CITY OF CAVE JUNCTION
TRANSPORTATION SYSTEM PLAN

Adopted December 8, 2014

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CHAPTER 1
EXISTING DOCUMENTS, GOALS, AND EVALUATION CRITERIA

Overview

In 2001, the City of Cave Junction adopted its Transportation System Plan (TSP) as the Transportation Element of the Cave Junction Comprehensive Plan with the assistance of the Oregon Department of Transportation (ODOT).

Since the adoption of the City's TSP, Cave Junction experienced a buildings surge between 2003 and 2007, changing local conditions and creating a need to re-address transportation issues and goals. The TSP update will also serve to update the population forecast Cave Junction and Josephine County adopted in 2007 for 2015 (an estimated population of 1755) but exceeded by 2013 (PSU-estimated population of 1905).

The Cave Junction TSP update will also review and revise the location of planned facilities, in addition to services and street network classifications. The adopted 2001 TSP predicted commercial and residential growth in the northeast and northwest sections, but residential growth also occurred in the southwest section. This has resulted in a disparity between the locations of planned facilities, services and street connectivity.

Although eight years remain until the TSP's horizon year of 2021, the TSP update enables the City of Cave Junction to complete the planning review needed to comply with the changes and updates to the Transportation Planning Rule (TPR); meet State goals to create "Safe Routes to School;" identify deficiencies and problematic areas that are hindering economic revitalization; and identify active transportation alternatives to help reduce transportation related emissions contributing to climate change. These reviews will result in updates of TSP sections including, but not limited to: the road plan, public transportation plan, and bicycle and pedestrian plan. In addition, the TSP considers street system functional classification updates, environmental justice, consistency between adopted state and local TSP's, land use changes, and changes to data sources. The purpose of this chapter is to review existing plans and to identify important transportation and land use issues that need to be considered in the preparation of the Cave Junction Transportation Systems Plan (TSP). This chapter will provide a synopsis of the following documents: Statewide Transportation Improvement Program (STIP), 1998-2001, Josephine County Comprehensive Plan Transportation Element, the Cave Junction Comprehensive Plan, and the Cave Junction Municipal Code.

Oregon Transportation Planning Rule (TPR)

The Land Conservation and Development adopted the Oregon Transportation Planning Rule in 1991 to implement Statewide Planning Goal 12. The rule is embedded in Oregon Administrative Rule 660-012 and mandates that communities adopt transportation system plans. It was

amended in 2011 to streamline the regulatory process and includes a new Section (9) that will allow local governments to rezone land without analyzing traffic if the zoning is consistent with the comprehensive plan map designation and the transportation system plan. Additionally, the rule was amended so that local decisions can be made without traffic analysis if the action includes conditions to prevent any increase in traffic generated at the site. To adjust the balance between multiple objectives, the TPR amendments add a new section (11) for economic development projects to reduce the burden of mitigating traffic impacts. Another amendment adds a new section (10) to allow local governments to designate areas where compact urban development is desirable and thus traffic congestion will not be a factor in zoning decisions

Oregon Transportation Plan/Oregon Modal Plans

The Oregon Transportation Plan (OTP) is the Oregon Department of Transportation (ODOT) policy guiding document. The OTP influences all transportation planning in Oregon. Separate modal plans serve as individual elements of the OTP. The plans provide a framework for cooperation between ODOT and local jurisdictions and offer guidance to cities and counties for developing local modal plans. The following table lists the different modal plans that have been established and the date the plan was adopted by the Oregon Transportation Commission (OTC).

Plan	Adopted/Updated
Oregon Transportation Plan	2006
Aviation System Plan	2007
Bicycle/Pedestrian Plan	1995
Highway Plan	1998
Public Transportation Plan	1997
Rail Freight Plan	1994
Rail Passenger Policy and Plan	1992
Transportation Safety and Action Plan	2011

Oregon Transportation Plan (2006)

The Oregon Transportation Commission adopted the updated Oregon Transportation Plan (OTP) in September 2006, building on the OTP it adopted in 1992. As required by Oregon and federal legislation, the OTP provides overall policy direction and a framework for prioritizing transportation improvements and developing funding for them. The updated plan emphasizes:

- Maintaining and maximizing the assets in place
- Optimizing the performance of the existing system through technology
- Integrating transportation, land use, economic development and the environment
- Integrating the transportation system across jurisdictions, ownerships and modes

- Creating sustainable funding
- Investing in strategic capacity enhancements

ORS 184.618(1) requires state agencies to use the OTP to "guide and coordinate transportation activities," but it does not give the OTC authority to impose OTP goals, policies and performance recommendations on other than state agencies. However, the OTP operates in the legal context of the State Agency Coordination Program and the Land Conservation and Development Commission's Transportation Planning Rule, which impose additional requirements and authority in the planning process for other jurisdictions. The OTP also must comply with federal legislation.

Oregon Aviation System Plan (2007)

The Illinois Valley Airport is located approximately four miles south of Cave Junction, and is designated as a Category IV – Local General Aviation Airport in the 2007 Oregon Aviation Plan. Category IV airports support primarily single-engine general aviation aircraft for local air transportation needs of Cave Junction and the Illinois Valley. The airport, located on 175 acres, currently provides little in the way of services or amenities (e.g., aviation fuel, car rental). Future expansion efforts should consider the need for such services to make the airport a viable transportation facility for the area.

Oregon Bicycle and Pedestrian Plan (1995)

The goal of this Plan is to provide safe, accessible and convenient bicycling and walking facilities and to support and encourage increased levels of bicycling and walking. The plan identifies policies, classification of bikeways, construction and maintenance guidelines, and suggested actions to achieve these objectives. These actions are: (1) provide bikeway and walkway systems that are integrated with other transportation systems; (2) create a safe, convenient, and attractive bicycling and walking environment, and (3) develop education programs that improve bicycle and pedestrian safety.

ODOT published a Bicycle and Pedestrian Design Manual in 2011, which provides detailed recommendations for designing facilities that are safe, attractive, convenient, and easy to use. In addition to providing facility designs, the manual also includes extensive information on signs and markings to make the facilities more visible and safe.

Oregon Highway Plan (1999)

This plan sets policies and investment strategies for Oregon's state highways for the next 20 years. It further refines the goals and policies of the Oregon Transportation Plan and is part of Oregon's Statewide Transportation Plan. The Highway Plan has three main elements:

$ The Vision presents a vision for the future of the state highway system, describes economic and demographic trends in Oregon, future transportation technologies, summarizes the policy and legal context of the Highway Plan, and contains information on the current highway system.

- The Policy Element contains goals, policies, and actions in five policy areas: system definition, system management, access management, travel alternatives, and environmental and scenic resources.

- The System Element contains an analysis of state highway needs, revenue forecasts, investment strategies, implementation strategies, and performance measures.

The Highway Plan gives policy and investment direction to corridor plans and transportation systems plans that are being prepared around the state, but it leaves the responsibility for identifying specific projects and modal alternatives to these plans to local jurisdictions.

The Plan emphasizes:

- Efficient management of the system to increase safety, preserve the system and extend its capacity
- Increased partnerships, particularly with regional and local governments;
- Links between land use and transportation;
- Access management;
- Links with other transportation modes; and
- Environmental and scenic resources.

The Highway Plan also specifies level of service and access management standards for Redwood Highway199, Caves Highway 46, and Interstate 5.

Oregon Public Transportation Plan (1997)

This plan is primarily focused on public transportation in metropolitan and urban areas. The following minimum public transportation level of service standards (for communities with a population of at least 2,500 located within 20 miles of an urban central city) apply for conditions in the year 2015.

- Coordinate intercity senior and disabled services with intercity bus and van services open to the general public.
- Coordinate local public transportation and senior and disable services to intercity bus services.
- Provide an accessible ride to anyone requesting services.
- Provide at least 1.7 annual hours of public transportation service per capita with fixed-route, dial-a-ride or other service types.
- Provide at least one accessible vehicle for every 40 hours of service.
- Provide backup vehicle for every 3.5 miles.
- Provide daily peak hour commuter service to the core areas of the central city.
- Provide a guaranteed ride home program to all users of the public transportation system and publicize it well.
- Provide park and ride facilities along transit route corridors to meet reasonable peak and off-peak demand for such facilities.
- Maintain vehicles and corresponding facilities in a cost-effective manner and replace vehicles when they reach suggested retirement age.

- $ Establish ride-matching and demand management programs in communities of 5,000 where there are employers with 500 or more workers who are not already covered by a regional ride-matching/demand management program.
- $ Establish ride-matching and demand management programs in communities of 10,000.

In addition to public transportation, the plan also describes minimum level of service standards for intercity bus and rail standards.

Oregon Rail Freight Plan (1994)

This plan presents an overview of the rail system in Oregon. It outlines the State rail planning process and examines specific rail lines in detail that may be eligible for State or Federal assistance. In addition, the plan describes minimum level of service standards for freight and passenger rail systems in Oregon. This plan describes use patterns of the Southern Pacific route that passes through Talent. The plan examines the trend of service on low density rail lines increasingly provided by the short haul (Class 111) railroads.

The nearest rail lines pass through Grants Pass, nearly 30 miles to the north.

Oregon Rail Passenger Plan (1992)

This plan evaluates all rail lines. Two corridors are identified as having high potential for development:

- $ Eugene-Portland portion of high-speed rail corridor.
- $ Portland to suburban areas of Tualatin to McMinnville with possible extensions to Salem/Eugene (interurban commuter service).

The nearest connection for passenger rail is Klamath Falls, nearly 100 miles to the east.

Oregon Transportation Safety and Action Plan (2011)

This plan established the safety priorities for Oregon by identifying 70 actions relating to all modes of transportation and the roadway, driver and vehicle aspects. Included in this plan is a specific action regarding the way safety issues should be considered in local transportation planning.

Local transportation plans, as well as modal and corridor plans should consider the following:

- $ Involvement in the planning process of engineering, enforcement, and emergency service personnel as well as local transportation safety groups.
- $ Safety objectives.
- $ Resolution of goal conflicts between safety and other issues.

Statewide Transportation Improvement Program (STIP), 2012-2015

The Statewide Transportation Improvement Program, known as the STIP, is Oregon's four-year transportation capital improvement program. It is the document that identifies the funding for, and scheduling of, transportation projects and programs. It includes projects on the federal, state, city, and county transportation systems, multimodal projects (highway, passenger rail, freight,

public transit, bicycle and pedestrian), and projects in the National Parks, National Forests, and Indian tribal lands.

The STIP is not a planning document; it is a project prioritization and scheduling document developed through various planning processes involving local and regional governments, transportation agencies, and the interested public. Through the STIP, ODOT allocates resources to those projects that have been given the highest priority in these plans.

There are no Cave Junction projects in the 2012-2015 STIP; however the STIP includes several projects that indirectly affect the city:

2013 B Replace the Applegate River Bridge on Highway 199. Approximately cost: $7,899,000
2014B Overlay Highway 199 from the Applegate River to Slate Creek. Approximate cost: $4,164,000.

TPR - The Oregon Transportation Planning Rule was adopted by the Land Conservation and Development Commission in 1991, was revised in 1995, and was further amended in 2011. The TPR guides regional and local transportation planning in carrying out the LCDC Transportation Goal. It also required ODOT to adopt a transportation system plan, which occurred in September 1992, followed by periodic updates. Cities are required to adopt local transportation system plans that are consistent with the state TSP.

The 2011 amendments provided additional methods of determining effects of new facilities on existing transportation systems, and permitting alternative measures to mitigate those effects.

Existing City Plans

The City Council adopted its Transportation System Plan in 2001. The plan included a set of findings, followed by goals and policies to address those findings.

Findings, Goals, and Policies

The purpose of adopting goals and policies is to provide a consistent framework to follow when making decisions about the transportation system. Six specific findings have been made as part of this planning process:

Findings:

l. Transportation affects all residents in Cave Junction, and is a critical element of the local economy. Mobility throughout the community and access to destinations requires an interconnected, multi-modal network. The automobile will remain the dominant form of transportation into the foreseeable future. Safety is important for an efficient transportation system.

2. All people should have equal access to transportation. Transportation options should be provided to those without access to an automobile, the elderly, the disabled, and those who choose to use alternative modes of travel. Highway 199 presents a travel barrier to bicyclists

and pedestrians. Travel across the highway is especially difficult for individuals with disabilities. Facility enhancements, such as striped crosswalks and curb cuts, are needed.

3. Funding available to the City of Cave Junction for transportation improvements is limited. Maintenance of the existing transportation system is a priority over the construction of new facilities. It will be important to investigate additional funding strategies for the maintenance and improvement of the transportation system.

4. Transportation and land use issues are interconnected. The existing transportation system will be impacted as the City continues to develop. Compatibility between land use and transportation should be preserved through a coordinated decision making process that involves all affected agencies.

5. There is a need for public transportation in Cave Junction. Cost effective, affordable transit is difficult to provide in this area because of a low population density and long travel distances. The City of Cave Junction supports public transportation through coordination with appropriate agencies and jurisdictions.

6- River Street is lacking bicycle lanes and sidewalks between Boundary Avenue and Daisy Hill Road. This street is an important route because an elementary school is located across from the Tracy Street intersection. Due to inadequate right-of-way width, it is cost-prohibitive to retrofit the roadway to include sidewalks and bicycle lanes on both sides. Alternative safety and traffic calming measures should be explored to make this area more bicycle and pedestrian friendly.

General Transportation Goals, Policies and Objectives

GOAL: TO PROVIDE A SAFE AND EFFICIENT TRANSPORTATION SYSTEM THAT REDUCES ENERGY REQUIREMENTS, REGIONAL AIR CONTAMINANTS AND PUBLIC COSTS AND PROVIDES FOR THE NEEDS OF THOSE NOT ABLE OR WISHING TO DRIVE AUTOMOBILES.

Policies:

1. The City will implement its transportation goals through this Transportation System Plan (TSP) and the City will review and update the TSP during periodic review, or more frequently if necessary.

2. The construction of transportation facilities shall be timed to coincide with community needs, and shall be implemented in a way that minimizes impacts on existing development. Where possible, the timing of facility maintenance will be coordinated with other capital improvements to minimize cost and avoid extraordinary maintenance on a facility scheduled for reconstruction or replacement.

3. The implementation of transportation system and demand management measures, enhanced transit service, and provision for bicycle and pedestrian facilities shall be pursued as a first

choice for accommodating travel demand and relieving congestion in a travel corridor, before street widening projects are considered.

4. Transportation facilities shall be designed and constructed to minimize noise, energy consumption, neighborhood disruption, economic losses to the private or public economy, social, environmental and institutional disruptions, and to encourage the use of public transit, bikeways and walkways.

5. Aesthetics and landscaping shall be considered in the design of the transportation system. Within the physical and financial constraints of the project, landscaping, and where appropriate, public art, shall be included in the design of the transportation facility. Various landscaping designs, suitable plants and materials shall be used by the City, private entities or individuals to enhance the livability of the area.

6- The rapid and safe movement of fire, medical and police vehicles shall be an integral part of the design and operation of the transportation system.

7. The City shall coordinate transportation planning and construction efforts with County, regional, State and Federal plans.

Finance

GOAL: A TRANSPORTATION SYSTEM FOR THE CAVE JUNCTION URBAN AREA THAT IS ADEQUATELY FUNDED TO MEET ITS CURRENT AND FUTURE CAPITAL, MAINTENANCE AND OPERATIONS NEEDS.

Objective 1: *Meet the current and future capital improvement needs of the transportation system for the Cave Junction urban area, as outlined in this plan, through a variety of funding sources.*

Policies:

1. The City shall consider adoption of transportation system development charges (SDCs), as defined by Oregon Revised Statutes and City ordinances, to be collected by the City to offset costs of new development on area-wide transportation facilities.

2. The City shall require those responsible for new development to mitigate their development's impacts to the transportation system, as authorized in the Cave Junction Zoning Ordinance and Oregon Revised Statutes, concurrent with the development of the property.

3. The City shall consider setting aside one percent of its allocation of State Highway Fuel Tax funds for creation of on-street bicycle and pedestrian facilities.

4. When the City agrees to vacation of a public right-of-way at the request of a property owner, conditions of such agreement shall include payment by the benefited property owner of fair market value for the land being converted to private ownership. Funds received for vacated lands shall be

placed in a special reserve trust fund for the acquisition of future rights-of-way.

Objective 2: *Secure adequate funding to implement a street maintenance program that will sustain a maximum service life for pavement surface and other transportation facilities.*

Policies:

1. Assuming there are no changes in State funding mechanisms, the primary funding sources for street system maintenance activities shall be the City's allocation of the State Highway Fuel Tax.

2. The City shall continue to participate in cooperative agreements with other State and local jurisdictions for maintenance and operation activities based on equitable determinations of responsibility and benefit.

Objective 3: *Secure adequate funding for the operation of the transportation system including advance planning, design engineering, signal operations, system management, illumination, and cleaning activities.*

1. Assuming there are no changes in State funding mechanisms, transportation system operations shall be funded primarily from the City's allocation of the State Highway Fuel Tax. Other funding sources should be pursued to augment the financial requirements of providing adequate future system operations.

2. The City shall encourage the formation of local street lighting districts when a neighborhood proposes the installation or improvement of lighting facilities. Lighting District members assume or share the costs of capital improvements, maintenance and operations of their own lighting system. Entire subdivisions shall be served by a proposed lighting district whenever practicable to promote cost equity and reduce costs.

3. The City shall continue to pursue federal, state and private grants to augment operations activities, especially in the planning and engineering functions.

Land Use

Policies:

1. The City shall consider changes to the Cave Junction Zoning Ordinance that will implement Comprehensive Plan goals that encourage mixed-use and high density development near the city center to reduce private vehicle trips by increasing access to transportation alternatives.

2. To reinforce the implementation of this transportation plan in land use decision making, corridors for future auto, bicycle and pedestrian facilities have been adopted into this plan.

3. The City shall review and revise as necessary a new Subdivision and Land Partition Ordinance

that includes simplified Planned Unit Development requirements, and that includes design standards and review criteria for adequate transportation facilities. Such provisions shall include, but are not limited to, connectivity between neighborhoods for vehicles, bicycles and pedestrians, access management standards, and street width and parking requirements.

4. The City shall review and revise as necessary the Cave Junction Zoning Ordinance wherever appropriate, especially the articles regarding Off-Street Parking. Site Development Plan review and Conditional Use Permit review, to add or improve transportation-related design standards and review criteria. Such revisions shall include, but are not limited to, connectivity between neighborhoods for vehicles, bicycles and pedestrians, access management standards, street width and parking requirements.

5. The City shall coordinate land use planning with transportation planning by notifying the City Administrator, Traffic Committee, Public Works Director, City Engineer, Fire Department and Police Department of all planning proposals that include transportation components. All departments will be invited to make suggestions for design improvement and conditions of approval.

Transportation System Management

GOAL: TO MAXIMIZE THE EFFICIENCY OF THE EXISTING SURFACE TRANSPORTATION SYSTEM THROUGH MANAGEMENT TECHNIQUES AND FACILITY IMPROVEMENTS.

Objective: To maximize the effective capacity of the street system through improvements in physical design and management of on-street parking.

l. The City shall give the physical improvement of intersections a higher priority than general street corridor widening in the design process, when seeking ways to increase capacity and relieve congestion on a street.

2. Where on-street parking is permitted on a congested arterial street, the City shall give first priority to removing on-street parking as a means of enhancing the capacity of the facility. The exception will be arterial streets within the central business district, where parking will not be removed. Depending upon the situation and proper analysis, the City may consider timed on--street parking prohibitions during peak travel periods in lieu of permanent removal.

Access Management

Objective: To increase street system safety and capacity through the adoption and implementation of access management standards.

Policies:

The City shall develop and adopt specific access management standards based on the following principles:

1. Properties with frontage along two streets shall take primary access from the street with the lower classification.

2. Any one development along the arterial street system shall be considered in its entirety, regardless of the number of individual parcels it contains. Individual driveways will not be considered for each parcel.

3. Signalized access for private streets and driveways onto the major street system shall not be permitted within 1,320 feet (1/4 mile) of any existing or planned future signal.

4. Shared, mutual access easements shall be designed and provided along arterial street frontage for future development. Shared, mutual access easements shall also be encouraged for existing development.

5. The spacing of access points shall be determined based on street classification. Generally, access spacing includes accesses along the same side of the street or on the opposite side of the street. Access points shall be located directly across from existing or future access, provided adequate spacing results.

6- All access to the public right-of-way shall be located, designed, and constructed to the standards o of the affected public agency and the Site Review Committee. Likewise, variances to access management standards shall be granted at the discretion of the hearings body, based upon the report of the Site Review Committee.

7. The City shall cooperate with the State's incorporation of access management standards into all of its arterial street design projects. Access management measures may include, but are not limited to, construction of raised median, driveway consolidation, driveway relocation, and closure of local street access to the arterial.

8. Consistent with the City's goal of improving mobility, the City shall coordinate with state and county agencies in developing access management projects for congested arterials to help improve safety and traffic flow. Access management projects may include, but are not limited to, construction of raised medians, driveway consolidation, driveway relocation, and closure of local street access to the arterial.

9. The City shall maintain carrying capacity and safety of pedestrian, bicycle, public transit and motor vehicle movement on arterials and collectors through driveway and curb cut consolidation or reduction.

10. The City shall encourage feasible alternatives to direct driveway access onto streets designated as collectors and arterials.

11. The City shall encourage design that combines multiple driveway accesses to a single point in a residential and commercial development.

Streets

GOAL: PROVIDE A COMPREHENSNE SYSTEM OF STREETS AND HIGHWAYS THAT SERVES THE MOBILITY AND MULTIMODAL TRAVEL NEEDS OF THE CAVE JUNCTION URBAN AREA.

Objective 1: *Develop a comprehensive, hierarchical system of streets and highways that provides for optimal mobility for all travel modes throughout the Cave Junction urban area.*

Policies:

1. The City shall fulfill its system-wide travel capacity needs through the use of multiple travel modes within its public rights-of-way.

2. The City's street system shall contain a grid network of arterial streets and highways that link the central core area and major industry with regional and statewide highways.

3. The City's street system shall contain a network of collector streets that connect local traffic to the arterial street system.

4. The City shall classify streets and highways within the Cave Junction urban area based on how they will function within the overall system.

5. The City shall periodically review and revise street design standards. The City shall consider incorporating traditional neighborhood design elements including, but not limited to, planting strips, minimum necessary curb radii, alleys and "skinny streets" in standards.

6- To facilitate pedestrian crossing, discourage through traffic, and reduce speeds, local streets shall not be excessively wide. However, local streets must have sufficient width to provide emergency access.

7. Within budget constraints, the City shall integrate traffic calming techniques into city street design standards to reduce automobile speeds within new and existing neighborhoods.

8. The City shall maintain street surfaces to achieve maximum pavement life so that road conditions are good and pavement maintenance costs are minimized.

9. The City shall discourage cul-de-sac or dead-end street designs whenever an interconnection alternative exists. Development of a modified grid street pattern shall be encouraged for connecting new and existing neighborhoods during subdivisions and partitions.

10. The City shall require street dedications as a condition of land development, where approved street plans demonstrate the need for a wider right-of-way.

11. Improvements to streets, in addition to those in or abutting a development, may be required as a

condition of approval of subdivisions and other intensifications of land use.

Objective 2: *Design City streets in a manner that: maximizes the utility of public right-of-way, is appropriate to their functional role, and provides for multiple travel modes, while minimizing their impact on the character and livability of surrounding neighborhoods and business districts.*

Policies:

1. The City of Cave Junction shall design its streets to safely accommodate pedestrian, bicycle and motor vehicle travel.

2. Arterial and collector street intersections shall be designed to promote safe and accessible crossings for pedestrians and bicyclists. Intersection design should incorporate measures to make pedestrian crossings convenient, minimizing barriers to pedestrian mobility.

3. Left-turn pockets shall be incorporated into the design of intersections of arterial streets with other arterial and collector streets, as well as collector streets with arterials and other collectors.

4. The City of Cave Junction Street Design Specifications in the Municipal Code reflect the American Public Works Association manual and shall be the basis for all street design within the Cave Junction urban area.

5. The City of Cave Junction shall apply the street design standard that most safely and efficiently provides motor vehicle capacity appropriate for the functional classification of the street.

6- Wherever possible the City of Cave Junction shall incorporate safely designed, aesthetic features into the streetscape of its public rights-of-way. These features may include: trees, shrubs, and grasses; planting strips and raised medians; and, in some instances, furniture, planters, special lighting, public art, or non-standard paving materials.
7. When existing streets are widened or reconstructed they shall be designed to the adopted street design standards for the appropriate street classification. Adjustments to the design standards may be necessary to avoid existing topographical constraints, historic properties, schools, cemeteries, existing on-street parking and significant cultural features. The design of the street shall be sensitive to the livability of the surrounding neighborhood.

8. Affected neighborhoods shall be invited to review proposed designs before construction begins.

9. To maintain the utility of the public right-of-way for the mobility of all users, access location and spacing to arterial and collector streets shall be controlled.

Objective 3: *The City will continue to promote traffic safety by enforcing clear vision area regulations applicable to public and private property located at intersections. The existing clear vision area ordinance shall be reviewed and revised as needed to*

ensure that fences, hedges, foliage and other landscaping features do not obstruct the line of sight of drivers and cyclists entering intersections.

