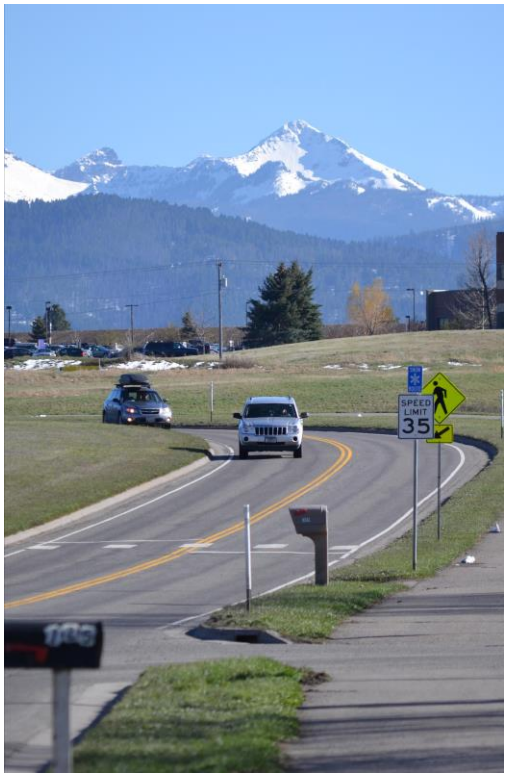

GOALS AND OBJECTIVES

Technical Memorandum

FINAL

November 25, 2015

prepared by:

Robert Peccia & Associates

www.rpa-hln.com

prepared for:

City of Bozeman & Montana Department of Transportation

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List of Tables

ABBREVIATIONS / ACRONYMS

CHSP	Comprehensive Highway Safety Plan
CTSP	Community Transportation Safety Plan
DOT	Department of Transportation
DUI	Driving Under the Influence
EPA	Environmental Protection Agency
HUD	Housing and Urban Development
LED	Light Emitting Diode
MAP-21	Moving Ahead for Progress in the 21st Century Act
MDT	Montana Department of Transportation
MPO	Metropolitan Planning Organization
MSU	Montana State University
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SOAR	Safe On All Roads
STEP	Selective Traffic Enforcement Program
TDM	Transportation Demand Management
TMP	Transportation Management Plan
TSAC	Transportation Safety Advisory Committee
TWG	Technical Working Group
U.S.	United States

Goals and Objectives

1.0. INTRODUCTION

Development of goals and objectives for the Bozeman Transportation Management Plan (TMP) is a critical first step in the transportation planning process. In addition to capturing all related information from previous community planning efforts, the goals and objectives lay out the general course of action for the TMP development and represent the community's vision for the future transportation system. Accordingly, developing goals and objectives cannot be accomplished within a vacuum. It is an iterative process that continually evolves through guidance provided by the Technical Working Group (TWG), specific stakeholders, the general public, and the elected officials.

The goals and objectives proposed later in **Section 5.1** of this memo are put forth in hopes of accurately reflecting the condition of planning within the general community, and more specifically reflecting the needs and desires relative to transportation. The listed information must be adequately vetted with the public over the course of the entire transportation planning exercise, and will be initiated at the very first public informational meeting.

The goals and objectives developed for the TMP are connected concepts – that is they represent the desired end result of the community's transportation system once projects identified are implemented. Goals and objectives also provide direction on how to get to that end result. Factoring in specific guidance for transportation planning relative to the eight planning factors contained in the Moving Ahead for Progress in the 21st Century Act (MAP-21) legislation, it is clear the importance that the establishment of goals and objectives carries. Collectively, the goals and objectives will inform the planning process and set the course of action for the transportation system for years to come.

Goals represent the overarching statements of the TMP intent and the direct elements of the community's vision.

Objectives are more focused statements of specific actions, measures or procedures that reflect how a particular goal can be attained.

Numerous local planning documents were reviewed to determine what, if any, transportation related goals and objectives have already been developed within the community. The summary of reviewed planning documents on the following pages is intended to portray existing transportation goals and objectives in the broader sense to identify what the community has in place and what diretion the community is heading relative to transportation. Many of the planning documents reviewed have been completed by non-City entities and accordingly may not appear to be "connected" to each other, however all do articulate some vision for community transportation.

2.0. LOCAL PLANNING PROCESSES

2.1. UNDERSTANDING COMMERCIAL TRUCK TRAFFIC THROUGH DOWNTOWN BOZEMAN (JUNE, 2015)

The Understanding Commercial Truck Traffic through Downtown Bozeman report states *"…the primary objective of this project is to gain a better understanding of the commercial truck use of the primary arterial through Downtown Bozeman (Main Street/US 191)."* The study was motivated by anecdotal evidence that heavy vehicles, specifically semi-tractor/trailer combos, comprise a large portion of traffic along Main Street. In addition to identifying the magnitude of heavy vehicle traffic on Main Street, the study also investigated other potential routes for through truck traffic.

The study notes that the City of Bozeman Municipal Code defines a truck route as "a way over certain streets, as designated by ordinance, over and along which trucks coming into, going out of and traveling within the city must operate."[1] However, it is also noted that the City of Bozeman has never designated any truck routes.[2]

For this study, Downtown Bozeman is defined as the Downtown Business Improvement District, the Downtown Tax Improvement District, or the B-3 Zoning District.

As part of the study, a literature review was performed with the intent of identifying cities with similar heavy vehicle issues and documenting the approach each city used to qualitatively define the magnitude of the issues. Eight cities were identified and their experiences summarized. The common theme among each of the eight cities was the interplay between pedestrians and heavy vehicles.

To accurately quantify the number of heavy vehicles using Main Street for through trips, video cameras were utilized to record all traffic from 12:00 PM on September 4th to 11:00 AM on September 15th. Traffic in both directions was recorded at two locations, one at the intersection of Haggerty Lane and Main Street and the other west of the intersection of 19th Avenue and Main Street. Over the course of the data collection effort, approximately 264 hours of footage was collected. From the footage, truck counts were performed for daylight hours between 8:00 AM and 8:00 PM.

[1] Chapter 36, Article 9 – Truck Traffic, City of Bozeman Code of Ordinances, Accessed 9/3/2015, https://www.municode.com/library/mt/bozeman/codes/code_of_ordinances?nodeId=PTIICOOR_CH36TRVE_ART9TRTR_S36.09.010DE
[2] Ulmen, Stacy. Bozeman City Clerk. March 23, 2015

For this research, a "through truck" was defined as "a large commercial truck that crosses from East Main Street to West Main Street in a reasonable amount of time without any stops or detours." The number of through trucks was determined by matching still footage of trucks that appeared at both cameras.

It was found that through trucks accounted for 21 to 71 percent of truck traffic depending upon the day of the week. **Table 2-1** presents a summary of the study findings.

Table 2-1: Through Trucks, Total Trucks, and Percentage

	Through Trucks	Total Truck	Percentage
Friday, 9/5/14	31	150	21
Saturday, 9/6/14	27	38	71
Sunday, 9/7/14	26	37	70
Monday, 9/8/14	37	141	26
Tuesday, 9/9/14	42	142	30
Wednesday, 9/10/14	38	108	35
Thursday, 9/11/14	38	119	31
Friday, 9/12/14	33	61	54

Alternate routes for through truck traffic were investigated in addition to the count data. Three additional routes were examined:

1. Exiting I-90 at N. 7th Avenue and continuing to Main Street,
2. Exiting I-90 at N. 19th Avenue and continuing to Main Street, and
3. Exiting I-90 at Jackrabbit Lane in Belgrade and continuing south to the Four Corners area.

