More than just a way to get from A to B, *Heritage Trail* includes an interpretive component that will become a community treasure.

### Why prepare a plan for non-motorized forms of transportation?

- **To Avoid Missed Opportunities**
  This plan will provide community decision-makers with a tool that will inform their decisions so that opportunities are not missed. It’s important that decision-makers not have to face important issues and make critical choices by the seat of their pants, but be able to rely on a well-conceived plan based on extensive community involvement. As the Planning Board, City Council, County Commission, and other bodies consider new land developments or public infrastructure projects, there is often only one opportunity to choose a solution that enhances non-motorized transportation – and that opportunity shouldn’t be missed.

- **To be Eligible for Federal Funds**
  Since the adoption of the *Intermodal Surface Transportation Efficiency Act* (ISTEA) in 1991, and subsequent transportation bills (TEA-21), the federal government has legitimized walking and bicycling as transportation modes through higher levels of funding than ever before seen for “transportation enhancements.” Federal policy requires that communities develop and adopt a non-motorized element of their overall community transportation plan in order to be eligible for this funding.

### How will the *Heritage Trail* Plan be used?

*Heritage Trail* is a vision for Billings’ future, and this plan presents a strategy for implementing that vision over the next 10 to 20 years. It should serve as a guide for local governing bodies and City staff as they make decisions, set policy, and prioritize projects and their funding. This document is not intended to be a capital improvements plan, and it is not intended to provide an engineering design or even specific trail alignments. *Heritage Trail*, most importantly, should be a living document that adapts and changes along with the needs of the community.

### How does *Heritage Trail* relate to other City plans?

While *Heritage Trail* stands alone as a plan for trails and bikeways in the Billings area, by reference it is part of the 2003 *Growth Policy* and will serve as the non-motorized component of the *Billings Urban Area 2000 Transportation Plan*. 
**Who Developed Heritage Trail?**

*Heritage Trail* is the culmination of a process that involved many people and organizations. It was developed under the authority of the Yellowstone County Planning Board and funded by a transportation planning grant from the Federal Highway Administration. A team of consultants made up of planners, engineers, and landscape architects conducted the planning process. A project steering committee made up of City representatives from various departments and the City Council provided regular oversight of the consultant team. The public was involved through a series of open public meetings and numerous interviews with individuals and interest groups.

**When will Heritage Trail be implemented?**

The implementation of *Heritage Trail* has already begun with the development and adoption of this plan. However, the key to making it a sustainable reality is persistent and coordinated efforts by public and private interests. It is critically important that public and private interests both recognize the long-term benefits of a system of trails and bikeways to the health of Billings’ citizens and its economy. Only then will development of trails and bikeways become forethought and not an afterthought.
2.0 **Benefits of Bicycle and Pedestrian Facilities**

Increased levels of bicycling and walking would result in significant benefits in terms of health and physical fitness, the environment, and transportation-related effects. Bicycle and pedestrian facilities are also often an expression of community pride and character, and in many cases a means of preserving the natural and historical resources of a region. The implications of this trend are also tremendously positive for the general livability of the community. The following sections provide a more detailed discussion and some quantitative insight into the various benefits resulting from the implementation of bicycle and pedestrian facilities.

2.1 **Social Benefits**

Bicycle and pedestrian facilities enhance the quality-of-life of communities by providing endless opportunities for outdoor recreation. Though less concretely established than some of the other benefits, trails and greenways help promote an increase in social activity.

Trails reconnect us to our neighbors by creating a common ground for social interaction. They offer an opportunity for people to get out of their homes and cars and contribute to neighborhood socialization and community unity. They also reconnect us to our families by providing safe and healthy recreation areas for children, parents and grandparents.

Trails have the potential to help communities build pride by ensuring that their neighborhoods are good places to live, so that children can safely walk or bike to a park or school. Face-to-face interaction with neighbors has been shown to increase a sense of community and reduce crime because neighbors who know each other are more likely to look out for each other and each other’s children.

2.2 **Historical & Cultural Benefits**

Trails provide a window into our history and culture by connecting people to the past. They often provide access to and incorporate significant community features, such as historic bridges, buildings, and battlefields. Trails provide a wealth of opportunities for people to learn about the history of people and places.
They have the power to connect us to our heritage by preserving historic places and by providing access to them. They can help provide people with an understanding of the enormity of past events, such as those pertaining to Native Americans. With the connection of places of significant historical interest, opportunities exist for interpretive signs highlighting historic events. Trails are capable of drawing the public to historic sites and are an important part of preserving the past for future generations.

2.3 Environmental Benefits

Replacing automobile trips with non-motorized and non-polluting bicycling or walking trips has the potential to yield significant environmental benefits. Increased use of non-motorized transportation modes can help communities reduce their levels of carbon monoxide and other pollutants. The greatest environmental benefit of bicycling and walking is that they bypass the fossil fuel system to which the American economy has become accustomed.

Bicycle riding and walking do not contribute to the environmental damage inherent in extracting, transporting, processing, and burning petroleum or other fossil fuels. Thus, to the extent that bicycling and walking displace trips that otherwise would have involved use of motor vehicles, they enable society to reduce consumption of fossil fuels and the associated pollution.

Automotive transportation is the largest single source of air pollution in the United States. Improving and establishing walkways and trails that connect neighborhoods will create an environment that decreases the number of automobile trips. According to a recent study, a family that walks two miles a day instead of driving will, in one year, prevent 730 pounds of carbon dioxide from entering the atmosphere. Trails and greenways also improve air quality by protecting the trees and other plants that naturally create oxygen and filter out air pollutants.
2.4 Transportation Benefits

The transportation benefits associated with facilitating non-motorized trips result in a reduction in congestion and lost time. Americans spend tens of millions of dollars purchasing, operating and maintaining automobiles. Road construction and maintenance, oil production, and environmental damage add to the tab. The average car costs about $3,000 per year to operate plus up to $2,000 a year on gasoline. Yet studies indicate that 50 percent of all car excursions are less than three miles, a distance that could easily be walked or biked.

Efforts to facilitate bicycling and walking can result in more general transportation benefits besides offering additional travel options for those who are unable to drive or who choose not to drive. Roadway improvements to accommodate bicycles, such as the addition of paved shoulders, have been shown to reduce the frequency of certain types of motor vehicle crashes. Measures to reduce vehicle speeds, which can encourage greater pedestrian activity in residential or downtown shopping and business areas, also have a positive impact on motor vehicle safety.

Regarding trails as both transportation and recreational facilities encourages the merging of exercise with our daily routine, making it easier to stay healthy and fit. According to statistics derived from the 1995 National Personal Transportation Survey (NPTS), 43 percent of cycling trips are made for purposes other than just recreation (such as work, shopping, school, and personal business). The same survey showed that cycling on an off-road trail facility is generally perceived as safer than riding on sidewalks or streets without bike lanes.

Surveys continue to indicate that as more safe facilities are made available, more people would be willing to use non-motorized transportation for many daily trips that would otherwise be made by car. Trails and on-street bicycle lanes are key elements of this expansion of transportation choices. Various studies have reported that a large percentage of the population would be willing to switch to alternate modes of transportation if adequate facilities were provided.

Many public agencies, as well as prominent advocacy groups, are leading the charge for smarter community design through better choices in transportation spending. One recurring theme is the need for transit-based growth, featuring transit stations that are fully integrated into their surroundings and accessible to as many people as possible. One of the ways to accomplish this integration and accessibility is through incorporation of trails as “feeder
Many environmentalists and urban planners agree that regional transportation systems that rely exclusively on the automobile are increasingly detrimental to both quality of life and community budgets.

### 2.5 Health Benefits

Trails have been built and maintained in this country mainly for reasons related to transportation and recreation. Rarely, however, have people questioned the importance of trails to our health and well-being. These facilities offer adults and children alike the opportunity to integrate moderate exercise with daily trips to work or school. There is strong scientific evidence that regular physical activity promotes health and reduces risk of many diseases and premature death. Such moderate exercise has been proven to reduce the risk of developing coronary heart disease, diabetes, obesity, and several other medical conditions. Public health officials and community planners throughout the country are rethinking our vehicle-friendly communities and seeking to design developments and retrofit established communities to encourage outdoor physical activity.

According to the Surgeon General’s Report on Physical Activity and Health, 60% of Americans are not regularly active and another 25% are not active at all. This report also suggests that creating safe places for people to bicycle and walk are critical to persuading inactive people to become more active. Individuals must choose to exercise, but communities can make that choice easier by providing attractive and safe networks of sidewalks, bikeways and trails.

Dr. William Dietz, director of the Division of Nutrition and Physical Activity for the Centers for Disease Control and Prevention in Atlanta, said most communities designed since World War II are unfriendly to pedestrians and cyclists. “A quarter of all trips taken by Americans are under a mile, but 75 percent of those trips are done by car,” he noted.

Trails create healthy recreation and transportation opportunities by providing people of all ages with attractive, safe, accessible and low or no cost places to bike, walk, hike, jog or in-line skate. In doing so, they make it easier for people to engage in physical activity. They provide natural, scenic areas that cause people to actually want to go outdoors and be physically active. In this age of expensive indoor gyms and health clubs, trails offer much more cost-effective places to exercise.

Bicycling and walking provide additional benefits related to physical health and quality of life by reducing health care costs. According to a National Parks Service study on the Economic
Impacts of Protecting Rivers, Trails, Greenway Corridors, people who exercise regularly have 14 percent lower claims against their medical insurance and spend 30 percent fewer days in the hospital.

In a recent report on physical activity and health, the U.S. Department of Health and Human Services (HHS) addressed the national public health crisis stemming from physical inactivity. According to HHS, “approximately 300,000 U.S. deaths a year are associated with obesity and overweight.” The Surgeon General recommends moderate physical activity – 30 minutes a day, five days a week – to combat the threat of diseases including high blood pressure, coronary heart disease, Type 2 diabetes, certain forms of cancer and depression. With the Surgeon General and HHS, the White House recognizes the need for physical activity and launched the “Healthier U.S. Initiative” fitness campaign designed to educate and inspire Americans to be active. Trails figure prominently in the fight against obesity and inactivity.

The National Center for Chronic Disease Prevention and Health Promotion (CDC) recognizes the positive impact that trails can have on the overall health of their users. There is now scientific evidence that providing access to places for physical activity increases the level of physical activity in a community. The Task Force on Community Preventive Services strongly recommends creating or enhancing access to trails and other places for physical activity. However, just building trails is not enough, the Task Force highlighted that communication strategies and outreach activities that promote using trails and facilities are also recommended. A typical study of an intervention to create or enhance access to places for physical activity reports a 25% increase in physical activity levels.

Another overlap between transportation and health stems from the mode that children use to get to school. Today, about 10 percent of kids between the ages of 5 and 15 walk to school. This is down from more than 50 percent in the 1960s. This decline is perhaps one reason why obesity rates in children have risen dramatically in the last twenty years. From the mid-1970s to the mid-1990s, the percentage of trips that children made on foot declined...
from about 15 percent to 10 percent. During the same period, the percentage of children who were considered overweight rose from 6 percent to 14 percent.

Individuals must choose to exercise, but communities can make that choice easier. Lack of time or access to convenient outlets for healthy transportation and recreation opportunities are reasons commonly cited as barriers to regular exercise. Communities can use trails as a tool to help make exercise more convenient and neighborhoods more exercise-friendly. According to the results of a study in Indiana, for all seven trails analyzed, at least 70 percent of users indicated that their participation in some form of physical activity has increased due to the trail.

### 2.6 Economic Benefits

An organized trail system is a desirable amenity and can contribute to the economic vitality of the community. Revenue generated from trail-related recreation and activities provide substantial income and employment opportunities. Well-managed trails running through communities can foster substantial, sustainable economic activity through business development and tourism. Trails encourage the establishment of “clean” industries and businesses such as cafes, bike shops, and bed & breakfasts in communities along the trail. Increased property values and tourism and recreation-related spending on items such as bicycles, in-line skates and lodging are just a few of the ways trails have a positive impact on local economies. The economy can also benefit from retention of businesses due to increased quality of life for employees that lead to reduced employee turnover. Trail systems also benefit communities by reducing costs related to transportation. According to a National Bicycling and Walking Study, the American public saves from 5 to 22 cents for every mile not traveled in an automobile. This savings is attributable to reduced pollution, oil import costs, and costs due to congestion, such as lost wages and lost time on the job.

[www.k12s.phast.umass.edu/~spac/eco.html](http://www.k12s.phast.umass.edu/~spac/eco.html)
BUSINESS ATTRACTION

Bicycle and pedestrian facilities also attract high-quality businesses by providing commuting options for employees and scenic places for stress-free strolls at lunchtime. Choosing a location that will help attract and retain key personnel has been cited as the number one factor in selecting office locations. Corporate real estate executives agree that employee “quality of life” issues are as important as cost when deciding where to locate a new office building. A National Park Service study revealed that the total economic impact of a trail involves a combination of newly created trail-related jobs (construction and maintenance) and the expansion of existing businesses related to travel, equipment, clothes, food, souvenirs, and maps. The economic potential is astounding considering there are millions of trail users per year.

PROPERTY VALUE

Trails are becoming common in many residential neighborhoods across the United States. Development plans for homes, apartments, and townhouses often include footpaths to enhance recreational opportunities and property values. Real estate agents regard urban trails as an amenity that helps to attract buyers and to sell property. Trails are considered lifestyle enhancements and are usually included in the sales package for a property.

Homebuyers have begun to recognize the benefits of bicycle and pedestrian facilities and are showing a preference for properties close to those facilities. According to a 1994 study done by American Lives, “walking and biking paths” ranked third among 39 features identified by homebuyers as important factors in their home buying decisions. A nearby trail not only makes properties easier to sell, but has also been proven to increase the value of those properties.
According to a brochure put out by the Florida Department of Environmental Protection, people who own property bordering a proposed greenway sometimes are concerned that development of a trail will lower their property values and lead to increased crime. But studies consistently show that trails often increase the value of property near a greenway. The studies that support these statements are the 1995 study of greenways in the metropolitan Denver area, the 1987 study of the Burke-Gilman Trail in Seattle, the 1994 study of two Minnesota rail-trails, and the 1992 National Park Service study that looked at three trails in Florida, Iowa and northern California.

According to the study done in the Denver metropolitan area on the effects of trails and greenways on property values, 35 percent of residents believed the existence of the trail near their home would increase the selling price and 46 percent felt it would make their home easier to sell or rent. As part of the same study, a survey of real estate agents in the area found that 82 percent used the trail as a selling point and that 91 percent felt that homes located next to the trail would be easier to sell than homes not located next to the trail. None of the real estate agents surveyed felt that the trail would have a negative effect on the value of the property. The results from the survey clearly point to the trail being an aid in selling a home, rather than a detriment. Trails are often considered an amenity or quality of life enhancement in reference to purchasing a home.

Studies in other regions have validated the findings of the Denver study. For example, a similar study was performed in Seattle, Washington on the Burke-Gilman Trail with the objective of determining the effect that a bicycle and pedestrian trail has had on property values and crime rates on property near and adjacent to the trail. The study was conducted in response to property owners concerns, in a different area of town, over a new trail development in their neighborhood. Results of the survey showed that property near the trail is significantly easier to sell and, according to real estate agents, sells for an average of six percent more as a result of its proximity to the trail. The conclusion of this study is that this particular rail-trail is an amenity that helps sell homes and increases property values. The study also found that the trail has had little, if any, effect on crime and vandalism experienced by adjacent property owners, and that there is a very high level of public support and acceptance of the trail.

In another study of two rail-trails in Minnesota, 87 percent of landowners surveyed believed the trails did not have a negative impact on the value of their property. Overall, studies generally conclude that the average value of a home adjacent to a trail would be considerably higher than the same property not adjacent to a trail.
The National Park Service and Pennsylvania University performed an economic analysis of three rail-trails in Iowa, Florida and California. Landowners along all three trails reported that their proximity to the trails had not adversely affected the desirability or values of their properties and the majority of owners felt the presence of the trail would make their properties easier to sell and at increased values. The number of real estate professionals interviewed who felt the trails increased property values outnumbered those reporting decreased values. In addition, results of this analysis showed that the average overall economic activity associated with these three trails was $1.5 million annually.

Another analysis was performed on the economic impact of a rail-trail in Ashland, Maryland. Several developers with projects in the area felt the trail may have increased the value of their units. The greatest value that the trail adds to nearby properties according to developers and brokers is the increased salability of listings. Hence, if two identical properties are for sale and one is near the trail and the other is not, the trail is used as a selling point and helps many nearby owners sell their property faster.

A land developer from Front Royal, Virginia donated a 50-foot wide, seven-mile easement for the Big Blue Trail in northern Virginia after volunteers from the Potomac Appalachian Club approached him to provide a critical trail link along the perimeter of his second-home subdivision. The developer recognized the amenity value of the trail and advertised that the trail would be adjacent to approximately 50 parcels and all lots were sold within four months.

In general, this increase in property value also results in increased property tax revenues for local governments. Many arguments made for parks and trails investment claim these acquisitions pay for themselves in a short period of time, due in part to increased property tax revenues from higher values of nearby property.

2.7 References


3.0 The Planning Process

The Heritage Trail Plan consists of two primary components, 1) an update to the 1994 BikeNet Plan, and 2) the development of comprehensive design standards for the trails system.

Heritage Trail began in October 2002 as an update to the 1994 BikeNet Plan. Since the adoption of BikeNet, significant progress has been made in education, awareness and implementation of trails. However, while many of BikeNet’s initial goals have been achieved, the growing community support for trails in and around the greater Billings area has driven the need for this update.