Policies:

1. The City shall work with other federal, state and local government agencies to promote traffic safety education and awareness, emphasizing the responsibilities and courtesies required of drivers and cyclists.

2. Through its law enforcement resources, the City shall continue to work to increase traffic safety by actively enforcing the City and State motor vehicle codes.

3. The City shall place a higher priority on funding and constructing street projects that address identified vehicular, bicycle, and pedestrian safety problems than those projects that solely respond to automotive capacity deficiencies in the street system.

4. The City shall work to increase traffic safety by requiring private property owners to maintain vision areas adjacent to intersections and driveways clear offences, landscaping, and foliage that obstruct the necessary views of motorists, bicyclists, and pedestrians.

5. The City shall coordinate with the County to develop a process for identifying and addressing areas prone to traffic accidents.

Objective 4: *Efficiently plan, design, and construct City-funded street improvement projects to meet the safety and travel demands of the community.*

Policies:

1. The City shall select street improvement projects from those listed in the Cave Junction Transportation System Plan when making significant increases in system capacity or bringing arterial or collector streets up to urban standards. The selection of improvement projects should be prioritized based on consideration of improvements to safety, relief of existing congestion, response to near-term growth, system-wide benefits, geographic equity, and availability of funding.

2. To maximize the longevity of its capital investments, the City shall design street improvement projects to meet existing travel demand and, whenever possible to accommodate anticipated travel demand for the next 20 years for that facility.

3. New arterial and collector street alignments shall be surveyed and delineated after their adoption in the Cave Junction Transportation System Plan. The determination of alignments will allow for the preservation of land for public rights-of-way and give advance notice to property owners and citizens of where future expansions of the street system will occur.

4. The City shall involve representatives of affected neighborhood associations and citizens in an

advisory role in the design of street improvement projects.

Objective 5: *A street system that is improved to accommodate travel demand created by growth and development in the community.*

Policies:

l. The City shall require Traffic Impact Analyses as part of land use development proposals to assess the impact that a development will have on the existing and planned transportation system. Thresholds for having to fulfill this requirement and specific analysis criteria shall be established in the Cave Junction Zoning Ordinance.

2.The City shall require new development to make reasonable site-related improvements to connecting streets where capacity is inadequate to serve the development.

3.The City may require new development to pay charges toward the mitigation of system-wide transportation impacts created by new growth in the community through Street System Development Charges (SDCs) and any other street fees that are established by the City. These funds can be used toward improvements to the street system. Projects funded through these charges are growth-related and should be selected from the approved list and prioritized based upon the established criteria.

Bicycle

GOAL: TO FACILITATE AND ENCOURAGE THE INCREASED USE OF BICYCLE TRANSPORTATION IN CAVE JUNCTION BY ASSURING THAT CONVENIENT, ACCESSIBLE AND SAFE CYCLING FACILITIES ARE PROVIDED.

Objective 1: The City of Cave Junction will create a comprehensive system of bicycle facilities.

Policies:

l. The City of Cave Junction recognizes bicycle transportation as a viable component of the transportation system

2. The Bicycle Element of this plan serves as the Cave Junction Bicycle Master Plan.

3. The City of Cave Junction shall actively pursue development of a linked bicycle network, focusing on the arterial and collector street system, and concentrating on the provision of bicycle lanes to be completed within the planning period (20 years). The bikeway network will serve bicyclists' needs for travel to employment centers, commercial districts, transit centers, institutions and recreational destinations.

4. The City of Cave Junction shall encourage using all opportunities to add bike lanes in conjunction with road reconstruction and restriping projects on collector and arterial streets.

5. The City of Cave Junction shall assure that the design of streets and public improvement projects facilitates bicycling by providing proper paving, lane width, traffic control, storm drainage grates, striping, signage, lighting, etc.

6- The City of Cave Junction shall assure regular maintenance of existing bicycle facilities, and take actions to improve crossings at creeks and major streets.

7. The City of Cave Junction shall assure the provision of bicycle racks and/or shelters at critical locations within the downtown and other locations where publicly provided bicycle parking facilities are called for.

8. The City of Cave Junction shall actively work with ODOT to improve bicycling on State Highway 199 and Caves Highway within Cave Junction.

9. The City of Cave Junction shall give priority to bicycle traffic over parking within public rights-of-way designated on the Bicycle Master Plan or otherwise determined to be important bicycling routes.

10. The City of Cave Junction shall encourage bicycle recreation.

11. The City shall require sidewalks and pedestrian access in all new developments.
12. The City shall require secure bicycle parking in business developments, institutions, and multi - family developments.

Objective 2: *The City will promote bicycle safety and awareness.*

1. The City of Cave Junction shall encourage local and state bicycle education and safety programs intended to improve bicycling skills, observance of laws, and overall safety for both children and adults.

2. The City shall consider the use of the media, bicycle committees, bicycle plans and other methods to promote use of bicycling for transportation purposes.

Pedestrian

GOAL: TO PROVIDE A COMPREHENSIVE SYSTEM OF CONNECTING SIDEWALKS AND W ALKWA YS THAT WILL ENCOURAGE AND INCREASE SAFE PEDESTRIAN TRAVEL.

Objective 1: *The City of Cave Junction shall create a comprehensive system of pedestrian facilities.*

Policies:

1. The City shall continue to inventory and map existing pedestrian facilities.

2. The City shall establish a Sidewalk Construction Program to complete the pedestrian facility network. The program will include criteria for prioritizing sidewalk projects.

3. Sidewalks and walkways shall complement access to multi-use paths. Activity centers and business districts should focus attention on and encourage pedestrian travel within their proximity.

4. All future development shall include sidewalk and pedestrian access construction as required by the Cave Junction Zoning Ordinance and adopted Street Specification Standards. All road construction or renovation projects shall include sidewalks.

5. The City shall encourage ODOT to provide crosswalks at all signalized intersections. Crosswalks at controlled intersections should be provided near schools, commercial areas, and other high volume pedestrian locations.

6- The location and design of sidewalks shall comply with the requirements of the Americans with Disabilities Act.

Objective 2: *Mixed-use development that encourages pedestrian travel by including housing close to commercial and institutional activities will be encouraged. As the Municipal Code* is *updated, existing provisions for mixed-use development shall be reviewed to consider changes that will increase opportunities and incentives for mixed-use development.*

Policies:

1. The City shall establish standards for the maintenance and safety of pedestrian facilities. These standards shall include the removal of hazards and obstacles to pedestrian travel.

2. Zoning shall be reviewed and revised as appropriate to allow for mixed land uses that promote pedestrian travel.

3. The City shall encourage efforts that inform and promote the health, economic, and environmental benefits of walking for the individual and community. Walking for travel and recreation shall be encouraged to achieve a more healthful environment that reduces pollution and noise, that will foster a more livable community.

4. The City shall encourage the development of a connecting, multi-use trail network, using existing corridors where possible.

Objective 3: *The City of Cave Junction shall encourage education services and promote safe pedestrian travel to reduce the number of accidents involving pedestrians.*

Policies:

l. The City shall encourage schools, safety organizations, and law enforcement agencies to provide information and instruction on pedestrian safety issues that focus on prevention of the most frequent accident causes. The programs shall educate all roadway users of their privileges and responsibilities when driving, bicycling and walking.

2. Pedestrian traffic should be separated from auto traffic on streets and in parking lots wherever possible.

Transit

GOAL: A TRANSIT SYSTEM THAT PROVIDES CONVENIENT AND ACCESSIBLE TRANSIT SERVICES TO THE CITIZENS OF THE CAVE JUNCTION URBAN AREA.

Objective 1: *Ensure that transit services ~~be~~ are accessible to Cave Junction urban area residences and businesses.*

Policies:

l. To encourage accessibility and increased ridership, the City shall continue to encourage future transit-supportive land uses, such as mixed uses, multiple-family, and employment centers to be located on or near transit corridors.

2. Through its zoning and development regulations, the City shall continue to facilitate accessibility to transit services through transit-supportive streetscape, subdivision, and site design requirements that promote pedestrian connectivity, convenience and safety.

3. The City shall include the consideration of transit operations in the design and operation of street infrastructure wherever it is appropriate.

4. The City of Cave Junction shall encourage connectivity between different travel modes. Park-and-ride facilities should be accessible by pedestrian, bicycle, bus and automobile travel modes.

5. The City shall identify park and ride, bike and ride, and walk and ride lots in Cave Junction to support ridesharing.

Municipal Code – Amended in 2001

As with many cities, the Cave Junction Municipal Code regulates activities within the city limits. The code is divided into chapters referred to as titles. Following is a listing of the regulations that specifically relate to transportation:

Title 10 -Vehicles and Traffic
10.04.60 establishes traffic control standards

Title 12 - Streets, sidewalks and public places
12.04.010 - street design standards establishing eight classifications, all of which require sidewalks on at least one side.
12.08 - Street and sidewalk design standards
12.08.030 discusses cul-de-sacs, but does not establish maximum length
12.08.080 Sidewalks required, widths varying from 5 to 8 feet.

Title 16- Subdivisions and Land Partitioning
16-20.080 - street right-of-way standards

Title 17 - Zoning
17.12.120 - Access standards
17.24.040 - 9000 square feet for duplex; 1000 additional square feet for each additional unit
17.32.020 - Parking requirements
17.36 - PUDs

Cave Junction Comprehensive Plan

The existing comprehensive plan was adopted in 1984. In July 2001, the City adopted a Transportation Plan that serves as the Transportation Element of the plan. The current plan includes a proposed street plan and the following policies and recommendations relating to transportation:

Policies:

1. The City will require dedication of adequate street right-of-way from developers according to the major streets plan and standards set forth in the subdivision ordinance.
2. The City will encourage social service agencies to provide services to the transportation disadvantaged.
3. The City will provide commercial zoning on streets parallel to the Redwood Highway to relieve potential congestion..

Recommendations:

1. The City should establish standards for curb cuts, vision clearance and other traffic safety measures in all areas of the city.
2. Curb cuts onto the State and U.S. highways should be reviewed with the appropriate state and federal agencies.
3. Traffic lights should be installed at major intersections as growth increases.
4. The City should develop a pedestrian and bikeways plan to take advantage of any state and federal funding sources which may be available.

Cave Junction Transportation System Plan July 2001

The current TSP functions as the City's Transportation Element. In addition to factual information about the city transportation system, it recommends street connections and standards to improve connectivity and safety. Adopted goals are:

- To provide a safe and efficient transportation system that reduces energy requirements, regional air contaminants and public costs and provides for the needs of those not able or willing to drive automobiles.
- A transportation system for the Cave Junction urban area that is adequately funded to meet its current and future capital, maintenance and operations needs.
- To maximize the efficiency of the existing surface transportation system through management techniques and facility improvements.
- To provide a comprehensive system of streets and highways that serves the mobility and multimodal travel needs of the Cave Junction urban area.
- To facilitate and encourage the increased use of bicycle transportation in Cave Junction by assuring that convenient, accessible and safe cycling facilities are provided.
- To provide a comprehensive system of connecting sidewalks and walkways that will encourage and increase safe pedestrian travel.
- A transit system that provides convenient and accessible transit services to the citizens of the Cave Junction urban area.

Josephine County Transportation System Plan - 2004

The Transportation System Plan (TSP) establishes the County's policies and strategies for developing the transportation system outside of the Grants Pass and Cave Junction urban areas. The goals area to:

- Improve safety for all transportation modes
- Provide for a transportation system that is accessible, efficient and practical
- Provide sufficient capacity within the transportation system to accommodate future demand
- Review and update roadway classifications as necessary
- Provide system connections as needed to improve efficiency and access and to improve circulation
- Consider and implement land use and transportation plans/solutions simultaneously in all planning activities
- Ensure an effective strategy for intergovernmental coordination in transportation planning
- Provide a plan document that is meaningful and useful to all stakeholders
- Consider funding issues n planning a future transportation system
- Plan for a transportation system that is environmentally responsible

Josephine County Comprehensive Plan

The comprehensive plan was adopted by the Board of Commissioners in 1981 and has been amended several times. Pertinent policies include:

Goal 3 Provide land allocations to encourage a wide variety of safe and affordable housing.

Policy 7. The Board of Commissioners shall....protect the public and private interest by assuming primary jurisdiction in the following areas authorized by law:

a. the partitioning or subdividing of land;
b. the creation of new roads or streets for development purposes.

The authorization of land uses shall be coordinated with the regulations of the Oregon Department of Transportation...

Goal 4 Plan and develop facilities and services that are needed, and can be afforded, by the residents of the county.

Policy 4. It shall be the policy of the Board of County Commissioners to encourage and facilitate the development of a transportation master plan for bridges and roads coordinated with City, State and Federal agencies.

Policy 5. The County shall continue to maintain and improved the appropriate airport facilities with Josephine County. Zoning standards shall be established to prevent the development of incompatible uses or hazardous structures within the flight approach zones. Any development and expansion will be in accordance with applicable airport master plans.

Policy 10. The physically handicapped and transportation disadvantaged shall be considered in the design of transportation facilities and alternative transportation modes.

Goal 9 Development and preservation of energy

Policy 3. The Board of County Commissioners shall encourage construction of safety paths with the reconstruction or development of new roads or streets between major shopping centers and recreational and educational facilities.

The Implementation section of the Comprehensive Plan assigns planning responsibilities to various county agencies. Among the responsibilities of the Public Works Department are:

2. The Public Works Department shall develop and maintain a transportation plan for the County. This plan shall include all forms of travel to include public transportation and airports.

6- The Department shall maintain and recommend to the Board of County Commissioners standards for the design of the County wide road system, to include established and proposed roads. The system shall be designed to take into account the need for safe and efficient movement of people, both on roads and safety paths, services, and goods; adequate design capacity to handle traffic loads generated by various areas of the County, and to avoid disruption of agricultural units or residential area. There should also be an ongoing program which will reduce road associated dust.

7. The Department shall devise, in cooperation with the incorporated cities and the Oregon State Highway Division, efficient by-pass routes around congested commercial

areas within established urban growth boundaries. Such by-pass routes should not disrupt rural areas or encourage the unnecessary expansion of urban uses into rural areas. The Department should also seek to develop complementary road systems to avoid routing truck traffic through residential areas. An environmental assessment, including review of the social and economic factors, shall accompany all proposals, which shall go through the public hearing process. Such bypass routes and complementary road systems shall be consistent with adopted transportation plans.

Several roads within the city limits of Cave Junction are under Josephine County jurisdiction. The following table includes County jurisdiction streets inside the city limits.

Street	From	To
Laurel Road	Redwood Highway	Oregon Caves Highway
Old Stage Road	Laurel Road	End
Hamilton Ave [1]	Barlow Street	Redwood Highway
River Street	Shadow Brook Drive	Laurel Road
Daisy Hill Road	River Street	End
Raymond Street	Junction Avenue	Hamilton Avenue
Farris Lane	Barlow Street	End

[1] Hamilton Lane is jointly administered by the County and City, but only the City provides minimal maintenance.

A joint management agreement between Cave Junction and Josephine County was approved November 17, 1980, outlining the responsibility of one jurisdiction to provide the opportunity for participation by the other prior to taking action on a matter. This agreement requires joint participation when developing or amending comprehensive or functional plans.

The Enterprise Communities of Josephine County

The Illinois Valley, composed of the Selma and Cave Junction census tracts, was designated an Enterprise Zone in 1990. In response to this designation, strategies and action plans were proposed to improve the economic health of the valley:

< Strategy 3 of the business goal is to create a portion of family wage jobs in the Josephine County Enterprise Communities by attracting new employers and developing new employment opportunities.
  < Action Plan C is to Support the development of physical infrastructure at the Illinois Valley airport, and in each community within the Enterprise Community.
< The Infrastructure goal is to develop new and improve existing infrastructure that will support responsible growth.

< Strategy 1 seeks to improve and expand the sewer, water, natural gas, and street systems in the Enterprise Communities.
< Strategy 2 is to support and participate in the upcoming Josephine County Transportation Element and Plan update process.
< Action D calls for signal project improvements at:
Hwy 199 and River Street
Hwy 199 and Laurel Road, (including a left turn refuge lane)
< Strategy 3 is to determine an appropriate industrial location in the Illinois Valley and develop the necessary infrastructure to serve that site.

Evaluation Criteria

The criteria for evaluating proposed projects include

- Mobility and safety
  Motor vehicle mobility is relatively unimpeded in Cave Junction; however, safety of pedestrian and bicycle facilities should be improved. The Safe Routes to School component of the plan will address these issues. Increased public transit opportunities should be explored.
- Cost and likelihood of being funded
  Like other small towns, Cave Junction has limited funding for transportation improvements. Innovative design that reduces costs will be important. Projects that are financially viable will be ranked higher than other important projects that are unlikely to be funded.
- Land Use and Environmental Effects
  Land use and transportation are closely linked. Proposed transportation improvements will be evaluated for their likelihood to reduce identified deficiencies and avoid environmental conflicts. When feasible, transportation design that minimizes adverse environmental effects will be favored over more conventional design.

CHAPTER 2
EXISTING TRANSPORTATION SYSTEMS

Street network facilities, bike paths, and sidewalks are included in the Cave Junction Roadway Inventory (Appendix C). Other existing system features to be reviewed are public transportation services, air, rail, water, and pipeline transportation, and environmental constraints, both natural and cultural.

Public Transportation

Public transportation was identified through the citizen involvement process as a needed service for Cave Junction. Two factors have hindered implementation of this service. The City's small population will not support local public transportation services. The expense of services to Grants Pass is greatly increased by the distance between the two cities.

Josephine Community Transit (JCT) provides fixed route bus service from Grants Pass to Cave Junction Monday through Friday with Route 50. The route serves the Cave Junction community five times per day (two times in the morning, once mid-day, two times in the evening). Grants Pass is a destination for employment and services (including health) for the Cave Junction community. Some residents have limited access to a personal automobile and rely strongly on the JCT system to get to work and services in Grants Pass. Detailed information about JCT can be found beginning on page 67 of this plan.

Air Transportation

The main airport for commercial and freight service in southwest Oregon is the Rogue Valley International Airport in Medford, 58 miles from Cave Junction. The airport is located approximately half way between Seattle and San Francisco, just off Interstate 5, the major north south corridor for the west coast (Oregon, California, and Washington). The airport occupies 989 acres of land within the Medford city limits.

Today, the Rogue Valley International Airport provides transit for industrial and agricultural freight, as well business travelers, recreation seekers, and vacationers. In January of 1995, the Rogue Valley International – Medford Airport was designated as a foreign trade zone and became an international point of entry. The airport has retained the designation, but there are no customs agents on site.

The Illinois Valley Airport is located approximately four miles south of Cave Junction, and is designated as a Class 3 airport by the State. The facility is situated on 175 acres, and provides general aviation services to Cave Junction and the Illinois Valley. The airport currently provides little in the way of services or amenities (e.g., aviation fuel, car rental). Future expansion efforts should consider the need for such services to make the airport a viable transportation facility for the area.

The Airport's main runway is 5,200 feet long by 75 feet wide. The Oregon Continuous Aviation System Plan (ODOT, January 1994) recommends that the airport evaluate its ability to extend the runway an additional 300 feet and provide lighting as identified in the Airport system plan. This report also recommended construction of a parallel taxiway to enhance the safety and operational flexibility of the airport.

Rail Services

There are currently no rail lines in the Illinois Valley. The nearest rail facilities are located in Grants Pass and are limited primarily to freight services.

Pipeline Transportation

There are no major pipeline transportation facilities in the study area. The Northwest Pipeline Corporation and C. P. National have major distribution lines in the Grants Pass area, but these facilities do not extend to the Illinois Valley.

Water Transportation

Water is not a means of transportation in Cave Junction. Water recreation exists on the Illinois River.

Environmental Constraints

Goal 5 requires inventories of the following resources:

Riparian corridors - water areas, fish habitat, adjacent riparian area, and wetlands within the riparian area boundary. ARiparian area@ is the area adjacent to a river, lake, or stream, consisting of the area of transition from an aquatic ecosystem to a terrestrial system.

The Illinois River is the primary corridor in the study area and, because it has an annual stream flow of 1209 CFS, the required setback from the river bank is 75 feet. Two minor drainages are also mapped as wetlands, and would require a 50 foot setback.

Wetland - an area that is inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

The National Wetlands Inventory indicates that most wetland features are located along the Illinois River. Very little ponding occurs in the city, with only two mapped palustrine features. One is located in the southeast corner of the city near the intersection of Laurel Road and Caves Highway, while the other is along an irrigation lateral in the southwest area near Schumacher Street and Daisy Hill Road. Construction in these areas is subject to approval of the Division of State Lands.

Wildlife habitat - an area upon which wildlife depend in order to meet their requirements for food, water, shelter, and reproduction. Examples include wildlife migration corridors, big game winter range, and nesting and roosting sites.

The Oregon Department of Fish and Wildlife has provided the City with a list of threatened and endangered species likely to exist in the Cave Junction UGB. ASensitive critical@, threatened or endangered species include:
Western Pond Turtle
Lewis Woodpecker
Northern Goshawk
Pileated Woodpecker
Peregrine Falcon
Bald Eagle
Townsend=s Big Eared Bat
Fall Chinook

Federal Wild and Scenic Rivers
A portion of the Illinois River downstream from Cave Junction is a federally designated wild and scenic river, but this designation does not directly affect the city.

Oregon Scenic Waterways
The portion of the Illinois River bordering Cave Junction is not a scenic waterway.

Groundwater Resources B any water, except capillary moisture, beneath the land surface of beneath the bed of any stream, lake, reservoir, or other body of surface water.

Groundwater resources are a serious concern with respect to population growth in the urban growth boundary, but they are not significantly affected by specific transportation projects.

Oregon Approved Recreation Trails
A trail designated by rule adopted by the Oregon Parks and Recreation Commission (OPRC). There are no hiking or biking trails meeting this definition in the planning area.

Natural Areas B areas listed in the Oregon State Register of Natural Heritage Resources
There are no ecologically or significant natural areas under the jurisdiction of the Nature Conservancy in the UGB, although several threatened or endangered plant species exist within the UGB.

Wilderness Areas
The city serves as a gateway to the Kalmiopsis Wilderness, which is one of the natural attractions cited in the strategic plan as a magnet for tourists.

Mineral and Aggregate Resources.
There are no inventoried mineral or aggregate resource sites in the Cave Junction Urban Growth Boundary; however, the Illinois River is noted as an important gravel resource.

Energy Sources B includes naturally occurring locations, accumulations, or deposits of: natural gas, surface water (i.e., dam sites) geothermal, solar, and wind areas.
Solar energy is the only identified source in the UGB.

Historic Resources B buildings, structures, objects, sites, or districts
The city=s comprehensive plan states that Kerby, rather than Cave Junction, was the early settlement in the Illinois Valley. As a result, there are no historic buildings or sites in the planning area; none are listed on the Statewide Inventory of Historic Places.

Open Space B parks, forests, wildlife preserves, nature reservations or sanctuaries, and public or private golf courses.
The largest open space in the planning area is the Illinois Valley Golf Course, although the 368 acre Illinois River Forks State Park is located just across the river from the city limits. Jubilee Park is a developed 11 acre city park, and a 40 acre site known as Old Stage Park has also been acquired.

Scenic Views and Sites - lands valued for aesthetic purposes.
The city is located in a scenic valley, affording residents views of the mountains that surround the valley. The Illinois River also borders the planning area. None of the sites has been inventoried as a Goal 5 resource.

CHAPTER 3
EXISTING TRANSPORTATION SYSTEM OPERATIONS

This chapter presents an evaluation of the existing transportation system conditions within the City of Cave Junction. It includes development of existing traffic volumes (vehicular and non-vehicular), assessment of traffic operations, multimodal analysis, and a review of historical crash patterns.

Existing Traffic Volumes

Existing traffic volume data was assembled from turning movement traffic counts conducted at intersections throughout the city and annual data collected by ODOT on the state highway system.

Average Daily Traffic Volumes

The average annual daily traffic (AADT) volumes for US 199 and OR 46 are currently available for the year 2012. The volumes are summarized in Table 3.1

Table -3.1. Average Annual Daily Traffic Volumes (2012)

Location Description	Volume
US 199	
0.10 mile south of Finch Road	8,500 vpd
North city limits of Cave Junction, 0.04 mile south of Laurel Road	7,800 vpd
0.02 mile south of Lister Street	8,600 vpd
0.02 mile north of Oregon Caves Highway (OR46)	10,400 vpd
South city limits of Cave Junction, 0.14 mile south of Hamilton Avenue	7,700 vpd
OR 46	
0.02 mile east of Caves Avenue	4,300 vpd
0.06 mile west of Old Stage Road	4,300 vpd
0.01 mile east of Old Stage Road	3,600 vpd
East city limits of Cave Junction	3,200 vpd

vpd = vehicles per day

Source: 2012 Transportation Volume Tables, Oregon Department of Transportation
The traffic counting program on the state highway system is conducted over a three year period, with both US 199 and OR 46 most recently having been counted in 2012.

Historic Automatic Traffic Recorder (ATR) data shows negligible growth along US 199 in recent years. Traffic peaked around 11,000 vehicles per day in the year 2007 before declining drastically in 2008. Since then, the traffic has consistently been between 9,000 and 10,000 vehicles per day on US 199 in downtown Cave Junction. Historic ATR data for OR 46 shows traffic peaking in year 2007 and declining to its lowest volume in 2012.