Each route, including the Downtown route was summarized as given in **Table 2-2**. Travel time data were collected based on one trip and may vary based on traffic congestion, weather, road construction, etc.

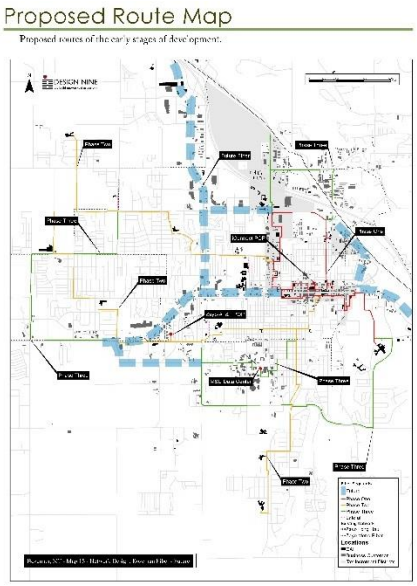
Table 2-2: Alternative Route Data

Route	Number of Traffic Control Devices	Length (miles)	Travel Time (minutes)
Downtown	24	8.7	20
N. 7th Avenue	19	10.8	17
N. 19th Avenue	17	12.9	15
Jackrabbit Lane	5	18	17

To quantify the impact that large vehicles have on sound levels in the downtown area, point measurements were taken on Main Street. It was found that the sound intensity on Main Street when no traffic was passing the observer ranged from 58 to 61 decibels. When traffic consisted of only passenger vehicles, the sound reading ranged from 69 to 75 decibels. When heavy vehicles passed the observer, the recorded sound levels ranged from 82 to 85 decibels.

2.2. Bozeman Fiber Master Plan and Feasibility Study (January, 2015)

The Bozeman Fiber Master Plan and Feasibility Study was commissioned by the Bozeman City Commission to explore strategies and activities to help get more and better broadband in the city of Bozeman. Increased affordability and availability of broadband delivered services has the potential to increase job creation in the city, help retain existing businesses, and improve the City's ability to attract new businesses and entrepreneurs. The expected outcomes of a fiber network in Bozeman includes increased economic growth through increased business attraction, increased local business expansion, and an increase in good-paying job opportunities. Pertinent to the Bozeman TMP, the Master Plan identifies a core fiber infrastructure network that would be required for implementation. This is important because as roadway transportation projects are developed, attention should be paid during the design and construction process to those locations where a future fiber network may be identified.



2.3. City of Bozeman Department of Community Development 2014 Annual Report (2014)

The City of Bozeman Department of Community Development Annual Report is used to summarize general trends and changes to the Bozeman community including residential and commercial building activity, actions to ensure that programs and regulations are relevant to changing community conditions, demographic trends, city boundary increases, subdivision activity, economic development, and code enforcement activity. The 2014 update summarizes the aforementioned activities for the 2014 calendar year. Annual Report updates are also available for years prior to 2014.

The report states that there are currently ±19,599 dwelling units in the City of Bozeman. Of those units, single-household units account for approximately 38 percent of all units. In 2014, 663 residential and 447 commercial building permits were issued. The approximate valuation of all building permits in 2014 is reported at $311,722,113.

According to the report, the population of the City of Bozeman in 2010 was 37,280 according to the US Census Bureau. The Census Bureau later estimated the population to be 39,860 in 2013. Using recent building construction, the City of Bozeman's estimated population in 2014 is 39,533.

Through annexation, 19.7 acres were incorporated into the City of Bozeman in 2014 according to the report. With the addition of this area, the total area of the City of Bozeman increased to 12,799 acres.

The report summarizes subdivision activity for the 2014 calendar year. A total of 58 subdivision applications and 32 subdivision exemption applications were processed. In addition to subdivision activity, zoning activity is also summarized in the report. A total of 56 zoning site development applications were processed in 2014.

2.4. Bozeman Community Transportation Safety Plan (July, 2013)

The Bozeman Community Transportation Safety Plan (CTSP) addresses the unique nature of urban and suburban traffic safety in the Bozeman Area. According to MDT, more crashes occur in urban areas as compared to rural areas. This fact is due in-part to the increased traffic volumes in urban areas. To address this reality, MDT established a program in which individual communities could apply for assistance to develop a CTSP. The process is data driven and led by community members.

The Plan states that "*…in Bozeman over the past three years (2009 – 2011) an average of one person dies annually and six people suffer incapacitating injuries resulting from traffic crashes. In addition, each year more than 200 people suffer less severe injuries in traffic crashes. The toll on Bozeman is significant in terms of suffering and economic loss.*" In 2012 the City of Bozeman began working to reduce the number of severe injury crashes in the urban area through the development of the CTSP. A Transportation Safety Advisory Committee (TSAC) was established to lead the effort. Through a thorough review of crash data, the TSAC identified the following three areas for focus (i.e. Emphasis Areas) to reduce fatal and incapacitating crashes in Bozeman:

1. Inattentive driving crashes;
2. Lack of occupant protection usage; and
3. Bicycle and pedestrian crashes.

The TSAC identified a goal to reduce fatalities and injuries by 25 percent between 2013 and 2018.

Bozeman Community Transportation Safety Plan Strategies

Inattentive Driving Crashes

1. Publicize the risks of distracted driving and conduct enforcement of distracted driving, including electronic handheld device with driving.
2. Conduct ongoing public education and outreach about safe driving protocols/skills and retaining opportunities.

Seat Belt / Occupant Protection Use

1. Promote seat belt use, through broadened membership partners and increase activity of the Greater Gallatin Safety Coalition.
2. Conduct targeted youth outreach to increase seat belt use.
3. Conduct outreach to Montana State University students on the importance of wearing seat belts in vehicles
4. Conduct general media outreach on the importance of seat belt use focusing on demographic groups with high rates of non-use. Complement outreach with targeted enforcement.
5. Collaborate with judges to ensure the judicial process is supportive of increased enforcement of seat belt non-use.
6. Enact a local ordinance making non-use of a seat belt a primary offense in Bozeman.
7. Conduct increased outreach about the need for vehicle passenger ages 4 to 9 to use booster seats.

Bicycle and Pedestrian Crashes

1. Increase bicycle and pedestrian infrastructure in Bozeman, including bicycle lanes, sidewalks, signage, and pavement markings.
2. Reduce impaired bicycling and walking.
3. Increase reporting of bicycle and pedestrian crashes.
4. Conduct public education about safe operating procedures between bicyclists and pedestrians and vehicles.
5. Increase enforcement of safe behaviors by both drivers around bicyclists and pedestrians and by bicyclist and pedestrians as they enter into the transportation mix.

The CTSP outlines implementation and review measures. The Plan states that the following steps should be undertaken for each emphasis area:

1. Chairs identify the appropriate partners to serve on the Emphasis Area team and coordinate regular team meetings;
2. Teams develop safety targets for each Emphasis Area, e.g. number of fatal and injury crashes involving inattention, unbuckled passengers, or bicycles and pedestrians;
3. Emphasis Area teams identify a strategy leader to carry out each Emphasis Area strategy and associated action steps;
4. Emphasis Area teams conduct regular (e.g. monthly) meetings to coordinate strategy implementation and report progress;
5. Emphasis Area teams report to the TSAC Chairperson, the Bozeman city engineer, on a regular basis (e.g. quarterly); and
6. Emphasis Area teams should develop new strategies for each Emphasis Area as strategies are put into place.