BikeNet was truly a pioneering document for the Billings community, educating the community on the importance of trails and leaving a lasting legacy of community interest groups and built trails that have set a positive tone for future development of the trails system. Heritage Trail recognizes the work that was developed through the BikeNet Plan and builds on a community-based planning process that had public participation and input as its cornerstone.

3.1 The Steering Committee

The development of the Heritage Trail Plan was guided by a Steering Committee that met periodically throughout the planning process to provide input and guidance to the consultant team and to review and refine the team’s work at key milestones. The Steering Committee was made up of City staff from the Planning, Public Works, and Parks Departments, City Administration, and the City Council.

The Steering Committee charged the planning team with the following objectives:
- Broaden the trails plan to appeal to a wider range of users
- Develop a document that offers a stronger policy for trail implementation
- Involve the community in the development of the plan
- Identify key corridors for trail development
- Develop a comprehensive set of design standards for trails and bikeways

3.2 Community Involvement

Throughout the planning process, the Heritage Trail planning team reached out to groups and individuals throughout the community to gather ideas and listen to issues. This process included three public forum meetings, written surveys, and numerous meetings with groups such as the Yellowstone River Parks Association (YRPA), BikeNet, Blue Creek Trails and Parks Association, Yellowstone Valley Cycling Club, Yellowstone Rim Runners, City of Billings Department of Planning, Department Public Works, Department of Parks, Recreation and Public Lands, Lockwood Transportation District, and community service groups including
Kiwanis and the Billings West End Rotary Club. A complete list of public meeting participants is included in Appendix A.

The overwhelming theme with all of these groups was that trails do benefit our community’s quality of life and should be implemented with the highest priority. A strong corollary to this was the often expressed fear that the plan, once adopted, would simply be put on a shelf and never implemented. As well, there were citizens that expressed concerns about trail development and its impact on personal property rights, and there were those that supported trails overall but “not in my back yard.” While this issue is sensitive in certain parts of the planning area, it is not the intent of this document to identify and resolve specific trail alignment issues. It is the intent of this document to identify a comprehensive network of trails and bikeways, which focuses primarily on important corridors and key connections; establish community specific design standards and make implementation recommendations. Specific trail alignments will be identified during design and engineering of specific trail segments as funding becomes available.

### 3.3 A New Identity

As the process was developed to update BikeNet, early on it was recognized that the original plan was narrowly focused on bicycle users and did not focus on the opportunities and interests of a multi-user trails system. The team’s first task was to create a new identity for the plan that would appeal to a broader spectrum of trail users.

The planning team explored opportunities for the trail system to be not just a functional and recreational system but also one that offered interpretive opportunities. As trail corridors were identified and evaluated, it became evident that there were numerous cultural and historical places and events that offered a look back to our rich “Heritage” that could be identified, accessed and interpreted. This idea grew into the driving force behind the new identity of the trails system – **Heritage Trail**.

### 3.4 Goals and Objectives

To guide the development of the plan, the planning team and the Steering Committee working together developed a set of goals and objectives. These were then refined based on public review and comment.
Goals of the *Heritage Trail Plan*:

1. The *Heritage Trail Plan* will be a comprehensive multi-use trails plan that serves the Greater Billings community and emphasizes:

   - Safety
   - Implementation
   - Preservation
   - Conservation
   - Interpretation
   - Recreation
   - Transportation
   - Access
   - Education
   - Utilization
   - Cost Effectiveness
   - Maintenance

2. The *Heritage Trail Plan* will be consistent with:

   - *Yellowstone County Growth Policy Plan*
   - *City of Billings Transportation Plan*
   - *City of Billings Parks Plan*

3. The *Heritage Trail Plan* will create links throughout Yellowstone County connecting communities, neighborhoods, natural and cultural features, commercial and employment centers, schools and parks.

Short-Term Objectives of the *Heritage Trail Plan*:

1. The *Heritage Trail Plan* will involve the greater Billings Community.
2. The *Heritage Trail Plan* will develop a vision and identity for the trails network in the Greater Billings Area.
3. The *Heritage Trail Plan* will provide an implementation strategy for the trails network in the Greater Billings Area.
4. The *Heritage Trail Plan* will be accepted by the Community and adopted by the City of Billings and Yellowstone County.
4.0 Study Area Characteristics

This chapter provides a profile of the socio-economic characteristics relevant to bicycle and pedestrian travel for the City of Billings and Yellowstone County. It also provides discussion on other topics pertaining to bicycle and pedestrian travel, including trip generators, barriers, current non-motorized activity, maintenance, transit, bicycle parking facilities, and safety.

4.1 Study Area Profile

Located in south central Montana, Yellowstone County is Montana’s most populous with 129,352 residents, according to the 2000 Census. Billings, the state’s largest city, has a population of 89,847 and is a major retail, financial, energy, transportation and medical center. Table 4.1.1 shows population trends and projections for the City of Billings and Yellowstone County. It should be noted that this table was created prior to the 2000 Census and the populations listed for the year 2000 were based on projections.

Table 4.1.1. Population Trends & Projections

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Billings</td>
<td>61,581</td>
<td>66,798</td>
<td>85,073</td>
<td>91,500</td>
<td>96,736</td>
<td>107,389</td>
<td>118,000</td>
</tr>
<tr>
<td>Billings Urban Area</td>
<td>77,098</td>
<td>91,714</td>
<td>94,724</td>
<td>100,460</td>
<td>104,284</td>
<td>114,667</td>
<td>123,127</td>
</tr>
<tr>
<td>Yellowstone County</td>
<td>87,367</td>
<td>108,035</td>
<td>113,419</td>
<td>120,890</td>
<td>122,747</td>
<td>137,198</td>
<td>148,978</td>
</tr>
<tr>
<td>Billings % of County</td>
<td>70.5%</td>
<td>61.8%</td>
<td>75.0%</td>
<td>75.7%</td>
<td>78.8%</td>
<td>78.3%</td>
<td>79.2%</td>
</tr>
<tr>
<td>Billings 10-yr. % Growth</td>
<td>8.5%</td>
<td>27.4%</td>
<td>7.6%</td>
<td>13.7%</td>
<td>11.0%</td>
<td>9.9%</td>
<td></td>
</tr>
<tr>
<td>County 10-yr. % Growth</td>
<td>23.7%</td>
<td>5.0%</td>
<td>6.6%</td>
<td>8.2%</td>
<td>11.8%</td>
<td>8.6%</td>
<td></td>
</tr>
</tbody>
</table>

Source: Billings Urban Area 2000 Transportation Plan

Although Yellowstone County residents experience four distinct seasons, they usually avoid the extremes of both cold and heat. According to the National Climatic Data Center, the average daily low in January is 14 degrees Fahrenheit with an average of 8 days of snowfall. The average daily high in July is 87 degrees Fahrenheit. The wettest month typically is May with an average of 11 days and 2.57 inches of rainfall. Table 4.1.2 shows detailed average temperatures and precipitation for each month from the National Climatic Data Center. Averages are computed from data recorded during the period of 1961 to 1990. The record highs and lows are through the year 2000.

Although the relative flatness of Yellowstone County’s terrain contributes to an environment conducive to bicycling and walking, this topography has also created conflicts for residents. Since 1997, the county has experienced more than ten floods, most of which occurred in the Billings area. Table 4.1.3, also from the National Climatic Data Center, describes the flood history of Yellowstone County since 1997. Flooding causes a decrease in usage and an
increase in maintenance required for on-street and off-street trails, specifically those located along river corridors and drainage ditches. Therefore, issues associated with flooding should be considered and addressed during the design process.

Table 4.1.2. Average Temperatures and Precipitation for Billings

<table>
<thead>
<tr>
<th>Month</th>
<th>Avg. High</th>
<th>Avg. Low</th>
<th>Record High</th>
<th>Record Low</th>
<th>Avg. Precip.(in.)</th>
<th>Rain/Snow Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>32°</td>
<td>14°</td>
<td>68°</td>
<td>-30°</td>
<td>0.90</td>
<td>8</td>
</tr>
<tr>
<td>February</td>
<td>39°</td>
<td>19°</td>
<td>72°</td>
<td>-38°</td>
<td>0.64</td>
<td>7</td>
</tr>
<tr>
<td>March</td>
<td>46°</td>
<td>25°</td>
<td>79°</td>
<td>-19°</td>
<td>1.16</td>
<td>9</td>
</tr>
<tr>
<td>April</td>
<td>57°</td>
<td>34°</td>
<td>92°</td>
<td>-5°</td>
<td>1.74</td>
<td>10</td>
</tr>
<tr>
<td>May</td>
<td>67°</td>
<td>43°</td>
<td>96°</td>
<td>14°</td>
<td>2.57</td>
<td>11</td>
</tr>
<tr>
<td>June</td>
<td>78°</td>
<td>52°</td>
<td>105°</td>
<td>32°</td>
<td>1.99</td>
<td>11</td>
</tr>
<tr>
<td>July</td>
<td>87°</td>
<td>58°</td>
<td>106°</td>
<td>41°</td>
<td>0.94</td>
<td>7</td>
</tr>
<tr>
<td>August</td>
<td>85°</td>
<td>57°</td>
<td>105°</td>
<td>35°</td>
<td>1.01</td>
<td>6</td>
</tr>
<tr>
<td>September</td>
<td>72°</td>
<td>47°</td>
<td>103°</td>
<td>22°</td>
<td>1.36</td>
<td>7</td>
</tr>
<tr>
<td>October</td>
<td>61°</td>
<td>38°</td>
<td>90°</td>
<td>-7°</td>
<td>1.14</td>
<td>6</td>
</tr>
<tr>
<td>November</td>
<td>45°</td>
<td>26°</td>
<td>77°</td>
<td>-22°</td>
<td>0.84</td>
<td>6</td>
</tr>
<tr>
<td>December</td>
<td>34°</td>
<td>17°</td>
<td>69°</td>
<td>-32°</td>
<td>0.79</td>
<td>7</td>
</tr>
</tbody>
</table>

*Source: National Climatic Data Center*
Table 4.1.3. Yellowstone County Flood History

<table>
<thead>
<tr>
<th>Location</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NW of Billings</td>
<td>Jan. 3, 1997</td>
<td>An ice jam broke on Yellowstone River, flooding several mobile homes and cars.</td>
</tr>
<tr>
<td>SW of Laurel</td>
<td>Feb. 2, 1997</td>
<td>An ice jam caused Clark Fork River to flood a ranch and several fields and damage a road.</td>
</tr>
<tr>
<td>SE Montana</td>
<td>June 1, 1997</td>
<td>Caused by record snow pack, heavy rains and unusually warm temperatures. Resulted in an estimated $2.2 million in damage in Yellowstone County.</td>
</tr>
<tr>
<td>Billings</td>
<td>June 8, 1997</td>
<td>Emergency traffic only in downtown Billings with most city streets full of water.</td>
</tr>
<tr>
<td>Billings</td>
<td>July 8, 1997</td>
<td>Two and a half feet of water near Metra Park at intersection of Main and First Street.</td>
</tr>
<tr>
<td>Billings</td>
<td>July 30, 1998</td>
<td>A strong thunderstorm produced street flooding on 14th Street between Lewis and Clark.</td>
</tr>
<tr>
<td>Billings</td>
<td>July 31, 1998</td>
<td>Street flooding reported throughout Billings. Several underpasses were flooded and a dozen manhole covers were flooded off.</td>
</tr>
<tr>
<td>N of Billings</td>
<td>June 26, 2001</td>
<td>Caused by two severe thunderstorms. Flash flooding was observed over much of eastern Yellowstone County, including downtown Billings.</td>
</tr>
<tr>
<td>Billings</td>
<td>July 17, 2001</td>
<td>Flash flood causing street flooding on the south side of Billings.</td>
</tr>
</tbody>
</table>

Source: National Climatic Data Center
4.2 Trip Generators

A goal of the Heritage Trail Plan is to provide a safe, accessible, and continuous network of non-motorized trails throughout the Greater Billings Area that connects neighborhoods with major trip generators, such as schools, shopping and business centers, and recreational opportunities. This is achieved by considering major trip generators that would potentially attract the bicycling and walking public and by providing trail connections to these locations. The Heritage Trail Plan will create links connecting communities, neighborhoods, natural and cultural features, commercial and employment centers, schools and parks. Potential bicycle and pedestrian trip generators identified in the Billings area are included in Appendix B.

4.3 Bicycle and Pedestrian Barriers

Obstacles to non-motorized travel can be separated into two groups: absolute barriers and bicycle and pedestrian impediments. Absolute barriers include rivers, lakes, railroad tracks, and interstate highways. However, it should be recognized that certain barriers such as rivers and abandoned railroad corridors could also provide excellent transportation and recreational opportunities for multi-use paths. Bicycle and pedestrian impediments are obstacles that can be crossed, but only with some difficulty and include high traffic streets, steep grades, and interstate interchanges.

More specific to Yellowstone County, absolute barriers include Interstates 90 and 94, Yellowstone River, the Rimrocks, and the Montana Rail Link railroad corridor. Bicycle and pedestrian impediments include major arterials (Main Street, King Avenue, etc.), all the interchanges along I-90 (Shiloh Road, West Billings, South Billings Boulevard, South 27th Street, Lockwood, and Johnson Lane), and large irrigation canals.

4.4 Current Non-motorized Activity

Table 4.4.1 shows the transportation mode breakdown for people traveling to work for the City of Billings and Yellowstone County, according to the U.S. Census 2000. As shown in Table 4.4, Yellowstone County accounts for 7 and 8 percent of Montana residents that walk or bike to work, respectively. A very high percentage of these people reside in the City of Billings (74 and 91 percent).
Table 4.4.1. Means of Transportation to Work for Workers 16 Years and Over

<table>
<thead>
<tr>
<th>Mode</th>
<th>Montana Total</th>
<th>Yellowstone County</th>
<th>City of Billings</th>
<th>Yellowstone Cnty %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>% of MT</td>
<td>Total</td>
</tr>
<tr>
<td>Total</td>
<td>422,159</td>
<td>64,697</td>
<td>15.3</td>
<td>45,013</td>
</tr>
<tr>
<td>Drove alone</td>
<td>311,872</td>
<td>52,635</td>
<td>16.9</td>
<td>36,855</td>
</tr>
<tr>
<td>Carpoold</td>
<td>50,192</td>
<td>6,367</td>
<td>12.7</td>
<td>4,331</td>
</tr>
<tr>
<td>Public Transportation</td>
<td>2,812</td>
<td>707</td>
<td>25.1</td>
<td>532</td>
</tr>
<tr>
<td>Motorcycle</td>
<td>338</td>
<td>16</td>
<td>4.7</td>
<td>14</td>
</tr>
<tr>
<td>Bicycle</td>
<td>4,049</td>
<td>326</td>
<td>8.1</td>
<td>297</td>
</tr>
<tr>
<td>Walked</td>
<td>23,336</td>
<td>1,645</td>
<td>7.0</td>
<td>1,213</td>
</tr>
<tr>
<td>Other means</td>
<td>2,649</td>
<td>366</td>
<td>13.8</td>
<td>223</td>
</tr>
<tr>
<td>Worked at home</td>
<td>26,911</td>
<td>2,635</td>
<td>9.8</td>
<td>1,548</td>
</tr>
</tbody>
</table>

Source: U.S. Census 2000

A trail system survey was recently conducted by the City of Billings and 208 residents responded. The purpose of the survey was to determine how many people were using the existing trail system and to acquire public input for future trails. The results are as follows:

- 76% of respondents have used the Billings trail system.
- 65% use the trail system randomly; 17% use it several times a week; 8% use it once a week; and 10% use it once a month.
- 55% use the trail for recreational/outdoor activities; 39% use it for exercise; and 6% use it as a transportation/commuter route.
- The modes of transportation used on the trail system consist of walking (46%), biking (40%), running/jogging (7%), and inline skating (7%).
- 25% of users live within 1 mile of the trail system; 52% live within 1 to 5 miles; and 23% live greater than 5 miles away from the system.
- 85% would use the trails more frequently if they were closer to their home or neighborhood.
- 78% would consider biking or walking to work or to run errands if the trail system (off-street) and bike lanes (on-street) were more adequate for their needs.
- The survey also resulted in the following list of priorities for trail users, in order of importance:
  1. Separation from vehicular traffic
  2. Recreational opportunity
  3. Scenery
  4. Safety
  5. Hard Surface
  6. Connection
  7. Social Interaction
The following is a list of desired improvements for the existing trails. Although the list is not in order of importance, the issues of “connections,” “access,” and “amenities” were most commonly listed as the highest priority.

1. Connections
2. Access
3. Amenities
4. Safety
5. Maintenance
6. User Conflict
7. Landscaping
8. Lighting
9. Signage
10. Parking Facilities
11. Hard Surface

4.5 Maintenance

Maintenance is essential to ensure user safety and to encourage increased use of Billings’ non-motorized trail system. Funding allocated for the maintenance of the Billings’ trail system was approximately $9,000 for the 2003 fiscal year, which is a separate part of the budget for the Department of Parks, Recreation, and Public Lands (PRPL). The source for this funding is the City of Billings general fund.

Maintenance includes repairs made to the surface of the bicycle or pedestrian facilities, tree trimming, weed control, snow removal, and sweeping. Minimal surface repairs are being made to the Billings trail system at this time, although the need will increase as more trails are constructed and existing trails weather and age. As needed during the growing season, PRPL trims trees and mows within 8 feet each side of the trails. Noxious weeds are controlled with spot treatments where weeds cannot be mowed, around posts and along fences. Snow removal is currently performed with a blade and sweeping is performed with a landscaping tractor attachment. Litter is removed twice per week during summer months and every other week during the off-season.