Turning Movement Counts

Turning movement traffic counts for this study were compiled from year 2013 count data. All nine of the study area intersections were counted in May 2013. The majority of the traffic counts were 4-hour turning movement counts, with the exception of US 199 at River Street, which was a 16-hour classification count. All of the traffic counts included full Federal Highway Administration (FHWA) 13-class vehicle classifications.
Table below provides a list of all intersection count locations and type.

Table 3.2 Vehicle Count Locations and Types

Location	Type of Count	Count Date
1. US 199 at Laurel Road	4-hour PM Peak Period[1]	5/23/2013
2. Old Stage Road at Laurel Road	4-hour PM Peak Period[1]	5/23/2013
3. US 199 at River Street (Signalized)	16-hour Classification[2]	5/21/2013
4. Old Stage Road at River Street	4-hour PM Peak Period[1]	5/22/2013
5. Laurel Road at River Street	4-hour PM Peak Period[1]	5/23/2013
6. US 199 at Lister Street (Signalized)	4-hour PM Peak Period[1]	5/21/2013
7. US 199 at Watkins Street (Signalized)	4-hour PM Peak Period[1]	5/22/2013
8. US 199 at OR 46 (Signalized)	4-hour PM Peak Period[1]	5/22/2013
9. Old Stage Road at OR 46	4-hour PM Peak Period[1]	5/22/2013

Notes:
1. 4-hour counts were collected from 2:00 to 6:00 PM and included turning movement and vehicle classification.
2. 16-hour counts were collected from 6:00 AM to 10:00 PM and included turning movement and vehicle classification.

The traffic volume data was examined to determine a common peak hour for each of the intersections, which is the one-hour period when the sum of volumes entering at all study area intersections is the highest. The common peak hour for the intersections was found to occur between 3:15 and 4:15 pm. The peak hour at each intersection may or may not correspond to the common peak hour.

Design Hourly Volumes

ODOT generally requires that transportation facilities be analyzed under design hourly volumes (DHVs), known as 30th highest hour volumes. The 30th highest hour volumes are used in traffic operations analysis so that results are valid for all but a few hours of the year. The procedure for determining 30th highest hour volumes is specified in ODOT's Analysis Procedures Manual (APM)[1] and briefly described below.

The 30th highest hour traffic volumes are calculated by multiplying the peak hour volumes by a seasonal factor. The seasonal factor is determined from ATRs, which are electronic counting sites on roadways that count vehicles continuously. It is desirable to obtain data from ATRs that either (1) are within the management area or (2) are on similar roadway types or within similar area types. The seasonal factors for US 199 and OR 46 use data from ATRs with similar characteristics. Local street seasonal factors use a seasonal commuter trend to adjust volumes according to the date of data collection, which in this case, are negligible. The data used in

[1] Analysis Procedures Manual, Oregon Department of Transportation, Transportation Development Division Planning Section, Transportation Planning and Analysis Unit, Salem, Oregon, April, 2006, Section 4.3. Updated August, 2013.

calculating the seasonal factors available upon request.

Peak hour count data was seasonally adjusted and volumes were balanced, where appropriate, to achieve a uniform dataset for analysis. Table 3.3 shows the existing balanced PM peak hour volumes developed for this project.

Non-Motorized Transportation Movements

Non-motorized transportation (bicycle and pedestrian) movements were collected as part of the vehicular turning movement counts. Table- summarizes the bicycle and pedestrian movements for each study area intersection, and the direction of travel.

Table-3.3 Peak Hour Bicycle and Pedestrian Volumes

Location	Bicycle[1]				Pedestrians[2]			
	North	South	East	West	North	South	East	West
1. US 199 at Laurel Road		2						
2. Old Stage Road at Laurel Road								
3. US 199 at River Street (Signalized)					6	9	13	6
4. Old Stage Road at River Street		2			1	7	23	1
5. Laurel Road at River Street								
6. US 199 at Lister Street (Signalized)			2		13	7	14	8
7. US 199 at Watkins Street (Signalized)	2		4	2	8		7	9
8. US 199 at OR 46 (Signalized)						3	5	--
9. Old Stage Road at OR 46					2		1	4

Notes:
1. Bicycle movements refer to the direction the bicycles are entering the intersection from
2. Pedestrian movements refer to the leg of the intersection being crossed.

During the PM peak hour, the majority of the non-motorized traffic is coming from the east and traveling west. The peak hour encompasses the end of the school day, which would coincide with the higher amount of pedestrian traffic. River Street provides indirect access to the middle school, and direct access to the high school, which could account for the higher non-motorized movements on this facility.

Existing Traffic Operations

Existing PM peak hour traffic operations were evaluated for the 9 study area intersections. The operational criteria, jurisdictional targets and standards, and procedures are described below followed by a discussion of the operational findings.

Operational Criteria

Transportation engineers have established various methods for measuring traffic operations of roadways and intersections. Most jurisdictions use either volume-to-capacity (v/c) ratio or level of service (LOS) to establish performance criteria. Both the LOS and v/c ratio concepts require consideration of factors that include traffic demand, capacity of the intersection or roadway, delay, frequency of interruptions in traffic flow, relative freedom for traffic maneuvers, driving comfort, convenience, and operating cost.

Volume-to-Capacity (V/C) Ratio

A comparison of traffic volume demand to intersection capacity is one method of evaluating how

well an intersection is operating. This comparison is presented as a v/c ratio. A v/c ratio of less than 1.00 indicates that the volume is less than capacity. When it is closer to 0, traffic conditions are generally good, with little congestion and low delays for most intersection movements. As the v/c ratio approaches 1.00, traffic becomes more congested and unstable, with longer delays.

Level of Service (LOS)

Level of service is also a widely recognized and accepted measure and descriptor of traffic operations. At both stop-controlled and signalized intersections, LOS is a function of control delay, which includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Six standards have been established, ranging from LOS A, where there is little or no delay, to LOS F, where there is delay of more than 50 seconds at unsignalized intersections, or more than 80 seconds at signalized intersections.

It should be noted that, although delays can sometimes be long for some movements at a STOP-controlled intersection, the v/c ratio may indicate that there is adequate capacity to process the demand for that movement. Similarly at signalized intersections, some movements, particularly side street approaches or left turns onto side streets, may experience longer delays because they receive only a small portion of the green time during a signal cycle, but their v/c ratio may be relatively low. For these reasons, it is important to examine both v/c ratio and LOS when evaluating overall intersection operations. Both are reported in the following section.

Operational Targets and Standards

The Oregon Highway Plan (OHP) has established several policies that enforce general objectives and approaches for maintaining highway mobility. Of these policies, the Highway Mobility Standards (Policy 1F) establish maximum v/c ratio targets for peak hour operating conditions for all highways in Oregon based on the location and classification of the highway segment being examined. The OHP policy also specifies that the v/c ratio targets be maintained for ODOT facilities through a 20-year horizon.

US 199 is classified as a freight route and a state highway. The posted speed is 30 mph through downtown, before transitioning to 45 mph north of River Street. The OHP target for US 199, is a v/c ratio less than or equal to 0.85 except at the intersection with Laurel Road, which has a target v/c ratio less than or equal to 0.80 due to the posted speed. OR 46 is classified as a district highway and has a posted speed of 35 mph between US 199 and Old Stage Road before transitioning to 45 mph east of Old Stage Road. The target for OR 46 is a v/c ratio less than or equal to 0.90.

Review of the 2001 TSP and the development code indicates the City of Cave Junction does not currently have operational standards for their roadways.

Traffic Operations Analysis Procedures

All operations will be evaluated using the methodology outlined in the *2000 and 2010 Highway Capacity Manual*s (HCM) along with the procedures outlined in ODOT's APM. The Synchro/SimTraffic analysis software was selected to perform the intersection analysis since it can provide the v/c ratio and LOS output of an HCM analysis and can be used to consider the systematic interaction of the intersections when congestion is present.

Synchro is a macroscopic model similar to the Highway Capacity Software (HCS), and like the HCS, is based on the HCM. The Synchro model explicitly evaluates traffic operations under coordinated and uncoordinated systems of signalized and unsignalized intersections. The v/c ratios and LOS presented in this report are based on the Synchro model output. For signalized intersections, overall operations are reported using HCM 2000. For unsignalized intersections, HCM 2010 is used and the operations for the critical movement are reported; the critical movement is defined as the stopped or yielding movement with the worst operations.

Existing PM Peak Traffic Operations

Existing (2013) PM peak hour traffic operations were evaluated at the nine study area intersections. These findings reflect the current signal timing plans as provided by ODOT. Operations are described in the following sections . Table 3.4 summarizes the results of the traffic operations analysis. Table 3.4 presents the v/c ratios and LOS performance by lane group for the area intersections.

Analysis for the PM peak period shows that all of the study area intersections currently meet applicable mobility thresholds. There is little to no congestion present at any of the study area intersections.

Freight Assessment

US 199 is the only designated freight route in Cave Junction. The highest truck activity occurs along US 199 in the north and south directions, with little to no truck traffic on the local roadway network.

Table 3.4. Existing (Year 2013) PM Peak Hour Traffic Operations Analysis Results

Intersection	Critical Movement[1]	V/C Ratio[2]	LOS[2]	OHP Target[3]
1. US 199 at Laurel Road	WB L/T/R	0.13	B	0.80
2. Old Stage Road at Laurel Road	EB T/R	0.02	A	NA[4]
3. US 199 at River Street (Signalized)[5]	Overall	0.45	A	0.85
4. Old Stage Road at River Street	SB L/T/R	0.07	B	NA[4]
5. Laurel Road at River Street	EB L/R	0.07	A	NA[4]
6. US 199 at Lister Street (Signalized)[5]	Overall	0.37	A	0.85
7. US 199 at Watkins Street (Signalized)[5]	Overall	0.36	B	0.85
8. US 199 at OR 46 (Signalized)[5]	Overall	0.47	B	0.85
9. Old Stage Road at OR 46	SB L/T/R	0.12	B	0.90

Acronyms: NA = Not Applicable; EB = eastbound; WB = westbound; NB = northbound; and SB = southbound. L = left; T = through; and R = right.

Notes:

1. At signalized intersections, the overall results are reported, while at unsignalized intersections the results are reported for the worst stopped or yielding movement.
2. The v/c ratios and LOS are based on the results of the macrosimulation analysis using Synchro, which cannot account for the influence of adjacent intersection operations.
3. 1999 Oregon Highway Plan (OHP), Policy 1F applies to existing and no-build conditions through the planning horizon.
4. Review of the 2007 TSP and the development code indicates the City of Cave Junction does not currently have operational standards for their roadways
5. Signalized intersection operations based on HCM 2000 methodology. Unsignalized intersection operations are based on HCM 2010 methodology.

Source: David Evans and Associates, Inc.

Multimodal Assessment

A multimodal analysis provides a comprehensive assessment of all modes, taking into account the impact of adjacent modes of travel. Table 3.5 provides a qualitative summary of performance on US 199 for each mode, using a ranking system with three categories: poor, fair, and good. These rankings take into account available facilities and their widths, vehicular travel speeds, volumes, operations, access, transit routes and frequencies, general conditions, and other factors that influence level of service for each mode. While bicycle, pedestrian, and transit conditions are largely influenced by adjacent modes, vehicular performance is primarily rated based on vehicular-oriented variables. The analysis breaks the corridor into intersections and the segments between them.

Table 3.5. US 199 Multimodal Assessment

Location	Travel Mode			
	Bicycle	**Pedestrian**	**Transit**	**Auto**
US 199 at Laurel Rd.	Poor	Poor	Fair	Good
Laurel Rd. to River St.	Poor	Poor	Fair	Good
US 199 at River St.	Fair	Good	Fair	Good
River St. to Lister St	Fair	Good	Fair	Good
US 199 at Lister St.	Fair	Good	Fair	Good
Lister St. to Watkins St.	Fair	Good	Fair	Good
US 199 at Watkins St.	Fair	Good	Fair	Good
Watkins St. to OR 46	Fair	Good	Fair	Good
US 199 at OR 46	Fair	Good	Fair	Good

Notes:
Multimodal analysis uses available data from existing conditions analysis for all modes.
Rating options include: Good, Fair, Poor

The existing conditions for the US 199 corridor through Cave Junction are generally good between River Street and OR 46 for automotive travel, and poor or fair for other modes. The automotive mode along US 199 is considered good due to appropriate roadway width, pavement quality and minimal delay for vehicles traveling through the study area. While designated bicycle facilities are absent on US 199, the outer lane width is generally wider and there is the occasional presence of underutilized on-street parking in the downtown area, which would allow bicyclists reprieve from vehicular traffic if needed. This rating could be improved to good with the addition of designated bicycle lanes.

Outside of the downtown area, the roadway lacks urban amenities such as consistent sidewalks or bicycle lanes. This lack of facilities is reflected in the poor ratings for both bicycle and pedestrian modes north of River Street. This rating could be improved to fair with additional signage and/or striping to make vehicular traffic aware of their presence, even if specific facilities cannot be constructed.

The fair rating for transit reflects weekday transit service to Cave Junction provided by Josephine County Transit and Southwest Point. A good rating was not assigned because there is no weekend service and weekday headways (time between arriving buses) are at least one hour.

Safety Analysis

A safety analysis was conducted to determine whether any significant, documented safety issues exist within the study area and to inform future measures or general strategies for improving overall safety. This analysis includes a review of crash records, critical crash rates, and ODOT Safety Priority Index System (SPIS) data.

Crash History

The crash analysis included a review of crash history data supplied by the ODOT Crash Analysis and Reporting Unit for the period between January 1, 2007, and December 31, 2011, which were the five most recent full years for which crash data were available at the time of the analysis. Table-3. summarizes data for study area roads and intersections.

Eighty-six crashes were reported within the study area during the five-year analysis period. Fifty-three of the reported crashes occurred at intersections, and 33 occurred along street segments. Of the reported crashes, 51 resulted in minor injury(s), and 32 resulted in property damage only; there were three crashes that resulted in a fatality or severe injury.

Table-3.6. Crash History at Study Area Locations

Location	Collision Type										Total	Severity			Crash Rate
	Rear End	Fixed Object	Angle	Other	Backing	Turning	Sideswipe	Head On	Bicycle	Pedestrian		Fatal & Serious Injury	Minor Injury	Property Damage Only	
Intersection Crashes															
Laurel Rd at US 199	1	3	0	1	0	0	0	0	1	0	6	0	2	4	**0.39**
Laurel Rd at Old Stage Rd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0.00**
River St at US 199	1	0	2	0	0	5	0	0	0	0	8	0	5	3	**0.40**
River St At Old Stage Rd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0.00**
River St at Laurel Rd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0.00**
Lister St at US 199	2	0	0	0	0	8	0	0	1	0	11	0	10	1	**0.53**
Watkins St at US 199	2	0	0	0	0	0	0	0	0	0	2	0	1	1	**0.10**
OR 46 at US 199	1	1	0	0	0	3	0	0	0	0	5	0	3	2	**0.24**
OR 46 at Old Stage Rd	0	0	0	0	0	1	0	0	0	1	2	1	1	0	**0.20**
Cottage Park Rd at US 199	0	0	0	0	0	1	0	0	0	0	1	0	0	1	
Hanby Ln at US 199	0	0	0	1	0	0	0	0	0	0	1	0	0	1	
Palmer St at US 199	0	0	0	0	0	1	0	0	0	0	1	0	1	0	
OR 46 at Frederick Ct	3	0	0	0	0	0	0	0	0	0	3	0	2	1	
Lister St at Caves Ave	0	0	1	0	0	0	0	0	0	0	1	0	1	0	
Lister St at Hussey Ave	1	0	0	1	0	0	0	0	0	0	2	0	1	1	
River St at Hussey Ave	0	0	0	0	0	1	0	1	0	0	2	0	1	1	
Watkins St at Hussey Ave	0	0	1	0	0	2	0	0	0	0	3	0	1	2	
River St at Junction Ave	0	0	0	0	0	1	0	0	0	0	1	0	0	1	
River St at Kerby Ave	0	0	0	0	1	0	0	0	0	0	1	0	0	1	
Hamilton Ave at 199	1	0	0	0	0	0	0	0	0	0	1	0	1	0	
Frontage Rd at 199	0	1	0	0	0	0	0	0	0	0	1	0	0	1	
Waldamar Rd at 199	0	1	0	0	0	0	0	0	0	0	1	1	0	0	
Subtotal Intersections	***12***	***6***	***4***	***3***	***1***	***23***	***0***	***1***	***2***	***1***	***53***	***2***	***30***	***21***	
Segment Crashes (not at Intersections)															
US 199															
North of Laurel Rd	1	0	0	0	0	1	0	0	0	0	2	0	1	1	**0.78**
Laurel Rd to River St	0	0	0	0	0	0	0	0	1	0	1	0	1	0	**0.10**
River St to OR 46	5	3	0	0	0	2	0	0	3	2	15	0	11	4	**2.14**
South of OR 46	0	0	0	0	0	0	2	1	1	0	4	1	3	0	**0.82**
OR 46	2	0	0	0	0	1	0	0	0	2	5	0	3	2	**0.52**
Junction Ave	0	0	0	0	1	0	1	1	0	0	3	0	1	2	
Old Stage Rd	0	0	0	0	1	0	0	0	0	0	1	0	0	1	
Laurel Rd	0	1	0	0	0	0	0	0	0	1	2	0	1	1	
Subtotal Segments	***8***	***3***	***0***	***0***	***2***	***4***	***3***	***2***	***5***	***4***	***31***	***1***	***21***	***11***	
Total	***20***	***10***	***4***	***3***	***3***	***27***	***3***	***3***	***7***	***6***	**86**	**3**	**51**	**32**	

Note: Crash rates could only be calculated for intersections where traffic count data has been collected. There were not a sufficient number of locations with common characteristics to perform an overall network screening analysis as outlined the Highway Safety Manual, Part B to calculate the critical crash rate.

The signalized intersection of Lister Street at US 199 experienced the highest number of study area crashes. Of the 11 crashes at this intersection, ten included minor injuries with various crash types including: turning (8), rear end (2), and bicycle (1). Currently the left-turn movements do not have any protected signal phasing, which may be related to the high number of turning

collisions.
The signalized intersection of River Street at US 199 experienced the second highest number of study area crashes. Of the eight crashes at this intersection, five were turning related due to a failure to yield the right-of-way. Similar to Lister Street at US 199, this signalized intersection does not have any protected signal phasing for left-turns, which contributes to a higher number of turning-related collisions.

There are two unsignalized intersections within the study area that had a higher number of a specific collision type. OR 46 at Frederick Court had three crashes, and all were rear end. Laurel Road at US 199 had six crashes, and half of them were fixed object. The fixed object collisions did not have a clear pattern in the type of object involved (slope/ditch, sign and guardrail), but all were due to driver error. The vehicle was either traveling too fast for conditions or making an illegal traffic maneuver.

The segment between intersections with the highest number of crashes was US 199 between River Street and OR 46; there were 15 crashes. Three of the crashes involved a bicyclist and two of the crashes involved pedestrians. Eleven of the crashes resulted in minor injury and the rest were property damage only. This high number of crashes is consistent with the segment being in the downtown area and encompassing all four of the signalized intersections within the City. The majority of the crashes were turning, fixed object, or rear end, which could be attributed to traffic signals and access points along US 199.

The crash data showed six collisions with pedestrians and seven collisions with bicyclists, which combine for 15% of the reported crashes within the study area. The pedestrian and bicycle collisions are spread throughout the study area, though the majority occurred along US 199. Two of the crashes were due to the pedestrian wearing dark clothing and the vehicle failed to yield right-of-way. Three of the pedestrian collisions were the result of the pedestrian being in the road illegally (either walking or jogging) and the final crash was due to careless driver behavior.

Of the crashes within the study area, seven involved bicyclists. The types of bicycle collisions include turning (4), angle (2), and head-on (1). Two of the turning crashes occurred between vehicles turning from a side street (OR 46 and Watkins Street) and a bicycle riding against traffic flow. A third collision involved a vehicle turning right from westbound Laurel Road and a northbound cyclist. The final turning collision was along US 199 at Palmer Street and involved a southbound cyclist and a northbound vehicle turning left. The two angle crashes involved westbound bicycles (Laurel Road and Lister) and northbound vehicles. The final bicycle crash resulted in a fatality as a result of a head-on collision (along US 199) when the cyclist was riding against traffic while the vehicle was not in their lane.

Two additional fatal crashes occurred within the study area. One involved improper passing near the intersection of OR 46 and Old Stage Road. The second occurred at the intersection of Waldamar Road and US 199 and involved a fixed object (tree).

Network Screening

The Highway Safety Manual Part B describes the critical crash rate method as a means of identifying locations that warrant further investigation. The critical crash rate is based upon average crash rates at comparable sites, traffic volume, and a confidence interval. Table-3.7 lists

the crashes reported within the City Limits and UGB from 2007 through 2011, even if it was not a study area intersection.

According to the HSM Part B Network Screening Critical Crash Rate method, a reference population, made up of locations with similar geometric and operational characteristics, must contain at least five sites for comparison. Within the study area, there are not enough reference populations with sufficient size to utilize the network screening method. In general, the low number of crashes throughout the study area may indicate that the network screening methodology is not entirely appropriate for this safety analysis. While it is not applicable to calculate critical crash rates for this data set, the intersection crash rates were calculated for the study area intersections and compared to 90th percentile crash rates from similar intersections in Oregon, as seen in the table below.

Table-3.7 Study Area Intersection Crash Rates Compared to 90th Percentile Crash Rates

Location	Intersection Traffic Control[1]	Crash Rate	90th Percentile Crash Rate (Urban)[2]
Laurel Rd at US 199	4ST	0.39	0.41
Laurel Rd at Old Stage Rd	3ST	0.00	0.29
River St at US 199	4SG	0.40	0.86
River St At Old Stage Rd	4ST	0.00	0.41
River St at Laurel Rd	3ST	0.00	0.29
Lister St at US 199	4SG	0.53	0.86
Watkins St at US 199	4SG	0.10	0.86
OR 46 at US 199	4SG	0.24	0.86
OR 46 at Old Stage Rd	4ST	0.20	0.41

Source: Exhibit 4-1, ODOT Analysis Procedure Manual, Version 2

1. 3ST = 3-legged stop-controlled; 4-SG = 4-legged signalized; 4ST = 4-legged stop-controlled
2. All study area intersections are considered urban

All of the crash rates for the analyzed intersections are below the 90th percentile crash rates for comparable urban intersections. Although the study area intersections are considered urban, it should be noted that the analyzed intersections are below the 90th percentile crash rates for comparable rural intersections as well. Although the intersection of Laurel Road at US 199 approaches the 90th percentile crash rate, further inspection of the intersection did not identify a systemic problem (as previously noted in the crash history section of this document).

Safety Priority Index System (SPIS)

The SPIS is a method used in Oregon to identify safety problem areas along state highways. Highways are evaluated in approximately one-tenth mile increments (often grouped into larger segments). Each year these segments are ranked by assigning a SPIS score based on the frequency and severity of crashes observed, while taking traffic volume into account. When a segment is ranked in the top 10% of the index, a crash analysis is typically warranted and corrective actions are considered. There are no segments of US 199 or of OR 46 within the study area that are identified in the top 10% of the most recent (2012) SPIS rankings.

CHAPTER 4
FUTURE TRANSPORTATION SYSTEM OPERATIONS

The future baseline traffic analysis assesses conditions for the year 2035. The analysis examines conditions where the transportation system has been improved by projects with programmed funding sources and where traffic volumes continue to grow based on population and employment forecasts. The analysis identifies no anticipated operational deficiencies although existing safety deficiencies could become worse with growth in traffic.

The current (2013) population of Cave Junction is estimated at 1,905.[2] The Cave Junction wastewater facilities plan included an update to the City's population projections. The City of Cave Junction has adopted an annual growth rate of 2.5 percent and is estimated to increase to a population of approximately 3,400 by the year 2035.

Future Land Use

There have been several new subdivisions platted on the west and north edges of the city; the majority of the lots remain vacant. No other subdivisions are approved at this time, but land remains available for significant residential growth. River Street, US 199 and Laurel Road would most likely be the main routes to access these areas.

The Siskiyou Clinic recently was approved to significantly expand its medical facility and outreach facility which would generate additional trips along their main access roads of US 199 and Watkins Street, respectively.

In summary, land is available to accommodate a wide variety of uses, but there are no large scale developments planned in the near future. For a more detailed description of Future Land Use within the study area, see Appendix A for the *Future Land Use Analysis Memorandum*.

Future Transportation Network

The future transportation network includes roadway projects expected to occur by year 2035. At the time this memorandum was written, there were no planned and funded roadway projects identified in the Statewide Transportation Improvement Plan (STIP) or City and County Capital Improvement Plans (CIP) within the study area that would change the transportation network from existing (year 2013) conditions.

Future Traffic Volume Development

Forecast traffic volumes were developed for the 2035 forecast year based on the land use forecast developed by RVCOG. This document focuses on the baseline (no-build) scenario traffic volumes.

[2] Certified Population Estimates 2013, Portland State University Population Research Center, http://www.pdx.edu/prc/sites/www.pdx.edu.prc/files/2013CertifiedPopEst_webCitiesTowns.pdf

Future (2035) Baseline Traffic Forecasts

Future baseline traffic volume forecasts for the year 2035 were developed using the cumulative analysis method, as outlined in ODOT's Analysis Procedures Manual (APM)[3]. This method uses assumptions for existing and planned land uses, in addition to historical trends, to estimate future traffic volumes. The future volumes are developed by summing the existing volumes with the volumes anticipated from historical trends and future development. This forecasting process is generally used for small urban areas that are growing at a fairly uniform rate or for areas where only minor changes are expected to take place.