2.5. Streamline 2012 Business Plan (January 6, 2013)

A five-year business plan for Streamline was prepared and focused on the goal of determining how the existing service and organization could be modified to better meet the needs of riders and potential riders in the greater Bozeman area. The plan includes a broad range of recommendations addressing opportunities to improve service for existing riders, increase public awareness of Streamline's services, and serve new riders. Since Streamline was launched in 2006, it has experienced a steady and significant increase in ridership every year and there is no reason to believe this trend will not continue. The plan further states that any improvements or expansion in service or marketing are likely to result in ridership increases.

Streamline's mission is stated on the Streamline website (www.streamlinebus.com/about/) as follows:

To be the provider of mobility services and alternatives to the single occupancy vehicle in southwest Montana. Streamline will accomplish its mission by providing alternative modes of transportation, including the following:

- *Fixed Route Transportation*
- *Demand-Responsive Transportation*
- *Van Pools*
- *Carpooling services*

Streamline will accomplish its mission by providing services to the following clientele:

- *Montana State University Students*
- *Montana State University Faculty and Staff*
- *Senior Citizens General Public*
- *Persons with Disabilities*
- *Person with Low Incomes*
- *Non-driving high school and middle school students*
- *Downtown shoppers and workers*

2.6. Downtown Bozeman Parking Study (February, 2011)

The Downtown Bozeman Parking Study was conducted to create a clearer picture of the current parking resources, how existing parking is performing, and what future parking needs may be. To answer these questions, the Parking Study generated an inventory of all available parking within the downtown area as well as examined aspects related to parking such as dwell time, turnover, and occupancy rates.

Inventory data were collected in July, 2010. The field inventory data collected included:

- Number of spaces,
- Type of parking (on-street, off-street),
- Ownership of parking (public, private),
- Fees for parking (free, pay, permit),
- Access point/side of street – collected for internal identification and reference purposes, and
- Restrictions (handicapped, time, loading zone).

It was determined that at the time of the Parking Study, there were 5,034 parking stalls available in the downtown area. Given the 31 downtown blocks within the study area, there is an average of 162 stalls per block. The Downtown Parking Garage block has the most available parking stalls at 479 total. The block with the fewest stalls, 85, is to the north east of the intersection of Rouse Avenue and Mendenhall Street, the location of Hawthorne School.

For occupancy data, Montana State University (MSU) undergraduate labor was employed to manually count occupied stalls for both a single weekday, August 11, 2010, and a single weekend, September 11, 2010. Only the ten blocks immediately to the north and south of Main Street, from Grand Avenue to Rouse Avenue, were counted. It was found that weekday occupancy rates at peak times ranged from 82.3 percent to 51.3 percent. Weekend rates ranged from 83.3 percent to 20.3 percent

Turnover rates, or the number of individual vehicles which occupy a particular space over a specific period of time, were determined for select off- and on-street parking areas. A rate of 1.0 would indicate that a stall is used by one vehicle per hour, while a rate of 2.0 would indicate two vehicles per stall per hour. Conversely, a rate of 0.5 would indicate that a stall was occupied by a single vehicle for a duration greater than one hour. The results of the turnover rate analysis are given in **Table 2-3**.

Table 2-3: Turnover Rate Results

Location	Observed Vehicles	Stalls	Study Duration (hrs)	Turnover Rate (Veh/stall/hr)	Date
Mendenhall and Black	127	58	6	0.36	8/11/2010
Mendenhall and Willson NE	90	44	6	0.34	8/17/2010
Mendenhall and Willson NE	105	44	6	0.40	9/16/2010
Mendenhall and Willson SE	114	28	6	0.68	9/23/2010
Tracy on-street	78	11	6	1.18	8/24/2010
Main on-street	129	24	6	0.90	8/23/2010
Rouse and Babcock NW	91	48	6	0.32	10/8/2010
Parking Garage	64*	435	6	0.02	8/11/2010

To assess how well the available parking in Bozeman addressed the need for parking, the Study used the ITE Parking Generation Manual to determine parking demand. The ITE Parking Generation Manual allows one to calculate expected parking demand based on building size and usage. Using a combination of aerial photography, Google street view imagery, and field visits, the total square footage for each building in the downtown area was calculated. Usage information was supplied by the City of Bozeman. It was found that for all of downtown, a surplus of 1,849 stalls exist. However, some blocks have a deficit of stalls. Ultimately, the study determined that *"…it appears the city possess an adequate number of publicly-owned stall."*

2.7. Bozeman Community Climate Action Plan (2011)

The Bozeman Community Climate Action Plan (CCAP)[3] arose out of the Mayor of Bozeman signing the Mayor's Climate Protection Agreement (MCPA) in November 2006. The purpose of this agreement was to engage US cities to decrease their output of gases known to cause global warming. As of 2011, over 1,000 Mayors across the United States signed onto the MCPA thereby committing their cities to attempt to meet measurable goals for greenhouse gas reductions. The Mayors' Community Climate Task Force (MCCTF), a 15 member stakeholder group, was appointed in October 2009 to develop recommendations for the CCAP. After careful consideration and thoughtful planning, the MCCTF proposed a two part approach to achieve Greenhouse Gas (GHG) reduction:

1. Reduce emissions to 10 metric ton per capita by 2020 with aggressive conservation measures.
2. Reduce emissions to 10 percent below 2008 levels by 2025 by developing alternative energy capacity.

Analysis and subsequent recommendations to achieve a reduction in GHG emissions focused on five content areas: (1) Community Engagement & Implementation (2) Residential & Commercial Building, (3) Transportation; (4) Waste, Water & Recycling, and (5) Energy Production.

Pertinent to transportation, the CCAP states that transportation accounted for 19% and 26% of emissions in 2000 and 2008, respectively, and that transportation will continue to become a large source of emissions as Bozeman continues to grow. Three strategies were developed to help reduce emissions relative to transportation, as follows:

1. Support policies for long-term integrated multi-modal transportation and land use planning for a 20-30 year horizon.
2. Develop infrastructure for electric vehicle friendly community and provide incentives for the production, sale and use of clean fuels.
3. Reduce vehicle miles traveled (VMT) and fuel emissions by promoting a pedestrian and bike friendly community.

Furthermore, nine recommendations to achieve a reduction in GHG emissions relative to transportation were developed. It was noted in the recommendations section prelude that smart growth principles of accessibility, walkable neighborhoods, mixed land use, and varied transportation options will all work toward reducing emissions in the transportation sector. The nine recommendations were as follows:

- TSP-1 Expand and improve multi-modal infrastructure
- TSP-2 Allocate one mill levy to Streamline directly
- TSP-3 Install pay electric charging stations
- TSP-4 Adopt an anti-idling ordinance

[3] Bozeman Community Climate Action Plan (2011),

- TSP-5 Bike and showers in lieu of parking requirements
- TSP-6 Interconnect and enhance sidewalk network
- TSP-7 Support a local option gas tax
- TSP-8 Examine emissions from Gallatin Field Airport
- TSP-9 Reform Tax Permitting Process

2.8. City of Bozeman Economic Development Plan (2009)

The City of Bozeman Economic Development Plan was produced in response to recommendations made in the Bozeman 2020 Community Plan. The purpose of the Economic Development Plan was to provide the City of Bozeman with the opportunity to address the community's most pressing economic development needs and to come together behind a strategy for progressive and sustainable change.

Transportation is cited as being a reason that Bozeman is easily accessible for businesses. The easy access for both trucking and railcar transportation is an important factor for business development. Manufacturing and industrial businesses benefit from easy access to freight.

The Plan lists 13 major industry sectors that contribute to the economic vitality of Bozeman. While not directly stated in the plan, transportation is key to the success of each of these sectors. Transportation of goods, mobility of workers, and attraction of customers can hinge on a properly functioning transportation system.