Sign maintenance and vandalism repairs are also included in maintenance duties. Existing signage on Billings’ trails consists mainly of safety, regulatory and street or access signage installed after construction. Vandalism repairs consist mainly of the removal of graffiti and cleaning and sweeping up broken glass. Signs are also replaced and damage to access control is repaired as needed.
4.6 Transit

Transit has become an integral component of the bikeway system in Billings by providing bicycle racks for transport on buses. Transit allows bicyclists to extend their trip length by creating a shared multi-modal trip. Bike rack usage on MET coaches is limited to two (2) bikes at a time. Riders are responsible for loading and unloading their own bicycles from the racks located on the front bumper of the MET coach. For safety reasons the MET Operator cannot leave the coach to assist cyclists. Written procedures for loading and unloading bicycles are available from the drivers. According to MET Transit, these bike racks were used 11,560 times in 2002.

4.7 Bicycle Parking Facilities

An inventory of existing parking facilities was performed at various bicycle trip generators across Billings. Specifically, this data was collected at Rocky Mountain College, MSU-Billings, Rimrock Mall, Downtown, the Medical Corridor, Terry Park, North Park, Pioneer Park, Riverfront Park, Stewart Park, and the MET Transfer Center adjacent to Stewart Park. A few examples of the bicycle parking facilities found across the City of Billings are illustrated in Figure 4.7.1.

Figure 4.7.1. Example Bicycle Parking Facilities

Photos by Engineering, Inc.
Although adequate parking facilities were found at Rocky Mountain College, MSU-Billings, and Rimrock Mall, according to recent studies several of the types of parking facilities at these locations are considered sub-standard. Of the parks that were included in the inventory, Stewart Park was the only one that provided bicycle-parking facilities. Parking facilities were located downtown, but for a retail and employment center of this size, additional facilities should be provided. The Medical Corridor near downtown Billings was also evaluated for parking facilities. Very few were found and it was observed that several bicyclists had been forced to lock their bikes up to street lamp poles. Even though it is potentially a major link between alternate modes of travel, the MET Transfer Center near Stewart Park does not currently provide any bicycle parking facilities.

According to the Pedestrian and Bicycle Information Center, more than 1.5 million bicycles are reported stolen every year in the United States and fear of bicycle theft is recognized as a significant deterrent to bicycle use. The availability of safe and convenient parking is as critical to bicyclists as it is for motorists and yet it is frequently overlooked in the design and operation of shops, offices, schools, and other buildings.

### 4.8 Safety

According to a study recently released by the Montana Livable Places Campaign, there are seven times as many fatal pedestrian and bicycle crashes as there are fatal car-train crashes in the State of Montana. However, much more attention is focused on improving railroad crossings and teaching safe crossing practices than is given to improving safety conditions for pedestrians or bicyclists.

Accident data involving bicycles and pedestrians from January of 1999 to December of 2001 was acquired from the City of Billings Traffic Engineering Division. Figures 4.8.1 through 4.8.3 illustrate the accident data by time day, day of week, and month, respectively. As shown in Figure 4.8.1, the greatest number of pedestrian accidents occurs at the end of the school day, between 3 and 4 pm, and the greatest number of bicycle accidents occurs at the end of the workday, between 5 and 6 pm. A high number of both accident types also occur between 1 and 2 pm, the time when many people return to school or work after lunch.

As shown in Figure 4.8.2, the majority of bicycle and pedestrian accidents occur during the week. The number of accidents decreases significantly over the weekend, which is likely due to an overall decrease in traffic. The average number of pedestrian accidents reaches its peak on Thursday, while bicycle accidents peak on Friday.

As illustrated in Figure 4.8.3, the average number of accidents involving bicycles and pedestrians is higher overall during the spring and summer months. This can be expected when the weather is nice and people are more likely to choose alternate modes of travel. There are a higher number of bicycle accidents in May, June and July, while the greatest number of pedestrian accidents occurs in April and August.
Figure 4.8.1. Pedestrian and Bicycle Accidents by Time of Day

Figure 4.8.2. Pedestrian and Bicycle Accidents by Day of Week
According to a study done by the Montana Livable Places Campaign, the number of injury crashes involving bicyclists and pedestrians are significantly under-reported. Because they are not required to file insurance claims, accidents involving bicyclists commonly go unreported. The effect is most notable when comparing emergency room data to the data contained in police records. Studies have shown that approximately 90 percent of those bicycle crashes that send someone to an emergency room are never reported to the police. Assuming this figure is accurate, bicycle injury crashes would account for as many as 25 percent of all injury crashes in the State of Montana, or six times as many as are currently being reported.

Although not as much data is available for crashes involving pedestrians, the pattern is reported to be similar. Only about 20 percent of pedestrian injury crashes show up in the reports and the subsequent statistics for the State of Montana. Accurate reporting of pedestrian accidents would likely result in 10 to 13 percent of the total number of injury accidents in Montana, approximately four times as many as reported in recent statistics.

Accounting for unreported bicycle and pedestrian injury crashes would likely increase the percentage of non-motorized injury crashes to between 20 and 30 percent of Montana’s total. Therefore, it is likely that the data presented in the previous figures significantly underestimates the actual number of accidents involving bicyclists and pedestrians in the City of Billings.

According to the December 2002 edition of Newsline, published by the Montana Department of Transportation (MDT), House Joint Resolution 37 called for a study of bicycle safety that encompasses the planning, design, and construction of Montana’s highways; programs or

Figure 4.8.3. Pedestrian and Bicycle Accidents by Month

![Bar chart showing pedestrian and bicycle accidents by month.](chart.png)
requirements for driver education, training or licensing; and safety equipment and clothing for cyclists. A consulting firm has conducted the study with technical support from an advisory panel that includes legislators, bicycle advocates, local government, local and state law enforcement, driver education, and the Motor Carriers Association.

In Montana, bicyclists are required to follow the same rules of the road as motorists. They are expected to ride safely, be courteous to other roadway users, and abide by all Montana traffic laws. Bicyclists are to ride upon a street single file except on paths or parts of streets set aside for the exclusive use of bicycles. Bicyclists shall not carry any article that prevents them from keeping one hand upon the handlebars. All bicycles in use at night should be equipped with a strong white headlight that emits light visible from a distance of at least 500 feet. They should also be equipped with a colorless front-facing reflector; colorless or amber pedal reflectors and a red rear-facing reflector. A red taillight may be used in addition to rear-facing reflectors. All bicycles in use at night should also be equipped with either tires with retro-reflective sidewalls or reflectors mounted on the spokes of each wheel.

In order to spread the word that we need to be respectful of all roadway users, the Montana Department of Transportation (MDT) and the Montana Highway Patrol have developed posters and bumper stickers to remind people to “Share the Road.” The posters and bumper stickers are available from MDT at no charge.

Bicycle helmets are a proven way of reducing the death and injury toll from bicycle crashes. A recent amendment to the Billings City Code addresses the laws related to the use of bicycle helmets. These additional sections require that all individuals under the age of sixteen wear protective helmets while operating a bicycle within the city limits. The code also requires that all bicycle rental businesses provide protective helmets and that all bicycle helmets for sale be conspicuously labeled, establishing a protective helmet bank and providing a penalty for violations.

In order to increase safety in school zones, the City of Billings has adopted a policy on “School Zone Traffic Control.” The policy was established for use as a guide in determining where school crossings should be located and what other traffic control devices may be appropriate for a given school zone or crossing. At the time of this publication, no education programs relating to bicycles and pedestrians were identified in the Billings Community.

4.9 References


   [http://www.mdt.state.mt.us/planning/ctep/bikelegal.html](http://www.mdt.state.mt.us/planning/ctep/bikelegal.html)


    [http://ci.billings.mt.us/pwe/Traffic_Engineering/SchoolZone_City.htm](http://ci.billings.mt.us/pwe/Traffic_Engineering/SchoolZone_City.htm)

5.0 Existing Non-Motorized System

An integral step in updating the plan for a Billings area non-motorized transportation system was to assess the state of the existing system. The previous chapter discussed the characteristics of Billings and the surrounding area with respect to non-motorized activity. This chapter provides a description of the existing non-motorized system facilities in the Billings area.

5.1 Existing Non-Motorized Facilities

The existing non-motorized transportation network in the Billings area is made up of a combination of formal and informal facilities. BikeNet, the City’s previous non-motorized plan, proposed a formal network of interconnected trails and bikeways, of which a few have been constructed. The existing facilities are comprised of paved trails, soft surface trails, on-street bikeways, and sidewalks.

EXISTING TRAILS
Currently, there are just over 10 miles of hard-surface multi-use trails within the greater Billings area. Roughly 6 miles of the paved multi-use trails are continuous, creating an off-street corridor from the Billings Heights to the Yellowstone River near Coulson Park. The remaining multi-use trails consist of independent segments, which have been built in conjunction with other developments. Additionally, several soft surface trails are located along the Yellowstone River, the Rimrocks, and Alkali Creek. Existing improved trails are listed in Table 5.1.1.

ON-STREET BIKEWAYS
In addition to off-street trails, on-street bikeways, wide curb lanes, and paved shoulders are facilities that also provide a means for cyclists to navigate the City. Currently, there are approximately 3.0 miles of striped on-street bikeways. While the number of designated bike lanes are limited, wide curb lanes and paved shoulders also provide informal bike lanes throughout the city.

An inventory of streets identified as potential primary bicycle routes was completed during the summer of 2003. The results indicate that the majority of streets within the urbanized areas of the City had curb lanes in excess of 12-ft. While the streets are not striped with a designated bike lane, the existing widths could easily accommodate both non-motorized and motorized traffic.

Paved shoulders on roadways without curb and gutter can also provide a space on the roadway for non-motorized vehicles. However, outside of the older, urbanized areas of the City of Billings, most of the roads are built according to county standards. The average lane width is less than 12-ft and there is little to no paved shoulder. Existing on-street bikeways are listed in Table 5.1.2.
Table 5.1.1. Existing Trails

<table>
<thead>
<tr>
<th>IMPROVED TRAILS</th>
<th>Length (mi)</th>
<th>Year Built</th>
<th>Project Cost</th>
<th>Primary Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard-Surface Multi-Use Trails</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heights-Kiwanis Trail</td>
<td>2</td>
<td>1996</td>
<td>$170,000</td>
<td>CTEP</td>
</tr>
<tr>
<td>MetraPark Trail</td>
<td>2</td>
<td>1998</td>
<td>$1,111,440</td>
<td>CTEP</td>
</tr>
<tr>
<td>Coulson Park Trail</td>
<td>2</td>
<td>2002</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Circle 50 Trail</td>
<td>0.2</td>
<td>2002</td>
<td>$40,500</td>
<td>Private</td>
</tr>
<tr>
<td>Descro Park Trail</td>
<td>0.5</td>
<td>2003</td>
<td></td>
<td>LWCF</td>
</tr>
<tr>
<td>Famous Dave's Trail</td>
<td>0.1</td>
<td>2003</td>
<td>$15,000</td>
<td>Private</td>
</tr>
<tr>
<td>Swords Park Trail</td>
<td>3</td>
<td>2004</td>
<td>$864,000</td>
<td>CTEP/Local</td>
</tr>
<tr>
<td>Midland Park Trail</td>
<td>0.4</td>
<td>2003</td>
<td>$300,000</td>
<td>Private</td>
</tr>
<tr>
<td>Rehberg Ranch Trail</td>
<td>0.75</td>
<td>2003</td>
<td></td>
<td>Private</td>
</tr>
<tr>
<td>Soft-Surface Trails</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jim Dutcher Trail (Riverfront Park)</td>
<td>2</td>
<td></td>
<td></td>
<td>YRPA</td>
</tr>
<tr>
<td>Two Moon Park</td>
<td>5</td>
<td></td>
<td></td>
<td>YRPA</td>
</tr>
<tr>
<td>YRPA Conservation Pond Trails</td>
<td>2</td>
<td></td>
<td></td>
<td>YRPA</td>
</tr>
<tr>
<td><strong>TOTAL IMPROVED TRAILS</strong></td>
<td><strong>10.95</strong></td>
<td></td>
<td><strong>$2,500,940</strong></td>
<td></td>
</tr>
</tbody>
</table>

*Note: Soft-Surface Trail lengths are approximate lengths.*

Table 5.1.2. Existing On-street Bikeways

<table>
<thead>
<tr>
<th>ON-STREET BIKEWAYS</th>
<th>Length (mi)</th>
<th>Year Built</th>
<th>Primary Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rimrock Road - Virginia Ln. to 17th St. W.</td>
<td>1.5</td>
<td>2002</td>
<td>MDT</td>
</tr>
<tr>
<td>38th Street West - Grand to Colton</td>
<td>0.5</td>
<td>2002</td>
<td>Private</td>
</tr>
<tr>
<td>S. 25th St. - Minnesota to 7th Ave. S.</td>
<td>0.5</td>
<td>2002</td>
<td>CTEP</td>
</tr>
<tr>
<td>Senators Blvd.</td>
<td>0.5</td>
<td>1997</td>
<td>City</td>
</tr>
<tr>
<td><strong>TOTAL ON-STREET BIKEWAYS</strong></td>
<td><strong>3.0</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SIDEWALKS**

Pedestrian traffic throughout the Billings area is accommodated on traditional sidewalks that exist on one or both sides of most City streets. The sidewalk network provides relatively continuous walking routes in the older and more densely urbanized portions of the City. However, significant discontinuities do exist primarily in outlying suburban areas near the City’s edge.
5.2 Evaluating Existing Roadways for Non-Motorized Improvements

The first step in identifying roadways for development or improvement of on-street bikeways is to evaluate the existing conditions. More specifically, the purpose of this section is to determine which streets would best accommodate bicyclists. This task was achieved using the newly developed Bicycle Compatibility Index.

BICYCLE COMPATIBILITY INDEX

The Bicycle Compatibility Index (BCI) is an empirically derived model recently developed at the Federal Highway Administration’s Turner-Fairbanks Highway Research Center. The goal of the BCI model is to give traffic engineers, transportation planners, and bicycle coordinators a means to evaluate how well a roadway can accommodate efficient operation of both bicycles and motor vehicles. The BCI could be an effective tool for evaluating existing roadways and ranking the need for bicycle-related improvements. Also, minimum BCI criteria could be established to help guide the design of new roadways.

DEVELOPMENT OF THE BCI MODEL

The BCI model was developed by having bicyclists view numerous roadway segments on videotape and rate how comfortable they would be riding on the street under the existing conditions. This surveying methodology allowed the participants to be able to rank the same stretch of roadway under the same traffic conditions without having to be exposed to dangerous riding conditions. Over 200 participants ranked 80 different roadway segments using a scale from one to six. A one indicated that the individual would be “extremely comfortable” riding in the shown conditions, while a six indicated that the individual would be “extremely uncomfortable” riding in the shown conditions.

Based on the results, a model was established using linear regression to predict a cyclist’s comfort level on any stretch of roadway from the following eight geometric and operational characteristics:

- Presence of a bicycle lane
- Bicycle lane width
- Curb lane width
- Type of development along the roadside (residential or other)
- Curb lane traffic volumes during the peak hour conditions
- Motor vehicle speed
- Presence of on-street parking
- Adjustment factor which accounts for the following three operational conditions:
  1. Percent of heavy vehicles on the roadway,
  2. Number of vehicles turning right into driveways
  3. Number of vehicles pulling into or out of on-street parking spaces
The model was determined to accurately predict the numerical ranking of each roadway segment for urban and suburban roadways. The BCI is applicable to through-corridors or mid-block locations that are exclusive of major intersections. The BCI equation and variable definitions are included in Table 5.2.1.