Traffic forecasts for the 2035 future baseline scenario at the study area intersections were developed from growth rates calculated from the 2032 Future Volume Tables for US 199 and OR 46- These growth rates were applied to the 2013 existing traffic data.

In addition to the growth anticipated from the historical trends, there is also need to account for build-out of already approved developments. As mentioned in Appendix A, there are several platted subdivisions that are currently vacant within the study area: one on the western edge of Cave Junction, and two more near the northern edge. Additionally, an expansion of the Siskiyou Medical Clinic is expected to be complete by the end of year 2014. For analysis purposes, the anticipated vehicular trips associated with these facilities (residential and medical clinic) were considered for development of the future (2035) baseline traffic volumes.

Traffic volumes for the future (2035) baseline scenario are presented in Table 4.1.

Future Traffic Operations

Table summarizes the results of the traffic operations analysis and compares them to the OHP mobility targets. Table 4.1 presents the v/c ratios and level of service (LOS) performance by lane group for the area intersections. Traffic signal timing at the signalized intersections was modified to optimize traffic flow with future demands while maintaining current cycle length.

The analysis results show that under the future (2035) baseline conditions, all of the study area intersections would meet operational targets during the PM peak period. There is little to no congestion anticipated at any of the study area intersections.

[3] Analysis Procedures Manual, Oregon Department of Transportation, Transportation Development Division Planning Section, Transportation Planning and Analysis Unit, Salem, Oregon, April, 2006, Section 4.3.

Table 4.1. Future (2035) Baseline PM Peak Hour Traffic Operations Analysis Results

Intersection	Critical Movement[1]	V/C Ratio[2]	LOS[2]	OHP Target[3]
10. US 199 at Laurel Road	WB L/T/R	0.19	B	0.80
11. Old Stage Road at Laurel Road	EB T/R	0.03	A	NA[4]
12. US 199 at River Street (Signalized)[5]	Overall	0.48	A	0.85
13. Old Stage Road at River Street	SB L/T/R	0.06	B	NA[4]
14. Laurel Road at River Street	EB L/R	0.06	A	NA[4]
15. US 199 at Lister Street (Signalized)[5]	Overall	0.41	A	0.85
16. US 199 at Watkins Street (Signalized)[5]	Overall	0.37	B	0.85
17. US 199 at OR 46 (Signalized)[5]	Overall	0.52	B	0.85
18. Old Stage Road at OR 46	SB L/T/R	0.14	B	0.90

Acronyms: NA = Not Applicable; EB = eastbound; WB = westbound; NB = northbound; and SB = southbound. L = left; T = through; and R = right.

Notes:

6. At signalized intersections, the overall results are reported, while at unsignalized intersections the results are reported for the worst stopped or yielding movement.
7. The v/c ratios and LOS are based on the results of the macrosimulation analysis using Synchro, which cannot account for the influence of adjacent intersection operations.
8. 1999 Oregon Highway Plan (OHP), Policy 1F applies to existing and no-build (baseline) conditions through the planning horizon.
9. Review of the 2007 TSP and the development code indicates the City of Cave Junction does not currently have operational standards for their roadways
10. Signalized intersection operations based on HCM 2000 methodology. Unsignalized intersection operations are based on HCM 2010 methodology.

Source: David Evans and Associates, Inc.

Future Freight Assessment

US 199 is the only designated freight route in Cave Junction. As in existing conditions, the highest truck activity is anticipated to occur along US 199 in the north and south directions, with little to no truck traffic on the local roadway network. Future growth in traffic demand is not expected to create congestion that would impact the movement of freight through the community.

Future Multimodal Assessment

Table 4.2 presents an update of the multimodal analysis to reflect the planned and funded improvements on US 199. There are currently no funded improvements that would provide benefits for any modes of travel along US 199, thus their rankings remain unchanged. Optimized signal timing has been assumed for analysis purposes and may result in slightly improved pedestrian service at signalized intersections or longer gaps at unsignalized pedestrian crossing locations. These changes are not anticipated to have a measurable effect on the results of the multimodal assessment; future baseline is expected to remain the same as existing conditions.

Table – 4.2. US 199 Future (2035) Multimodal Assessment

Location	Travel Mode			
	Bicycle	Pedestrian	Transit	Auto
US 199 at Laurel Rd.	Poor	Poor	Fair	Good
Laurel Rd. to River St.	Poor	Poor	Fair	Good
US 199 at River St.	Fair	Good	Fair	Good
River St. to Lister St	Fair	Good	Fair	Good
US 199 at Lister St.	Fair	Good	Fair	Good
Lister St. to Watkins St.	Fair	Good	Fair	Good
US 199 at Watkins St.	Fair	Good	Fair	Good
Watkins St. to OR 46	Fair	Good	Fair	Good
US 199 at OR 46	Fair	Good	Fair	Good

Notes:
Multimodal analysis uses available data from existing conditions analysis for all modes and any funded planned improvements.

Summary of Analysis

No significant operational deficiencies are anticipated under future (2035) baseline conditions. However, since there are no anticipated projects within the study area and the volumes throughout the network are anticipated to grow slightly, the existing safety deficiencies still exist and will likely be exacerbated on US 199 and OR 46-

Appendix A. Future Land Use Analysis Memorandum*
Appendix B. Future Traffic Volume Development*
Appendix C. Future Volume Development Methodology Memorandum*
Appendix D Future Traffic Operations Worksheets*

**Available upon request*

CHAPTER 5
EXISTING AND FUTURE TRANSPORTATION DEFICIENCIES

This chapter presents the deficiencies identified within the study area as a result of the existing and future transportation system inventory and operations analysis along with consideration of the regional planning context. Overall system deficiencies and needs for vehicular and non-vehicular traffic were chosen based on applicable standards and the goals identified at the outset of this project. The deficiencies identified in this chapter will be used to develop system alternatives.

Identifying Deficiencies

When identifying deficiencies, there are three areas to examine: 1) the completeness of the physical system, 2) how that system operates, and 3) consistency with regional planning regulations.

In addition, the process must consider the adopted goals where emphasis was placed on developing a city transportation system to encourage the following:

- **Safety:** Promote the safety of current and future travel modes for all users. In the case of Safe Routes to School this goal overlaps with the mobility goal below.
- **Efficiency:** Maximize the efficiency of the existing surface transportation system through management techniques and facility improvements. This goal has the added benefit of reducing energy requirements.
- **Mobility:** Link communities, neighborhoods, schools, and businesses and address the existing and future transportation needs of moving both people and goods throughout the corridor.
- **Multimodal System:** Provide a multimodal transportation system that accommodates the needs of all users and encourages increased use of alternate modes of travel.

If an aspect of the transportation system could be improved to better demonstrate the adopted goals, it was identified as a deficiency. In some cases, an intersection analysis did not identify capacity deficiencies; however, area development and access could benefit from a new roadway connection. Additionally, operational and safety deficiencies were identified in the Existing Transportation System Operations and Future Transportation System Operations chapters.

Summary of Deficiencies

This chapter considers deficiencies in the following categories, as shown in Table **5.1**5.1:

- **Infrastructure Needs**
    - **Roadway Inventory** – Although some deficiencies can be identified at spot locations, the roadway inventory deficiencies considered segments within the study area. During the compiling of the existing roadway inventory, deficiencies were identified for jurisdiction, substandard pavement, roadway cross-section (adequate shoulder, curb), and connectivity.

    - **Multi-Modal Facilities Inventory** – These deficiencies highlight areas of improvement for pedestrian, bicycle and transit facilities as well as overall connectivity.

- **Operations and Safety**
    - **Operational** – During the existing and future traffic conditions analysis, deficiencies were identified for traffic operations.
    - **Safety Evaluation** – These deficiencies focus on locations with a high frequency of crashes, fatal and serious injuries, or at locations with roadway attributes and environmental factors that may contribute to future crashes.
- **Plan Consistency and Adopted Standards**
    - **Plans and Policies** – Deficiencies in this category focus on maintaining consistency with existing local and regional plans and call out areas where policies could be amended or created.

All of the deficiencies identified in this chapter are based on existing conditions inventory and analysis. No new deficiencies were identified in the future baseline conditions transportation analysis.

Table 5.1 Summary of Deficiencies

Deficiency	Location	Related Goals
Roadway Inventory		
Jurisdiction	• Transfer county roads within Cave Junction city limits to City jurisdiction	• Efficiency
Pavement Conditions	• Fair: W Lister St, Old Stage Rd and OR 46	• Efficiency • Mobility
Roadway Cross-section	• Partial curb on E. and W. River Street, Watkins Street, US 199, Lister Street, • Missing curb on OR 46, Old Stage Road,	• Mobility
Connectivity	• Residential growth in the southwest section of Cave Junction has resulted in a disparity between the locations of planned facilities, services and street connectivity	• Multi-Modal • Mobility
Multi-Modal Facilities Inventory		
Sidewalks	• Limited sidewalks along US 199 south of OR 46, between Laurel Rd and River St, and North of Laurel Rd (arterial) • OR 46 does not have sidewalks on either side of the roadway (arterial) • Limited sidewalks on Watkins St, Lister St and W River St (collectors) • No sidewalks on either side of Old Stage Rd or E River St (collectors)	• Safety • Multi-Modal • Mobility
Bike Lanes	• Only bike lanes striped within the UGB are on E River St between US 199 and Laurel Rd-left side only (collector)	
Connectivity	• No continuous parallel bicycle/pedestrian route to US 199 (north-south) or River St (east-west)	
Service	• Josephine County Transit buses are running at about 65 percent of capacity, warranting consideration of larger vehicles or additional runs	• Efficiency • Multi-Modal • Mobility
Existing and Future Traffic Operations & Safety		
Safety	• Lister St at US 199 intersection had 11 reported crashes (in 5 years) including 10 crashes that resulted in minor injury, one of which was a bicycle collision. • River St at US 199 intersection had eight reported crashes (in 5 years) including 5 crashes that resulted in minor injury. • The segment of US 199 between River St and OR 46 (downtown Cave Junction) had 15 reported non-intersection related crashes (in 5 years) including 11 crashes that resulted in minor injury, 3 were bicycle collisions and 2 involved pedestrians • 15% of the reported crashes within the study area were bicycle or pedestrian collisions.	• Safety • Multi-Modal • Mobility
Operations	• Southbound left-turn movement at the intersection of US 199 at Watkins St experiences higher delays than other left-turns in study area	• Efficiency • Mobility
Plan Consistency and Adopted Standards		
Plan Consistency	• Need to create a process to coordinate area development and transportation system	• Efficiency
Operational Standard	• Cave Junction lacks specific roadway, mobility, and access standards for evaluation of local system operations	• Mobility

CHAPTER 6
ALTERNATIVES EVALUATION

This chapter presents the alternatives analysis of projects for consideration in the Cave Junction Transportation System Plan (TSP) update. The identified improvement concepts are intended to achieve the goals and objectives set forth for this project, while addressing identified deficiencies for all modes.

Once the preferred improvements are identified, they will be combined to create a comprehensive improvement strategy. As the overall strategy is developed, concepts will be refined so that the improvements work well together.

Existing Plan Projects

The previous TSP identified roadway improvement projects "needed to address existing concerns and/or enhance traffic operations throughout the City." Each project in the list was assessed to determine its current status and Table 6-1 summarizes the recommended action for the 2014 update.

Table 6-1. Previously Identified Projects

Potential Improvement	Status	Recommended Action for 2014 TSP Update
Southbound left-turn lane on US 199 at Laurel Rd	Complete	Do not include in 2014 TSP update; this project has been completed.
Left-turn lanes along US 199 at River St	Complete	Do not include in 2014 TSP update; this project has been completed.
Left-turn lanes along US 199 at Lister St	Incomplete	Consider removing from TSP; adequate demand not expected.
Traffic signal at intersection of US 199 at River St	Complete	Do not include in 2014 TSP update; this project has been completed.
Create separate westbound turn lanes on OR 46 at US 199	Incomplete	Consider as an alternative in the 2014 TSP Update
Network Improvements throughout Cave Junction	Incomplete	Consider as an alternative in the 2014 TSP Update but examine options (See Section 0)

New Transportation Projects for Consideration

The alternatives evaluation considers new street, bicycle, pedestrian, and transit projects which could be incorporated into the 2014 TSP Update. In developing the projects, emphasis was placed on developing a city transportation system that encourages safety, efficiency, mobility and serves the multimodal needs of the community.

New Street Alternatives for Consideration

Although the transportation network is expected to operate adequately in year 2035, a few potential new street projects are considered. These projects are described below and summarized in the Project Evaluation Matrix.

S-1: US 199 Complete Street

US 199 is a four-lane roadway with two travel lanes in each direction between Palmer Street (M.P. 28.56) and Hamilton Avenue (M.P. 29.13), not including turn bays. This improvement concept would reduce the number of travel lanes on US 199 from four lanes to two through travel lanes with a center two-way left-turn lane and bike lanes through restriping. The purpose of this improvement concept is to create a complete street that improves safety and provides facilities for all modes of travel along US 199.

Under current conditions, traffic turning left into driveways and onto Lister Street must stop in the left-most (fast) through travel lane and wait for a gap in oncoming traffic. This lane configuration does have some safety and operational concerns. Because the left-turning traffic stops in a through travel lane, there is potential for either rear end collisions (when a following vehicle fails to stop behind the left-turning vehicle) or sideswipe collisions (when sudden lane changes are made to avoid the left-turning vehicle). At busier times of day, the capacity of the lane used for left turns can be significantly reduced by the turning vehicles leaving only one lane that most of the through traffic uses.

Although this concept would reduce the number of through travel lanes from two in each direction to one lane in each direction, current forecasts indicate that conditions would not be congested in the future. Left-turning movements currently made from the inner travel lanes reduce the ability of those lanes to carry traffic. Replacing those lanes with a single center refuge lane would maintain turning capacity to serve the businesses on US 199 while freeing up paved surface to add bike lanes. Freight movement along US 199 would be minimally affected with this change and could benefit from the increased distance between the travel lanes and parking as well as the separation between opposing travel lanes.

While congestion is not currently an issue in the corridor, there have been many documented crashes associated with turning vehicles on this segment of roadway; thus the addition of a dedicated center two-way left-turn lane should be considered. The center lane would serve vehicles turning left from US 199 into a driveway/access. It would also provide a refuge lane which vehicles turning left from a driveway/access onto US 199 could use to make a two-stage left-turn movement (i.e., first pull into the center lane from the access, then merge with through traffic lanes).

This section of roadway had 15 segment crashes and 18 intersection-related crashes documented in the 5-year crash history, accounting for almost 40 percent of the total number of crashes within the UGB. This improvement would address existing safety concerns for vehicular traffic by separating left-turning traffic from the through travel lanes. Three-lane roadways generally have lower crash rates than 4-lane roadways.

The crossing distances of the 3-lane cross section would not be substantially different than the current 4-lane cross section because the overall paved surface would remain the same. However, both pedestrians and bicyclists would only have to cross two lanes of flowing traffic rather than four lanes. Sight distance from side streets is improved because the lanes of traffic on US 199 are farther away from the sides of the highway, making it easier to see conflicting oncoming traffic on US 199.

This improvement would not require any widening of the roadway, and thus would not require acquisition of additional right of way or treatment of storm water runoff. However, additional water treatment measures may be desired.
Complete streets improve the livability of a community by improving travel options for residents and businesses. While beneficial to everyone, this improvement would have socioeconomic benefits to disadvantaged populations who often rely on non-auto travel modes.
Design elements are being coordinated between ODOT and City staff and an estimate is in progress.

S-2: Westbound OR 46 Turn Lane Striping at US 199

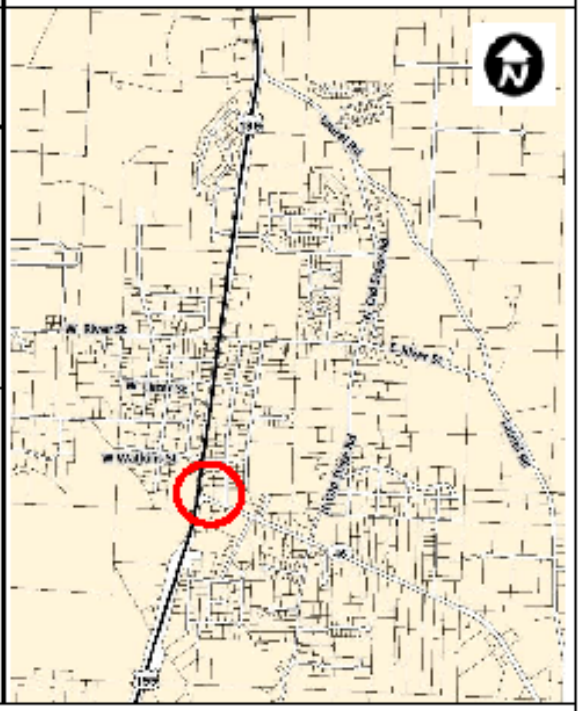
Previously identified in the existing Cave Junction TSP, this project would formally stripe OR 46 with three lanes: one eastbound lane, one westbound left-thru lane and one westbound right-turn lane at its junction with US 199. In order to accommodate these movements, some reconfiguration of the island ("porkchop") in the southeast corner would be needed and the northbound sign would need to be relocated.

Currently, some westbound local traffic cuts through the parking lot in the northeast quadrant of the intersection to avoid having to wait behind left-turning vehicles stopped at the light. Separating the right turns from the left-turn and through movements may resolve cut-through traffic without having to modify access to the business parking lot in the northeast quadrant. This intersection had five total crashes, four of them turning-related collisions including one of which involved a bicyclist. In the detailed crash reports, it was noted that the majority of these crashes occurred due to improper maneuvers with one vehicle entering/exiting an alley/driveway. Striping turn lanes could reduce cut-through traffic and crashes resulting from these illegal maneuvers.

Little right of way should be needed; therefore, additional treatment of storm water runoff would be minimal. However, additional water treatment measures may be desired. The previous TSP estimated costs of $10,000 to $15,000, depending on how much roadside work and reconfiguration will actually be needed.

Project S-2: Westbound OR 46 Turn Lane Striping at US 199

City of Cave Junction
Transportation System Plan Update

Milepoint	28.95 (US 199)	**Intersection of US 199 and OR 46**
Description	Officially stripe OR 46 with three lanes at its junction with US 199 (one eastbound lane, one westbound left-thru lane and one westbound right-turn lane) and add bicycle lanes	
Purpose	▪ Reduce cut-through traffic in the NE quadrant of the intersection who are avoiding eastbound left turning vehicles stopped at the light ▪ Separation of the right turns from the left-turn and through movements may resolve the cut-through movements ▪ Avoid modifying access to the NE quadrant ▪ Provide new bicycle lanes	
Crash Data/Safety Concerns	▪ The intersection had 5 crashes during a 5-year study period ▪ 4 crashes were turning related collisions, including 1 involving a bicyclist ▪ Majority of crashes occurred due to improper maneuvers with one vehicle entering/exiting an alley/driveway ▪ Striping turn lanes could reduce crashes resulting from these improper maneuvers	
Project Features	▪ ADT 2800 (Current-2013), 3100 (Forecast 2035) ▪ Right-turning traffic volumes comprise over 70% of total eastbound traffic ▪ Sidewalk present on both sides of US 199 and limited along OR 46 to the intersection ▪ Bicycle lanes are not present on either side of OR 46 or US 199 ▪ Transit stop located opposite of OR 46 connection ▪ Existing roadway width is 40 ft (OR 46), 70 ft (US 199) ▪ Available ROW is 60 ft (OR 46) and 80 ft (US 199) ▪ Posted speed is 35mph (OR 46) and 30mph (US 199) ▪ Cross-sections: 5-lane cross-section (US 199) and 2-lane (OR 46)	
	Existing/Future Deficiency	**With Improvement**
How Improvement Addresses Deficiencies	▪ Improper maneuvers to avoid traffic result in collisions ▪ Lack of striping forces eastbound right-turning traffic to wait for signal if another vehicle is in front of them	▪ OR 46 will have two striped eastbound lanes including a designated right-turn lane ▪ Likely reduction in queue lengths (separation of right-turns)
Community Benefit	▪ Increases connectivity for pedestrians, bicyclists, and automobiles	
Additional Considerations	▪ Provide moderate bicycle and pedestrian safety benefits (new bike lanes) ▪ High potential to increase vehicular safety ▪ Minimal adverse land use and existing development impacts	
Cost Option	▪ Little to no ROW should be needed (dependent on final design) ▪ Additional treatment of storm water runoff would be minimal (additional water treatment measures may be desired) ▪ Previous TSP estimate: $10,000 and $15,000 –depending on how much roadside work and reconfiguration would be needed	


S Redwood Hwy
S Redwood Hwy
199
Caves Hwy

S-3: Repave Streets in Substandard Conditions

An inventory of arterial and collectors within the study area identified locations where the pavement had declined to substandard levels. Pavements are load-carrying structures which degrade over time due to the combined action of traffic and environment. Consequently, they must be resurfaced or rehabilitated at periodic intervals to add service life and keep them in good condition, which improves the driver/rider experience for all modes of transportation and manages costs. The following sections of road are identified as having "fair" pavement condition and should be considered for resurfacing to delay the need for complete replacement:

- OR 46 (US 199 to East UGB)
- Old Stage Road (Laurel Road to South UGB)
- W Lister Street (Boundary Avenue to US 199)

As a result of resurfacing roadways, new striping will also be implemented, which can provide clear lanes of travel for all modes, improving visibility and safety. It is recommended that improvements listed here be combined with construction of other alternatives (see BP-1: Bikeway Priority Network and BP-2: Priority Sidewalk Network), when possible.
This project is not expected to require right-of-way acquisition or have significant environmental impacts.
The estimated costs for resurfacing the identified roads are:

- OR 46: Up to $595,000 for the entire segment (within UGB)
- Old Stage Road: up to $525,000 for the entire segment (within UGB)
- W Lister Street: up to $115,000

S-4: Improve Connectivity to Existing and Future Development

As land develops throughout the city, efforts should be made to add key links to the roadway network. A review of the existing roadway network, potential future development and layout of parcels/geographic features was completed to identify potential for improving roadway network connectivity. In doing so, two different options were identified and are explained below.

Option A: Improve Connectivity within the Existing Network

For the most part, Cave Junction has a quality paved system of arterial and collector roadways. However, the local roadway network still contains notable coverage gaps, particularly along some of their north-south connections where a roadway is incomplete.
The following new or improved connections are recommended to improve connectivity and consistency among residential neighborhoods, as well as access to local destinations. Figure S-4 shows locations where gaps in the street network exist including:

- Boundary Avenue (Lister Street to Schumacher Street)
- Sawyer Avenue (W River Street to Lister Street)
- Vineyard Place (Daisy Hill Road to Cabernet Circle)

Increased connectivity improves the livability of a community by tying neighborhoods together and reducing out-of-direction travel. This improvement would have socioeconomic benefits to

disadvantaged populations by providing shorter, more direct travel routes and improved access to transit.

Right-of-way and environmental impacts will depend on the location of the improvement, though most of the connections would occur within existing right of way.
The estimated costs for constructing the identified roads are:

- Boundary Avenue: $290,000 to $590,000
- Sawyer Avenue: $290,000 to $590,000
- Vineyard Place: $80,000 to $240,000

Cost estimates vary depending on whether sidewalks, drainage or illumination are included in the improvement. Additional water treatment measures may be desired. Further refinement of the improvement segments would alter the cost estimates.

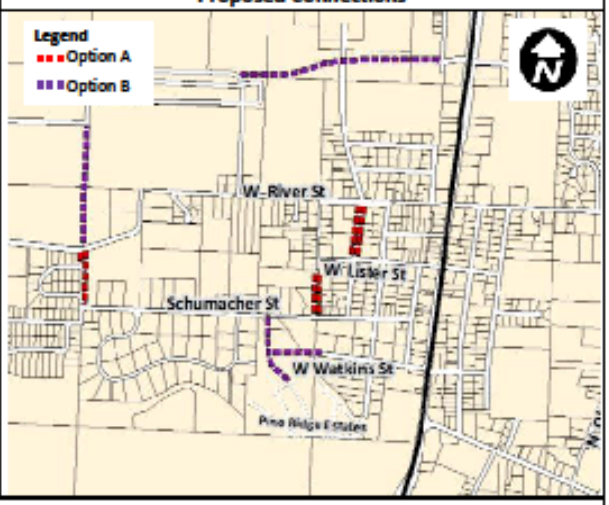
Option B: Improve Connectivity to Accommodate Future Development

This option identifies potential new roadway connections that would be constructed in response to future development in Cave Junction. In the previous TSP, several network improvements were identified for different locations within the city. That list has been refined to focus on separate areas of the City and each potential roadway connection serves planned developments. The suggested connections include:

- Ollis Road/Golf Club Drive (Extend Ollis Road east and Golf Club Drive west so they meet at N Sawyer Avenue)
- Vinyard Place (Extend Vineyard Place north to connect to Ollis Road)
- Connection to Pine Ridge Estates (Extend W Watkins Street northwest to bisect with new road to Pine Ridge Estates)

As with Option A, increased connectivity improves the livability of a community and benefits disadvantaged populations by providing shorter, more direct routes to developing neighborhoods. Right-of-way and environmental impacts will depend on the location of the improvement, though most of the connections would occur within existing right of way.
The estimated cost for the Ollis Road/Golf Club Drive connection is $1.5 million to $2.5 million, depending on the cross section of roadway.