Major Industry Sectors

- Technology
- Retail
- Hospitality, Tourism, and Recreation
- Gallatin Field Airport
- Construction, Land Development, and Real Estate
- Manufacturing
- Montana State University
- Healthcare and Bozeman Deaconess Health Services
- Government
- Finance and Professional Business Services
- Agriculture
- Non-Profit Organizations
- Telecommuters

Assessment of economic development for the plan was performed through an Economic Development Survey. The survey asked respondents, business leaders and stakeholder groups to rate a variety of community aspects on a 1 to 4 scale, with 4 being Excellent. Of interest in a transportation context are the results for infrastructure, development fees and impact fees, and public transportation. Using the results of the survey, economic development initiatives and priorities were ranked. Improving transportation infrastructure ranked as the fifth most important issue.

2.9. Downtown Bozeman Improvement Plan (December, 2009)

The Downtown Bozeman Improvement Plan states that the plan is *"…intended to guide decisions by public bodies, private businesses, and non-profit organizations for at least ten years to come."* The Plan describes downtown as the retail core with bright lights, colorful storefronts and heavier traffic flows. In addition to the retail core, the Plan also includes the transit center, nearby neighborhoods that touch the edge of the retail core, concentrations of employment, public open spaces, and institutions such as the library, and cultural facilities like the Emerson Center.

The Plan gives an overview of possible issues impacting the downtown area. Among those issues are access and circulation. The Plan lists vehicle circulation patterns as encouraging through traffic and high speeds. The Mendenhall/Babcock one-way couplet is specifically called out as making movement within downtown difficult for vehicles and pedestrians. The truck traffic on Main Street is also cited as being at odds with the character of downtown's signature pedestrian nature.

The Plan goes on to further list opportunities for improvement. Of these opportunities, "complete streets" is listed. Under this opportunity, the Plan identifies that most streets in the downtown area are in need of improvements for multi-modal traffic.

Twelve guiding principles are outlined with the intent to provide the philosophical foundation for the Plan and the recommended next steps. Of these 12 principles, the following five can be directly related to transportation within the downtown area:

- All streets and sidewalks in downtown should be designed to make the experience of pedestrians and bicyclists safe, comfortable, and visually appealing.
- Parking should not govern development potential; the amount of parking relative to development should decrease. Parking inventory should be managed so as to ensure convenient access for customers.
- Transit should be expanded to serve downtown more extensively and frequently
- Sustainable methods and techniques should be applied to infrastructure, street design, and redevelopment to contribute to a healthier and greener community.
- Create strong connections between sub-districts, and from downtown to surrounding community.

After establishing the guiding principles for the Plan, a series of strategies are given to improve the downtown area. Of these suggestions, transforming alleys into a more pedestrian friendly environment, reduce truck traffic and invite bicyclists to Main Street, and convert Mendenhall and Babcock to two-way traffic are directly related to transportation. The Plan suggests that the alleys that run parallel to Main Street are underutilized and could be converted to a more pedestrian friendly and usable space through the addition of greenery, proper drainage, and other pedestrian focused amenities. Truck traffic, as cited in the issues section of the Plan, can dissuade usage of Main Street for pedestrian and bicycle usage.

Conversion of the one-way couplet to two-way operation is listed as a possible way to make navigation of downtown simpler for all users. The Plan describes the function of Mendenhall as more of a "major through-way, getting people through downtown, than moving people within downtown." It is also stated that both Mendenhall and Babcock are "very poor pedestrian environments, with narrow or inconsistent sidewalks flanked by long stretches of surface parking lots." The Plan presents three case studies from other two-way street conversions.

2.10. Bozeman Community Plan (June, 2009)

Recognizing that Bozeman is an attractive community and growth trends over the decade(s), the Bozeman Community Plan was prepared to proactively and creatively address issues of development and change while protecting public health, safety, and welfare. Three points within the vision statement for the Plan address transportation related issues:

- Public services and infrastructure support Bozeman's growing population in a cost-effective manner.
- Bozeman's development pattern encourages and enables the use of diverse modes of transportation.
- An actively engaged citizenry has a wide array of opportunities to participate in civic life.

The Community Plan cites results from the 2007 Bozeman Citizen Survey. This survey found that the top five perceived issues in Bozeman are too much growth; traffic congestion; drugs; taxes; and weeds (homelessness and unsupervised youth tied). The Plan gives the following statement as the introduction to Chapter 11: Transportation:

"Safety, choice, and convenience; these are things Bozeman's citizens seek in their travel. A desire for safe and functional bicycle and pedestrian travel options is a common theme of public comment. Transportation shapes a community. Transportation investments should advance the overall goals of the community."

The City of Bozeman's Reasons for Transportation Planning

- Safety for travelers
- Use public places such as trails to create a sense of community and foster social interaction
- Functional and dependable transportation
- Cost effectiveness and efficiency while giving quality services
- Promote an active and healthy citizenry
- Affirm the community's commitment to responsible land use and stewardship of the natural environment
- Support and enhance the community's economy
- Protect and enhance the beauty of the community
- Support sustainability of the community

This Plan further notes that transportation and development have always been closely related. In a historic context, land use was dictated by the effort required to make non-local trips. As such, a compact development pattern emerged. However, as the Plan states, *"…beginning in the 1960s, urban development became increasingly automobile oriented."* This vehicle-centric mentality resulted in development patterns

that were designed to accommodate vehicular transportation over other modes. The resulting development patterns - commercial establishments clustered on major transportation corridors - are not easily traveled without an automobile. Neighborhood isolation, traffic congestion, declining air quality, and inviting visual impacts are all results of this development pattern according to the Plan.

Population growth results in a corresponding increase in the demand for services and residences with the City. The Plan addresses this fundamental relationship by saying that *"…the City's land use and transportation policies encourage well executed increased density in order to ensure the most efficient and cost-effective use of land and public services."*

The Plan suggests that transportation demand management (TDM) strategies could provide a cost effective means of addressing congestion as opposed to the construction of additional travel lanes. TDM is an integrated set of strategies design to reduce congestion. Example of TDM strategies given in the Plan include reducing the number of trips made, shifting travel to less congested times, and shifting the travel mode to higher occupancy vehicles.

The Plan establishes the following transportation related goals:

- Maintain and enhance the functionality of the transportation system.
- Ensure that a variety of travel options exist which allow safe, logical, and balanced transportation choices.
- Encourage transportation options that reduce resource consumption, increase social interaction, support safe neighborhoods, and increase the ability of the existing transportation facilities to accommodate a growing city.
- Establish and maintain an integrated system of transportation and recreational pathways, including streets, bicycle and pedestrian trails, neighborhood parks, green belts and open space.

2.11. Bozeman Municipal Climate Action Plan (June, 2008)

The Bozeman Municipal Climate Action Plan begins with an introduction that notes that *"…if immediate and aggressive policies are not taken to begin mitigating anthropogenic greenhouse gas concentrations, the effects could be devastating to the Bozeman community."* The Plan further warns that *"… for the Bozeman Area, climate change may lead to such tangible, life-impacting alterations as increased catastrophic forest fires, shortened ski seasons, hotter summers, lower summer river levels, and drought."* The Plan divides recommendations into five categories: (1) Planning, Building, and Energy, (2) Transportation and Land Use, (3) Waste Water and Recycling, (4) Education and Outreach, and (5) Implementation.