Table 5.2.1. Bicycle Compatibility Index (BCI) Model

<table>
<thead>
<tr>
<th>BCI =</th>
<th>3.67 – 0.966BL – 0.125BLW – 0.152CLW + 0.002CLV + 0.0004OLV + 0.035SPD + 0.506PKG – 0.264AREA + AF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Where:</td>
<td>PKG = presence of a parking lane with more than 30% occupancy</td>
</tr>
<tr>
<td>BL =</td>
<td>presence of a bicycle lane or paved shoulder ≥ 3.0 ft</td>
</tr>
<tr>
<td>no = 0</td>
<td>yes = 1</td>
</tr>
<tr>
<td>BLW =</td>
<td>bicycle lane (or paved shoulder) width</td>
</tr>
<tr>
<td>ft (to the nearest tenth)</td>
<td></td>
</tr>
<tr>
<td>CLW =</td>
<td>curb lane width</td>
</tr>
<tr>
<td>ft (to the nearest tenth)</td>
<td></td>
</tr>
<tr>
<td>CLV =</td>
<td>curb lane volume vph in one direction</td>
</tr>
<tr>
<td>OLV =</td>
<td>other lane(s) volume – same direction vph</td>
</tr>
<tr>
<td>SP =</td>
<td>85th percentile speed of traffic mph</td>
</tr>
<tr>
<td>OL =</td>
<td>other lane(s) volume – same direction vph</td>
</tr>
<tr>
<td>PKG =</td>
<td>presence of a parking lane with more than 30% occupancy</td>
</tr>
<tr>
<td>no = 0</td>
<td>yes = 1</td>
</tr>
<tr>
<td>AREA =</td>
<td>type of roadside development</td>
</tr>
<tr>
<td>residential = 1</td>
<td>other = 0</td>
</tr>
<tr>
<td>AF = f₁ + fₚ + fₚ</td>
<td></td>
</tr>
<tr>
<td>where:</td>
<td></td>
</tr>
<tr>
<td>f₁ = adjustment factor for truck volumes (see below)</td>
<td></td>
</tr>
<tr>
<td>fₚ = adjustment factor for parking turnover (see below)</td>
<td></td>
</tr>
<tr>
<td>fₚ = adjustment factor for right-turn volumes (see below)</td>
<td></td>
</tr>
</tbody>
</table>

Adjustment Factors

<table>
<thead>
<tr>
<th>Hourly Curb Lane Large Truck Volume¹</th>
<th>f₁</th>
<th>Parking Time Limit (min)</th>
<th>fₚ</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥ 120</td>
<td>0.5</td>
<td>≤ 15</td>
<td>0.6</td>
</tr>
<tr>
<td>60 – 119</td>
<td>0.4</td>
<td>16 – 30</td>
<td>0.5</td>
</tr>
<tr>
<td>30 – 59</td>
<td>0.3</td>
<td>31 – 60</td>
<td>0.4</td>
</tr>
<tr>
<td>20 – 29</td>
<td>0.2</td>
<td>61 – 120</td>
<td>0.3</td>
</tr>
<tr>
<td>10 – 19</td>
<td>0.1</td>
<td>121 – 240</td>
<td>0.2</td>
</tr>
<tr>
<td>&lt; 10</td>
<td>0.0</td>
<td>241 – 480</td>
<td>0.1</td>
</tr>
<tr>
<td>&gt; 480</td>
<td></td>
<td>&gt; 480</td>
<td>0.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hourly Right-Turn Volume²</th>
<th>fₚ</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥ 270</td>
<td>0.1</td>
</tr>
<tr>
<td>&lt; 270</td>
<td>0.0</td>
</tr>
</tbody>
</table>

¹ Large trucks are defined as all vehicles with six or more tires.
² Includes total number of right turns into driveways or minor intersections along roadway segment.
Source: FHWA Bicycle Compatibility Index: A Level of Service Concept, Implementation Manual
BICYCLING LEVEL OF SERVICE
The Highway Capacity Manual (HCM) defines level-of-service (LOS) as “a qualitative measure that characterizes operational conditions within a traffic stream and the perception of these conditions by motorists and passengers.” While the HCM does not define LOS in terms of bicyclists, the concept of basing the LOS on the user’s perceptions of the operational conditions applies just as well to bicyclists as it does to motorists. The BCI reflects the comfort levels of bicyclists based on observed geometric and operational conditions and creates a numerical output.

In order to remain consistent to the HCM, six LOS designations from A to F were defined. Each letter designation corresponds to a range of numerical values. Based on the responses of all types of cyclists, the roadway segment with the best rating had a mean value of 1.24 and the roadway segment with the worst rating had a mean value of 5.49. Those two extreme values were considered to indicate the conditions in which all cyclists would feel comfortable riding in or all cyclists would feel uncomfortable riding in, respectively. The upper and lower boundaries for the LOS designations were established around the two extreme values. Table 5.2.2 gives the numerical equivalents for each LOS designation.

<table>
<thead>
<tr>
<th>LOS</th>
<th>BCI Range</th>
<th>Compatibility Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>( \leq 1.50 )</td>
<td>Extremely High</td>
</tr>
<tr>
<td>B</td>
<td>1.51 – 2.30</td>
<td>Very High</td>
</tr>
<tr>
<td>C</td>
<td>2.31 – 3.40</td>
<td>Moderately High</td>
</tr>
<tr>
<td>D</td>
<td>3.41 – 4.40</td>
<td>Moderately Low</td>
</tr>
<tr>
<td>E</td>
<td>4.41 – 5.30</td>
<td>Very Low</td>
</tr>
<tr>
<td>F</td>
<td>&gt; 5.30</td>
<td>Extremely Low</td>
</tr>
</tbody>
</table>

Source: FHWA Bicycle Compatibility Index: A Level of Service Concept, Implementation Manual

EVALUATING EXISTING ROADWAYS USING THE BCI
The BCI model can be used to evaluate existing roadways, provide design standards for future roadways, and aid in planning how future projects could fit within the existing network of bicycle and pedestrian paths.

All roadway segments identified as primary bicycle routes in the Heritage Trail Plan were inventoried to determine the BCI LOS of each segment. A field investigation was conducted to determine the roadway geometry, lane widths, presence of bicycle lanes, presence and occupancy of parking lanes, and posted speed limits. Average Annual Daily Traffic (AADT) volumes were obtained from the City of Billings counts (2001–2003), the Billings Traffic Model being prepared by the Montana Department of Transportation (MDT), and counts
taken by Engineering, Inc. (2000-present). A summary of the data collected and used for the
determination of BCI LOS is included in Appendix C.

In cases where the data was not available, adjustments and assumptions were made in
accordance with the *Bicycle Compatibility Index: A Level of Service Concept, Implementation Manual*
(FHWA-RD-98-095). For example, 85th percentile speeds were assumed to be 9 mph above
the posted speed limit. Also, the percentage of heavy vehicles was assumed to be 3.5% for
principal arterials, 2% for minor arterials, 1.5% for collectors, and 0% for local streets.

A summary of the BCI calculations and results for each of the primary bicycle routes outlined
in the *Heritage Trail Plan* is included in Appendix D. As with motor vehicle facilities, it is
recommended that all primary bicycle routes operate at LOS C or higher. Bicyclists can use
the results of this BCI analysis to determine the safest and most comfortable routes. In
addition, these results were used as one of the criteria in prioritizing on-street improvements
(see Chapter 7).

**5.3 Special Features**

Currently there are few special features or amenities associated with the non-motorized trails
and on-street bikeways. The only existing special features include two bikeway/roadway
crossings.

**SHILOH PEDESTRIAN UNDERPASS**

The Shiloh Pedestrian Underpass is a grade-separated crossing located on Shiloh Road
between Grand Avenue and Rimrock Road. Shiloh Road carries an AADT volume of
approximately 9,000 vpd near the crossing and the underpass was designed to offer a
safe crossing location for pedestrians and bicyclists. The crossing connects a multi-use
trail stub on the west side of Shiloh Road to the Circle 50 multi-use trail on the east side of
Shiloh Road. The total cost for construction of this project was approximately $600,000.
CENTRAL AVENUE BIKE CROSSING
The Central Avenue bicycle crossing is an at-grade mid-block crossing located on Central Avenue between the BBWA Canal and 29th Street West. The bicycle crossing consists of raised center islands with an at-grade cutout that directs cyclists to turn and face oncoming traffic mid-street before crossing the other half of the roadway. The crossing connects the south end of the Descro Park trail to the north side of Stewart Park. The engineer’s estimate of probable cost for this project was approximately $50,000.

5.4 Corridors, Rights-of-way, and Easements
In addition to existing non-motorized facilities that have been built within the City of Billings, there have also been several corridors identified for future development of off-street bike and pedestrian facilities. Most of the corridors are comprised of a series of dedicated rights-of-way and easements within the newer subdivisions on the fringe of the densely populated urban area. Most easements or rights-of-way are acquired from developers and landowners that voluntarily dedicate land for trails or utilities. Therefore, as some landowners and developers have chosen not to dedicate land towards a trail system, there are discontinuities along potential corridors. The major corridors that have been identified for future development include waterway drainages and old railroad rights-of-way.

WATERWAY CORRIDORS
Existing waterway drainages provide excellent scenic opportunities for trail development. It should be noted that, because of the risk of flooding, certain issues would need to be addressed during the design process. The following major waterways were identified as potential trail corridors:

- Yellowstone River
- Alkali Creek
- Blue Creek
- Clear Creek
- Five Mile Creek
- Canyon Creek
- Hogan’s Slough
- The Big Ditch
- BBWA Canal
- Bitter Creek
- Cove Ditch
- 100 Foot Lift Canal

Other drainage areas, even minor ones, should be considered as potential trail corridors.

**RAILROAD CORRIDORS**
Existing and abandoned railroad rights-of-way also provide a great opportunity for trail corridors. For example, the Heights-Kiwanis multi-use trail was constructed within the old BNRR railway spur right-of-way. All railroad corridors within the City of Billings and Yellowstone County provide potential opportunities for trail development.

**SUBDIVISION EASEMENTS AND RIGHTS-OF-WAY**
A summary of subdivisions with known recorded easements or rights-of-way is shown in Table 5.4.1.

<table>
<thead>
<tr>
<th>Subdivision Name &amp; Filing</th>
<th>Easement</th>
<th>R/W</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bell Estates Sub., 3rd Filing</td>
<td>x</td>
<td></td>
<td>Adjacent to Shiloh Drain easement</td>
</tr>
<tr>
<td>Billings Heights St. V's Medical &amp; Health</td>
<td>x</td>
<td></td>
<td>15-ft easement adjacent to BBWA</td>
</tr>
<tr>
<td>Bitterroot Heights Sub.</td>
<td></td>
<td></td>
<td>Easement requested along Five Mile Creek</td>
</tr>
<tr>
<td>Brey Sub.</td>
<td></td>
<td>x</td>
<td>Easement along Cove Ditch and through Tr. 1, between Lots 4 and 5</td>
</tr>
<tr>
<td>Cherry Creek Estates Sub.</td>
<td></td>
<td>x</td>
<td>20-ft wide Bike-Net easement along Yellowstone River</td>
</tr>
<tr>
<td>Chrysalis Acres Sub.</td>
<td></td>
<td>x</td>
<td>15-ft easement along north boundary of subdivision</td>
</tr>
<tr>
<td>Clear Creek Sub.</td>
<td></td>
<td>x</td>
<td>50-ft wide conservation easement along Clear Creek Drainage</td>
</tr>
<tr>
<td>Crooked Creek Sub.</td>
<td></td>
<td>x</td>
<td>20-ft wide drainage ditch easement along Five Mile Creek</td>
</tr>
<tr>
<td>Deep Powder Sub.</td>
<td></td>
<td>x</td>
<td>10-ft wide pedestrian walkway connecting Deep Powder Drive and Clubhouse Way</td>
</tr>
<tr>
<td>Dry Creek Sub.</td>
<td></td>
<td>x</td>
<td>20-ft wide easement along Hwy 87 for bike trail</td>
</tr>
<tr>
<td>Emmanuel Baptist Annex</td>
<td></td>
<td></td>
<td>West side of Shiloh Drain</td>
</tr>
<tr>
<td>Famous Dave's Sub.</td>
<td></td>
<td></td>
<td>Constructed 10 ft. wide trail adjacent to BBWA</td>
</tr>
<tr>
<td>Five Mile Creek Sub.</td>
<td>x</td>
<td></td>
<td>100-ft wide easement along Five Mile Creek</td>
</tr>
<tr>
<td>Forest Park Sub., 6th Filing</td>
<td>x</td>
<td>x</td>
<td>20-ft wide easement located along the west and south subdivision boundaries</td>
</tr>
<tr>
<td>Ironwood Sub.</td>
<td></td>
<td>x</td>
<td>25-ft public utility right-of-way</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10-ft wide easement along Ironwood Drive</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>30-ft wide Conoco Pipeline easement adjacent to Block 1, Lots 74-75, Block 12, Lots 25-27, Block 10, Lot 19</td>
</tr>
</tbody>
</table>
Table 5.4.1 Subdivision Easements and Rights-of-Way (continued)

<table>
<thead>
<tr>
<th>Subdivision Name &amp; Filing</th>
<th>Easement</th>
<th>R/W</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>j&amp;e Sub.</td>
<td>x</td>
<td>x</td>
<td>20-ft wide Carol Drain easement</td>
</tr>
<tr>
<td>Kreitz Heights Sub.</td>
<td>x</td>
<td></td>
<td>Linear park connecting Carol Drain easement to City utility right-of-way (old spur line)</td>
</tr>
<tr>
<td>Linlee Lake Estates Sub.</td>
<td>x</td>
<td></td>
<td>15-ft easement on east side along BBWA; sunset of easement after 3 yrs. if no trail built.</td>
</tr>
<tr>
<td>Menholt Sub.</td>
<td>x</td>
<td>x</td>
<td>Parkland north of Danford Drain</td>
</tr>
<tr>
<td>Midland Sub.</td>
<td>x</td>
<td></td>
<td>Banister Drain Right-of-Way across the BBWA canal</td>
</tr>
<tr>
<td>Montana Sapphire Sub.</td>
<td>x</td>
<td></td>
<td>8 ft wide trail built along north boundary</td>
</tr>
<tr>
<td>Morningside Sub.</td>
<td>x</td>
<td></td>
<td>114-ft wide Shiloh Drain easement</td>
</tr>
<tr>
<td>Pierce Sub.</td>
<td>x</td>
<td></td>
<td>Annexation agreement for trail easement through Unit 14, Tr. 2</td>
</tr>
<tr>
<td>Pierce Sub.</td>
<td>x</td>
<td></td>
<td>Easement to construct trail along Zoo Dr when lots develop</td>
</tr>
<tr>
<td>Rehberg Ranch Estates Sub.</td>
<td>x</td>
<td></td>
<td>Multiple 20-ft wide drainage easements allowing access from local roadways into park land</td>
</tr>
<tr>
<td>Rimrock West Estates Sub., 5th Filing</td>
<td>x</td>
<td></td>
<td>20-ft. wide easement along south edge</td>
</tr>
<tr>
<td>Riverview Estates Sub.</td>
<td>x</td>
<td></td>
<td>20-ft wide easement along Yellowstone River</td>
</tr>
<tr>
<td>Rush Sub., 6th Filing</td>
<td>x</td>
<td></td>
<td>15-ft wide ditch easement and 25-ft wide linear park located along the north side of the Big Ditch</td>
</tr>
<tr>
<td>Rush Sub., 7th Filing</td>
<td>x</td>
<td></td>
<td>15-ft wide ditch easement</td>
</tr>
<tr>
<td>Schuyler Sub., Amnd Lot 2, Block 1</td>
<td>x</td>
<td></td>
<td>110-ft Arnold Drain easement</td>
</tr>
<tr>
<td>Shiloh Business Park Sub.</td>
<td>x</td>
<td></td>
<td>16-ft wide utility and sidewalk easement along Zoo Drive, Shiloh Road, and Pierce Parkway</td>
</tr>
<tr>
<td>Sierra Estates Sub., 2nd Filing</td>
<td>x</td>
<td></td>
<td>35-ft easement for 100-ft Lift Canal along north side of Block 1, Lots 1-6 and 10-ft walkways connecting La Paz Ct. and Durango Place and Guadeloupe Drive to the park</td>
</tr>
<tr>
<td>South Heights Sub.</td>
<td>x</td>
<td></td>
<td>10-ft wide trail access easement connecting South Heights Lane to the City right-of-way (Kiwanis Trail)</td>
</tr>
<tr>
<td>Tanglewood Sub.</td>
<td></td>
<td></td>
<td>Suggested connection to trail along Cove Ditch</td>
</tr>
<tr>
<td>Terra West Sub., 4th Filing</td>
<td>x</td>
<td></td>
<td>20-ft wide irrigation ditch easement</td>
</tr>
</tbody>
</table>
### Table 5.4.1 Subdivision Easements and Rights-of-Way (continued)

<table>
<thead>
<tr>
<th>Subdivision Name &amp; Filing</th>
<th>Easement</th>
<th>R/W</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terrace Estates, 3rd Filing</td>
<td></td>
<td></td>
<td>Parkway along the Alkali Creek Drainage</td>
</tr>
<tr>
<td>Transtech Center Sub.</td>
<td></td>
<td></td>
<td>Constructing 10-ft wide trail throughout subdivision</td>
</tr>
<tr>
<td>Uinta Park Sub.</td>
<td></td>
<td>x</td>
<td>20-ft wide linear park along the BBWA Canal tract</td>
</tr>
<tr>
<td>The Village Sub.</td>
<td>x</td>
<td></td>
<td>Trail easements throughout subdivision with connections along Shiloh Road</td>
</tr>
<tr>
<td>Westlind Sub.</td>
<td></td>
<td></td>
<td>Along Canal to connection to parkland</td>
</tr>
<tr>
<td>Whitney Meadows Sub.</td>
<td>x</td>
<td></td>
<td>20-ft wide along BBWA</td>
</tr>
<tr>
<td>Wildwood Sub.</td>
<td></td>
<td></td>
<td>Parkland dedication along west boundary</td>
</tr>
<tr>
<td>Wolf Meadows Sub.</td>
<td>x</td>
<td></td>
<td>Easement along BBWA</td>
</tr>
<tr>
<td>Yellowstone Club Estates Sub.</td>
<td></td>
<td></td>
<td>Lot 1 along lower portion of Rims and Lot 2 along top of Rims</td>
</tr>
<tr>
<td>Yellowstone Ridge Sub.</td>
<td>x</td>
<td></td>
<td>Parkland easement along north side of subdivision and north–south easement connection for trail</td>
</tr>
</tbody>
</table>

### 5.5 References


6.0 The Plan

The success of the Heritage Trail system is dependent on many different factors. Perhaps the most important factor is broad-based community support from both public and private interests all working together to achieve a common vision. Even with the support of the majority, however, a well-conceived plan backed by real policies and programs is required to ensure implementation. In fact, during the development of the original BikeNet plan, and again during the process to develop this plan update, the most often expressed concern was that “the plan wouldn’t be implemented.”

This Chapter is organized into three sections: Policy, Programs, and Facilities. Each section lists specific goals followed by implementation-oriented recommendations for action.

6.1 Policy

One of the keys to making Heritage Trail a reality is to create a sound set of local standards, policies, regulations, and ordinances that support the ongoing development of trails and bikeways. In recent years, transportation policy at the national and state level has become much friendlier to non-motorized transportation, but more could be done locally.

**POLICY IMPLEMENTATION GOAL 1.** Adopt local government policies, processes and standards that encourage and enhance non-motorized transportation.