The estimated coast for the Vineyard Place northern connection is $675,000 to $1.2 million, depending on the cross section of the roadway and whether or not a culvert is needed.
The estimated cost for the new connection to Pine Ridge Estates from Schumacher Street and the Watkins Street extension is $600,000 to $1.2 million, depending on whether or not a culvert is needed.

Project S-4: Improve Connectivity to Existing and Future Development		City of Cave Junction Transportation System Plan Update
Milepoint	Various locations west of US 199	**Proposed Connections**
Description	Improve connectivity within the existing roadway network (Option A) and to accommodate future development (Option B)	
Purpose	▪ Improve connectivity to existing and proposed developments ▪ Reduce out of direction travel ▪ Improve community access to local destinations	
Crash Data/Safety Concerns	▪ Limited/indirect emergency access to and from developed areas and future development	
Project Features	<u>Option A</u> ▪ New or improved connectivity and consistency among residential neighborhoods and access to local destinations ▪ Reduce gaps within local roadway network and resulting out-of-direction travel ▪ Complete roadways along some of the north-south connections <u>Option B</u> ▪ New roadway connections to future development in Cave Junction ▪ Increased roadway network connectivity	
How Improvement Addresses Deficiencies	**Existing/Future Deficiency**	**With Improvement**
	<u>Option A</u> ▪ Lack of roadway connectivity results in out-of-direction travel ▪ Segmented neighborhoods <u>Option B</u> ▪ Lack roadway connections to future developments ▪ Lack of roadway connectivity	▪ More direct travel routes for disadvantaged populations ▪ Reduces out-of-direction travel ▪ Ties neighborhoods together and thus improves livability ▪ Improved emergency access routes <u>Option A</u> ▪ Connectivity and consistency among residential neighborhoods and access to local destinations <u>Option B</u> ▪ Network improvements in different locations within the city ▪ Direct routes to developing neighborhoods
Community Benefit	▪ Improve livability by tying neighborhoods together ▪ Socioeconomic benefits by providing shorter, more direct travel routes and improved transit access	
Additional Considerations	▪ ROW and environmental impacts will depend on the location of improvement (most occur within existing ROW)	
Cost Option	<u>Option A:</u> Cost estimates depend on whether sidewalks, drainage, or illumination are improved ▪ Boundary Avenue: $290,000 to $590,000 ▪ Sawyer Avenue: $290,000 to $590,000 ▪ Vineyard Place: $80,000 to $240,000	<u>Option B</u> ▪ Ollis Road/Golf Club Drive connection: $1.5 million to $2.5 million (depending on the roadway cross-section) ▪ Vineyard Place: $675,000 to $1.2 million (depending on cross-section and need for a culvert) ▪ Pine Ridge Estates/W Watkins Connection: $600,000 to $1.2 million (depending on cross-section and need for a culvert)

New Bicycle & Pedestrian Alternatives for Consideration

Many of the facility improvement projects recommended for the 2014 TSP Update include bicycle and pedestrian elements as well. Additional projects for consideration are described below and summarized in the Project Evaluation Matrix.

BP-1: Bikeway Priority Network

A bikeway priority network is a system of interconnected bicycle routes that would enable people to satisfy their daily travel needs within the city or surrounding region by bicycle. The priority network would be designed to provide connections to key local destinations, including schools, parks, the library, downtown Cave Junction, and other identified activity centers. The classification system would set up a hierarchy of bikeways in Cave Junction, based on the facility's type and designed trip purpose, and would be accompanied by bicycle directional and wayfinding signage that indicates to bicyclists the direction of travel, location of nearby destinations, and travel time and distance to those destinations. In addition to increasing bicycling comfort and ease of use of the network, wayfinding tools, such as sharrows, provide a visual cue to motorists that they are travelling along a bicycle route and should proceed with caution. Fifteen percent of the reported crashes within the study area were bicycle or pedestrian collisions, and many of these crashes were due to bicyclists traveling in areas where vehicles may not anticipate their presence; this alternative would help improve this safety concern.

A comprehensive signage plan would identify the location of signage, the type of signage (destinations highlighted) and key design features. Signage would typically be placed at key locations leading to and along bicycle routes, including the intersection of multiple routes. Signage would be designed to reflect a consistent image or branding for Cave Junction and potentially for individual routes relating to network hierarchy or specific route designation. As part of this network, missing gaps in the bikeway network, such as US 199 and River Street, would be prioritized for completion. Figure 6-2 shows an inventory of the City's current bicycle and pedestrian network.

Three types of bikeways would be identified in a priority network:

1. **Dedicated Bike Lanes**

   Some routes would facilitate bicycle circulation within Cave Junction using bike lanes with a minimum width of 5 feet and ideally up to 7 feet. They would form the spine of the network, consisting of high-quality, high-priority routes that provide direct, relatively unimpeded access between residential neighborhoods and local destinations such as downtown Cave Junction, schools, transit stops and parks.

   Potential for dedicated facilities with striped bike lanes would be prioritized by roadway classification in conjunction with concept BP-3: Safe Routes to School Program and include the following roads:

   Arterials: US 199 and OR 46

   Collectors: River Street

   Local: Junction Avenue

Although local streets do not typically include bike lanes because of the relatively low traffic demand, Junction Avenue connects to Jubilee Park and the middle school. If bike lanes are desired on this street, a change in functional classification to Collector may be warranted.

2. **Shared Facilities**

   These neighborhood routes would be located mostly on calm residential streets with low traffic volumes and speeds. They are designed to provide safe, comfortable, low-stress access to short-distance destinations within neighborhoods and are designed for individuals of all bicycling confidence levels and families of all ages. Bicycle-specific infrastructure would consist of painted sharrow markings and signage to provide wayfinding. Sharrows can also help suggest proper placement for bicyclists along the street and alert motorists that bicycling traffic may be present.
   Potential for dedicated facilities with striped bike lanes would be prioritized by roadway classification in conjunction with concept BP-3: Safe Routes to School Program and include the following roads:

   Collectors: Old Stage Road, Hanby Lane and Lister Street

   Local: Kerby Avenue

3. **County Bikeways**

   The Josephine County Bikeways and Walkways Committee identifies routes throughout the County to help avid bicyclists with route selection for recreational rides. Contrary to the aforementioned shared facilities, there are no special provisions or signing for bicyclists, and no prohibitions on bicycle use of the roadway. On a County Bikeway, a motorist will usually have to cross over into the adjacent travel lane to pass a bicyclist. These facilities may be a part of a City's bicycle network since they could provide a connection between local facilities, but it is understood that any improvements to these roadways would be the responsibility of the County or require multi-jurisdictional coordination. Roadways identified as bikeways in the County TSP are:

   Arterials: OR 46 (East of Laurel Road)

   Collectors: Laurel Road

A complete bicycle network improves the livability of a community by increasing connectivity and adding facilities where there currently are none. It could result in socioeconomic benefits to disadvantaged populations by providing improved access to community facilities and transit. Right-of-way and environmental impacts will depend on the location of the improvement, though some of the connections would occur within existing right of way.
A unit cost of $9,000 per 100 feet of bike lane was assumed for segments where bicycles lanes would be installed on both sides of the roadway ($5,000 per 100 feet if only needed on one side). The estimated costs for widening the roadway and striping bicycle lanes are:

- US 199: $405,000
- OR 46: $525,000 to $715,000
- W River Street: $315,000
- E River Street: $105,000 (County section – north side only)

- Junction Avenue: $270,000

These estimates do not include any structural (guardrail, retaining wall, sidewalk), utility (lighting, drainage), or right of way costs associated with widening sections of road. Additional water treatment measures may be desired.

The estimated costs for adding sharrows and wayfinding signage on the identified roads are:

- Old Stage Road: $3,500 - $4,000
- Hanby Lane: $5,600 - $6,200
- W Lister Street: $2,500 - $2,900
- E Lister Street: $1,500 - $1,800
- Kerby Avenue: $5,800 - $6,400

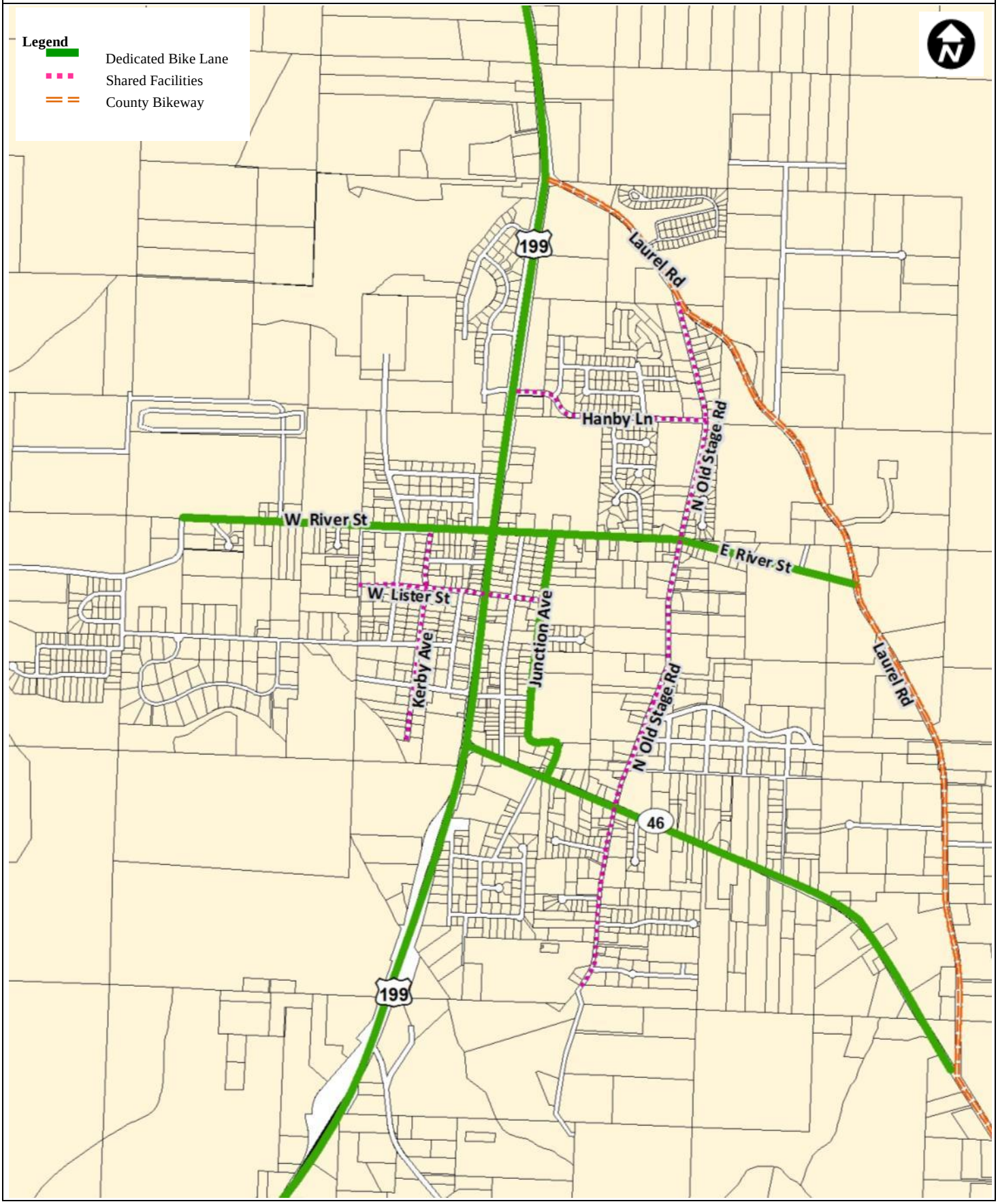
<table>
<tr><td colspan="2">Project BP-1: Bikeway Priority Network</td><td colspan="2">Cave Junction
Transportation System Plan Update</td></tr>
<tr><td>Milepoint</td><td>Varies</td><td colspan="2">Signing Examples</td></tr>
<tr><td>Description</td><td>A prioritized system of interconnected bicycle routes</td><td colspan="2" rowspan="3"> 

Sample Wayfinding & Directional Signage
 
Sample On-Street Bicycle Facilities (Sharrows)</td></tr>
<tr><td>Purpose</td><td>▪ Enable people to satisfy their daily travel needs within the city or surrounding region by bicycle
▪ Provide connections to key local destinations
▪ Provide designated bike routes along City roadways
▪ Improve bike access to disadvantaged neighborhoods
▪ Connect existing bike networks
▪ Improve safety by heightened awareness</td></tr>
<tr><td>Crash Data/Safety Concerns</td><td>▪ 15% of crashes recorded within the study area were bicycle or pedestrian collisions
▪ The majority of the bicycle related crashes occurred when bicyclists were traveling in areas where vehicles may not have been able to anticipate their presence</td></tr>
<tr><td>Project Features</td><td colspan="3">Dedicated Bike Lanes (striped bike lanes)
▪ Facilitate bicycle circulation within Cave Junction using bike lanes with a width between 5 and 7 feet
▪ The “spine” of the new bicycle network: provide direct access between key destinations (schools, neighborhoods, downtown Cave Junction, transit spots, and parks)
Shared Facilities (e.g., sharrows, signage improvements)
▪ Neighborhood routes located mainly on residential streets with low traffic volumes and speeds
▪ Designed for all bicycle confidence levels
▪ Painted sharrow markings/signage to provide wayfinding
County Bikeways
▪ Identifies routes throughout Josephine County to help avid bicyclists with route selection for recreational rides
▪ Facilities that do not exclude bicycle use
▪ Improvements to these roads are the responsibilities of the County or require multi-jurisdictional coordination</td></tr>
<tr><td rowspan="2">How Improvement Addresses Deficiencies</td><td>Existing/Future Deficiency</td><td colspan="2">With Improvement</td></tr>
<tr><td>▪ Gaps in bikeway network
▪ Lack of driver awareness that bicycles may be on roadway</td><td colspan="2">▪ Interconnects bicycle routes providing designated paths to key local destinations
▪ Signage to cue motorists of the presence of bicycles
▪ Signage to provide directional information to bicyclists</td></tr>
<tr><td>Community Benefit</td><td colspan="3">▪ Complete bicycle network improves the livability of a community by increasing connectivity with new facilities
▪ Provides socioeconomic benefits to disadvantaged populations by providing improved access to key facilities
▪ Supports Safe Routes to School program (see BP-3)</td></tr>
<tr><td>Additional Considerations</td><td colspan="3">▪ The project will include bicycle directional and wayfinding signage
▪ Sharrows may be used on shared facilities to provide a visual cue to drivers to expect bicycles on this roadway
▪ A comprehensive signage plan would identify the location of signage, the type of signage, and key design features
▪ ROW and environmental impacts will depend on the location of improvement</td></tr>
<tr><td>Cost Option</td><td colspan="3">Dedicated Bike Lanes: Unit cost of $9,000 per 100 feet of bike lane ($5,000 if it is only needed on one side) Shared Facilities: Sharrows unit cost of ~$230 per hundred feet, plus 10-12% mobilization</td></tr>
</table>

Project BP-1: Bikeway Priority Network		Cave Junction Transportation System Plan Update
	▪ US 199: $405,000 ▪ OR 46: $525,000 to $715,000 ▪ W River Street: $315,000 ▪ E River Street: $105,000 (County section-north side only) ▪ Junction Avenue: $270,000	▪ Old Stage Road: $3,500 - $4,000 ▪ Hanby Lane: $5,600 - $6,200 ▪ W Lister Street: $2,500 - $2,900 ▪ E Lister Street: $1,500 - $1,800 ▪ Kerby Ave: $5,800 - $6,300

Project BP-1: Bikeway Priority Network

Cave Junction
Transportation System Plan Update



BP-2: Priority Sidewalk Network

Because sidewalk improvements adjacent to US 199 are identified in the street concepts section, this section covers the proposed spot improvements.

The City of Cave Junction's sidewalk network contains notable coverage gaps, particularly on River Street east of US 199, along OR 46, and US 199 north of River Street, where no sidewalks are built on either side of the roadways. In other locations, such as River Street west of US 199, gaps in the sidewalk are present. Figure 6-2 shows an inventory of the City's current bicycle and pedestrian network.

The following new or improved connections are recommended to improve pedestrian mobility and access to local destinations such as schools, parks, and downtown destinations. Priority should be given to collectors and arterials as they provide the "backbone" to the system. Some of the segments are under County jurisdiction but are provided to identify what it would take to complete the system.

Table 6-2. Sidewalk Improvements

Roadway	Segment		Jurisdiction	Cost Estimate[1]
	From	To		
Collector/Arterial Roadways				
US 199	N City Limits	River St	ODOT	$1.4 million
US 199 (West)	Pedestrian X-ing	Watkins St	ODOT	$120,000
US 199 (East)	OR 46	S City Limits	ODOT	$360,000
OR 46	US 199	Keller Ln	ODOT	$920,000
W River St	Daisy Hill Ln	US 199	City	$920,000
E River St	US 199	Old Stage Rd	City	$550,000
E River St (North)	Old Stage Rd	Laurel Rd	County	$400,000
W Lister St (North)	Boundary Ave	Sawyer Ave	City	$110,000
W Lister St (South)	Boundary Ave	Kerby Ave	City	$70,000
E Lister St (North)	US 199	Junction Ave	City	$130,000
W Watkins St (North)	End of Street	US 199	City	$215,000
W Watkins St (South)	End of Street	200 feet east of Kerby Ave	City	$125,000
E Watkins St (North)	Caves Ave	Junction Ave	City	$70,000
Old Stage Rd	Laurel Rd	E River St	County	$730,000
Old Stage Rd	OR 46	S City Limits	County	$590,000
Local Roadways				
Laurel Rd	US 199	Old Stage Rd	City	$560,000
Bumblebee Ln	Old Stage Rd	Honeybee Ln	City	$80,000
Honeybee Ln	North End	South End	City	$230,000
Shadowbrook Dr	E River St	Cul-de-sac	City	$460,000
Too Far South Ln (West)	W River St	Cul-de-sac	City	$100,000
N Tracy Ln	W River St	Cul-de-sac	City	$80,000
Sawyer Ave	W River St	North End	City	$370,000
Stevenson St	Sawyer Ave	East End	City	$260,000
Millie St	Sawyer Ave	East End	City	$230,000
Golf Club Dr	US 199	Terminus	City	$450,000
Green Valley Dr	Golf Club Dr	S of Hanby Ln	City	$540,000
Cottage Park Dr	Green Valley Dr	US 199	City	$70,000
Boundary Ave	W River St	Terminus	City	$220,000
S Sawyer Ave	W Lister St	Schumacher St	City	$180,000
S Kerby Ave (West)	N of Schumacher St	Schumacher St	City	$80,000
S Kerby Ave (East)	W Lister St	Schumacher St	City	$130,000
S Kerby Ave	Schumacher St	S Terminus	City	$290,000
S Hussey Ave (East)	W Lister St	W Watkins St	City	$200,000
Schumacher St (North)	Vineyard Pl	Boundary Ave	City	$530,000
Schumacher St (South)	Forks Cir	S Kerby Ave	City	$280,000
Schumacher St	S Kerby Ave	S Hussey Ave	City	$100,000
W Palmer St (North)	N Kerby Ave	US 199	City	$90,000
Daisy Hill Rd	W River St	Vineyard Pl	Private	$290,000
Mountain Valley Wy	Shadowbrook Dr	S of Tennessee Vw	City	$30,000
N Caves Ave	E River St	E Lister St	City	$190,000

Table 6-2. Sidewalk Improvements

Roadway	Segment		Jurisdiction	Cost Estimate[1]
	From	To		
N Caves Ave (West)	E Lister St	E Watkins St	City	$230,000
N Caves Ave (East)	S of Lister St	E Watkins St	City	$130,000
N Caves Ave	E Watkins St	OR 46	City	$200,000
E Terrace Dr	S Junction Ave	Cul-de-sac	City	$150,000
S Junction Ave (East)	E River St	E Lister St	City	$120,000
S Junction Ave (East)	S of E Lister St	N of OR 46	City	$340,000
S Junction Ave	OR 46	Raymond St	City	$290,000
S Junction Ave	Raymond St	Barlow St	City	$170,000
Hamilton Ave	US 199	Barlow St	City	$300,000
Sherwood Ave	Cul-de-Sac	Barlow St	City	$240,000
Raymond St	S Junction Ave	Sherwood Ave	City	$130,000
Jonathan Ct	S Junction Ave	Cul-de-sac	City	$80,000
Stage Stop Dr (North)	Old Stage Rd	Cul-de-sac	City	$120,000
S Frederick Ct	OR 46	Cul-de-sac	City	$150,000
Barlow St	Hamilton Ave	Sherwood Ave	City	$230,000

Notes:

1. Cost estimates do not include right-of-way acquisition, illumination or roadway widening.

Most of these improvements can be constructed within existing right of way. Some may be constructed with new development, or as part of a Safe Routes to School Program (See BP-3: Safe Routes to School Program) while others may require street upgrades as part of the City's Capital Improvement Program.

A complete sidewalk network improves the livability of a community by improving existing facilities and closing gaps in discontinuous segments. It especially benefits disadvantaged populations by providing improved access to community facilities and transit.
Cost estimates include drainage although additional water treatment measures may be desired. Further refinement of the improvement segments would alter the cost estimates.

BP-3: Safe Routes to School Program

The City of Cave Junction is bisected by US 199. While the highway provides quick north-south automobile access, it also is an impediment to school children whose school is located on the side opposite of their home. Additionally, there are many streets that are either partially built (truncated), or have minimal amenities (i.e., no bicycle or pedestrian amenities). This infrastructure makes walking and biking to school difficult for children and the adults who may accompany them.

The Safe Routes to School Program seeks to provide a safe, continuous local network of streets that provide both pedestrian and bicycle access, along with their vehicular counterpart. Overall community access is improved by the projects presented in other alternatives (BP-1: Bikeway Priority Network, BP-2: Priority Sidewalk Network, and BP-4: ADA Ramp Repairs).Though the students may benefit from the other improvements, this program focuses on the mobility to and from schools only.

Table 6-3 shows the roadways identified for the program and the anticipated bicycle and pedestrian needs. Additionally, Table 6-3 includes jurisdiction and roadway classification of the roadways expected to be impacted the implementation of the program.

Table 6-3. Safe Routes to School Bike and Pedestrian Improvements

Roadway	Segment		Jurisdiction	Roadway Classification	Improvement Type[1]	
	From	To			Bike Lane	Sidewalk
US 199	North City Limits	South City Limits	ODOT	Arterial	Yes	Yes
OR 46	US 199	East City Limits	ODOT	Arterial	Yes	Yes
W River Street	Daisy Hill Lane	US 199	City	Collector	Yes	Yes
E River Street	US 199	Old Stage Road	City	Collector	Yes	Yes
E River Street	Old Stage Road	Laurel Road	County	Collector	Yes	Yes
Old Stage Road	Hanby Lane	E River St	County	Collector	No	Yes
Junction Avenue	E River Street	OR 46	City	Local	Yes	Yes
Shadowbrook Drive	Mt. Valley Way	E River Street	City	Local	No	Yes

Notes:

1. The goal of the Safe Routes to School program is safe facilities with continuous multimodal elements. Some of the segments identified may already have facilities for pedestrians and/or bicyclist but with noticeable gaps in coverage; the improvement would close any holes in the segment.

See sections BP-1: Bikeway Priority Network and BP-2: Priority Sidewalk Network for an estimated cost of constructing the bicycle and pedestrian facilities identified for construction as part of this concept.

BP-4: ADA Ramp Repairs

This alternative would install ADA compliant ramps at key locations where they do not currently exist. Many of the intersections where pedestrians frequently cross in the City are lacking ADA accessible curb ramps. The absence of these amenities makes it difficult (and in some cases, impossible) for a person using a wheelchair, scooter, walker, or other mobility device to safely cross at an intersection without curb ramps present at either side of the street. The lack of curb ramps could force persons with disabilities to either stay home or use their mobility device alongside vehicles in the street. The missing curb cuts are also needed to provide safe access to transit stops for these disadvantaged populations.