Transportation related recommendations range from signal timing improvements to increased Streamline funding. Many of the recommendations are geared toward the City-owned vehicle fleet, however, others are meant for the public at large. It was recommended that traffic signals switch to a flashing scheme during the evening hours. A flashing scheme would decrease emission from vehicles by reducing stop and go operations. However, pedestrian safety was cited as a major concern for this type of scheme. In addition to signal timing, the Plan identified roundabouts as a possible intersection treatment that could help to reduce vehicular emissions by reducing stop and go operations. It was recommended that when comparing a signal to a roundabout, both vehicular emission and electrical usage are analyzed.

Transportation Related Climate Protection Task Force Recommendations

- Improve traffic signal operations
- Consider roundabouts
- Modify vehicle purchasing policies (City fleet)
- Establish vehicle tracking method for City fleet
- Increase City fleet average fuel efficiency standards
- Create transportation demand management pilot program
- Anti-idling ordinance
- Green bike program
- Fund LED lighting program
- Streamline Funding

TDM programs were recommended by the Plan as a method to decrease emissions from vehicles. TDM solutions can range from flex work schedules to promoting high-occupancy vehicles. Other recommendations such as anti-idling ordinances, LED lighting programs, and increased funding of Streamline are all geared at reducing emissions related to transportation and the associated infrastructure.

2.12. Greater Bozeman Area Transportation Plan (2007 Update)

Goals and objectives were developed as part of the 2007 Transportation Plan Update to reflect transportation considerations and community desires. The goals and objectives were continuously monitored by local jurisdiction staff to ensure compatibility with the community vision. The developed transportation planning goals and objectives from the 2007 Transportation Plan Update were as follows:

Goal #1: Provide a safe, efficient, accessible, and cost-effective transportation system that offers viable choices for moving people and goods throughout the community.

Objectives:

- Plan and implement a logical, efficient, long-range arterial and collector transportation system to ensure that public and private investments in transportation infrastructure support other land use decisions of the community.
- Plan a logical, efficient long-range arterial system that can be systematically implemented by right-of-way reservations and advance acquisition procedures.
- Meet the current and future needs of the greater Bozeman area that can be maintained with available resources.
- Provide adequate emergency service access to all residents inside and outside of the Study Area Boundary.
- Develop a "Major Street Network" classifying existing roadways by functional usage (as well as future corridors) within the Study Area Boundary.
- Address the needs of business and commerce both locally and regionally.
- Plan for adequate access to high volume traffic generation points.
- Conduct a comprehensive data collection effort that will include vehicular counts, truck counts, bicycle movements and pedestrian usage at the intersections identified for the study.
- Review the most recent three-year accident history and crash statistics to evaluate potential safety problems and possible mitigation efforts that can improve and/or resolve identified concerns on the existing transportation system.
- Examine population and employment growth trends to assess demographic changes and how those changes may affect transportation system users over the twenty year planning horizon.
- Develop a 20-year traffic model that can be used to predict future transportation system needs as growth occurs within the Study Area Boundary limits.
- Identify current and foreseeable traffic problems.

Goal #2: Make transit and non-motorized modes of transportation viable alternatives to the private automobile for travel in and around the community.

Objectives:

- Support alternatives to single occupancy vehicles.
- Establish safe pedestrian and bicycle access in designated areas by:
    - Considering pedestrian/bicycle needs when planning and designing new roads.
    - Considering improvement and dedication of bikeways and pedestrian paths though developing area.
    - Providing widened shoulders where possible to accommodate pedestrians/bicycles on existing roadways, with a preference for physical separation between motorized and non-motorized traffic.
- Encourage mixed-use development that integrates compatible residential, office, and commercial uses to reduce the need for automobile trips.
- Encourage walkable neighborhoods, both within existing developed areas and new residential and commercial subdivisions.
- Recommend policies and decisions to ensure bicyclists and pedestrians can access and conveniently cross all major roadways and highways.
- Identify and incorporate, as applicable, Transportation Demand Management (TDM) strategies to provide alternatives to private vehicle travel.
- Consider equestrian needs, where appropriate, when planning and designing new roads.

Goal #3: Provide an open public involvement process in the development of the transportation system and in the implementation of transportation improvements, and assure that community standards and values, such as aesthetics and neighborhood protection, are incorporated.

Objectives:

- Provide for citizen involvement in the planning and implementation of transportation plans and projects.
- Respect and ensure the areas natural and historic context and minimize adverse impacts to the environment and existing neighborhoods.
- Minimize negative transportation effects upon residential neighborhoods.

- Encourage transportation improvements that preserve the natural panorama of skylines and sightlines, and are compatible with historic resources.
- Evaluate and identify transportation system needs of area schools, and address existing and future transportation issues as appropriate.
- Provide for connecting streets among neighborhoods.
- Meet the unique transportation needs of the areas elderly, disabled and disadvantaged populations

Goal #4: Provide a financially sustainable Transportation Plan that is actively used to guide the transportation decision-making process throughout the course of the next 20 years.

Objectives:

- Review all existing and on-going planning reports and studies for compatibility.
- Conduct a financial analysis to ensure the Plan is financially feasible and sustainable.
- Identify funding mechanisms that may be viable alternatives to the traditional funding programs currently used to fund transportation system improvements.

Goal #5: Identify and protect future road corridors to serve future developments and public lands.

Objectives:

- Develop a Plan to address forecasted transportation growth needs.
- Identify future corridors and future connections to existing roadways in order to secure appropriate right of way and improvements.
- Identify road construction needs to serve developing areas, and encourage development in identified urban areas.

2.13. Bozeman Parks, Recreation, Open Space and Trails Plan (December, 2007)

The Bozeman Parks, Recreation, Open Space and Trail Plan, while focusing primarily on Parks and the general operations of them, includes a chapter dedicated to trails. As this Plan says, *"…trails provide safe transportation corridors for people to move throughout the community on foot or on bike."* The Plan designates five classes of trail with multiple sub groups. These trail types address various transportation and recreation needs and range from paved paths 12-feet in width to narrow semi-separated equestrian trails.

Issues related to the construction and maintenance of shared use paths is presented in the Plan. Four emphasis areas are noted for the identification of corridors that are suitable for shared used paths:

- Availability of street right-of-way;
- Feasibility of development of the facility, most often in undeveloped or underdeveloped areas;
- Proximity to community facilities such as schools, parks, and the public library; and
- Speed and traffic volume on the adjacent street.

Other issues, such as surface material, direction, design, and aesthetics, are noted in the Plan. The choice of surface material is informed by the usage of the trail. For example, an asphalt surface is desirable for joggers, disabled individuals, and other wheeled transportation modes. However, the City Engineering and Street Department prefer concrete due to the superior longevity and ease of maintenance. Debate over the direction of shared use paths, as stated in the Plan, often brings up the question as to whether there should be a path on both sides of a roadway. The plan recommends that based on safety concerns, shared use paths should be installed on both sides of the street when feasible.

2.14. Mandeville Industrial Park Railroad Feasibility Study (March, 2007)

The intent of the Mandeville Industrial Park Railroad Feasibility Study was to determine the feasibility of rail access to the proposed Mandeville Industrial Park, as well as identify rail related transportation issues. The study reviewed three alternatives for rail access including a cost analysis and two site access options concerning rail crossings. The impacts of this development were localized to the study area, north of I-90 between N. 7th and N. 19th Avenues. The study does not identify a preferred option but does outline the pros and cons of each option.

2.15. Design and Connectivity Plan for North 7th Avenue Corridor (October, 2006)

The Design and Connectivity Plan for North 7th Avenue Plan begins by summarizing the current (2006) nature of north 7th Avenue. The goal of the Plan was to develop a framework plan that addresses technical questions about the area, while providing a vision for the future. A key goal is to establish a distinct identity for the corridor and the subareas within it.