**Action 1.** Adopt and implement the Heritage Trail Plan.

The process of developing, writing and producing the Heritage Trail Plan is a relatively minor part of the plan’s ultimate success. First, the Billings City Council and the Yellowstone County Commission should formally adopt the Heritage Trail Plan, and by reference Heritage Trail should become part of the Billings Urban Area 2000 Transportation Plan and the Yellowstone County Comprehensive Plan. However, ultimate success will come only with implementation, which will require persistent, on-going effort. Planning ideas must become reality in the form of adopted policies, ordinances and standards that create equitable ways for developing and funding trails that can be applied consistently and predictably.

**Action 2.** Designate City of Billings staff member(s) to be responsible for the coordination of non-motorized transportation.

A City employee should be designated as the first point of contact for planning and coordination of non-motorized transportation projects and programs.
Action 3. Revise and update local subdivision and site development policy to include incentive-based criteria for trail and bikeway development.

City/County Code currently provides only vague guidance for developers and City/County staff on when and how trails and bikeways should be implemented with new development. In order to preserve corridors and ultimately build a community-wide interconnected trail network, zoning and subdivision regulations should be updated to establish a clear set of expectations for developers that Staff can effectively enforce. It is recommended that new regulations be adopted which require that all new development or significant redevelopment include provisions for non-motorized transportation consistent with the Heritage Trail Plan. With these new regulations, some bonus or incentive should be offered for developments that incorporate high quality bicycle and pedestrian amenities beyond the minimum requirements.

**EXISTING CITY OF BILLINGS CODE**

**Sec. 23-711. Bikeways.**

(a) Bikeways based upon the adopted bikeway plan shall be provided when deemed necessary in the opinion of the city-county planning board and the city administrator.

(b) Bikeways shall be designed according to the state of the art manuals.
ZONING & SUBDIVISION POLICY RECOMMENDATIONS

The intent of including provisions for non-motorized transportation in zoning regulations is to ensure that all new developments and significant redevelopment includes these facilities in the appropriate design and location. As with any effective regulations, the requirements of applicants should be as clear and concise as possible to minimize confusion and conflict about what is desired, and where.

- **Statement of Purpose**
  The City Code and Zoning Regulations should include a statement that those policies will guide the zoning officer, planning board and/or zoning commission in making decisions related to non-motorized transportation.

- **Requirement for Preliminary Plat or Site Plan Review**
  1. **Trip Generators** - for all new subdivisions or site developments, plan submittals and/or the required traffic study should identify all trip generators within ½-mile radius of the perimeter of the proposed development.
  2. **Trail & Bikeway Connectivity** – submittals should also include the locations of all existing and proposed trails and bikeways within the proposed development and within 1-mile of the development.
  3. A written or schematic description of the proposed connections between the development and the trip generators and trails and bikeways should be required.

- **Development Standards**
  Zoning Regulations should be updated to refer specifically to and require compliance with the adopted Heritage Trail Plan and its related design standards. The Heritage Trail design standards should provide a set of criteria for achieving a desired level of non-motorized transportation improvements.

- **Incentives**
  While design standards will detail the minimum required improvements, they are limited in their ability to influence where private developers will choose to create a new development or redevelopment. Zoning regulations should be crafted to provide incentives that would encourage development in areas targeted for growth, e.g., in-fill development, and for providing amenities beyond the minimum requirements. Potential incentives can take the form of releases from certain requirements or bonuses for design that is particularly beneficial. Examples include:
  - Increase in allowable lot coverage
  - Decrease in required number of motor vehicle parking spaces
  - Reduction in setback requirements
  - Credit toward traffic signal contribution
  - Sign area increase
  - Increased lot density
  - Accelerated or streamlined application review/approval
  - Right-of-way exchange for park dedication or narrower roads
Action 4. Institutionalize funding for construction and maintenance of trails and bikeways.

Historically, major trail projects in the Billings area primarily have been funded with grants. While grant funding for transportation enhancements such as trails is considerably greater under TEA-21 than in the past, it still cannot be counted on consistently to fund a significant trails program. To insure development of trails and bikeways on a community-wide scale, funding for trails and bikeways should be institutionalized in that trail funding is made an intrinsic part of public works and land development, as is funding of public streets and utilities.

Action 5. Develop and adopt a comprehensive set of local guidelines and standards for design, construction and maintenance of trails and bikeways.

Design standards for multi-use trails and on-street bikeways have significantly developed and evolved over the last 8 to 10 years since BikeNet was adopted. This evolution is generally due to the much larger body of constructed projects that are now in place across the country. Billings should draw on this collective experience to develop and adopt a set of design and maintenance guidelines and standards that are based on nationally accepted standards but tailored to local conditions. An integral part of these design standards should be standards for new subdivision and site development projects.

(The Billings Public Works Department has contracted for the development of a set of trail and bikeway design standards. Any reference in this document to design standards should be considered as a reference to the most recent version of the City of Billings design standards for trails and bikeways.)

Action 6. Require that all site development projects and subdivision plats be reviewed by the City of Billings, or Yellowstone County where appropriate, for compliance with the Heritage Trail Plan.

A policy should be adopted that gives City/County staff the authority to review and approve all new site developments and subdivisions. City/County staff should work with the developer to plan for and accommodate non-motorized transportation needs. In addition to
dedication and construction of specifically planned trail segments, City/County staff should consider site design elements, circulation, access, etc., relative to their impact on alternate modes. A review checklist should be developed for use by City/County staff and the developer during the review process.

GUIDELINES FOR NEW DEVELOPMENT

Perhaps the biggest impediment to walking and bicycling is automobile-oriented zoning and development practices that create segregated land uses with relatively long distances between origin and destination. New developments should be designed with non-motorized modes of transportation as a primary consideration, not an afterthought. Following are recommended practices that should be incorporated into zoning regulations in order to encourage the development of walkable, bicycle-friendly and transit oriented communities:

- Provide locations for neighborhood-scale commercial development within residential areas.
- Provide for higher density residential development and mixed-use zones to create “village centers.”
- Keep automobile-oriented development in zones near arterial roadways.
- Allow a high level of lot coverage (higher density) for properties with high pedestrian, bicycle, and/or transit access.
- Allow accessory dwellings, a variety of home occupations, and a mix of office and residential uses on the same lot or in the same building.
- Encourage clustering of uses in development and set aside open space for parks and trails.
- Allow and encourage the development of alleys.
- Discourage gated access and perimeter walls around subdivisions.
- Limit the use of cul-de-sacs and dead-end streets. If used, trail connections should be provided between cul-de-sacs and adjacent streets.
- Require that contiguous sidewalks, trails and bikeways be incorporated into new residential and commercial subdivisions.
- Provide direct bicycle and pedestrian access to adjacent residential areas and to nearby (1/4 mile for walking and 2 miles for cycling) activity centers, such as schools, parks and commercial areas.
- Trails and bikeways should connect to adjacent properties that are likely to be subdivided in the future to ensure that a contiguous non-motorized transportation system develops over time.
- Require direct pedestrian access between adjacent commercial properties.
- Preserve natural drainages for use as trail corridors.
Action 7. Require that all public infrastructure and utility projects be reviewed by the City of Billings, or Yellowstone County where appropriate, for compliance with the Heritage Trail Plan.

A policy should be adopted that requires City/County staff to review and approve the design of all public infrastructure and utility projects. By completing a preliminary review early in the design process, opportunities to include non-motorized enhancements can be identified. Ultimately, City/County staff should evaluate each project to make sure that the design meets the intent of the Heritage Trail Plan.

Action 8. Encourage enforcement of existing parking and traffic laws.

Effective enforcement of traffic laws creates a safer environment for all road users. As much as motorists, pedestrians and cyclists too must follow the rules of the road. Motorists that drive aggressively and are disrespectful of non-motorized users’ right to the road create dangerous situations that can lead to accidents and injuries, but they also create a situation that discourages some people from even attempting to use non-motorized transportation. Likewise, cyclists and pedestrians that ignore traffic laws (wrong way riding, jaywalking, red light running, etc.) breed contempt with motorists and do nothing to foster respect between user groups. Therefore, the Police should consistently enforce traffic laws that impact bicycle and pedestrian safety, including issuing citations and/or warnings to pedestrians and cyclists.

Action 9. Encourage cooperation between local governments and departments to plan and implement multiple-use and multiple benefit projects.

Funding for trails is scarce. To make that funding go farther, it is important that local government agencies and departments work together to identify projects that address multiple needs. Often other public works, utility and land development projects provide ideal opportunities for construction of trails and bikeways allowing the limited trail funding to be leveraged.

Action 10. Adopt revised roadway design standards to accommodate and encourage shared use of rights-of-way by bicycles, pedestrians and motorized vehicles.

AASHTO states, “to varying extent, bicycles will be used on all highways where they are permitted.” Therefore, all new road construction or major re-construction projects should include accommodations for bicycles and pedestrians. While bicycles and cars can safely share the road on low-volume residential streets, significant improvements in the form of bike lanes
and/or off-road paths are needed along high-speed or high-volume arterials. City and County roadway design standards should be revised and formally adopted to require improvements for non-motorized transportation modes with all new construction.

**Action 11.** Develop public bicycle parking facilities and require the development of private bicycle parking facilities with new construction.

The lack of secure parking is frequently cited as a reason that people choose not to use their bikes for basic transportation: “I would ride to work if there was a safe place to lock my bike.” Therefore, providing bicycle parking facilities is an essential part of an overall effort to promote bicycling. Public parking should be constructed at all public facilities, including schools, parks, government buildings and transit stops. New commercial development should be required to provide convenient bicycle parking with the furthest bicycle parking rack no further away from the building entrance than the nearest car parking space.

**Bicycle Parking Basics**

<table>
<thead>
<tr>
<th>Bicycle parking should be:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visible</td>
</tr>
<tr>
<td>Accessible</td>
</tr>
<tr>
<td>Easy to Use</td>
</tr>
<tr>
<td>Convenient</td>
</tr>
<tr>
<td>Plentiful</td>
</tr>
</tbody>
</table>

**Action 12.** Encourage development of trails in multi-use corridors, including particularly ditches, canals, utility rights-of-way and railroads.

The desire of trail users, particularly cyclists, is for long, continuous and relatively uninterrupted routes. The rights-of-way of the historic irrigation canals and drains that crisscross the Yellowstone Valley are natural corridors on which to build trails. Likewise, utility corridors and easements should be utilized for their mutual benefit for trails.

**Action 13.** Monitor state and national policy, programs, and plans.

Local trails programs and funding sources are affected by policies implemented at the state and national level. The City of Billings and Yellowstone County should monitor state and national policy developments to insure that local programs are not adversely impacted and to take advantage of new opportunities.

**Action 14.** Create a Heritage Trail Interpretive Task Force to oversee implementation of interpretive elements of the *Heritage Trail Plan*.

It is recommended that a task force be created to oversee the implementation of the interpretive elements of the *Heritage Trail Plan* and to ensure that connections are provided to historical and cultural areas. Additional discussion on these interpretive elements and task force responsibilities is included in Section 6.5.
POLICY IMPLEMENTATION GOAL 2. Encourage public involvement in the planning and implementation of the Heritage Trail system.

**Action 1.** Work with independent trail and bicycle advocacy groups and outlying communities.

The City should work with independent non-profit organizations that advocate for the development of trails and bikeways, such as BikeNet, Yellowstone River Parks Association, Blue Creek Trails & Parks Association, and others. The City should also coordinate efforts with outlying communities, such as Laurel, Shepard and Huntley, to provide connections to these communities. The City should coordinate its efforts with these groups to ensure that efforts are not duplicated.

(Note: After the completion of the BikeNet plan in 1994, a citizen’s advisory committee was formed to oversee the implementation of BikeNet. The group, which was named BikeNet, included local government officials, city and county staff, and representatives from bicycling interest groups. This group has since become an effective advocacy group for trail development, and in 2002 achieved status as an independent 501(c)(3) non-profit corporation.)

**Action 2.** Encourage trail advocates to serve on government boards.

Trail advocates should be encouraged to serve on local government boards and councils where they can influence local policies and decision-making as it relates to trail development, such as the City Council, Planning Board, Zoning Commission, Traffic Control Board and others.

**Action 3.** Inform the public of non-motorized transportation issues and opportunities.

If the public is expected to be involved and effective in non-motorized transportation planning, advocacy and decision-making, then it must be informed. The City of Billings and Yellowstone County should be responsible for informing the public of non-motorized transportation trends and issues, of developments in state and national transportation policy, and of opportunities where citizens can be involved in the on-going effort to plan and implement trails and bikeways.

**Action 4.** Pursue public-private partnerships in the planning and implementation of non-motorized transportation elements.

The most successful projects are those that achieve a win-win solution for all parties. This is most often accomplished when public agencies and private parties create partnerships early in the development process. Public-private partnerships should be pursued and encouraged.
6.2 Programs

The central and most visible part of the Heritage Trail system is a network of constructed trails and bikeways, but the long-term goals of the plan will not be achieved through facility improvements alone. There are many institutional, cultural and social factors that influence people’s mode choice. So an equally important component to the long-term success of Heritage Trail is a comprehensive menu of education and promotional programs. Also, the public including the cyclist, the pedestrian, and the motorist, needs to be educated to use transportation facilities properly and legally.

**PROGRAM IMPLEMENTATION GOAL 1.** Adopt a policy requiring the City of Billings and Yellowstone County to partner with community organizations and other agencies to sponsor programs that promote and encourage the use of non-motorized transportation.

**Action 1.** Partner with the community on education and encouragement programs.

The best way to promote non-motorized transportation is to achieve grass roots-level buy-in by enlisting the assistance and enthusiasm of the many community organizations throughout the Billings area, including youth organizations, cycling and running clubs, schools, neighborhood task forces, police and sheriff organizations, service clubs, and many others.

**Action 2.** Partner with the medical and health community.

The City of Billings and Yellowstone County should work with Billings’ large medical community to develop programs that promote the health and wellness benefits associated with walking and cycling.

**Action 3.** Partner with the schools.

School age children, particularly at the elementary and middle school level, are some of the most frequent users of non-motorized transportation modes. The City and County should work with schools to develop programs that encourage bicycling and walking among this age group and that encourage the continued use of alternate modes into high school and adulthood. Cycling skills and rules-of-the-road classes should be incorporated into the elementary school curriculum that promote safe and proper behavior among young cyclists and pedestrians. The City should work with schools to develop field trip outings and other programs to explore the historical and interpretive components of Heritage Trail.

**Action 4.** Partner with MET Transit.

The City should work with MET Transit to promote the mutual benefits of bicycling and mass transit. Some MET buses are currently fitted with racks that allow cyclists to place their bikes on buses. Currently limited to two bikes per bus, the bus racks are frequently full, indicating
the potential to expand this program. Lock-and-ride facilities at bus transfer stations should be developed and promoted.

**Action 5.** Partner with museums.

The historical and interpretive aspects of *Heritage Trail* present a unique opportunity to work with local museums and cultural organizations to develop programs that celebrate the rich history of Billings and the Yellowstone Valley.

**Action 6.** Co-sponsor or coordinate bicycle events.

Collaborate with community organizations and businesses to improve public awareness of non-motorized transportation. Events such as the highly successful Ales for Trails not only raise money for beneficial projects but they create an overall supportive atmosphere for trail and bikeway development.

**Action 7.** Establish a consistent community-wide *Heritage Trail* signing and information system.

Including maps and attractive, easily identified directional and informational signing, a consistent way of identifying trails and primary on-street bikeways should be developed. Consistent identification of bicycle and pedestrian friendly routes will encourage their use.

**Action 8.** Develop a postcard Improvement Identification Program.

Improvement Identification Forms should be distributed through the Planning Department, local bike shops, and local bicycling, running and trail clubs, in order to solicit suggestions, input on maintenance needs, safety concerns and other issues.

**Action 9.** Develop corporate and service group programs.

Adopt-a-Trail or Sponsor-a-Trail programs should be implemented and marketed to local businesses and service groups as a way to fund and maintain trails. For those wishing to contribute smaller amounts, sponsorship opportunities should be developed for trail segments and various trail amenities such as benches, trailhead improvements, interpretive sites, etc.
Action 10. Work with law enforcement.

The City of Billings and Yellowstone County should communicate regularly with local law enforcement agencies to encourage enforcement of traffic laws that impact bicycle and pedestrian safety. Also, law enforcement personnel should be recruited to participate in education programs in the schools.

Action 11. Encourage bike shops to provide bicycle skills and repair instruction.

The City and County should work with local bike shops to develop programs for training in bicycle repair and in on- and off-road riding skills.

Action 12. Develop and maintain a program of data collection and opinion surveys on non-motorized transportation.

In order to inform future transportation decision making, City/County staff should organize, coordinate and maintain a comprehensive program of data collection and public opinion surveys that monitors trail and bikeway usage, user preferences, ownership rates, accident trends, etc. Monitoring of data should include regular analysis and comparisons of local statistics to national trends in order to identify areas for improvement.

Action 13. Work with private businesses and public and private institutions to share parking and restroom facilities.

The City and County should work to develop a community-wide network of bicycle-friendly businesses and institutions that are willing to share parking and restroom facilities in order to encourage wider use of non-motorized transportation. Facilities could include post offices, banks, government buildings, MetraPark, Chamber of Commerce, hotels and motels, hospitals, etc.

Action 14. Encourage entrepreneurial activities near the trails.

The City of Billings and Yellowstone County should encourage local entrepreneurial businesses related to trail activities to develop near the trail network, such as bike and rollerblade rentals or food vendors.