Figure 6-1shows locations within the City where ADA ramps are needed. ADA ramp needs on arterial, collector and local roads include:

- W River Street at Too Far S Lane
- W River Street at Sawyer Avenue
- W River Street at N Kerby Avenue
- E Lister Street at N/S Caves Avenue
- E Lister Street at N/S Junction Avenue
- W Lister Street at N Kerby Avenue
- W Watkins Street at S Hussey Avenue

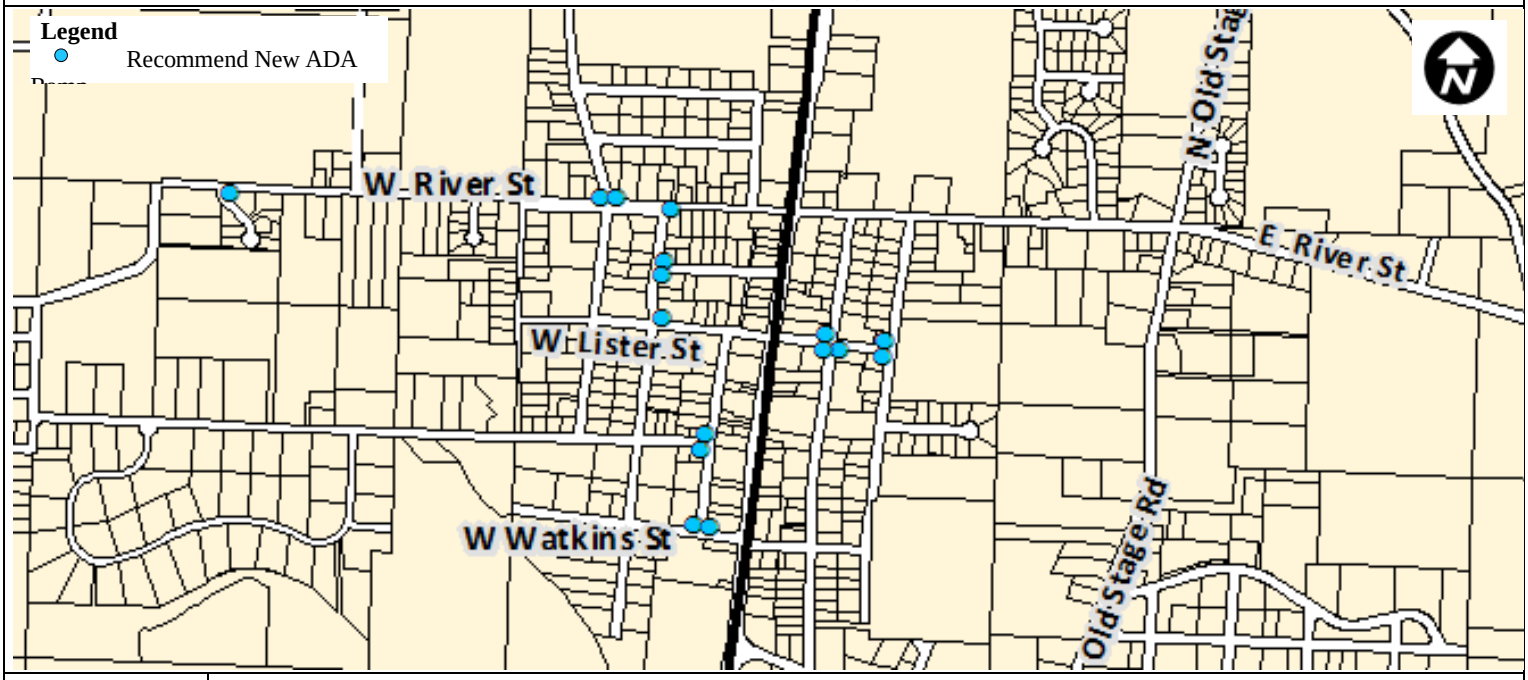
- Schumacher Street at S Hussey Avenue
- W Palmer Street at N Kerby Avenue

This project would occur within existing right of way and does not have any negative environmental impacts. ADA ramp installation should be paired with sidewalk improvements where appropriate.

Project BP-4: ADA Ramp Repairs

City of Cave Junction
Transportation System Plan Update

Preliminary Concept



Description	ADA compliant ramps at key locations (on a collector or arterial)		
Purpose	▪ Provide ADA accessible curb ramps for pedestrians ▪ Provide access to transit stops, especially for disadvantaged populations ▪ Provide access for people who cross the intersection with the aid of a mobility device		
Project Features	**Intersection**	**Classification**	**No. of ADA Ramps Needed**
	W River Street at Too Far S Lane	Collector	1
	W River Street at Sawyer Avenue	Collector	2
	W River Street at N Kerby Avenue	Collector	1
	E Lister Street at N/S Caves Avenue	Collector	3
	E Lister Street at N/S Junction Avenue	Collector	2
	W Lister St at N Kerby Avenue	Collector	1
	W Watkins Street at S Hussey Avenue	Collector	2
	Schumacher Street at S Hussey Avenue	Local	2
	W Palmer Street at N Kerby Avenue	Local	2
How Improvement	**Existing/Future Deficiency**	**With Improvement**	
	▪ Intersections lacking ADA accessible curb ramps	▪ Improves access for pedestrians crossing at an	

Project BP-4: ADA Ramp Repairs		City of Cave Junction Transportation System Plan Update
Addresses Deficiencies	▪ Difficulty for people using wheelchairs, scooters, walker, or other mobility device to safely cross at intersections ▪ No safe access for people, especially disadvantaged populations, to reach transit stops	intersection, especially for those who need the aid of a mobility device
Community Benefit	▪ Improved access to transit stops for disadvantaged populations and neighborhoods	
Additional Considerations	▪ The project would occur within existing right of way and does not have any negative environmental impacts ▪ ADA installation should be paired with sidewalk improvements where appropriate ▪ Minimal adverse land use impacts and minimal impacts to structures	
Cost Option	Projects assumed to occur concurrently with sidewalk improvements, estimates provided in BP-2. Therefore, project cost would be low and cost effective given potential alternatives.	

New Transit System Alternatives for Consideration

The following alternatives have been developed to address observed system deficiencies in transit. The projects are summarized in the Project Evaluation Matrix.

T-1: Enhance Transit Service: Route 50 Service Adjustments

Josephine Community Transit (JCT) provides fixed route bus service from Grants Pass to Cave Junction Monday through Friday with Route 50. The route serves the Cave Junction community five times per day (two times in the morning, once mid-day, two times in the evening). Grants Pass is a destination for employment and services (including health) for the Cave Junction community. Some residents have limited access to a personal automobile and rely strongly on the JCT system to get to work and services in Grants Pass.

There are three transit stops in Cave Junction. Two of the stops are located along US 199 while the third stop is located on E River Street (at the IV Coalition). Of the stops along US 199, one is located closer to the southern end of the community, opposite OR 46 at the Junction Inn. The second stop is more centrally located near the intersection of W Lister at the County Building.

The JCT buses are running approximately 65 percent of capacity and often include bicycles. There are no external mounting options for bicycles, thus they must be brought into the bus making the available space confined. External bicycle mounts, additional transit service, or larger vehicles would address the deficiency.

Improved service capacity benefits all transit riders but especially disadvantaged populations who rely more heavily on transit for transportation.

A cost associated with this project is dependent of the type of adjustment(s) made. JCT is actively investigating grant options and seeking funding to use as a match.

T-2: Amenities

There are three JCT transit stops in Cave Junction: County Building, Junction Inn, and the IV Coalition. These bus stops act as de facto park-and-ride locations and the amenities vary from

stop to stop. This concept would provide more consistent amenities.

The southern bus stop, along US 199, at the Junction Inn includes a bench and trash receptacle (provided by SW Point service); however, it lacks signage specific to JCT and printed (or posted) schedule information. If supported, a shelter would provide refuge from the elements while waiting for the bus to arrive.

To the north, along US 199, is the bus stop outside of the County Building. This bus stop could also benefit from JCT signage and printed (or posted) schedule information.

The third bus stop is located along E River Street at the IV Coalition (near Illinois Valley High School). This stop has no amenities currently. A bench would be beneficial and consideration could be given to a trash receptacle and JCT signage.
As noted for Concept T-1, improving the transit system benefits all riders, especially the disadvantaged populations who rely more heavily on transit for transportation.

An estimate for this improvement is approximately $5,000. JCT is investigating grant options and seeking funding to use as a match.

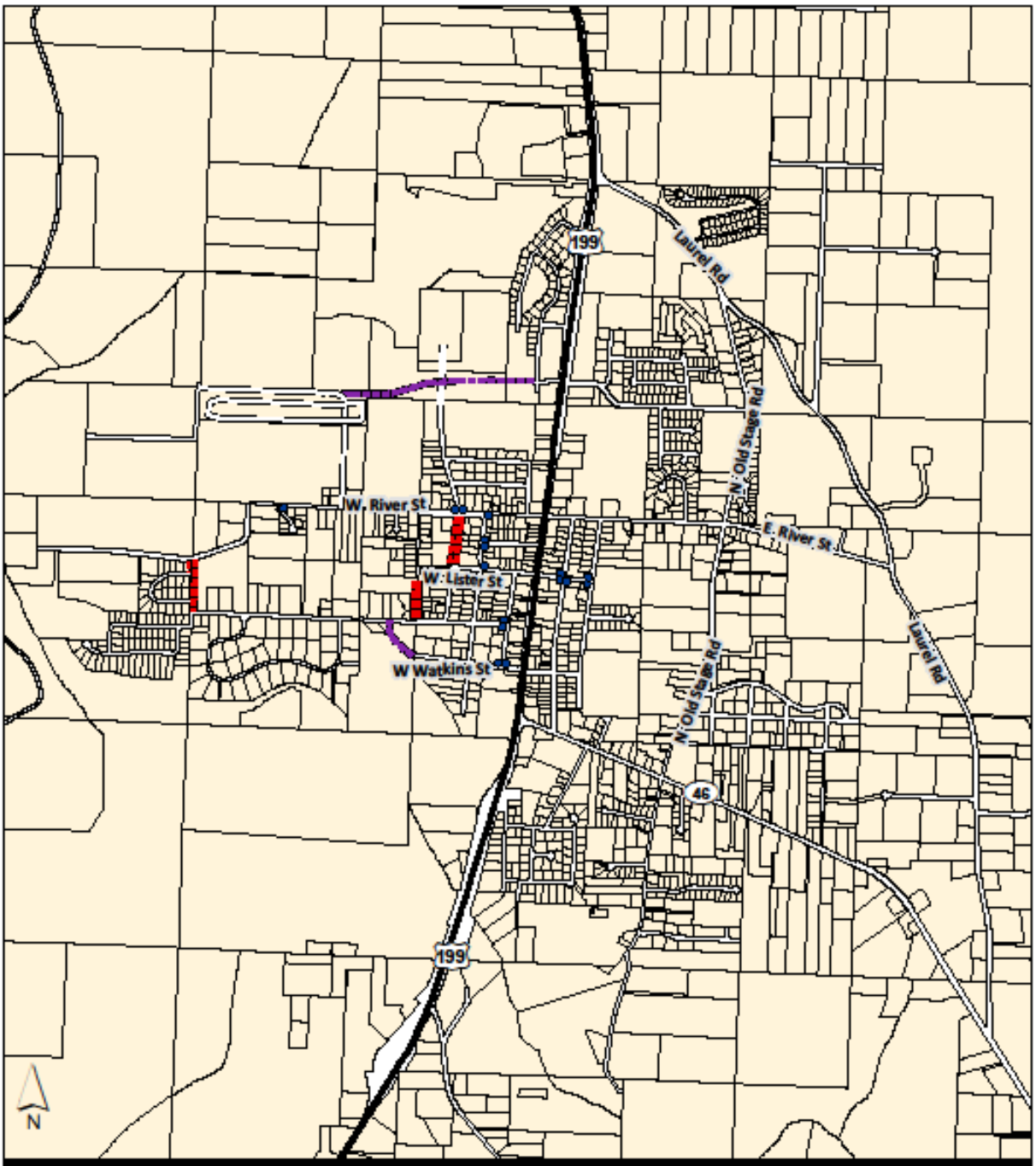
T-3: Improved Bus Access to Stop Locations

Two of the stop locations (Junction Inn and County Building) are positioned in areas where on-street parking exists which may require the transit vehicle to stop in a travel lane. This can cause congestion and safety issues for vehicles and obscure pedestrians from either the transit vehicle or other automobiles. Consideration of modified transit stops should be coordinated with JCT and considered if the cross section of US 199 is modified. Any modifications must maintain accessibility for all transit users.

This improvement is recommended when modifications are made to the roadway cross section on US 199, thus costs are assumed to be included in the roadway project (S-1: US 199 Complete Street).

Evaluation Matrix

A broad set of evaluation criteria that represent the proposed set of goals for the Cave Junction TSP update are used to evaluate proposed projects and alternatives. Table 6-4 describes the criteria and provides a qualitative scale that is used to summarize and screen projects for comparison. Table 6-4 lists each project discussed in the previous sections of this memo and states which criterion applies to each of them.


199
Laurel Rd
N. Old Stage Rd
W. River St
E. River St
W. Lister St
W Watkins St
N. Old Stage Rd
Laurel Rd
46
199
N
City of Cave Junction Transportation System Plan
Legend
Proposed Connections Within Existing Network selection
Proposed Connections For Future Development
ADA Ramps Needed
Josephine Co. Tax Lots
Source Data: ESRI
* Maps are for Planning Purposes only. The accuracy or completeness of the contents of this map are not guaranteed.
Figure 6-1
Street Improvements
Document Path: P:\OIC\DOT\0000078710\800\INF\GIS\arcmap\Existing Conditions\TM6 Alternatives.mxd
Date: 5/23/2014 Time: 12:12:39 PM User Name: aaro

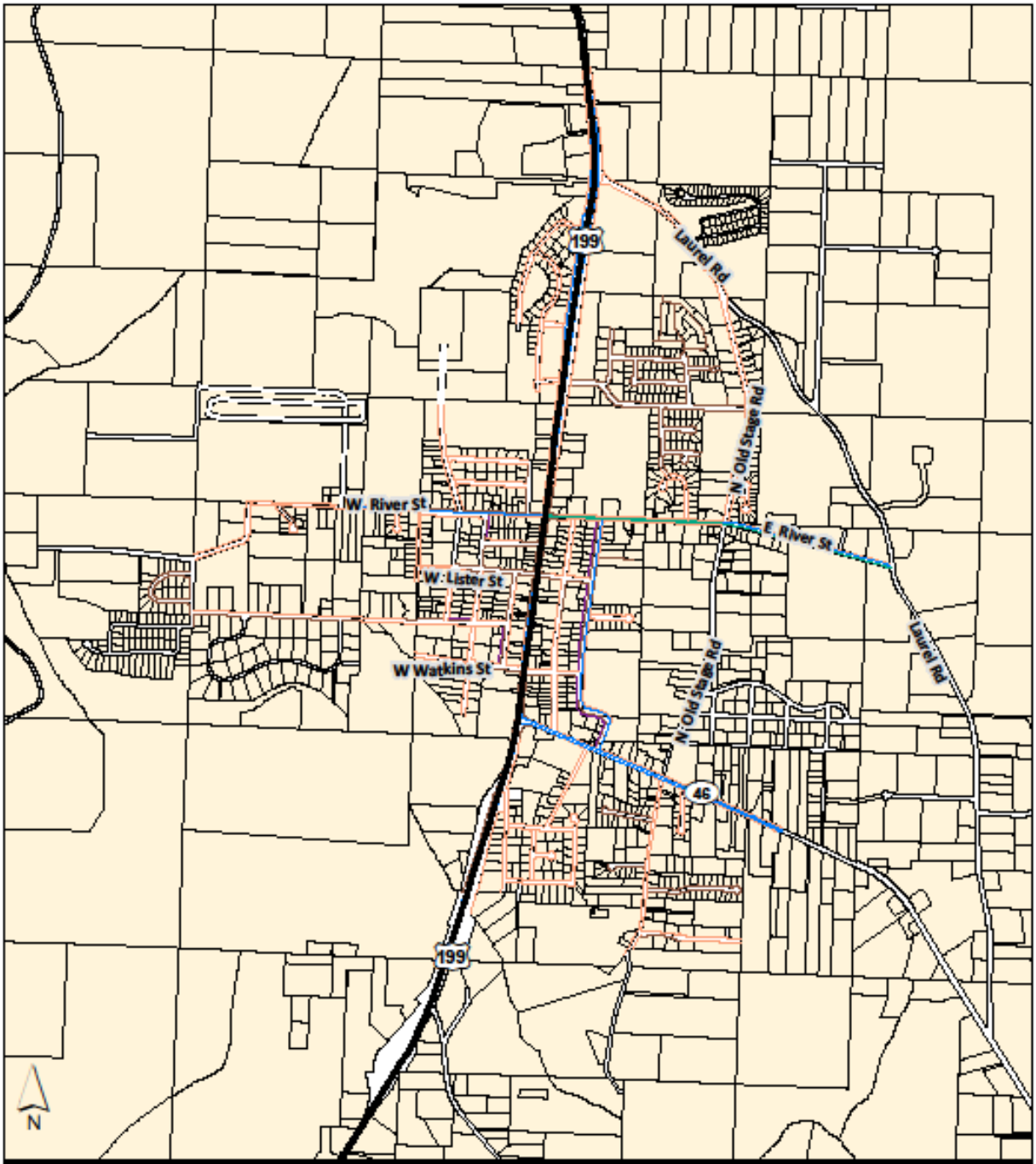


Figure 6-2
Bicycle and Pedestrian Improvements

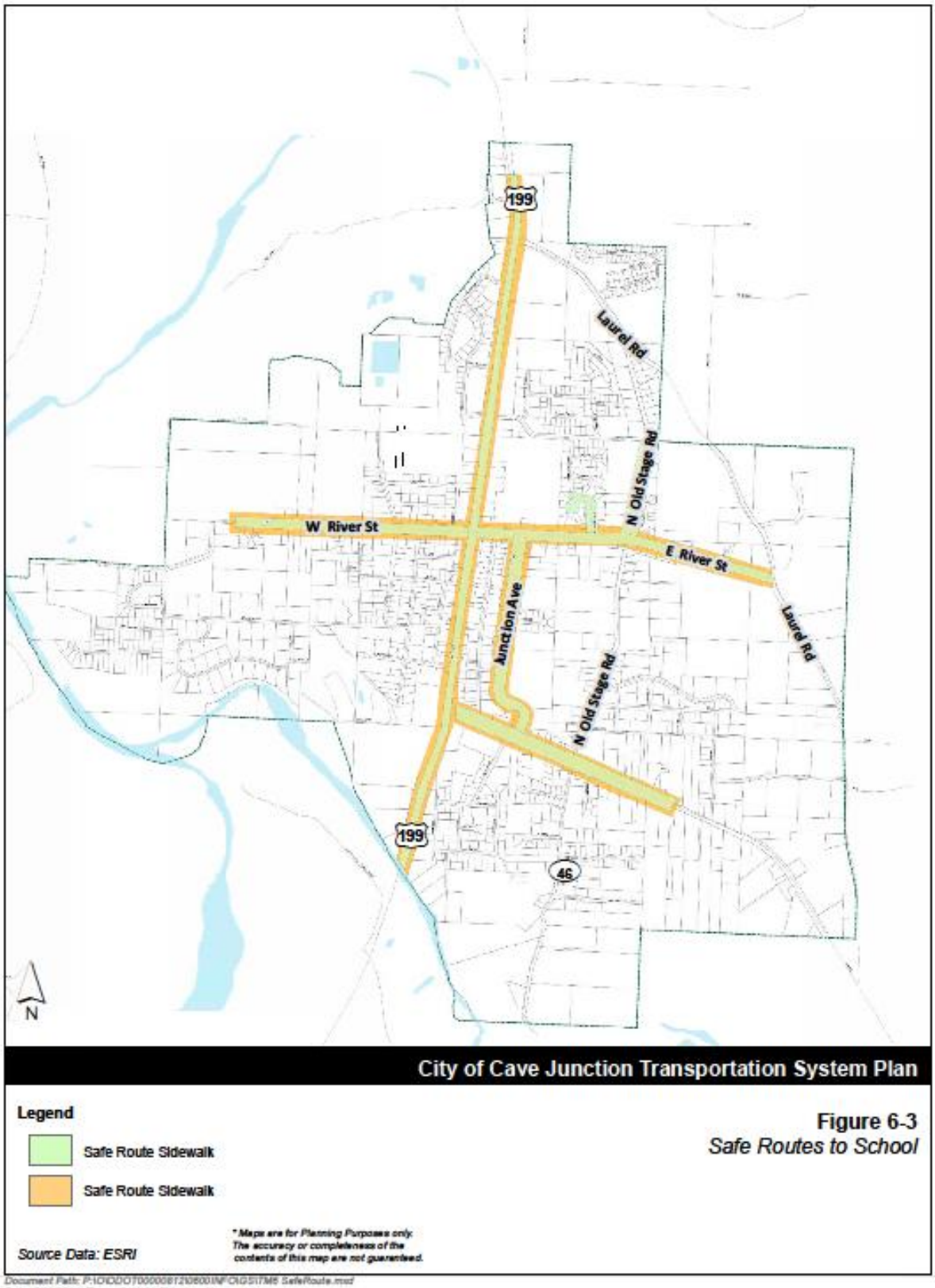

199
Laurel Rd
N Old Stage Rd
W River St
E River St
Junction Ave
Laurel Rd
N Old Stage Rd
199
46
N
City of Cave Junction Transportation System Plan
Legend
Safe Route Sidewalk
Safe Route Sidewalk
Source Data: ESRI
* Maps are for Planning Purposes only. The accuracy or completeness of the contents of this map are not guaranteed.
Figure 6-3
Safe Routes to School

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Table 6-4 Evaluation Criteria for Cave Junction Transportation System Plan

Goal	Criteria	Rating	
Mobility/ Connectivity	**General Connectivity: Increases network connectivity for all modes** ▪ Project increases network density of pedestrian, bicyclist, automobiles, freight and transit connections within the City. ▪ Project anticipates planned development in developing street patterns.	●	Increases connectivity for pedestrians, bicyclists, automobiles, freight and transit
		◉	Does not increase connectivity
		○	Decreases connectivity for one or more modes
		N/A	Project has no effect on connectivity for any mode
Mobility/ Connectivity	**Bicycle & Pedestrian: Promotes safe and convenient bicycle and pedestrian circulation within, to, and from Cave Junction** ▪ Project addresses a bicycle and/or pedestrian gap within the network. ▪ Project provides a new, safer alternative to an existing bicycle or pedestrian route.	●	Fully addresses a known gap in the pedestrian or bicycle network
		◉	Partially addresses a known gap in the pedestrian or bicycle network, or provides an alternative bicycle or pedestrian route
		○	Does not promote safe or convenient bicycle and pedestrian circulation or decreases pedestrian and bicycle safety
		N/A	Project does not address bicycle or pedestrian circulation
Mobility/ Connectivity	**Transit: Improves transit service or accessibility to transit** ▪ Project increases connections to transit for all modes ▪ Project improves transit service.	●	Increases the availability of transit service or improves access to existing service
		◉	Indirectly improves the availability of, or access to transit service
		○	Project adversely impacts access to transit and/or adversely impacts transit service
		N/A	Project has no effect on transit access or service
Mobility/ Connectivity	**Freight: Maintains or Improves Freight Routes** ▪ Project maintains roadway ▪ Project improves freight service	●	Increases mobility for freight movement through the City
		◉	Indirectly improves accessibility for freight movement
		○	Project adversely impacts freight movement
		N/A	Project has no effect on freight movement
Mobility/ Connectivity	**Emergency Access: Provides easy, clear and redundant access for emergency service** ▪ Project enhances or provides an emergency service route. ▪ Project provides network redundancy, which is helpful for emergency response.	●	Provides clarity or otherwise improves emergency access routes
		◉	Provides moderate clarity or improvement to emergency access routes
		○	Project reduces emergency access or increases emergency response delay
		N/A	Project has no effect on emergency access routes or response time
Safety/ MMLOS	**Safety: Addresses known safety issues for bicycles** ▪ Project addresses known safety concerns such as a high crash area, potential area of high conflict, or an area of community concern. ▪ Project addresses bicycle safety. ▪ Project addresses known safety or user comfort issues within ½ mile of an existing or planned school or a designated safe route to school.	●	Fully addresses a known safety issue or has high potential to greatly increase bicycle safety
		◉	Addresses a known safety issue of moderate concern or the proposed project will provide moderate bicycle safety benefits
		○	Project reduces bicycle safety
		N/A	Project does not address a known safety issue or bicycle safety
Safety/ MMLOS	**Safety: Addresses known safety issues for pedestrians** ▪ Project addresses known safety concerns such as a high crash area, potential area of high conflict, or an area of community concern. ▪ Project addresses pedestrian safety. ▪ Project addresses known safety or user comfort issues within ½ mile of an existing or planned school or a designated safe route to school.	●	Fully addresses a known safety issue or has high potential to greatly increase pedestrian safety
		◉	Addresses a known safety issue of moderate concern or the proposed project will provide moderate pedestrian safety benefits
		○	Project reduces pedestrian safety
		N/A	Project does not address a known safety issue or pedestrian safety
Safety/ MMLOS	**Safety: Addresses known safety issues for motorized vehicles** ▪ Project addresses known safety concerns such as a high crash area, potential area of high conflict, or an area of community concern. ▪ Project addresses vehicular safety. ▪ Project addresses known safety or user comfort issues within ½ mile of an existing or planned school or a designated safe route to school.	●	Fully addresses a known safety issue or has high potential to greatly increase vehicular safety
		◉	Addresses a known safety issue of moderate concern or the proposed project will provide moderate vehicular safety benefits
		○	Project reduces vehicular safety
		N/A	Project does not address a known safety issue or vehicular safety