The Plan notes that North 7th Avenue is an automobile-oriented corridor; however, it has the potential to become more pedestrian-oriented while serving as an arterial roadway. The following components were considered in the Plan: automobile circulation, bicycle circulation, development patterns, landscape opportunities, pedestrian circulation, public transit, and wayfinding.

The Plan supplies roadway cross sections for the various sections of the North 7th Avenue corridor. Each of the diagrams shows a boulevard separating the sidewalk from the roadway. Additionally, center median landscaping to improve the visual appeal of the corridor.

Other pedestrian options that are suggested include improved definition of crosswalks, bulb-outs, and public transit stops. Bicycle improvement options include bicycle lanes, designation of bicycle routes, and recreational trails. Recommendations for streetscape improvements include decorative paving, lighting, and street furniture.

Specific Issues Identified for North 7th Avenue

- Difficult pedestrian crossing at I-90
- Pedestrian crossings where people feel safe are few
- Poorly defined walkways along the highway and within properties
- School zone crossings are dangerous
- Key intersections are poorly defined, making for difficult pedestrian crossings
- Discontinuity in sidewalks
- Lack of bicycle commuter lanes
- Incomplete bicycle route
- Public wayfinding signs are sparse and difficult to read
- Lack of cross-property access between parcels
- Many curb cuts, which disrupt sidewalks and encourage multiple turning movements that inhibit traffic flow
- Left turn at Durston difficult
- Drainage issues at Durston
- Buildings set back from the street, thereby failing to provide interest at the sidewalk
- Lack of boulevard grass between the sidewalk and street
- Poor maintenance and dusty
- Poor Lighting
- Provide proper lighting and stop lights for large truck traffic on inlets and outlets
- Improper tie-ins with Main, South 8th, and Babcock

3.0. STATE PLANNING PROCESSES

3.1. The Comprehensive State Highway Safety Plan (CHSP)

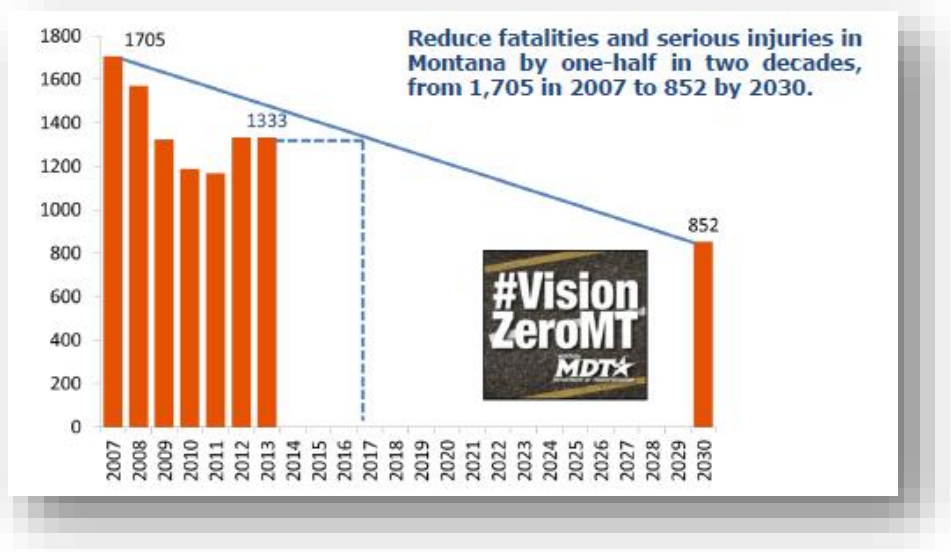
The Montana Comprehensive Highway Safety Plan (CHSP)[4] is just one of many statewide planning level documents that provides guidance and sets policies regarding a multitude of transportation related issues. Perhaps most applicable to the TMP is the focus of the CHSP on comprehensive safety and reducing fatal and serious injury crashes on the State's roadway system. The Montana CHSP sets forth goals and objectives that are both broad and distinct at the same time. The current CHSP, dated May 2015, identifies the following overall safety vision and interim safety goal for the State of Montana:

Vision

The vision for safety on Montana's roadways is clear - Vison Zero: zero fatalities and zero serious injuries.

Goal

To reduce fatalities and incapacitating injuries in the State of Montana by half in two decades, from 1,705 in 2007 to 852 by 2030.



[4] http://www.mdt.mt.gov/publications/docs/plans/chsp/current_chsp.pdf

Vison Zero is a multipronged initiative with the ultimate goal of eliminating deaths and injuries on Montana highways. Vision Zero focuses on three emphasis areas (below) using a combination of Education, Enforcement, Engineering, and Emergency Medical Response strategies:

- **Roadway Departure and Intersection Crashes:** These crashes tend to be severe due to high speeds and rural locations. They account for about 20 percent of all people involved in crashes, but 67 percent of fatalities. The vast majority (96 percent) of roadway departure fatalities and serious injuries occur in rural areas,
- **Impaired Driving Crashes:** These crashes account for only 8 percent of people involved in all crashes but 47 percent of all fatalities and 29 percent of serious injuries. As the blood alcohol concentration (BAC) level goes up in the human body, the physiological effects range from loss of judgment and altered mood to reduced muscle control and deteriorating reaction times. Regardless of which impairing substance a driver is using, the repercussions of impaired driving are a decline in visual functions and multitasking abilities, reduced concentration, impaired perception, and significantly reduced reaction time resulting in an inability to respond to changing conditions.
- **Occupant Protection:** A safety belt, when worn properly, is the single most effective way to save lives and reduce injuries in crashes. Safety belts keep motorists in their seats during a crash and spread the crash forces across the stronger parts of the upper body. Restraint systems are designed to keep occupants inside the vehicle where there is greater protection against bodily injury. Restraints also can prevent injuries in the event of a secondary collision. Occupant protection includes other safety protection devices and restraints, including child safety seats and booster seats that have proven to be highly effective in preventing child deaths and injuries in traffic-related crashes. Unrestrained occupants are significantly overrepresented in fatal and serious injury crashes: compared to all people in crashes, they are almost six times more likely to suffer a fatal or serious injury when involved in a crash. Over half of all passenger vehicle occupants killed in a crash from 2004 through 2013 were not wearing a seat belt.

3.2. Livability for Montana Transportation (March, 2012)

A research project was commissioned by MDT that resulted in report number FHWA/MT-12-001/8210, titled Livability for Montana Transportation[5]. Due to heightened national dialogue on livability, MDT sought to more formally define what it means for Montana and its communities, and understand how livability relates to Montana's transportation needs. The study found that Montana has some unique characteristics that may have a bearing on measures of its livability. For example, sixty-two percent of Montanans live in areas where the population density is 800 people per square mile or higher, but those areas account for only 0.1 percent of the land area. Along with its

[5] FHWA/MT-12-001/8210, Livability for Montana Transportation, http://www.mdt.mt.gov/research/projects/planning/benchmarks.shtml

unique character, the surveys conducted for the study indicate that Montana is also a good place to live. Survey respondents endorsed the belief that MDT projects add value to their quality of life. There were some consistent themes identified through the various tasks of this study. One size does not fit all, and any definition of livability should have some flexibility and scalability based on local needs and a community vision. Well maintained road system, safety, public transportation systems, bike and pedestrian facilities, and winter maintenance are important features of livability for Montana communities.

Based on research and outreach, the research team proposed the following definition for livability in Montana as it relates to transportation:

"Provide a transportation system that emphasizes a safe, maintained road network; allows for multimodal transportation opportunities; and considers local community values."