If you can’t measure it, you can’t improve it.
6.3 Facilities

This section outlines planning processes and facility recommendations to implement a comprehensive system of trails and bikeways that goes beyond providing simple connections between points A and B. Heritage Trail is intended to enhance the community by providing transportation links, but also by tying neighborhoods together with natural and cultural features. As with the plan document itself, the proposed system should be ever-changing. As the community expands and grows, the plan should be regularly updated to reflect changing conditions, attitudes and opportunities.

Facility Implementation Goal 1. Improve non-motorized transportation facilities through planning, design and improvement projects.

Action 1. Address non-motorized transportation modes as an integral part of transportation planning.

Alternate transportation modes, particularly bicycles and pedestrians, should be considered in the design of all public infrastructure projects.

Action 2. Involve citizens in transportation project planning.

Public input should be solicited in the planning and design development of all public transportation infrastructure projects. This is a critical step if the community at-large is to have a sense of ownership and commitment to the Heritage Trail system.

Action 3. Adopt planning guidelines and design standards for the design, construction and maintenance of trails and bikeways.

The City of Billings and Yellowstone County should adopt guidelines and standards for design, construction and maintenance of trails and bikeways. Once adopted, these standards and guidelines should be fully integrated into the planning of new roadway facilities and land development projects.

Action 4. For all roadway classifications, adopt new roadway design standards that incorporate non-motorized transportation modes as a primary design consideration.

It must be recognized that bicyclists and pedestrians will use all streets, including arterials because they provide the most direct route to major destinations. As such, all streets should be designed to accommodate bikes and pedestrians unless specifically prohibited.
Action 5. Encourage the use of traffic calming and neighborhood traffic management strategies in the development of neighborhood streets.

Establish traffic planning programs and implement appropriate improvements to insure that traffic volumes and speeds remain low on local residential streets. This will encourage the use of neighborhood streets for bicycling and walking.

Action 6. Adopt the following non-motorized facility classifications:

- On-Street Bikeways (Primary, Secondary, Arterial Bikeways)
- Bike Routes
- Bike Lanes
- Hard-Surface Multi-Use Trails
  - Connector Trails
  - Park Trails
- Soft-Surface Trails
  - Park Trails
  - All-Terrain Bike, Cross-country Ski, and Equestrian Trails
- Regional Connectors
- Greenways

Refer to Section 6.4 for detailed descriptions of each of the facilities.

Action 7. Implement a system of designated and signed on-street bikeways.

A designated system of signed primary on-street bikeways is recommended. This primary system is recommended on an approximately 1-mile grid, and should, as much as possible, avoid the use of principal arterials.

Action 8. Preserve potential corridors for future use.

A policy should be adopted to preserve designated Greenways for non-motorized use. Greenways include active and abandoned rail corridors, utility rights-of-way, and natural areas including the Rimrocks, the Yellowstone River, Canyon Creek, and other creeks, ditches, and drainage ways.

Action 9. Complete a periodic trails and bikeways inventory and capital improvement plan similar to the plan for citywide curb, gutter and sidewalk improvements.

This inventory should extend into the county with a particular emphasis on providing safe school routes. A policy should be adopted to consider non-motorized transportation needs prior to initiating construction of street, curb, gutter and sidewalk improvements.
Action 10. Include priority trail and bikeway projects in 5-year Capital Improvements Plan (CIP).

Trail and bikeway projects should be considered in the development of the City’s plan for upcoming capital improvement projects.

Action 11. Work with canal and ditch companies to construct trails along canal and ditch rights-of-way.

Because the agricultural canals, ditches and drains in most cases pre-dated the urbanization of Billings, the canal rights-of-way do not typically follow the linear, right angle-type alignments of our current street system. Instead, they were designed to follow the natural contours of the Yellowstone Valley. This makes them particularly attractive as pedestrian and bicycle corridors since they lack steep grades. Throughout the planning process, the public expressed as one of its highest concerns, the desire for the City to negotiate an agreement with the Ditch companies that would allow the development of trails along these corridors.

Action 12. Identify and improve opportunities for trail use by equestrians.

Appropriate trail corridors and natural areas should be identified for equestrian use. Horses are an integral part of Billings’ western heritage, and throughout the planning process there was an expressed public interest to see more opportunities available for equestrian users. Accommodations for equestrians should be incorporated into trails and trailhead amenities where appropriate.

6.4 Route Classifications

The Heritage Trail Plan provides an update to the facility classifications included in the BikeNet Plan. The purpose of updating these classifications is to be consistent with national standards. The following classifications are based primarily on the Park, Recreation, Open Space and Greenway Guidelines, a project of the National Recreation and Park Association and the American Academy for Park and Recreation Administration.
ON-STREET BIKEWAYS

On-street Bikeways are paved segments of roadway that serve as a means to safely separate bicyclists from vehicular traffic. These facilities would commonly serve bicycle commuters, fitness enthusiasts and competitive athletes. They include bike routes and bike lanes. Bike routes are shared portions of the roadway that provide separation between vehicles and bicyclists, such as paved shoulders. Bike lanes are designated portions of the roadway for the preferential or exclusive use of bicyclists. Bike lanes should be used in situations where traffic volumes are heavy enough to warrant clear separation between bicycles and vehicles and bike routes (paved shoulders) should be used in all other situations. The following on-street designations correspond to the routes shown in the Trail & Bikeway Plan Map, included in Appendix E.

**Principal Vehicular Arterial**
Some arterial streets are not conducive to bike travel, even for expert riders, because of high traffic volumes, high speeds, narrow curb lanes or a combination of these factors. On-street bike travel should not be encouraged on these facilities. Principal vehicular arterials are shown in yellow on the Trail & Bikeway Plan Map.

**Arterial Bikeways**
While arterials are usually the least desirable routes for on-street bikeways, in some cases where lower volumes and travel speeds exist, and where sufficient pavement width exists, bike travel can be accommodated on arterials. In addition, where no alternative route exists, arterials must be considered for bike routes. Typical users of arterial bikeways generally will be more advanced in ability and will be more concerned with efficiency and continuity of routes than with the quality of the riding environment. These routes are shown in orange on the Trail & Bikeway Plan Map.

**Primary Bikeways**
Primary bikeways should provide relatively direct and continuous connections between neighborhoods and other major trip generators. Typically, they will follow streets classified as minor arterials or collectors. When possible, primary bikeways should connect to off-street routes. Bicyclists using primary bikeways will typically include a complete range of users from children and basic riders to advanced cyclists. Therefore, route selection must give equal consideration to directness, traffic volumes, and environmental quality. Primary bikeways are shown in red on the Trail & Bikeway Plan Map.
Secondary Bikeways
Secondary bikeways are shorter in length and typically follow routes classified as local streets. These routes are intended to provide safe routes, particularly for children, that link neighborhood residential areas with schools, parks, and neighborhood commercial centers. These routes are shown in purple on the Trail & Bikeway Plan Map.

HARD-SURFACE MULTI-USE TRAILS

Connector Trails
Connector trails are multi-purpose trails that emphasize safe travel to destinations throughout the community. The focus of connector trails is as much on transportation as it is on recreation. In general, connector trails are located within existing road rights-of-way and utility easements or along artificial drainage ways. Connector trails are intended to accommodate walkers, bicyclists, in-line skaters, wheelchair users and when appropriate horseback riders.

The type of trail used and its design should reflect the anticipated magnitude of commuter use. In some situations, the use patterns of connector trails will dictate separate, adjacent paths for different user types.

Park Trails
Hard-surface park trails are multi-purpose trails located within greenways, parks, and natural resource areas. The focus of this type of trail is primarily on recreational value and interaction with the natural environment. However, park trails can also be used for commuting purposes.

This type of trail would allow for relatively uninterrupted movement through city parks and development areas. Abandoned railroad beds, utility rights-of-way, and scenic and historic routes provide the greatest opportunity for park trails. An example would be a trail around an inner-city lake or along a riverfront.

As with connector trails, the design should reflect the anticipated magnitude of recreational use. In some situations, use patterns will dictate separate paths for pedestrians, bicyclists and if
necessary in-line skaters. All existing hard-surface multi-use trails (connector and park trails) are shown as solid green lines on the Trail & Bikeway Plan Map (Appendix E), and proposed hard-surface multi-use trails are represented by dashed green lines. It should be noted that the proposed multi-use trails shown in the Trail & Bikeway Plan Map are proposed corridors only and do not represent actual alignments.

**SOFT-SURFACE TRAILS**

*Park Trails*
Similar to hard-surface park trails, soft-surface park trails are located within greenways, parks, or natural resource areas. They will be used specifically for recreational purposes and are generally suited for lighter use patterns than hard-surface park trails. They are the preferred alternative for areas that require minimum impact to natural surroundings, such as within nature preserves. Solid black lines on the Trail & Bikeway Plan Map represent existing soft-surface trails.

>All-Terrain Bike, Cross-Country Ski, and Equestrian Trails*
All-terrain bike, cross-country ski, and equestrian trails are similar to park trails in that they emphasize a strong relationship with the natural environment, although for somewhat different reasons. They are most often located within natural resource areas, greenways, community parks and special use facilities, such as golf courses. Since regional and state parks often develop and maintain these types of trails, the need for them at the local level is often limited. The following defines some of the considerations with respect to each of these trail types.

Off-road mountain biking has become a very popular activity that appeals to a wide range of age groups and varying skill levels. Given its relative infancy, trail standards to meet the needs of mountain bikers has continued to evolve.

Cross-country skiing trails come in a variety of types and widths to accommodate two different styles: diagonal or traditional and skate-ski. Diagonal style requires a set track, while skate-ski style requires a wider packed and groomed
surface. Trail lengths vary considerably, with loops ranging from a few to 10 or more miles. Since quality and safety are important to all skiers, a few well-groomed trails are preferable to extensive but poorly maintained ones.

As previously discussed, horseback riders can be incorporated into connector or park trails. However, it may also be desirable to develop trails specifically for horseback riding. Equestrian trails are usually grass or woodchip surfaced with varying lengths. In some instances, cross-country ski trails provide an opportunity for horseback riding during the summer.

www.trailsandgreenways.org/photos

REGIONAL CONNECTORS

Regional Connectors provide a connection between an urban area and an outlying community. It may be any one of the trail types listed above and should serve as an additional and separate designation when applicable. This classification is not included in the Park, Recreation, Open Space and Greenway Guidelines or the BikeNet Plan, but is included as an additional route classification in the Heritage Trail Plan. An example of a regional connector would be a trail that would provide a connection between Billings and Laurel.

GREENWAYS

Greenways are corridors of protected open space managed for conservation and recreation purposes. They often follow natural land or water features, and link nature reserves, parks, cultural features and historic sites with each other and with populated areas. Greenways can be publicly or privately owned, and some are the result of public/private partnerships. They often contain trails or paths that are used for walking, bicycling, or other forms of recreation, exercise, or transportation. Trails and greenways often follow abandoned rail corridors, canals, and utility rights-of-way.

www.cityofseattle.net/parks/BurkeGilman/bgtrail.htm

www.trailsandgreenways.org/photos
The classification of greenways corresponds to that of “Conservation Corridors” in the BikeNet Plan. “Conservation Corridors” include corridors of natural, scenic, cultural, or resource management value.

6.5 **HISTORICAL AND CULTURAL OPPORTUNITIES**

Multi-use trails offer a unique opportunity for users to explore the community and its rich historic, cultural and natural resources. The Yellowstone Valley and the City of Billings offer countless opportunities for interpretation that may be lost if not recognized and preserved. The philosophy and identity of Heritage Trail is the offering and interpretation of our past to those who use our trail system. Through interpretation, we can enrich the lives of those who experience our community by leaving a lasting impression of our history.

The National Parks Service defines cultural resources as “sites, structures, districts, and objects significantly associated with or representative of earlier people, cultures, and human activities and events.” The Yellowstone Valley is rich with these opportunities that continue to be threatened with growth and development. Trails offer a wonderful opportunity not only for preservation of these resources but for interpretation of them as well.

**INTERPRETIVE OPPORTUNITIES**

It is the intent of the Heritage Trail Plan to identify appropriate interpretive sites and set the stage for an interpretive master planning process that will identify additional sites and implement interpretative amenities throughout the trail system. Deciding what to protect and interpret is a difficult task. Most interpretive opportunities will fall within one of the following categories:

- **Visitors retain:**
  - 10 percent of what they hear
  - 30 percent of what they read
  - 50 percent of what they see
  - 90 percent of what they do
1. **Historical Significance** – The events and figures of the past that have shaped local, state, or national history.

2. **Architectural or Engineering Significance** – The evolution of building style structure and the unique application of engineering principles.

3. **Ethnic Significance** – The life and traditions of people or regions, such as agriculture, hunting, festivals, and religious celebrations.

4. **Archaeological Significance** – The material remains of past human cultures.

5. **Natural Significance** – The natural features that shaped human habitation and influence such as the Yellowstone River or the Rims.

6. **Economic Significance** – The value of trail corridors in terms of increased tax revenues, tourism, and economic development.

Protection and interpretation of historic, cultural and natural resources after they have been identified and defined are important next steps. Protection methods should be based on the following principles:

- It is better to preserve and restore than destroy and rebuild
- Rehabilitation should be compatible with the exiting historic fabric and style of surrounding buildings and landscapes
- New construction should use materials, techniques, and designs that respect the character and value of the existing buildings, landscapes, and settings
- Not all sites should be fully accessible to the public

**INTERPRETIVE MASTER PLAN**

The development of an Interpretive Master Plan for the Heritage Trail is the next step in planning and implementing interpretive opportunities throughout the community. The Interpretive Master Plan will help explain the significance of the resources to others and will improve public acceptance of preservation and interpretation strategies.

Interpretation is “…a communication process designed to reveal meanings and relationships of our cultural and natural heritage to the public (visitors) through first-hand experiences with objectives, artifacts, landscapes, or sites.”

-- Interpretive Master Planning
It is recommended that a task force be created to develop an Interpretive Master Plan and oversee the implementation of the interpretive elements into the Heritage Trail. This task force would be responsible for researching potential historic, cultural and natural resources, as well as providing recommendations for the continuity and evolution of their interpretation. Additional duties of this task force might also include education and the preservation of these elements.

Historic, cultural, and natural resources can be explored through guided tours, self-guided tours, interpretive signage, audio interpretation, and photo opportunities. Additional interpretive media options include maps, brochures, kiosks, and web sites. It may also be desirable to provide various interpretive themes throughout the community, such as:

- River Ecology and the Story of the Yellowstone River Valley
- Wildlife of the Yellowstone Valley
- Plant Communities of the Yellowstone Valley
- Geology of the Yellowstone Valley

There are several resources available to aid in the identification of local interpretive opportunities including, *Billings A to Z* and *Pieces & Places of Billings History*. In addition to these books, there are countless individuals with unique stories that add to the color and interest of our community.
The following lists include potential historic, cultural, and natural sites that can be accessed or viewed from many points along the Heritage Trail corridors. They also include various facilities to which connections should be provided as part of the trail and bikeway network. These lists are by no means complete and are intended as a starting point for the development of an Interpretive Master Plan.

**Natural Areas**
- The Yellowstone River
- Beartooth Mountains
- Riverfront Park
- Alkali Creek
- Four Dances Nature Area
- Pryor Mountains
- Big Horn Mountains
- Lake Elmo - Holling Lake
- Canyon Creek
- Two-Moon Park

**Historic & Cultural Resources**
- Boothill Cemetery
- Face-on-the-Rims
- Black Otter Trail
- Chief Plenty Coup State Park
- Pompey’s Pillar
- The Steamboat Josephine
- Coulson Townsite
- NP Steam Switch Engine #1031
- The Gilrdfs House
- Maverick Hose Company’s Fire Bell
- Heffner Stone Quarry- Heffner Steps
- Mavity Law Enforcement Memorial
- James J. Hill Plaque
- Memorial Lane
- Tracy’s Landing
- Pictograph Cave State Park
- Sacrifice Cliff
- Chief Joseph & the Canyon Creek Battle Site
- The 7th Cavalry Guidon Trooper- Sculpture
- Immel-Jones Site
- Luther S. “Yellowstone” Kelly’s Gravesite
- Ferry Ring
- The First Church (Congregational Church)
- Yegen Brothers Sign
- Zimmerman Trail
- James Webb Memorial
- John Losekamp Memorial
- Myers Trail
- Community Christmas Trees
- Pioneer Park- The George Washington Trees

**Facilities**
- Western Heritage Center
- Billings Parmly Library
- Yellowstone Art Center
- BBWA Canal
- Alberta Bair Theater
- Daylis Stadium
- Women’s History Museum
- Peter Yegen, Jr. Yellowstone County Museum
- Railroad Depot
- Moss Mansion
- Billings Logan International Airport
- Cobb Field
- Metra Park
- Zoo Montana
### ADDITIONAL CULTURAL AND HISTORICAL INFORMATION

#### State and Local Contacts

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<thead>
<tr>
<th>Contact</th>
<th>Address</th>
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<tr>
<td>Peter Yegen Jr. Yellowstone County Museum</td>
<td>1950 Terminal Circle</td>
<td>(406) 256-6811</td>
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<tr>
<td>Western Heritage Center</td>
<td>2822 Montana Avenue</td>
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<tr>
<td>Dept of Parks, Recreation and Public Lands</td>
<td>City of Billings</td>
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<tr>
<td>Friends of Chief Plenty Coups Association</td>
<td>Box 100</td>
<td>(406) 252-1289</td>
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<tr>
<td>Frontier Heritage Alliance</td>
<td>1004 Big Goose Road</td>
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<td>Museums Association of Montana</td>
<td>c/o Montana Historical Society</td>
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<td>Montana Fish Wildlife &amp; Parks</td>
<td>2300 Lake Elmo Drive</td>
<td>(406) 247-2940</td>
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<tr>
<td>Yellowstone River Parks Association</td>
<td>c/o D.A. Davidson, Hart Albin Building</td>
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<tr>
<td>Carbon County Historical Society Archives</td>
<td>224 N. Broadway Avenue</td>
<td>(406) 446-3667</td>
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### National Contacts

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<td>444 North Capitol Street, NW Suite 332</td>
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<td>Washington, DC 20001</td>
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<tr>
<td>45 School Street</td>
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<td>Boston, MA 02108</td>
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<td>617.350.7032</td>
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### 6.6 Site Amenities

Site amenities offer a wonderful opportunity to enhance the character and identity of the Heritage Trail. Often overlooked, site amenities can offer trail users points of rest, interpretation, and contemplation resulting in a positive trail experience while providing continuity throughout the trail system. It is the intent of the Heritage Trail to offer suggestions on appropriate site amenities that fit the character that is unique to the Yellowstone Valley.
Amenities such as benches, bollards, and signage utilizing materials such as wood timbers and natural stone are recommended to promote and enhance the identity of Heritage Trail.