Table 6-4 Evaluation Criteria for Cave Junction Transportation System Plan

Goal	Criteria	Rating	
Safety/ MMLOS	**Safety: Addresses known safety issues for transit** ▪ Project addresses known safety concerns such as a high crash area, potential area of high conflict, or an area of community concern. ▪ Project addresses transit safety.	●	Fully addresses a known safety issue or has high potential to greatly increase transit user safety
		◉	Addresses a known safety issue of moderate concern or the proposed project will provide moderate transit safety benefits
		○	Project reduces transit safety
		N/A	Project does not address a known safety issue or transit safety
Livability	**Land Use: Minimizes land use impacts** ▪ Project minimizes right-of-way acquisition and if acquisition is required, acquisitions would result in usable remainder property. ▪ Project preserves open space and minimizes impacts to existing and planned development.	●	Project can be accomplished within existing right-of-way, has minimal impacts to existing or planned development, minimal adverse land use impacts and no or minimal impacts to structures
		◉	Right-of-way is needed, but acquisitions would result in usable remainder property; project has minimal impacts to existing or planned development, minimal adverse land use impacts and minimal impacts to structures
		○	Requires significant right-of-way acquisition; project has significant impacts to existing or planned development and/or has significant adverse impacts on land use and/or structures
Livability	**Natural Resources: Minimizes impacts to natural resources, environmentally sensitive habitats and threatened or endangered species** ▪ Project minimizes potential impact to environmentally sensitive habitats and threatened and endangered species.	●	Project has no effect or minimal potential on natural resources, environmentally sensitive habitats or threatened or endangered species
		◉	Project potentially has some adverse impacts to natural resources, environmentally sensitive habitats or threatened or endangered species
		○	Project potentially has moderate to significant impacts on natural resources, environmentally sensitive habitats or threatened or endangered species
Livability	**Socioeconomic:** Supports transportation mobility for disadvantaged populations (Title VI) ▪ Project benefits disadvantage populations through improved accessibility and mobility. ▪ Project includes environmental justice considerations (i.e., does not disproportionately impact Title VI populations)	●	Project potentially benefits disadvantaged populations
		◉	Project potentially has no effects on disadvantaged populations
		○	Project potentially has adverse impacts on disadvantaged populations
Cost Effectiveness	**Benefits vs. Costs: Maximizes benefits for project cost** ▪ Project considers low-cost alternatives ▪ Project costs over its life cycle are acceptable given a qualitative assessment of benefits provided by the project	●	Project cost is low and/or project is cost effective given potential alternatives
		◉	Project cost is moderately and/or project is more cost effective than some alternatives
		○	Project cost is high and/or project is not cost effective or effectiveness is difficult to determine
Cost Effectiveness	**Fundability: Project aligns with current funding opportunities** ▪ Project is potentially eligible for funding from known federal, state, regional or local sources based on funding criteria	●	Project is eligible for funding from one or more sources and would be a strong funding candidate
		◉	Project is eligible for funding from one or more sources
		○	Project is unlikely to be funded

Table 6-5. Project Evaluation Matrix

Potential Improvement	Mobility / Connectivity					Safety / MMLOS				Livability			Cost Effectiveness	
	General Connectivity	Bicycle & Pedestrian	Transit	Freight	Emergency Access	Bicycle	Pedestrian	Vehicle	Transit	Land Use	Natural Resources	Socioeconomic	Benefits vs. Costs	Fundability
Roadway														
S-1: US 199 Complete Street	●	●	N/A	N/A	N/A	●	●	◉	◉	●	●	●	●	●
S-2: Westbound OR 46 Turn Lane Striping	●	N/A	N/A	N/A	N/A	◉	◉	●	N/A	●	●	◉	◉	○
S-3: Repave Streets in Substandard Condition	◉	●	◉	◉	●	◉	◉	◉	N/A	●	●	◉	◉	◉
S-4: Improve Connectivity to Existing and Future Development														
Option A: Improve Connectivity within the Existing Network	●	●	N/A	N/A	●	N/A	N/A	N/A	N/A	◉	◉	●	◉	○
Option B: Improve Connectivity to Accommodate Future Development	●	●	N/A	N/A	●	N/A	N/A	N/A	N/A	○	◉	●	○	○
Bicycle and Pedestrian														
BP-1: Bikeway Priority Network	●	●	N/A	N/A	N/A	●	◉	◉	◉	◉	◉	●	●	◉
BP-2: Priority Sidewalk Network	●	●	N/A	N/A	N/A	◉	●	◉	◉	◉	◉	●	◉	◉
BP-3: Safe Routes to School Program	●	●	N/A	N/A	N/A	●	●	◉	◉	◉	◉	●	●	◉
BP-4: ADA Ramp Repairs	●	●	N/A	N/A	N/A	◉	●	◉	N/A	●	●	●	●	◉
Transit														
T-1: Enhance Transit Service: Route 50 Service Adjustments	◉	N/A	●	N/A	N/A	◉	◉	◉	●	●	●	●	◉	◉
T-2: Amenities	N/A	N/A	●	N/A	N/A	N/A	◉	N/A	●	●	●	●	●	◉
T-3: Improved Bus Access to Stop Locations	◉	N/A	●	N/A	N/A	●	●	N/A	●	●	●	●	◉	◉

CHAPTER 7
FINANCING PLAN

Although a financing plan is not required by the TPR (OAR 660-12-040), developing an understanding of how projected funding needs compare with available revenues is important. This chapter summarizes potential funding sources available from the federal, state and local levels of government and existing City of Cave Junction (City) transportation budgets. It also includes a brief discussion of the appropriateness of the available sources to fund potential projects.

7.1 Overall Project Needs

The City of Cave Junction Transportation System Plan (TSP) Update identifies improvement for the next 20 years including a variety of roadway, bikeway, sidewalk, and transit projects.

Although some projects may be identified on state highways (US 199 and OR 46) in the TSP update, inclusion of an improvement in the TSP is not considered "planned," and does not represent a commitment by ODOT to fund, allow, or construct the project. Highway projects that are programmed to be constructed may have to be altered or cancelled at a later time to meet changing budgets or unanticipated conditions such as environmental constraints.

Josephine County funds maintenance of County roadways.

7.2 Federal Sources

The funding level for the federal highway and transit programs is about $15 billion more per year than the Highway Trust Fund receives. The federal gas tax provides a significant majority of the resources flowing into the federal Highway Trust Fund. The gas tax provides about 45 percent of the Oregon State Highway Fund's ongoing revenues. Gas tax receipts have been flat or declining for half a decade. Fuel efficiency of new vehicles has increased by 23 percent since 2004 and standards for new vehicles are scheduled to rise to 54.5 mpg by 2025. The federal fuels tax has not been raised since 1993. Meanwhile, 2010 construction costs were nearly 70 percent higher than in 2001. If Congress does not find additional resources for the transportation program, federal surface transportation funding will have to be cut by about 30 percent. This would result in Oregon's annual federal highway program funding decreasing by $150 million.

However, with continued national emphasis on community livability and energy efficiency, future funding solicitations may be made by federal agencies that have not traditionally funded streetscape projects. The City would be wise to monitor notices of funding availability from these state and federal agencies over time, and to keep an open dialogue with legislators and congressional delegates about funding needs.

7.2.1.Moving Ahead for Progress in the 21st Century (MAP-21)

MAP-21 is the federal surface transportation funding program. MAP-21 was signed in to law on July 6, 2012 and expires on September 30, 2014. MAP-21 reauthorizes federal highway, transit, and transportation safety programs for federal fiscal years (FY) 2013 and 2014 (October 1, 2012

through September 30, 2014, although it includes some FY 2012 funding). It provides $105 million for FY 2013 and 2014. Overall funding and the split for highways and transit (approximately 80 percent/20 percent) are the same (plus inflation) as the previous biennium.

MAP-21 consolidates the number of federal programs by two-thirds, from about 90 programs down to less than 30. The Transportation Mobility Program replaces the current Surface Transportation Program, but retains the same structure, goals and flexibility to allow states and metropolitan areas to invest in the projects that fit their unique needs and priorities. It also widely defines eligibility of surface transportation projects that can be constructed. Activities that previously received dedicated funding in Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU), but are being consolidated under MAP-21, will be retained as eligible activities under the Transportation Mobility Program.

The two relevant MAP-21 Federal Highway Administration (FHWA) programs are described below.

7.2.2. Transportation Alternatives Program (TAP) (formerly Transportation Enhancements [TE])

http://www.fhwa.dot.gov/map21/tap.cfm

Transportation Alternatives Program aggregates SAFETEA-LU programs such as Transportation Enhancements, Recreational Trails, and Safe Routes to School. The purpose of TAP is to expand transportation choices and enhance the transportation experience through activities related to surface transportation, including pedestrian and bicycle infrastructure and safety programs, scenic and historic highway programs, landscaping and scenic beautification, historic preservation, and environmental mitigation.

Eligible activities include a broad range of transportation actions, as well as recreational trails and safe routes to school. Eligible activities include:

- Construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other nonmotorized forms of transportation.
- Construction, planning, and design of infrastructure-related projects and systems that will provide safe routes for non-drivers, including children, older adults, and individuals with disabilities to access daily needs.
- Conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists, or other nonmotorized transportation users.
- Construction of turnouts, overlooks, and viewing areas.
- Community improvement activities, including— historic preservation and rehabilitation of historic transportation facilities, vegetation management in rights-of-way, and managing outdoor advertising.

Eligible applicants are local governments, transit agencies, regional transportation authorities, Tribes, natural resource and land management agencies, and school districts. Two percent from the Highway Account of the Highway Trust Fund is reserved for TAP annually. Half of each state's apportionment is suballocated to areas based on their relative share of the total state population, with the remaining 50 percent available for use in any area of the state. States have the flexibility to transfer up to half of TAP funds to the National Highway Performance, Surface

Transportation (STP), Highway Safety Improvement, Congestion Mitigation Air Quality, and Metropolitan Planning programs.

7.2.3. Surface Transportation Program (STP)

http://www.fhwa.dot.gov/map21/stp.cfm

The STP provides flexible funding that may be used by States and localities for projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals. Eligible activities include a broad range of planning, design, and construction for highways, roadways, bridges, and alternative transportation. Multimodal trails are included:

- Recreational trails projects.
- Transportation alternatives --newly defined to include most transportation enhancement eligibilities.
- Carpool projects, fringe and corridor parking facilities and programs, including electric and natural gas vehicle charging infrastructure, bicycle transportation and pedestrian walkways, and ADA sidewalk modification.
- Highway and transit safety infrastructure improvements and programs, installation of safety barriers and nets on bridges, hazard eliminations, mitigation of hazards caused by wildlife, railway-highway grade crossings.
- Environmental restoration and pollution abatement.
- Replacement, rehabilitation, preservation, protection, and anti-icing/deicing for bridges and tunnels on any public road, including construction or reconstruction necessary to accommodate other modes.

It authorizes a lump sum total instead of individual authorizations for each program. Once each State's share of the total is calculated, it is divided up by program within the State. The funds are for states. The FY 2014 Oregon apportionment, minus FY 2014 penalties, is $131,277,041.

7.2.4. Secure Rural Schools and Community Self Determination Act

On October 2, 2013, Congress passed a one-year reauthorization of the Act in Section 10 of HR 527 Helium Stewardship Act. The Act provides funding for road maintenance in counties with large amounts of federal land. It is unknown whether the Act will be reauthorized in the future.

7.2.5. Federal Transit Administration (FTA) Programs

City transit projects may be eligible for the following Federal Transit Administration (FTA) funding programs, which are administered by ODOT.

5310 Enhanced Mobility of Seniors And Individuals with Disabilities

This program is intended to enhance mobility for seniors and persons with disabilities by providing funds for programs to serve the special needs of transit-dependent populations beyond traditional public transportation services and Americans with Disabilities Act (ADA) complementary paratransit services.
Guidelines for this program include:

- At least 55% of program funds must be used on capital projects that are:

    - Public transportation projects planned, designed, and carried out to meet the special needs of seniors and individuals with disabilities when public transportation is insufficient, inappropriate, or unavailable.
- The remaining 45% may be used for:
    - Public transportation projects that exceed the requirements of the ADA.
    - Public transportation projects that improve access to fixed-route service and decrease reliance by individuals with disabilities on complementary paratransit.
    - Alternatives to public transportation that assist seniors and individuals with disabilities.
- Federal share for capital costs is 80 percent and for operating costs is 50 percent.
- Projects must be identified in a transportation plan.
- 20 percent is allocated to states for small urbanized areas.

5311 Formula Grants for Rural Area

This program provides capital, planning, and operating assistance to states to support public transportation in rural areas with populations less than 50,000, where many residents often rely on public transit to reach their destinations. Eligible activities include job access and reverse commute projects, and the acquisition of public transportation services.

Guidelines for this program include:

- Federal share for capital costs is 80 percent and for operating costs is 50 percent.
- Federal share is 80 percent for Americans with Disabilities Act (ADA) non-fixed-route paratransit service, using up to 10% of a recipient's apportionment.

5339 Bus and Bus Facilities Formula Grants

Provides capital funding to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities. A 20 percent local match is required. Each state receives $1.25 million and the remaining $362 million is allocated based on population, vehicle revenue miles, and passenger miles.

7.3. State of Oregon Sources

In Oregon, the three major sources of revenue for roadway projects and maintenance include motor vehicle fuel taxes, motor vehicle registration fees, and truck weight-mile taxes[4]. The net revenues from these three sources are deposited into the State Highway fund. The revenues are constitutionally dedicated for construction, improvement, maintenance, operation and use of public highways, roads, streets, and roadside rest areas. Approximately 25 percent of these revenues are allocated to counties, based on vehicle registration.

ODOT's State Highway Fund resources are essentially committed to the cost of running the agency, maintaining highways, and debt service. The passage of Oregon Transportation Investment Act program in 2001 authorized ODOT to use bonding for the first time. The

[4] In Oregon, commercial vehicles over 26,000 pounds pay a user fee based on the number of miles traveled on public roads within Oregon. The per-mile rate is based on the declared weight of the vehicle, and for vehicles weighing over 80,000 pounds, the number of axles. Vehicles paying the weight-mile tax are exempt from the use-fuel (diesel) tax.).

resulting debt service reduces funding available for new projects.

This leaves virtually no state funding for new capital projects in the Statewide Transportation Improvement Program (STIP) other than the Jobs and Transportation Act projects and matching funds for federal resources. And it leaves federal funding as the exclusive funding source for construction projects.

Because of limits on the use of the State Highway Fund and federal transportation resources, there is no adequate, dedicated source of funding for non-highway modes.

7.3.1. Statewide Transportation Improvement Program (STIP)—ODOT

http://www.oregon.gov/ODOT/TD/STIP/Pages/default.aspx
The Statewide Transportation Improvement Program, known as the STIP, is Oregon's four year transportation capital improvement program that is updated every two years. It is the document that identifies the funding for, and scheduling of, transportation projects and programs. It includes projects on the federal, state, city, and county transportation systems, multimodal projects (highway, passenger rail, freight, public transit, bicycle and pedestrian), and projects in the National Parks, National Forests, and Indian tribal lands.
Funding in the STIP is divided into two categories:

1. **Enhance**: "Activities that enhance, expand, or improve the transportation system."
2. **Fix-It**: "Activities that fix or preserve the transportation system."

According to a summary of the program,[5] the **Enhance** portion of the program is expected to receive less than one-quarter of the STIP funding, while the **Fix-It** portion would receive more than three-quarters of the STIP funding. This allocation reflects an emphasis on preserving the existing system. Another aspect of the program revisions is the need to address a wide range of issues and fund multi-modal solutions that best address system problems.

3. Projects that may be eligible for the **Enhance** category of funds include:
    - Bicycle and/or pedestrian facilities on or off the highway right of way
    - Development STIP projects (projects not ready for construction within 4-year cycle)
    - Modernization projects that add capacity to the highway system (per Oregon Revised Statute [ORS] 366-507)
    - Most projects previously eligible for Transportation Enhancement funds
    - Projects previously eligible for Flex Funds (Bicycle and Pedestrian, Transit, and TDM projects, plans, programs, and services)
    - Protective right of way purchases
    - Public transportation (capital projects only, not operations)
    - Safe Routes to School (infrastructure projects)
    - Scenic Byways (construction projects)
    - Transportation Alternatives (the federal transportation authorization, MAP-21)
    - Transportation Demand Management (TDM) projects

[5] Introduction to *Enhance* and *Fix-It* for the 2015-2018 STIP, ODOT website: http://www.oregon.gov/ODOT/TD/TP/pages/stip_guide.aspx.

4. Project activities eligible for the **Fix-It** category of funds include:
    - Bicycle and pedestrian facilities on state routes only
    - Bridges (state owned)
    - Culverts
    - High risk rural roads
    - Illumination, signs and signals
    - Landslides and rock falls
    - Operations (includes ITS)
    - Pavement preservation
    - Rail-highway crossings
    - Safety
    - Salmon (fish passage)
    - Site mitigation and repair
    - Storm water retrofit
    - TDM (part of operations)
    - Work zone safety (project specific)

The application period for the 2015-2018 STIP closed on November 27, 2012. The 2015-2018 STIP is being finalized for an anticipated November 2014 OTC adoption and February 2015 USDOT approval.

7.3.2. Special Transportation Fund—ODOT

http://www.oregon.gov/ODOT/PT/Pages/programs/enhanced-mobility.aspx#funding
The Oregon Legislature created the Special Transportation Fund (STF) to enhance the mobility of seniors and individuals with disabilities. STF was initially funded by a portion of the cigarette tax. Now, ODOT combines a portion of the cigarette tax with ODOT excess revenue from other sources, FTA Section 5310 program funds (Enhanced Mobility of Seniors and Individuals with Disabilities), and FHWA Surface Transportation Program funds into the STF. The purpose of the STF is to improve service to the special needs, elderly (age 60 and older) and other transit-dependent populations beyond traditional services. Typical projects include vehicle fleet growth and maintenance, facilities, signs, equipment, and purchased service. Funds can also be used to provide operations, capital equipment, planning, travel training, and information for seniors and people with disabilities.

The STF Formula Fund distributes funds, based on population, to the 42 designated agencies in the state.

The STF Discretionary Grant Account funds are distributed through a competitive program. Eligible recipients are cities, counties, transportation districts, public and private agencies, Indian Tribes, and organizations joined in a cooperative agreement. In the 2013-2015 biennium, ODOT provided $24,663,034 total for 68 recipients. Project categories are equipment, passenger shelters, preventative maintenance, vehicle purchase, vehicle replacement, mobility management, operating, and contracted service. ODOT awarded agencies within Region 3 (Southern Oregon) $4,407,407. They included Curry, Douglas, and Josephine counties; the City of Grants Pass; Coos County Area Transit Service District; RVTD; Confederated Tribes and Cow Creek Band, Upper Rogue Community Center; and Options for Southern Oregon. One-third

of the money went to RVTD.

7.4. Local Mechanisms and City Budget

Oregon cities and counties have the legal authority to devise their own non-property tax and other local revenue structures without specific state enabling legislation. Although these sources are typically implemented at the city level, some are also applicable at a regional or multi-jurisdictional level as well. The institution of some of these revenue sources could make available some of the transportation fund revenue that currently goes towards maintenance and preservation. Existing and potential local funding sources are listed and described below.

7.4.1. City Budget

The proposed City budget for fiscal year 2014-2015 is comprised of general city operations (which includes general, water, sewer, street maintenance, and law enforcement); dedicated funds for the water and sewer expansion, street improvements, and bonds; reserve funds (for vehicle and equipment replacement, liability insurance, and building maintenance); and debt service. Therefore, City transportation funding comes from three funds, as shown in Table 7.1

Table 7.1. City of Cave Junction 2014-2015 Budget Transportation Funding Sources

Activity	Amount	Fund	Purpose	Revenue sources
Street maintenance	$172,050	General city operations	Administrative; planning and community service functions	63% gas tax 20% available cash 9% transfers into fund 7% business licenses
Street improvements	$146,409	Dedicated fund for street improvements	Repair and maintenance of streets	7% gas tax 93% available cash
Vehicle and equipment replacement	$60,800	Reserve	Carry over funds from year to year, with limits on spending for the fund's purpose	26% available cash 74% transfers into fund

7.4.2. Property Taxes

The General Fund is the only fund supported by property taxes. Local property tax revenues can be used to fund transportation projects and maintenance.

7.4.3.Business Taxes

City levies business taxes that are used for road maintenance costs. For the 2014-2015 budget, business taxes are anticipated to contribute seven percent of the street maintenance fund. Municipal Code Title 5, Business Licenses and Regulations, Chapter 5.04, Business Licenses Taxes, establishes the requirements and rates for the tax.

> *5.04.030 Purpose of occupational tax and business license. A. It is necessary that occupation taxes be levied and fixed for the purpose of securing revenue to assist in defraying the cost of street lighting and road maintenance in the cost of other necessary municipal services.*

The occupational tax base rate is $50, and is calculated based on number of employees, so that, for example, a business with 10 employees pays $81 per year, one with 20 employees pays $111. The city has approved taxes of game, music, and vending machines at $1.25 per month, as well as special events, but has never implemented or enforced the tax.

7.4.4. Franchise Fees

The City collects franchise fees from Pacific Power and Citizens Communications. Cities may collect franchise fees from local utility companies that utilize public right-of ways for the conveyance of their services. Cities can allocate a percentage of the funds derived from the franchise fees for maintenance and street improvement needs.

7.4.5. Special Assessments

City of Cave Junction Municipal Code Title 3, Revenue and Finance, Chapter 3.04, Special Assessments for Local Improvements, establishes procedures for special assessments for streets, sidewalks, parking, and other improvements per ORS 310.140.

7.4.6. Local Improvement District (LID)

A Local Improvement District (LID) is a method by which a group of property owners can share in the cost of transportation infrastructure improvements or other types of public improvements such as improving a street, building sidewalks, and installing a stormwater management system. In many LIDs, the cost burden is borne entirely by private property owners who are adjacent to or nearby the new improvement, which might be difficult to approve. LIDs enable the public and private sectors to share the cost of needed infrastructure and to finance it over long-term bond repayments with low interest rates, rather than paying up front. Thus, LIDs could be used to build the Preferred Concept and potentially fund subsequent improvements in the study area. LIDs must be supported by local property owners through an official vote, since they are partially or wholly supported by an additional tax assessment within the directly affected area.

Property owners typically enter into LIDs because they see economic advantage to the improvements. Fees are paid with property tax bills. LIDs can be implemented to fund new connector roads that will benefit one or more groups of property owners at a higher rate than the city as a whole. LIDs are particularly beneficial to improve local roadways to City standards. LIDs generally are geographically limited but can be matched with other funds where a project has a system-wide benefit. The formation of LID districts is governed by state law and local jurisdictional development codes. LID revenues can only be used to fund new capital improvement projects and not for maintenance expenses. LID revenues could be combined with other revenue sources.

7.4.7. Urban Renewal District/Tax Increment Financing

An Urban Renewal District, or tax increment financing, is a funding tool that captures the net new property taxes generated by real estate development within a defined district and directs those funds towards needed infrastructure improvements in the district. Therefore, when working properly, tax increment financing creates a beneficial cycle of needed public infrastructure and actions, and private investments. Tax increment financing is typically the most powerful tool for funding local redevelopment and revitalization, and is used in many of the state's cities and counties. The basic idea behind creating an Urban Renewal District is that the increase in property values increases tax revenue, which funds the infrastructure necessary to encourage redevelopment. While urban renewal is a funding source, it is also a signal to interested potential property and business owners that the area has the funding to share in the cost of some of the needed improvements.

Before an urban renewal district can be established, the needs and required funding must be

identified. This would typically take the form of an urban renewal plan. The urban renewal plan would specify the boundaries for the urban renewal district, the proposed improvements to be made, the costs associated with these improvements, and the amount and source of funding. A new urban renewal area would require approval by the jurisdiction's designated urban renewal agency, and cannot overlap with existing urban renewal plans. Urban renewal districts typically are set up by incorporated cities or for urbanizing areas within city urban growth boundaries (UGBs). Areas outside UGBs would need to be brought into the UGB before an Urban Renewal Plan went into effect.

7.4.8. System Development Charges (SDCs)/Impact Fees

A System Development Charge (SDC) is a one-time fee assessed on new development at the time of development approval (development or building permit). An SDC is intended to finance necessary capital improvements needed as a result of that development. The purpose of the charge is to recoup a proportionate share of the jurisdiction's capital costs for infrastructure. SDCs can be used for capital costs off-site, throughout the jurisdiction. The fee, which can vary for different land uses, is calculated based on the estimated number of vehicle trips generated by the proposed development. Development charges are calculated to include the costs of impacts on adjacent areas or services. SDCs ensures that existing residents and businesses are not subsidizing new development.

Oregon Revised Statute (ORS) 223.208-314 authorizes local governments to establish SDCs. The charges must be used to fund a capacity increase on (not maintenance of) of the transportation system. SDCs can be used to fund future projects or to reimburse the cost of funding previously constructed projects. ORS 223.309 requires that the local government must have a Capital Improvement Program (CIP) before establishing an SDC system. SDCs are pooled and expended on projects identified in the CIP. ORS 223.311 requires that the local government designates special accounts for SDC funds and perform annual accounting.

7.4.9. Revenue and General Obligation Bonds

Revenue bonds are issued and sold by government agencies and repaid by a stable revenue stream of specific user fees or service charges (such as a local gas tax or street utility fee). The bonds are typically secured by a stable revenue stream, such as a local gas tax, street utility fee, or toll. For funding transit, fare box revenue bonds and grant anticipation notes (repaid with FTA capital funding) typically are used.