Furthermore, the following summary offers an expanded definition of livability elements that are a priority for Montana and its residents, as follows:

For Montanans, the most important elements of a livable community, although not necessarily transportation related, are friendly neighbors, rural character, availability of outdoor activities, access to high quality education and health care, abundance of natural scenic beauty, and availability of entertainment and cultural activities. However, transportation aspects that Montanan's perceive bring value to a community include:

- **Primarily**
  - A safe and well-maintained road network
  - Infrastructure and services that match local community values and needs
- **Secondarily**
  - Multi-modal alternatives to automobile travel—access to transit, rail, and air services
  - Bicycle and pedestrian facilities
  - Access to nearby cities and towns for employment, health care services, and recreational activities through personal vehicles, transit, intercity bus or other options
  - Local enhancements that connect residents to the people and activities of their neighborhoods and communities
  - Context-sensitive transportation planning that promotes the character of the community
  - Preservation of the natural resources, scenic views, and rural sense of place that are valued by all Montanans
  - Road surfaces that are well maintained in all weather conditions
  - Transportation Infrastructure that improves local economies

4.0. FEDERAL PLANNING PROCESSES

Various laws and regulations at the federal level assist to inform the development of the TMP. The laws and regulations set forth requirements to be considered in the transportation planning process or to be contained in the TMP. These include MAP-21 planning requirements, livability principles, environmental justice considerations, and potentially others. Transportation planning activities must provide for consideration of all modes of travel, and are to be continuing, cooperative, and comprehensive.

4.1. MAP-21 Planning Factors

MAP-21 was signed into law on July 6, 2012 and replaces the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). MAP-21 creates a streamlined, performance-based, and multimodal program to address the many challenges facing the U.S. transportation system. These challenges include improving safety, maintaining infrastructure condition, reducing traffic congestion, improving efficiency of the system and freight movement, protecting the environment, and reducing delays in project delivery. Collectively, these items represent national goals for transportation as described in MAP-21.

Title 23 of the United States Code, section 134(f) (revised in SAFETEA-LU section 6001(h)) describes Federal Planning Factors issued by Congress to emphasize planning factors from a national perspective. Under Map-21 these planning factors remain unchanged. The eight planning factors are as follows:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
2. Increase the safety of the transportation system for motorized and non-motorized users.
3. Increase the security of the transportation system for motorized and non-motorized users.
4. Increase the accessibility and mobility of people and for freight.
5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.
6. Enhance the integration and connectivity of the transportation system, across and between modes, people and freight.
7. Promote efficient system management and operation.
8. Emphasize the preservation of the existing transportation system.

4.2. Livability Principles from HUD/EPA/USDOT

Many federal partners are leading a growing effort to provide communities with a high quality of life that is increasingly sustainable. Livability is a national movement with local implications that are supported within the Bozeman community. Providing transportation options to improve access to housing, jobs, businesses, services and social activities are fundamental desires of most transportation system user groups. Active transportation results in a physically fit population, minimizes auto emissions, extends the life of transportation infrastructure, and delays the needs for infrastructure improvements. The Department of Housing and Urban Development (HUD), Environmental Protection Agency (EPA), and the US Department of Transportation (USDOT) have developed six guiding principles for communities to consider in their effort to achieve better access to affordable housing, more transportation options, and lower transportation costs, while supporting the environment. These principles are listed below:

1. **Provide more transportation choices.** Develop safe, reliable and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions and promote public health.
2. **Promote equitable, affordable housing.** Expand location- and energy-efficient housing choices for people of all ages, incomes, races and ethnicities to increase mobility and lower the combined cost of housing and transportation.
3. **Enhance economic competitiveness.** Improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services and other basic needs by workers as well as expanded business access to markets.
4. **Support existing communities.** Target federal funding toward existing communities—through such strategies as transit-oriented, mixed-use development and land recycling—to increase community revitalization, improve the efficiency of public works investments, and safeguard rural landscapes.
5. **Coordinate policies and leverage investment.** Align federal policies and funding to remove barriers to collaboration, leverage funding and increase the accountability and effectiveness of all levels of government to plan for future growth, including making smart energy choices such as locally generated renewable energy.
6. **Value communities and neighborhoods.** Enhance the unique characteristics of all communities by investing in healthy, safe, and walkable neighborhoods—rural, urban, or suburban.

5.0. RECOMMENDED GOALS AND OBJECTIVES FOR BOZEMAN TMP

Based on a review of relevant planning efforts within the community, five primary principles are suggested to carry forward for the TMP. These principles are founded on the following:

1. The community desires a connected, smarter transportation system through land use and transportation planning. This type of system allows citizens to choose what mode of travel they desire, and makes travel more convenient while promoting an active lifestyle by choice for its citizens.
2. Bozeman provides a stable economic base for a variety of services and industry. The community embraces the opportunity to attract jobs and support ongoing economic vitality.
3. Efficient travel and increased mobility is desirable to minimize transportation and associated costs.
4. Transportation influences quality of life. The community desires a transportation system that is compatible with the environment and context of the Bozeman area, with special consideration given to sustainability and conserving natural and cultural resources.
5. The community desires a safe and secure transportation system, and strives for a reduction in crashes, injuries and fatalities.

5.1. PROPOSED GOALS AND OBJECTIVES FOR TMP

GOAL 1: MAINTAIN THE EXISTING TRANSPORTATION SYSTEM.

Bozeman's transportation system is aging, and available funding is not sufficient for the necessary maintenance. There is often competition between funding for new projects as compared to maintenance and operations of the existing system. The short- and mid-term focus should turn to optimizing the existing transportation system to the greatest extent possible.

OBJECTIVES:

- Maintain existing roadway systems to optimize their usefulness and minimize life-cycle costs.
- Monitor the performance of key facilities and work with local and regional partners to identify critical deficiencies in the roadway network.
- Use transportation project selection criteria to identify and prioritize maintenance activities and project development.
- Relieve pressures on the existing transportation system through minor infrastructure improvements, maintenance and system preservation activities rather than expanding the current system.

- Encourage reuse and/or redevelopment around existing transportation facilities.

GOAL 2: IMPROVE THE EFFICIENCY, PERFORMANCE AND CONNECTIVITY OF A BALANCED TRANSPORTATION SYSTEM.

A transportation system that performs well allows users to choose multiple transportation modes and to move through those modes in a safe and efficient manner. An efficient system allows people to move from place to place in as direct a route as possible, allowing them to reduce the amount of time spent in travel, the distance that must be traveled, and the amount of time spent in congested traffic. Connectivity allows citizens to make route decisions and mode choices based on traffic and road conditions, or desired destinations.

OBJECTIVES:

- Ensure the current street network of collectors, minor arterials, principal arterials and the interstate is adequate to safely and efficiently handle projected traffic.
- Promote the development of an effective roadway network through improvements in intersection and roadway capacity.
- Improve opportunities for active transportation (non-motorized) as part of daily travel mode choice within the community by increasing pedestrian, bicycle and transit connections.
- Ensure that mobility-challenged populations, such as low income, persons with disabilities, or senior citizens, have travel options in the Bozeman area.
- Identify and reduce (or eliminate) freight movement impacts on area roadways and identify improvements to eliminate deficiencies with the objective of improving freight movement.

GOAL 3: PROMOTE CONSISTENCY AND COORDINATION BETWEEN LAND USE AND TRANSPORTATION PLANNING TO MANAGE AND DEVELOP THE TRANSPORTATION SYSTEM FOR ALL MODES AND USERS.