TRAILHEADS

Trailheads offer a unique opportunity to present the trail system to the public. They are transition points and are typically the first impression of the trail system to the public. Because of this, special attention should be considered when designing and developing trailheads. A typical trailhead plan with parking is shown in Figure 6.6.1 and a typical trailhead plan without parking is shown in Figure 6.6.2.

A typical trailhead design should consider:
- Circulation for vehicles, pedestrians and potentially animals
- Appropriate parking areas
- Restrooms, signage, screening, and landscaping
- Connector trails to the main trail for alternate use
- Safety and security

Figure 6.6.1 Typical Trailhead Design with Parking
Figure 6.6.1 Typical Trailhead Design without Parking

The placement of signage at all trailheads and transition points provides continuity throughout the trail system. An example of a Heritage Trail sign to be placed at all major trailheads is shown in Figure 6.6.3 and recommended specifications for the standard Heritage Trail sign are shown in Figure 6.6.4. Heritage Trail signage should also be placed at transition points and various locations along the length of a trail. Additional signing recommendations are included in the following sections.
Figure 6.6.3. Major Trailhead Sign

Figure 6.6.4. Recommended Specifications for Heritage Trail Sign
BENCHES

Benches offer a wonderful opportunity to enhance trail identity and allow community participation. Location, style and comfort are important considerations when selecting and implementing benches.

Typically, benches should be located at all primary and secondary entry points and at regular intervals along the trail. Typical design standards include one bench every two miles on rural trails, one bench every half mile on suburban trails and benches placed as necessary on urban trails. Actual locations will vary based on usage and alignment opportunities.

Bench style is dependent on trail character, funding and maintenance. All benches should be vandal resistant, securely fastened to the ground to eliminate the possibility of theft, and have a unique style which is the same or similar throughout the trail system. One option for benches would be the use of sandstone slabs (see photo). Design standards include an 18” bench height with a minimum seat depth of 15”.

SIGNAGE

Signage is an important amenity to the trail system as it provides critical information to trail users. Signs should be clear, concise and legible and made of materials that are suitable to the trail character and durable enough to stand up to public use. As shown in Figure 6.6.5, utilizing natural sandstone for bollards/signage for example is an opportunity to tie the unique character of the Rims to the trail system.
Trail signage can be broken down into six categories: informational, directional, regulatory, warning, event, and interpretive. Informational signs orientate users on the trail system and provide an overview of the trail and associated facilities. Informational signs can also identify trail distances in the form of mileage markers, and average time required to travel along a particular section of trail or a specific trail facility. Examples of typical informational signs in the form of mileage markers are shown in Figure 6.6.5 and 6.5.6.

Figure 6.6.5 Stone Bollard

Figure 6.6.6 Typical Informational Sign

Directional signs provide trail users with information necessary to choose a particular travel route. Typical directional signs utilize graphic symbols with brief descriptions. Signs may
include information such as arrows indicating direction of travel with supporting text “this way” or “keep to the right”. Figure 6.6.7 shows an example of a typical directional sign.

Regulatory signs identify rules, laws, and regulations that apply along trail corridors. Examples include speed limit, hours of operation, and pass with care. Warning signs are used to caution trail users about potential hazards such as a narrow bridge or steep slope. Refer to the current City of Billings Design Standards for Trails and Bikeways for additional guidance on appropriate use and placement of regulatory and warning signs on trails.

The final two categories of trail signage are event and interpretive signage. Event signs offer wonderful opportunities to present information about special events happening both on the trail and within the community. Interpretive signage offers information about significant cultural and natural features along the trail.

**Figure 6.6.7 Typical Directional Sign**

**ADDITIONAL SITE AMMENITIES**

Other site amenities to consider include:

- Bicycle Racks
- Shelters
- Restrooms
- Lighting
Site amenities also offer the opportunity for community participation. Memorial benches, corporate donations of shelters, and local business advertising on signage can all be ways to allow the community to participate in the implementation of our trail system with a true sense of pride and ownership.

### 6.7 Landscape Recommendations

Trail development often occurs in areas rich in aesthetic character allowing for great experiences for trail users. Whether it is an opportunity to enjoy the fall colors along the Yellowstone River or experiencing the spectacular views of the Greater Yellowstone Valley, landscape plays an important role in how a trail “feels”. There are locations, however, where trail alignments occur in less pleasing areas where well designed landscaping can add to a positive trail experience.

Author Kevin Lynch writes on the importance of understanding landscape from the perspective of the trail user, “Since (the) landscape is usually experienced by a moving observer, it is not the single view that is important as much as the cumulative effect of a sequence of views.” Landscaping can serve several purposes along trail corridors including defining outdoor spaces, creating shade, directing circulation and providing screening from adjacent property owners. Other important considerations include soil conditions, plant selection, water requirements, maintenance requirements and initial and long-term costs.

It is the intent of the **Heritage Trail** to provide guidance for appropriate planting throughout the trail system as sections of the trail are constructed. With many sections of proposed trails located in areas with little to no supplemental water, native plants are recommended. If non-native plates are selected, they should be considered drought tolerant with a non-invasive root structure and hardy to zones 3-4. **Heritage Trail** identifies three “zones” differentiated by soil type and geographic locations within the Billings area.

- Water Corridors- silty soils
- The Valley- clay soils
- The Rimrocks- sandy soils

The following plant palettes, as shown in Figure 6.7.1, provide guidance on appropriate plantings that fit their location and can survive with little maintenance.
Figure 6.7.1 Plant Communities
WATER CORRIDORS

**Grasses**
- American Sloughgrass
- Prairie Sandreed
- Canada Wildrye
- Thickspike Wheatgrass
- Western Wheatgrass
- Slender Wheatgrass
- Reed Canarygrass
- Canada Bluegrass
- Prairie Cordgrass

**Woody Vegetation**
- Rocky Mountain Juniper
- Peachleaf Willow
- Sandbar Willow
- Narrowleaved Cottonwood
- Plains Cottonwood
- White Clematis
- Boxelder
- Rose Woods
- Green Ash
- Buffaloberry
- Golden Current
- Common Chokecherry
- Redtwig Dogwood
- Skunkbrush
- Snowberry
- Wild Grape

THE VALLEY

**Grasses**
- Blue Gramma
- Thickspike Wheatgrass
- Western Wheatgrass
- Prairie Junegrass
- Sandberg Bluegrass
- Green Needlegrass
**Wildflowers**
- Arrowleaf Balsamroot
- Paintbrush
- Blanket Flower
- Lupine
- Larkspur
- Coneflower
- Prairie Smoke
- Blue Flax
- Yarrow

**Woody Vegetation**
- Prairie Rose
- Big Sagebrush
- Fringed Sagebrush
- Winterfat

**THE RIMROCKS**

**Grasses**
- Blue Grama
- Prairie Sandreed
- Bluebunch Wheatgrass
- Prairie Junegrass
- Indian Ricegrass
- Sandberg Bluegrass
- Needle-and-thread

**Woody Vegetation**
- Ponderosa Pine
- Limber Pine
- Quaking Aspen
- Rocky Mountain Juniper
- Mountain Mohogany
- Golden Current
- Common Chokecherry
- Redtwig Dogwood
- Silverberry
- Sandcherry
- Skunkbrush Sumac
- Snowberry
- Silver Sagebrush
- Fringed Sagebrush
- Rabbitbrush
- Winterfat
- Shrubby Cinquefoil

There are additional zones such as urban areas and contaminated areas that will require site specific attention.

It is the recommendation of the Heritage Trail that landscaping at a minimum include site grading to mitigate construction activities encountered through trail construction and seeding of disturbed areas with a seed mix that includes some, if not all, of the recommended grasses. Additional landscaping is recommended as construction and maintenance budgets allow.

**ADDITIONAL LANDSCAPING RECOMMENDATIONS**

The trails edge should include a mowed shoulder (2-3 feet min.) on each side of the trail. This maintained shoulder offers an alternative lane for pedestrians, in particular joggers, who may prefer not to use the paved trail surface. It is important to note that woody vegetation including trees and shrubs should be kept at least 5 feet from the edge of the trails edge to reduce root damage to the trail.

Safety and security are also important factors when developing landscape along trail corridors. Visibility of 100 feet both forward and backward on all points along the trail is recommended, as well as adequate site distances on approaches to bridges and intersections. Trail users should have clear vision through an area before entering or committing to a particular route.

**LANDSCAPE MAINTENANCE PLAN**

The development of a maintenance plan should be designed and implemented as each trail segment comes on-line. Coordination with adjacent landowners and local jurisdictions such as the Parks, Recreation, and Public Lands should also take place to ensure long-term vitality of the trail landscape. If maintenance costs are prohibitive for the development of landscaping along trail corridors, alternative programs such as “Adopt-a-Trail” can be implemented to ensure the long-term success of individual projects.
6.8 References


7.0 IMPLEMENTATION

7.1 PLAN RECOMMENDATIONS

This chapter makes recommendations designed to enhance the bicycle and pedestrian environment in the Billings area. Using the existing network and project evaluation criteria, future priority bicycle and pedestrian facility projects were selected.

7.2 PROJECT SELECTION AND PRIORITIZATION

Ideally, the Heritage Trail would be implemented in its entirety all at once. The realities of funding availability, however, make it necessary to consider the plan as a combination of many projects, both small and large, which ultimately will result in total implementation of Heritage Trail.

Many bicycle and pedestrian facilities are developed in conjunction with larger projects such as street reconstruction or widening. The priority of the more significant project often determines when a bikeway project will be accomplished. Many other bicycle and pedestrian projects are closely linked to or are a result of development. These projects are often not needed until development actually occurs and construction of such projects is dependent upon funding provided by the new development. The following project evaluation criteria should be used to rate priority projects for the implementation of facilities that are not related to street reconstruction or development projects.

PROJECT EVALUATION CRITERIA

Safety
The opportunity for conflict between motorized and non-motorized traffic should be minimized whenever possible. Safety concerns were evaluated and included in the project prioritization process. In general, those projects that would remove bikes and pedestrians from roadways that have narrow shoulders, blind curves, high traffic volumes, or high speeds would receive a higher level of priority.

Safety was ranked as high (1), medium (2), or low (3). Projects received a high level of priority related to safety if they would provide an alternate route to a roadway that is a high safety concern as described above. A medium level of priority was assigned if the project would provide an alternate route to a roadway that is a moderate safety concern. Projects that would not provide a reasonable alternate route to a roadway were given a low level of priority related to safety.
**Connectivity & Accessibility**

A bicycle and pedestrian transportation network should provide direct connections to important origins and destinations, and whenever possible, facilities should be located where they can provide convenient access to all users. Origins and destinations include residential neighborhoods, parks, schools, and business and retail centers. An effective non-motorized transportation system should also provide connections with other transportation modes, such as public transit routes. Connectivity and accessibility are measures of the distance a facility is from a specified trip origin and destination and the ease by which this distance can be traveled, respectively.

Connectivity and accessibility were ranked as **high** (1), **medium** (2), or **low** (3). A project with **high** connectivity would be one that would provide several connections between primary origins and destinations; a project with **medium** connectivity would provide at least one connection between an origin and destination; and a project with **low** connectivity would not provide any connections between origins and destinations. A connection is defined by the origin or destination being within ½ mile of any point along the facility.

**Route Continuity**

The proposed network should minimize missing links. By eliminating gaps in the overall network, bicycle and pedestrian facilities can better serve all segments of the community. If gaps exist in the bicycle network, they should be signed well, and should not include traffic environments that are unpleasant or threatening to facility users, such as high-volume or high-speed motor vehicle traffic with narrow outside lanes. Good quality routes should be direct and smooth flowing with little waiting time and have minimal increased (detour) distance compared to the most direct route.

Continuity was ranked as **high** (1), **medium** (2), or **low** (3). A project with **high** continuity would be one that would provide a continuous route between two or more existing facilities; a project with **medium** continuity would provide a connection to one existing facility; and a project with **low** continuity would not provide a connection to any existing facilities.

**Aesthetics and Recreational Value**

Bicyclists and pedestrians are more inclined to use facilities that provide a comfortable and attractive route, especially for recreational trips. The goal of this criterion for evaluation is to give some priority to those projects that would provide a more enjoyable and visually pleasing recreational experience (i.e., along the Rimrocks or Yellowstone River). Trails that link park facilities were given more priority than those that simply follow transportation corridors.

Aesthetics and recreational value were ranked as **high** (1), **medium** (2), or **low** (3). Projects that would be located within corridors along the Rimrocks, Yellowstone River, other waterways, or within parks or greenways were given a **high** level of priority. Those not located in the above corridors, but also not located along roadways, were given a **medium** level of priority. Projects that would be located within the right-of-way of roadways, railroads, etc. were given a **low** level of priority related to aesthetics and recreational value. It should be noted that, although it is an
important criterion to include in the prioritization of projects, aesthetic beauty is a matter of perception. Therefore, it is important to be consistent when comparing one potential project to another.

**Travel Demand**

Bicycle and pedestrian travel demand is based on several factors, including population, commuter mode split, the number of trip generators that can be accessed by a given facility, potential bicyclists or walkers, recreational trips, etc. Because alternate-mode travel demand forecasting is currently a difficult and time-consuming process, many transportation and advocacy groups consider this issue to be a high research priority, especially considering the amount of funding available through ISTEA for bicycle and pedestrian projects. However, there is not a clear consensus among these groups as to the ideal bicycle and pedestrian demand forecasting methodology.

Therefore, based on research of current methods, a simple process for determining bicycle and pedestrian travel demand has been developed for the purpose of evaluating and comparing potential projects. This process was developed specifically for the purpose of comparing potential projects and is not meant for design purposes. These bicycle and pedestrian travel demand forecasting guidelines consist of the following steps:

1. Define the bikeway or multi-use path corridor or section for analysis.
2. Define the area of influence from which the bicycle and pedestrian travel demand would originate or to which it would be destined. Through research of various methodologies, it was determined that ½ mile on either side of the facility is the common assumption for area of influence.
3. Use current Census data to determine the average mode split for the area of influence. For each of the Census tracts within this area, obtain the percentage of commuters that bike or walk to work and calculate the average. For simplicity, it is not necessary to account for the fact that not all of the census tracts will be entirely encompassed by the area of influence.
4. Determine the demand for the facility by multiplying the average mode split by the Average Daily Traffic (ADT) on the adjacent streets within the area of influence. It is recommended that the following approaches be taken for different facilities:

   **On-street Bikeways** – Multiply the average mode split by the ADT on all arterials and collectors that are parallel to the proposed facility and within the area of influence.

   **Multi-Use Trails** – Multiply the average mode split by the ADT on all arterials and collectors that would form an alternate adjacent route to the facility being analyzed. This step is somewhat subjective, and therefore it is important to be consistent when comparing one potential facility to another.
5. After the previous steps have been completed for each of the proposed bicycle and pedestrian facilities, the calculated travel demands should be taken into consideration when deciding which projects should receive priority. Bike and pedestrian travel demand was ranked as high (1), medium (2), or low (3) for each potential project based on the following conditions:

**On-street Bikeways** – Proposed on-street bikeways were given a high ranking if they had a travel demand greater than 1000 trips per day, a medium ranking if they had a demand between 500 and 1000 trips per day, and a low ranking if they had a demand of less than 500 trips per day.

**Multi-Use Trails** – Proposed multi-use trails were given a high ranking if they had a travel demand greater than 500 trips per day, a medium ranking if they had between 100 and 500 trips per day, and a low ranking if they had a demand of less than 100 trips per day.

**Bicycle Compatibility Index (BCI)**

As described in Section 5.2, the BCI is a measure of how well a roadway can accommodate efficient operation of both bicycles and motor vehicles. The BCI is an effective tool for evaluating existing roadways, as well as ranking the need for bicycle-related improvements. All roadway segments identified as primary bikeways in the Heritage Trail Plan were inventoried to determine the BCI level of service of each segment. A summary of the BCI entry data collected during this process is included in Appendix B and a summary of the calculations and results are included in Appendix C.

The results of the BCI calculations and resulting levels of service (LOS) were used as one of the criteria for prioritizing primary bikeways. Those facilities with the worst level of service should be rated with the highest level of priority for improvement. Therefore, facilities with BCI LOS E or F received a high (1) ranking, facilities with BCI LOS C or D received a medium (2) ranking, and facilities with BCI LOS A or B received a low (3) ranking.