Land use decisions affect the quality and quantity of transportation infrastructure throughout the study area. Rural, low-density developments may necessitate transportation features different than urban, high-density developments. Transportation system amenities are not always required to be similar between the different development types and forms. An urban boundary exists as delineated from the 2010 Census. Consistency in infrastructure within the urban boundary should be met if possible for continuity of urban form and function, to the extent that future urban density growth and potential annexation is realized. Additionally, as Bozeman's population ages and the number of persons per household decreases, options in housing and transportation will be needed to meet the demands of the population.

Transportation improvements should be integrated with local land use planning to ensure the proper mix of roads, trails, transit, paths and other bicycle and pedestrian features co-exist.

OBJECTIVES:

- Develop and implement road design and construction standards within the urban area that reflect the potential for annexations of currently unincorporated land. As urban development occurs, ensure that basic transportation amenities are in place within the urban area.
- Recognize that land use policy discussions regarding future development and corresponding density in the "Triangle" between Bozeman, Four Corners and Belgrade are on-going. Land use decisions are tied to the adequacy of transportation infrastructure and may serve to constrain growth depending on policy directions both within and outside of the Bozeman city limits.
- Develop and implement consistent access management and corridor preservation standards, ordinances and plans appropriate to the roadway network and land use within the study area boundary.
- Integrate land use planning and transportation planning to manage and develop the transportation system.
- Use transportation project programming to encourage desired development patterns within the community and ensure new development is adequately served.
- Ensure an environmentally responsible and sound transportation system that minimizes adverse environmental impacts within the community.

GOAL 4: PROVIDE A SAFE AND SECURE TRANSPORTATION SYSTEM.

Most community planning efforts recognize the desire for a safe transportation system. Community safety and security can be improved by transportation efforts in a number of ways. Reducing crashes, improving the ability of emergency responders to quickly and reliably respond to emergencies, and providing evacuation routes in the event of a natural disaster will all assist to improving safety and security. Educational programs that help travelers understand the particular safety concerns associated with various travel modes can also help all users travel with increased confidence and security.

OBJECTIVES:

- Reduce the rates of fatalities and crashes occurring on all transportation facilities.
- Identify barriers to effective and prompt emergency response.
- Implement safety initiatives and educational programs for all modes of transportation.

- Coordinate with freight operators and agencies on projects that can enhance the security of the freight transportation system in the region.

GOAL 5: SUPPORT ECONOMIC VITALITY OF THE COMMUNITY.

All economic activity relies on a functioning, diverse transportation network. Vehicle, freight, air, transit, rail and non-motorized infrastructure all have a purpose to serve when linking economic vitality to the costs of doing business. Transportation in terms of economic vitality is only one component of a successful business environment. High quality schools, diversity in housing types, low debt, availability of infrastructure, and access to a highly educated workforce all contribute to the economic success of a community.

OBJECTIVES:

- Optimize the transportation system to meet the needs of Bozeman and its citizens, including employment centers, and industrial and commercial areas.
- Provide attractive and convenient transportation facilities that attract and retain business, young professionals, families and older adults.
- Facilitate the movement of goods and freight to commercial and industrial centers.

GOAL 6: PROTECT AND ENHANCE ENVIRONMENTAL SUSTAINABILITY, PROVIDE OPPORTUNITIES FOR ACTIVE LIFESTYLES, AND CONSERVE NATURAL AND CULTURAL RESOURCES.

Both the MAP-21 planning factors and the livability principles from HUD/EPA/USDOT point to quality of life concerns in the development of TMP's. Not only are impacts to the environment taken more seriously, but increasingly citizens are demanding a more holistic approach to transportation. The preservation of natural, historic and cultural resources, as well as promoting a healthy, active lifestyle, are priorities of this TMP and current Federal transportation planning guidance.

OBJECTIVES:

- Promote transportation projects, plans and/or programs that encourage reducing fuel consumption, reducing vehicle miles of travel, and thereby minimizing air pollution.

- Coordinate transportation planning activities with appropriate federal, state, and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation.
- Engage stakeholders and the public in the decision-making stage of the transportation planning process.
- Coordinate transportation planning activities with local and regional land use planning activities, including the City's Community Plan and Gallatin County's Growth Policy (and subsequent updates to both).

GOAL 7: PROMOTE A FINANCIALLY SUSTAINABLE TRANSPORTATION PLAN THAT IS ACTIVELY USED TO GUIDE THE TRANSPORTATION DECISION-MAKING PROCESS.

Transportation facilities that provide options to the public, reduce the time spent traveling, reduce fuel consumption, and make the best use of limited public funds for infrastructure improvements are desirable. Not only are costs related to the cost of building facilities, but there are also associated costs of time spent in vehicles.

OBJECTIVES:

- Identify available funding mechanisms potentially including federal and state gas tax revenue, impact fees, transportation bond issues, local option gas taxes, and other revenue funding sources used in similar cities.
- Encourage cooperation between public, private and non-profit organizations in the development, funding, and management of transportation projects.
- Promote cost-effective recommendations that balance transportation system needs with available funding and expected expenditures.
- As funds become available for transportation projects, place priority for funding on those projects and programs identified in the TMP.

5.2. Alignment of Goals with MAP-21 and Livability Principles

Although technically not required since Bozeman is not a Metropolitan Planning Organization (MPO) as per the 2010 Census, it is still desirable to ensure the alignment of local TMP transportation goals with the MAP-21 planning factors. Additionally, the Livability Principles from HUD/EPA/USDOT, while technically not Federal law, are worthy national transportation process objectives that should be reviewed and considered. **Table 5-1** depicts the relationship between the proposed Bozeman TMP goals, the required MAP-21 planning factors, and the objectives contained in the Livability Principles from HUD/EPA/USDOT.

Table 5-1: Alignment of Goals with MAP-21 and Livability Principles

			Goal 1: Maintain the existing transportation system.	**Goal 2**: Improve the efficiency, performance and connectivity of a balanced transportation system.	**Goal 3**: Promote consistency and coordination between land use and transportation planning to manage and develop the transportation system for all modes and users.	**Goal 4**: Provide a safe and secure transportation system.	**Goal 5**: Support economic vitality of the community.	**Goal 6**: Protect and enhance environmental sustainability, provide opportunities for active lifestyles, and conserve natural and cultural resources.	**Goal 7**: Promote a financially sustainable transportation plan that is actively used to guide the transportation decision-making process.
MAP-21 Planning Factors	**1**	Support the **economic vitality** of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.					✓		✓
	2	Increase the **safety** of the transportation system for motorized and non-motorized users.				✓			
	3	Increase the **security** of the transportation system for motorized and non-motorized users.				✓			
	4	Increase the **accessibility and mobility** of **people and for freight**.		✓	✓		✓		
	5	**Protect and enhance the environment**, promote **energy conservation**, improve the **quality of life**, and promote **consistency between transportation improvements** and State and local planned growth and economic development patterns.			✓			✓	✓

	6	Enhance the **integration and connectivity** of the transportation system, across and between modes, people and freight.		✓	✓				
	7	Promote **efficient system management and operation**.		✓					
	8	Emphasize the **preservation of the existing transportation system**.	✓						
Livability Principles	1	Provide more **transportation choices**.		✓					
	2	Promote equitable, **affordable housing**.		✓	✓				✓
	3	Enhance **economic competitiveness**.					✓		
	4	**Support** existing **communities**.	✓	✓	✓	✓		✓	
	5	Coordinate policies and **leverage investment**.							✓
	6	**Value communities and neighborhoods**.	✓	✓	✓	✓			