**Public Opinion**

The transportation planning process must include opportunities for gathering public input. Bicyclists and pedestrians are the ones who best understand the challenges that might be limiting the use of non-motorized transportation. Input on non-motorized transportation improvements can be sought from local bike clubs, parent/teacher organizations, public surveys, etc. For the purpose of this project, public opinion was incorporated in the prioritization process through a survey at the third public meeting. The public was presented with the top 10 multi-use trail projects and the top 18 on-street primary bikeway projects, based on the above criteria. Each person was asked to choose three multi-use trail projects and three on-street bikeway projects that they feel should be priority. The total of all the rankings obtained from the public were then used in the overall project evaluation.
PROJECT EVALUATION PROCESS

Through a series of public meetings and steering committee meetings, a proposed network of on-street and off-street facility corridors were produced. In order to prioritize these proposed projects, it was necessary to divide the corridors into reasonable sections for analysis. These sections were used for the evaluation process only and do not necessarily reflect how the corridors would be constructed.

Because of the difference in characteristics between on-street and off-street facilities, the evaluation process was performed separately for each based on a different set of criteria. Off-street facilities, or multi-use trails, were evaluated based on safety, connectivity, route continuity, aesthetics, and non-motorized travel demand. On-street primary bikeways, were evaluated based on route continuity, non-motorized travel demand, and the bicycle compatibility index. The results of this analysis are shown in the project evaluation matrices, included in Appendix F and G for multi-use trails and primary bikeways, respectively. The overall rankings that are closest to 1.0 represent the projects that should be considered highest priority.

Each of the priority projects resulting from this analysis was then combined into longer, more reasonable sections for public input. The top 10 trail projects and the top 18 on-street bikeway projects based on these criteria were then presented to the public for its input, which was then incorporated into the overall priority ranking. The priority projects, as presented to the public are shown in Figure 7.2.1 and 7.2.2 for multi-use trails and on-street bikeways, respectively. The priority projects will be discussed in greater detail in Section 7.3.
Figure 7.2.1 Priority Projects – Multi-Use Trails
Figure 7.2.2 Priority Projects – On-Street Primary Bikeways
Because of the difference in evaluation criteria, the results of the ranking process for on-street facilities should not be directly compared to the results for off-street facilities. In addition, as previously discussed, this process should only be used to compare one potential project to another and should not be used for design purposes.

Up to this point, this process has been independent of fiscal and constructability constraints, which will ultimately have an effect on the actual development of proposed facilities. Therefore, the highest ranked projects based on the above criteria were then further evaluated based on cost, funding availability, and ease of implementation.

**Cost and Funding Availability**
The overall cost and source of funding will ultimately be the deciding factor on the timeframe available for implementation of a proposed facility. The cost of an individual project should be considered within the context of the entire network to determine its real benefit. Overall cost of a facility is dependent on length, crossings (at-grade or grade separated), addition or removal of earthwork, clearing or modification of vegetation, and amenities (lighting, benches, etc.).

Section 7.3 lists a range of estimated costs and potential funding sources for each of the priority multi-use trails. The cost estimates were calculated using the following assumptions based on 2003-2004 construction costs.

- 10-foot wide hard-surface trails at $2.50 to $3.00 per square foot
- 5-foot landscaped (or reseeded) area on either side of the trails at $0.24 to $0.30 per square foot
- Grade-separated crossings, at-grade crossings, and waterway crossings based on the cost of similar, recently constructed projects

See Appendix H for detailed calculations of construction cost estimates of priority multi-use trails. It should be noted that the purpose of these cost estimates is for comparison only, and they should not be used for securing or allocating funding. The trail lengths used for this analysis were based on proposed corridors and not actual alignments. Cost estimates should be recalculated once actual alignments are determined. These estimates also assume minimal landscaping and do not include any additional amenities, such as lighting, benches, or railings.

**Ease of Implementation**
Similar to cost and funding availability, the ease of implementation for a proposed project could be the difference in whether or not a project gets constructed. The ease of implementation depends on necessary crossings, characteristics of existing terrain, and the availability of right-of-way. Trail corridors that have the most amount of public-owned land should be given some preference over those requiring right-of-way acquisition or easements. Section 7.3 includes various constraints on implementation for the priority multi-use trails.
7.3 Priority Projects

Although all of the proposed bicycle and pedestrian facilities would be integral parts of the overall network, the following projects have been selected as priority projects based on the evaluation criteria previously discussed.

MULTI-USE TRAILS

The following provides a detailed description of each of the priority multi-use trail projects, listed in order of public preference. Also included are a range of estimated costs, potential funding sources, and implementation constraints for each proposed multi-use trail. As previously discussed, each of the proposed projects are highlighted in Figure 7.2.1 and a summary of the results of the project evaluation process is included in Appendix F.

1. **Riverfront Trail** – This trail would run along the Yellowstone River and would provide a connection to the existing multi-use trail that runs from Metra Park to Mystic Park near the I-90 27th Street Interchange. The proposed trail would also connect to the existing Riverfront Park trails. The following list provides additional information on this project:
   - Approximate Length: 1.8 miles
   - Estimated Construction Cost – $260,000 to $315,000
   - Potential Funding Sources – Community Transportation Enhancement Program (CTEP), Recreational Trails Program (RTP), Transportation Community Systems Preservation (TCSP), 1999 GO Bond
   - Constraints – Acquisition of right-of-way

2. **Blue Creek Trail** – This trail would run along the Blue Creek Corridor from the Yellowstone River to Basin Creek Road (Blue Creek School). The following list provides additional information on this project:
   - Approximate Length: 3.0 miles
   - Estimated Construction Cost – $490,000 to $600,000
   - Potential Funding Sources – CTEP, RTP, TCSP, Private funding
   - Constraints – Multiple crossings of Blue Creek and acquisition of right-of-way

3. **Downtown Railroad Trail** – This trail would run along the railroad right-of-way beginning from the area between MRL RR Bridge and the Interstate by the Yellowstone River, through Downtown, to the I-90 West Billings Interchange. The following list provides additional information on this project:
   - Approximate Length: 5.4 miles
   - Estimated Construction Cost – $2,780,000 to $3,340,000
   - Potential Funding Sources – CTEP, RTP, TCSP
4. **Alkali Creek Trail** – This trail would run through the Alkali Creek Corridor. It would provide a connection to the existing trail near Lincoln Lane. Although the proposed trail would eventually extend for several miles along Alkali Creek, this priority project would end at Senators Boulevard. The following list provides additional information on this project:

- Approximate Length: 2.4 miles
- Estimated Construction Cost – $1,860,000 to $2,235,000
- Potential Funding Sources – Currently $500,000 available through TCSP, CTEP, RTP
- Constraints – Acquisition of right-of-way, grade separated crossing at Main Street, and Park Master Plan

5. **BBWA Northwest Trail** – This trail would run along the BBWA Canal from North 27th Street to Broadwater Avenue, where it would connect to the existing Descro Park Trail. The following list provides additional information on this project:

- Approximate Length: 4.0 miles
- Estimated Construction Cost – $660,000 to $815,000
- Potential Funding Sources – CTEP, RTP, TCSP
- Constraints – Acquisition of right-of-way and multiple arterial and collector street crossings

6. **BBWA Westend Trail** – This trail would run along the BBWA Canal from the south end of the Descro Park Trail at Central Avenue to Shiloh Road. Included in this corridor is the existing trail located along Famous Dave’s Restaurant on King Avenue West. Also included in this priority corridor is a link to the existing Midland Park Trail. The following list provides additional information on this project:

- Approximate Length: 3.4 miles
- Estimated Construction Cost – Central to King-$291,300; Gabel Rd. Connector-$776,750 (excluding Midland and section already funded for Transtech)
- Potential Funding Sources – CTEP, 1999 GO Bond, RTP (Funding already in place for trail from Central to King and portion through TransTech Center)
- Constraints – Acquisition of right-of-way and multiple arterial street crossings and potential BBWA crossings

7. **BBWA Heights Trail** – This trail would run along the portion of the BBWA Canal located in the Heights. It would run from Five Mile Creek, along Lake Elmo, to Alkali Creek. The following list provides additional information on this project:

- Approximate Length: 3.8 miles
- Estimated Construction Cost – $590,000 to $720,000
- Potential Funding Sources – CTEP, RTP, TCSP
- Constraints – Acquisition of right-of-way and multiple street crossings

8. **Zimmerman Trail** – This trail would run along the existing street, called Zimmerman Trail, and would provide a connection from Rimrock Road to State Highway 3 above the Rimrocks. This trail would also provide a connection to Zimmerman Park, a recreational area with a significant number of natural trails. The following list provides additional information on this project:
   - Approximate Length: 1.0 miles
   - Estimated Construction Cost – $435,000 to $650,000
   - Potential Funding Sources – CTEP, RTP, TCSP
   - Constraints – Limited right-of-way, rough terrain and steep grades

9. **Big Ditch Trail** – This trail would run along the Big Ditch from Shiloh Road at the existing Shiloh Road Underpass to approximately 1 mile west of 56th Street West. The following list provides additional information on this project:
   - Approximate Length: 2.9 miles
   - Estimated Construction Cost – $420,000 to $505,000
   - Potential Funding Sources – CTEP, RTP, TCSP
   - Constraints – Acquisition of right-of-way

10. **Bridal Moon Trail** – This trail would run from Alkali Creek Road near Senators Boulevard to Airport Road near Swords Park. The trail would run through the existing Bridal Moon Park and along the old Airport Operations Center access road. The following list provides additional information on this project:
   - Approximate Length: 1.5 miles
   - Estimated Construction Cost – $300,000 to $480,000
   - Potential Funding Sources – CTEP, RTP, TCSP
   - Constraints – Acquisition of right-of-way, rough terrain and Airport Road crossing
ON-STREET PRIMARY BIKEWAYS

The following is a list of the priority on-street bikeways, listed in order of public preference. As previously discussed, the proposed projects are highlighted in Figure 7.2.2 and a summary of the results of the project evaluation process is included in Appendix G.

1. Poly Drive – From North 27th Street to 38th Street West
2. Lake Elmo Drive – From Main Street to Pemberton Lane
3. Mary Street – From Main Street (Bench Boulevard) to Fivemile Creek
4. North 30th Street – From Poly Drive to Montana Avenue
5. Lewis Avenue – From 1st Street West to Parkview Drive
6. 20th Street West/19th Street West/17th Street West – From King Avenue West to Rimrock Road
7. Duck Creek Road/Rudio Road/56th Street West – South of South Frontage Road
8. Parkhill Drive – From North 32nd Street to 17th Street West
9. Monad Road – From Moore Lane to Shiloh Road
10. Colton Boulevard – From 17th Street West to 38th Street West
11. South 28th Street – From 1st Avenue South to State Avenue
12. 2nd Avenue South – From South 28th Street to State Avenue
13. North 28th Street – From 9th Avenue North to proposed railroad trail
14. 8th Street West – From proposed railroad trail to Parkhill Drive
15. South 34th Street – From 1st Avenue South to State Avenue
16. 9th Avenue North – From North 31st Street to North 19th Street
17. 1st Street West – From North 32nd Street (Avenue B) to proposed railroad trail
18. North 19th Street/North 18th Street – From 9th Avenue North to proposed railroad trail

7.4 Funding Strategies

FEDERAL FUNDING SOURCES

The Intermodal Surface Transportation Efficiency Act (ISTEA), enacted in 1991, provided authorizations for highways, highway safety, and mass transportation. Under the Enhancement Program, special funding was dedicated for bicyclists and pedestrians. This act was superseded in 1998 by the Transportation Equity Act for the 21st Century (TEA21). It provides authorization for highways, highway safety, transit and other surface transportation programs and builds on the initiatives established in ISTEA. A portion of this funding is dedicated for bicyclists and pedestrians.

TEA21 recognizes the transportation value of bicycling and walking and offers mechanisms to increase consideration of bicyclists’ and pedestrians’ needs within the National Intermodal
Transportation System. The following are major funding programs of TEA21 under which bicycle and pedestrian projects are included as eligible activities.

**National Highway System (NHS)**
These funds may be used to construct bicycle transportation facilities and pedestrian walkways on land adjacent to any highway on the National Highway System (other than highways with access control). In addition, NHS funds can now be spent on non-motorized projects within Interstate corridors. The federal share of the projects funded is generally 80% with a 20% state or local match.

**Surface Transportation Program (STP)**
Funds may be used on an 80% federal/20% state or local basis for either the construction of bicycle transportation facilities and pedestrian walkways, or non-construction projects related to safe bicycle use (such as brochures, public service announcements, and route maps). TEA21 specifically made sidewalk improvements required to comply with Americans with Disabilities Act eligible for funding.

In addition, 10 percent of each State’s annual STP funds are available only for Transportation Enhancement Activities (TEAs). This activity has, and will continue to have, a significant impact upon the development of bicycle and pedestrian programs and facilities.

**Congestion Mitigation and Air Quality Improvement (CMAQ)**
Program funds may be used on an 80% federal/20% state or local basis for the construction of bicycle and pedestrian facilities, or non-construction projects related to safe bicycle use (such as brochures, public service announcements, and route maps).

**Federal Lands Funds**
May be used on a 100% federal basis to construct bicycle and pedestrian facilities in conjunction with roads, highways, or parkways at the discretion of the Federal Bureau charged with the administration of such funds.

**Scenic Byway Program**
Funds may be used on an 80% federal/20% state or local basis to plan, design, and construct facilities along highways for the use of bicyclists and pedestrians. The Scenic Byway Program may also be funded through the Community Transportation Enhancement Program (CTEP), which is further discussed under State and Local Funding Sources.

**National Recreational Trails Act**
At least 30% of these funds go to motorized trails, 30% to non-motorized trails, and 40% to multipurpose trails. This money can be used for maintenance as well as construction of recreational trails. The Recreational Trails Program, one part of TEA 21, will provide $1.4 million for Montana trails over the next two years. Montana’s Parks Division administers these funds with advice from the citizen’s State Trails Advisory Committee.
Highway Safety Programs
This funding is 100% federal and includes components to “improve pedestrian performance and bicycle safety.” A recreation department or elementary school, for example, could apply for these funds to conduct a program on bicycle safety.

Federal Transit
Transit funds may be used on an 80% federal/20% state or local basis for bicycle and pedestrian access to transit facilities, to provide shelters and parking facilities for bicycles in or around transit facilities, or to install racks or other equipment for transporting bicycles on transit vehicles.

Hazard Elimination Program
TEA21 added bicycling and walking hazards into the list of eligible elimination activities. It also included publicly owned bicycle and pedestrian pathways and trails and traffic calming measures into the definition of a public road.

Section 402 Funding
Pedestrian and bicyclist safety remain priority areas for highway safety program funding. State and community highway safety grant programs are eligible for 100% federal funding.

Demonstration Projects
One-of-a-kind projects may be funded under this provision on an 80% federal, 20% state/local basis. This may include funding the construction of a bicycle and pedestrian path or just a special feature, such as vegetation demonstration planting. It may also include the funding by a group to develop a program that encourages more children to wear bicycle helmets.

Transit Enhancement Activities
This new TEA 21 funding program created with a one percent set-aside of Urban Area Formula transit grants can be used for, among other things, bicycle and pedestrian access to mass transit, including bicycle storage facilities and installing equipment for transporting bicycles on transit vehicles. The funding is 95% federal and only 5% matching local funds.

Transportation and Community and system preservation PILOT Program (TCSP)
The TCSP Program, administered by the Federal Highway Administration, provides funds for planning and implementation grants, technical assistance and research to investigate and address the relationship between transportation, community and system preservation, and private sector-based initiatives. States, local governments, metropolitan planning organizations (MPOs), and tribal governments are eligible to apply for TCSP Program funds.
Other Potential Federal Funding Sources

- Watchable Wildlife Program
- Community Development Block Grants, Entitlement Program, Small Cities Program
- Federal Land and Water Conservation Funds (administered by MT Fish Wildlife and Parks)
- Congestion Management and Air Quality Improvement Program

STATE AND LOCAL FUNDING SOURCES

Community Transportation Enhancement Program (CTEP)

Montana is currently in the tenth year of administering the Community Transportation Enhancement Program (CTEP), made available by federal funding sources. Annually, this program provides the mechanism for allocating about $5 million to Montana jurisdictions. Over half of the enhancement projects selected by local units of government involve facilities for bicycles and pedestrians.

Historically, MDT has been actively involved in the funding of bicycle and pedestrian facilities. The 1985 Footpath and Bicycle Act (Montana Code Annotated 60-3-301) is the only Montana statute that specifically addresses bicycle and pedestrian funding. This act sets a minimum annual spending requirement for footpaths and bicycle trails. Through the federal programs and other initiatives, MDT has consistently exceeded this minimum requirement.

Additional State and Local Funding Sources

- Montana Air and Congestion Initiative Funds
- State General Funds, State of Montana, Governor’s Office
- Transportation Funds administered by MDT
- Montana Department of Natural Resources & Conservation (DNRC) Conservation Grant Program
- Reallocation of Existing Resources
- Local government general funds and parks, public works, engineering, public utilities, and community development funds
- Land acquisition through subdivision development land dedications
- Recreational use easements
- Special Assessment and Taxes
- Special improvement districts, bond issues, and optional sales tax
- Developer land dedications
- Adverse impact mitigation improvements
- Impact fees
- Motor vehicle taxes, user or licensing fees
- Park dedication requirements – cash in lieu of land provisions
Private Funding Sources

- Cash Donations
- Fund raising events (i.e., Ales for Trails)
- Conservation Groups
- Corporate sponsors
- Bank trusts established for bicycle interests
- Foundations (i.e., Bikes Belong Coalition Ltd., Montana Community Foundation)
- Volunteer and Service Organizations
- League of American Wheelman
- Cost sharing with Government
- Medical and educational facilities
- Land acquisition through donations, conservation easements, and shared use agreements

7.5 References


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