General Obligation Bonds pay for construction of large capital improvements. This method is typically used to fund road improvements that will benefit a large portion of the city. General Obligation Bonds add the cost of the improvement to property taxes over a period of time. Oregon State law requires a double majority voter approval for instituting General Obligation Bonds. Revenue is collected in property tax billings.

7.4.10. Gas Tax

Municipalities are allowed to enact an ordinance to collect vehicle fuel taxes. Gas tax revenues can be used to fund either operating or capital costs, but the Oregon Constitution restricts gas tax revenue to road or bridge projects (not transit). A local gas tax would be assessed at the pump. Gas taxes generally measure demand for use of transportation facilities, so the equity is fairly high. However, fuel revenues are expected to level off in the short-term and then drop

permanently, as the purchasing power of fuel revenues decreases with inflation and more fuel-efficient vehicles are purchased. The City would need to enact an ordinance to collect, enforce, and administer the vehicle fuel taxes.

7.4.11. Vehicle Registration Fee

With voter approval, Oregon municipalities may impose a vehicle registration fee that is no more than the state's vehicle registration fee currently $86 for two years). For a City registration fee, ODOT would collect revenue from the fees and pay the revenue back to the municipalities that establish registration fees. The Oregon Constitution requires all revenues to be used for the construction and maintenance of highways, roads, and streets. According to the ODOT Department of Motor Vehicles, as of December 31, 2013, there were 82,406 registered passenger vehicles in Josephine County. It is unknown how many vehicles are registered in the City. The City would need to enact an ordinance to collect, enforce, and administer the vehicle registration fee.

7.4.12. Hotel/Lodging or Rental Car Tax

Many Oregon jurisdictions impose a local hotel tax (also known as a transient room tax). Presently, there are at least four jurisdictions in Oregon (Lake Oswego, Lincoln City, Umatilla County, and Union County) that specifically dedicate revenue from a hotel/lodging tax to transportation projects.
In Cave Junction, the businesses listed in Table 7.2 offer accommodations in the City or surrounding areas.

Table 7.2. Accommodations in the Vicinity of Cave Junction

Accommodation	Annual Sales	NAICS[1] Category	NAICS Code
Inside Cave Junction City Limits			
Junction Inn	$1 million-$2.5 million	Hotels (except Casino Hotels) and Motels	721110
Outside Cave Junction City Limits			
Oregon Caves Chateau	$2.5 million-$5 million	Hotels (except Casino Hotels) and Motels	721110
Whispering Springs B&B	<$500,000	Bed-and-Breakfast Inns	721191
Out 'n' About Treehouse Resort	$1 million-$2.5 million	All Other Traveler Accommodation	721199
Shady Acres Trailer & RV Park	<$500,000	Recreational Vehicle Parks and Campgrounds	721211
Mountain Man RV Park	<$500,000	Recreational Vehicle Parks and Campgrounds	721211
Ol Jo RV Campground	<$500,000	Recreational Vehicle Parks and Campgrounds	721211
Country Hills Resort	<$500,000	Recreational Vehicle Parks and Campgrounds	721211

Note:
1. North American Industry Classification System

Source: Infogroup® Omaha, NE, ©2010, via Oregon Employment Department Employer Database, www.qualityinfo.org

With the limited sales data reported by the Oregon Employment Department, it is not possible to estimate how much revenue the implementation of an accommodation tax would generate. The

City would need to enact an ordinance to collect, enforce, and administer the lodging fee.

A rental car tax is similar to the hotel/lodging tax.

7.4.13. Campaigns and Donations

The City could raise money directly through fundraising campaigns such as "selling" pieces of the streetscape amenities, such as benches and trees ("adopt-a-brick"), providing each donor with a "deed" for that donor's amenity. The revenue can be used for construction as well as operations and maintenance.

7.4.14. Trust Funds or Endowments

A trust fund or endowment can be established into which funds contributed from government sources, private grants, and gifts are deposited. Funds can be used for acquisition, construction or maintenance. The fund or endowment would be administered by a nonprofit group or local commission.

7.5. Glossary of Terms

Allocation - An administrative distribution of funds for programs that do not have statutory distribution formulas.
Appropriation - Legislation that allocates budgeted funds from general revenues to programs that have been previously authorized by other legislation. The amount of money appropriated may be less than the amount authorized.
Appropriations Act - Action of a legislative body that makes funds available for expenditure with specific limitations as to amount, purpose, and duration. In most cases, it permits money previously authorized to be obligated and payments made, but for the highway program operating under contract authority, the appropriations act specifies amounts of funds that Congress will make available for the fiscal year to liquidate obligations.

Apportionment - A term that refers to a statutorily prescribed division or assignment of funds. An apportionment is based on prescribed formulas in the law and consists of dividing authorized obligation authority for a specific program among the States. It also refers to the distribution of funds as prescribed by a statutory formula.

Authorization - Federal legislation that creates the policy and structure of a program including formulas and guidelines for awarding funds. Authorizing legislation may set an upper limit on program spending or may be open ended. General revenue funds to be spent under an authorization must be appropriated by separate legislation.

Capital Costs - Non-recurring or infrequently recurring cost of long-term assets, such as land, buildings, vehicles, and stations.

Maintenance - Activities that preserve the function of the existing transportation system.

7.6. Resources

Catalog of Federal Domestic Assistance contains detailed program descriptions for 2,197 Federal assistance programs: https://www.cfda.gov/

Community Transportation Association of America provides technical assistance for a wide variety of alternative transportation issues and activities: www.ctaa.org
Grants dot gov is a source to find and apply for federal grants: http://www.grants.gov/
FHWA's MAP-21 site: http://www.fhwa.dot.gov/map21/
FTA's funding and finance site: http://www.fta.dot.gov/12309.html
Foundation Center's Foundation Finder is a fee-based searchable database: http://foundationcenter.org/findfunders/foundfinder/;jsessionid=FOBIFZGJZ4FMJLAQBQ4CGXD5AAAACI2F
Kirk, Robert S. and William J. Mallett. 2013 (September 23). Congressional Research Service. *Funding and Financing Highways and Public Transportation*.
National Transportation Alternatives Clearinghouse: http://www.ta-clearinghouse.info/funding_sources

APPENDIX A

PROPOSED AMENDMENTS TO COMPREHENSIVE PLAN GOALS AND POLICIES

Following are proposed amendments to the Goals and Policies. The existing Goals and Policies are shown in their entirety in Chapter 1. The only potions included here are those proposed to be changed. Proposed additions are in red; proposed deletions are crossed out and highlighted in green.

The purpose of adopting goals and policies is to provide a consistent framework to follow when making decisions about the transportation system. Six specific findings have been made as part of this planning process:

Findings:

2. All people should have equal access to transportation. Transportation options should be provided to those without access to an automobile, the elderly, th~~e~~ose with disab~~led~~ilities, and those who choose to use alternative modes of travel. Highway 199 presents a travel barrier to bicyclists and pedestrians. Travel across the highway is especially difficult for individuals with disabilities. Facility enhancements, such as striped crosswalks and curb cuts, are needed.

4. Transportation and land use issues are interconnected. The existing transportation system will be ~~impacted~~ affected as the City continues to develop. Compatibility between land use and transportation should be preserved through a coordinated decision making process that involves all affected agencies.

6- River Street ~~is~~ lack~~s~~~~ing~~ bicycle lanes and sidewalks between Boundary Avenue and Daisy Hill Road. This street is an important route because an elementary school is located across from the Tracy Street intersection. Due to inadequate right-of-way width, it is cost-prohibitive to retrofit the roadway to include sidewalks and bicycle lanes on both sides. Alternative safety and traffic calming measures should be explored to make this area more bicycle and pedestrian friendly.

General Transportation Goals, Policies and Objectives

GOAL: TO PROVIDE A SAFE AND EFFICIENT TRANSPORTATION SYSTEM THAT REDUCES ENERGY REQUIREMENTS, REGIONAL AIR AND WATER CONTAMINANTS AND PUBLIC COSTS AND PROVIDES FOR THE NEEDS OF THOSE NOT ABLE OR WISHING TO DRIVE AUTOMOBILES.

Policies:

1. The City will implement its transportation goals through this Transportation System Plan (TSP) and the City will review and update the TSP ~~during~~ periodically. ~~review, or more frequently if necessary.~~

8. Design streets that minimize impacts to topography and natural resources, such as streams, wetlands, and wildlife corridors, by adopting modern stormwater road runoff treatment techniques.

9. Consider potential environmental impacts and mitigation to maintain and restore affected environmental functions in consultation with appropriate federal, state and local agencies.

10. Implement programs that make walking and biking fun, easy, safe, and healthy for all students and families while reducing reliance on cars.

Land Use

Policies:

6- ODOT and Josephine County shall be notified of proposed land use actions affecting their facilities. In addition, ODOT shall be notified of all Comprehensive Plan amendments and zone changes affecting any portion of the city.

Streets

GOAL: PROVIDE A COMPREHENSIVE SYSTEM OF STREETS AND HIGHWAYS THAT SERVES THE MOBILITY AND MULTIMODAL TRAVEL NEEDS OF THE CAVE JUNCTION URBAN AREA.

Objective 1: *Develop a comprehensive, hierarchical system of streets and highways that provides for optimal mobility for all travel modes throughout the Cave Junction urban area.*

Policies:

2. ~~The City's street system shall contain a grid network of arterial streets and highways that link the central core area and major industry with regional and statewide highways.~~

Objective 2: *Design City streets in a manner that: maximizes the utility of public right-of-way, is appropriate to their functional role, and provides for multiple travel modes, while minimizing their impact on the character and livability of surrounding neighborhoods and business districts.*

Policies:

6- It is acknowledge that the street landscape dominates the town environment, and that all roads with collector drainage extend the natural watershed river system and adversely modify it s hydrology, geomorphology and water quality. Wherever possible the City of Cave Junction shall incorporate safely and aesthetically designed~~, aesthetic~~ features into the streetscape of its public rights-of-way. These features may include: trees, shrubs, and grasses; bioswales, carbon-filled infiltration systems, planting strips and raised medians; and, in some instances, furniture, planters, special lighting, public art, or non-standard paving materials.

Objective 5: *A street system that is improved to accommodate travel demand created by growth and development in the community.*

Policies:

2. The City shall require applicants for new development to make reasonable site-related improvements to connecting streets where capacity is inadequate to serve the development.

3. The City may require ~~new~~ developers~~ment~~ to pay charges toward the mitigation of system-wide transportation ~~impacts~~ created by new growth in the community through Street System Development Charges (SDCs) and any other street fees that are established by the City. These funds can be used toward improvements to the street system. Projects funded through these charges are growth-related and should be selected from the approved list and prioritized based upon the established criteria.

Bicycle

GOAL: TO FACILITATE AND ENCOURAGE THE INCREASED USE OF BICYCLE TRANSPORTATION IN CAVE JUNCTION BY ASSURING THAT CONVENIENT, ACCESSIBLE AND SAFE CYCLING FACILITIES ARE PROVIDED.

Objective 2: *The City will promote bicycle safety and awareness.*

3. The City shall improve safe access between schools and neighborhoods by building and maintaining marked crosswalks, bike routes, sidewalks, and paths that offer safe and convenient connections.

4. The City shall work with schools and community partners to incorporate transportation education for all modes (walking, biking, driving, and taking transit) into all levels of school curricula.

Pedestrian

GOAL: TO PROVIDE A COMPREHENSIVE SYSTEM OF CONNECTING SIDEWALKS AND WALKWAYS THAT WILL ENCOURAGE AND INCREASE SAFE PEDESTRIAN TRAVEL.

Objective 1: *The City of Cave Junction shall create a comprehensive system of pedestrian facilities.*

Policies:

5. ~~The City shall encourage ODOT to provide crosswalks at all signalized intersections.~~ Crosswalks at controlled intersections should be provided near schools, commercial areas, and other high volume pedestrian locations.

Transit

GOAL: A TRANSIT SYSTEM THAT PROVIDES CONVENIENT AND ACCESSIBLE TRANSIT SERVICES TO THE CITIZENS OF THE CAVE JUNCTION URBAN AREA.

Objective 1: *Ensure that transit services ~~be~~ are accessible to Cave Junction urban area residences and businesses.*

Policies:

4. The City ~~of Cave Junction~~ shall encourage connectivity between different travel modes. Park-and-ride facilities should be accessible by pedestrian, bicycle, bus and automobile travel modes.

PROPOSED AMENDMENTS TO MUNICIPAL CODE

Add to Section 17.14.030 Description of permit/decision-making procedures

C. Traffic Impact Analysis. The following provisions also establish when a proposal must be reviewed for potential traffic impacts; when a Traffic Impact Analysis must be submitted with a development application in order to determine whether conditions are needed to minimize impacts to and protect transportation facilities; the required contents of a Traffic Impact Analysis; and who is qualified to prepare the analysis.

a. When a Traffic Impact Analysis is Required. The City or other road authority with jurisdiction may require a Traffic Impact Analysis (TIA) as part of an application for development, a change in use, or a change in access. A TIA shall be required where a change of use or a development would involve one or more of the following:

(1) A change in zoning or a plan amendment designation to a more intensive category; (e.g., single family to multiple family residential, residential to commercial or industrial.)

(2) The road authority indicates in writing that the proposal may have operational or safety concerns along its facility(ies);

(3) An increase in site traffic volume generation by 300 Average Daily Trips (ADT) or more;

(4) An increase in peak hour volume of a particular movement to and from a street or highway by 20 percent or more; or

(5) An increase in use of adjacent streets by vehicles exceeding the 20,000 pound gross vehicle weights by 10 vehicles or more per day;

(6) The location of an existing or proposed approach or access connection does not meet minimum spacing or sight distance requirements or is located where vehicles entering or leaving the property are restricted, or such vehicles are likely to queue or hesitate at an approach or access connection, creating a safety hazard;

(7) A change in internal traffic patterns may cause safety concerns; or

(8) A TIA is required by ODOT pursuant to OAR 734-051.

b. Traffic Impact Analysis Preparation. A professional engineer registered in the State of Oregon, in accordance with the requirements of the road authority, shall prepare the Traffic Impact Analysis.

Add to Permitted Uses in Sections 17.18.020 (P);17.20.030(SR) 17.24.20 (MR);17.28.020 (C); and 17.30.100 (EG-LI):

(a) The following transportation facilities, services and improvements need not be subject to land use regulations except as necessary to implement the TSP and, under ordinary circumstances do not have a significant impact on land use:

(A) Operation, maintenance, and repair of existing transportation facilities identified in the TSP, such as road, bicycle, pedestrian, port, airport and rail facilities, and major regional pipelines and terminals;

(B) Dedication of right-of-way, authorization of construction and the construction of facilities and improvements, where the improvements are consistent with clear and objective dimensional standards;

(C) Reconstruction or modification of public roads and highways, including the placement of utility facilities overhead and in the subsurface of public roads and highways along the public right of way, but not including the addition of travel lanes, where no removal or displacement of buildings would occur, or no new land parcels result.

(D) Temporary public road and highway detours that will be abandoned and restored to original condition or use at such time as no longer needed.

(b) To the extent, if any, that a transportation facility, service or improvement concerns the application of a comprehensive plan provision or land use regulation, it may be allowed without further land use review if it is permitted outright or if it is subject to standards that do not require interpretation or the exercise of factual, policy or legal judgment;

Add to Section 16-20.080 Streets

I. Traffic Calming. The City may require the installation of traffic calming features such as traffic circles, curb extensions, reduced street width (parking on one side), medians with pedestrian crossing refuges, speed tables or speed humps, and/or special paving to slow traffic in neighborhoods or commercial areas with high pedestrian traffic.

J. Cul-de-Sac. A cul-de-sac shall be as short as possible and shall have a maximum length of four hundred feet and serve not more than eighteen dwelling units. A cul-de-sac shall terminate with a circular turnaround. The cul-de-sac shall provide, or not preclude the opportunity to later install, a pedestrian and bicycle access between it and adjacent developable lands. Such access ways shall conform to Section 16-20.080(F).

Q. Alternatives to curb and gutters may be approved when the City determines that environmental considerations warrant designs that filter stormwater runoff. Where a park strip is provided it shall consist of a minimum [4] feet wide strip between the sidewalk and the curb or roadway. Where a swale is provided, it shall either be placed between the roadway and sidewalk or behind the sidewalk on private property, subject to City approval and recording of required public drainage way and drainage way maintenance easements..

Add to 16-20.100 Building sites.

B. Access.

2. The number of approaches on higher classification streets (i.e., collector and arterial streets) shall be minimized; where practicable, access shall be taken first from a lower classification street.

3. The City may limit the number or location of connections to a street, or limit directional travel at an approach to one-way, right-turn only, or other restrictions, where the roadway authority requires mitigation to alleviate safety or traffic operations concerns.

4. Driveways shall be designed so that vehicle areas, including but not limited to drive-up and drive-through facilities and vehicle storage and service areas, do not obstruct any public right-of-way.

5. Approaches and driveways shall not be wider than necessary to safely accommodate projected peak hour trips and turning movements, and shall be designed to minimize crossing distances for pedestrians.

6- The City may require changes to the proposed configuration and design of an approach, including the number of drive aisles or lanes, surfacing, traffic-calming features, allowable turning movements, and other changes or mitigation, to ensure traffic safety and operations;

7. Where a new approach onto a state highway or a change of use adjacent to a state highway requires ODOT approval, the applicant is responsible for obtaining ODOT approval. The City may approve a development conditionally, requiring the applicant first obtain required ODOT permit(s) before commencing development, in which case the city will work cooperatively with the applicant and ODOT to avoid unnecessary delays;

8. Where an approach or driveway crosses a drainage ditch, canal, or other feature that is under the jurisdiction of another agency, the applicant is responsible for obtaining all required approvals and permits from that agency prior to commencing development.

9. Where a proposed driveway crosses a culvert or drainage ditch, the City may require the developer to install a culvert extending under and beyond the edges of the driveway on both sides of it, pursuant applicable [public works / engineering] design standards.

10. Except as otherwise required by the applicable roadway authority or waived by the Public Works Director, temporary driveways providing access to a construction site or staging area shall be paved or graveled to prevent tracking of mud onto adjacent paved streets.

11. Construction of approaches along acceleration or deceleration lanes, and along tapered (reduced width) portions of a roadway, shall be avoided; except where no reasonable alternative exists and the approach does not create safety or traffic operations concern

12. Where the City approves a joint use driveway, the property owners shall record an easement with the deed allowing joint use of and cross access between adjoining properties. The owners of the properties agreeing to joint use of the driveway shall record a joint maintenance agreement with the deed defining maintenance responsibilities of property owners. The applicant shall provide a fully executed copy of the agreement

to the City for its records, but the City is not responsible for maintaining the driveway or resolving any dispute between property owners.

APPENDIX B

Sidewalk/ Bicycle Deficiencies

ADA Ramp Repairs (most of these have no curb cut-out/ramp):

- SW corner of Lister St/ Junction Ave
- NW corner of Lister St/ Junction Ave
- SE corner of Lister St/ Caves Ave
- SW corner of Lister St/ Caves Ave
- NW corner of Lister St/ Caves Ave
- NE corner of Lister St/ Kerby Ave
- NE corner of Watkins St/ Hussey Ave
- NW corner of Watkins St/ Hussey Ave
- SW corner of Schumacher St/ Hussey Ave
- NW corner of Schumacher St/ Hussey Ave
- SE corner of Palmer St/ Kerby Ave
- NE corner of Palmer St/ Kerby Ave
- SE corner of River St/ Kerby Ave
- NE corner of River St/ Sawyer Ave
- NW corner of River St/ Sawyer Ave
- SE corner of River St/ Too Far South

Safe Route to Schools Sidewalks (as prioritized by staff):

- River St from Redwood Hwy to Laurel Rd
- River St from Redwood Hwy to Too Far South
- Caves Hwy from Redwood Hwy to IV Fire Station
- Junction Ave from River St to Caves Hwy
- Shadowbrook from River St to Cul-de-sac
- N. Old Stage Rd from Hanby Ln to River St

Safe Route to Schools Bicycle Lane (as prioritized by staff):

- Redwood Hwy from Waldamar Rd to Bridge south of Town
- River St from Redwood Hwy to Too Far South
- Caves Hwy from Redwood Hwy to IV Fire Station
- Junction Ave from River St to Caves Hwy

Create Contiguous Sidewalks (as prioritized by staff):

- Redwood Hwy from River St to Waldamar Rd
- River St from Redwood Hwy to Vineyard Place
- Caves Ave from River St to Caves Hwy
- Schumacher St from Hussey Ave to Vineyard Place
- Watkins St from Junction Ave to Redwood Hwy
- Watkins St from Redwood Hwy to Kerby Ave
- Kerby Ave from River St to South of Watkins St
- Sawyer Ave from Lister St to Schumacher St
- Boundary Ave from River St to Lister St
- Tracy Ln from River St to Cul-de-sac

S. Old Stage Rd from Caves Hwy to Stage Stop Dr
Junction Ave from Caves Hwy to Barlow St
Hamilton Ln from Redwood Hwy to Barlow St
Raymond St from Sherwood Ave to Hamilton Ln
Barlow St from Hamilton Ln to Sherwood Ave
Jonathan Court
Sherwood Ave
Terrace Ln
Millie St
Stevenson St
N. Sawyer Ave
Frederick Ct
Honeybee Ln
Bumblebee Ln
N. Old Stage Rd from Hanby Ln to Laurel Rd
Laurel Rd from Redwood Hwy to N. Old Stage Rd
Stage Stop Drive

Substandard sidewalk: (at street level, or improper grade)
Junction Ave from Caves Hwy to River St
Hussey Ave from Watkins St to Schumacher St
Schumacher from Kerby Ave to Sawyer Ave
Kerby Ave from Palmer St to River St

Unfinished City Streets (unrecorded or incomplete):
Junction Ave (SW corner of Jubilee Park not recorded, is complete street)
North end of Sawyer Ave (not recorded, is complete street)
Sawyer Ave from Lister St to River St (to be built)
Boundary Ave from Lister to Schumacher St (to be built)

Cave Junction Roadway Inventory 2013

Street Name	Segment Name (from)	Segment Name (To)	Jurisdiction	Road Class	Pavement Type	Number of Lanes	Shoulder Type	Speed Limit	Sidewalks Left/Right	Bike Lane (Y/N)	Curbs Left/Right	On Street Parking	Roadway Width	R.O.W Width	Pavement Condition	Footage Road	Footage Lane	Total Footage	Miles	Trafic Control
Addison Lane	S.Old Stage Road	End of Street	Cave Junction	Local	Asphalt	2	Asphalt	25	Both	No	Both Rolled	Both	30	50	Good	1130'	2260'	2260'	0.12	At Intersec
Barlow Street	Hamilton Ave	S. Junction Ave	Cave Junction	Local	Asphalt	2	Ditch	20	None	No	No	No	30	50	Fair	325'	650'			At Intersec
Barlow Street	S. Junction Ave	Sherwood Ave	Cave Junction	Local	Asphalt	2	Ditch	20	None	No	No	No	30	50	Fair	515'	1030'	1680'	0.16	At Intersec
N. Boundray Ave	River Street	Lister Street	Cave Junction	Local	Asphalt	2	Ditch	25	None	No	No	No	18	30	Good	630'	1260'			At Intersec
N. Boundray Ave	Lister Street	End of Street	Cave Junction	Local	Asphalt	2	Ditch	25	None	No	No	No	18	30	Good	220'	440'	1700'	0.16	At Intersec
S.Boundray Ave	Schumacher Street	End of Street	Cave Junction	Local	Gravel	1	Gravel	25	None	No	No	No	18	30	N/A					At Intersec
BumbleBee Lane	N.OldStage Road	Honeybee Lane	Cave Junction	Local	Asphalt	2	Gravel	25	None	No	No	No	30	50	Fair	150'	300'	300'	0.03	At Intersec
Burgandy Lane	Hanby Lane	Gamay Drive	Cave Junction	Local	Asphalt	2	Asphalt	25	Left	No	Both	One Side	25	50	Good	255'	510'			At Intersec
Burgandy Lane	Gamay Drive	Lindilu Lane	Cave Junction	Local	Asphalt	2	Asphalt	25	Both	No	Both	One Side	25	50	Good	197'	394'			At Intersec
Burgandy Lane	Lindilu Lane	Merlot Drive	Cave Junction	Local	Asphalt	2	Asphalt	25	Both	No	Both	One Side	25	50	Good	115'	230'	1134'	0.1	At Intersec
Cabernet Circle	Vineyard Place	Vineyard Place	Cave Junction	Local	Asphalt	2	Asphalt	25	Both	No	Both	One Side	30	60	Good	1115'	2230'	2230'	0.21	At Intersec
S. Caves Ave	Oregon Caves Highway	Watkins Street	Cave Junction	Local	Asphalt	2	Ditch	25	None	No	No	No	30	60	Poor	653'	1306'			At Intersec
S. Caves Ave	Watkins Street	Lister Street	Cave Junction	Local	Asphalt	2	Asphalt	25	None	No	Right	One Side	30	60	Poor	1137'	2274'	3580'	0.34	At Intersec
N. Caves Ave	Lister Street	River Street	Cave Junction	Local	Asphalt	2	Ditch	25	None	No	No	No	30	60	Poor	734'	1468'	1468'	0.14	At Intersec
Cedar Brook Ln	Laurel Road	Cedar Ridge Drive	Private	Local	Asphalt	2	Asphalt	25	None	No	Both	No	25	50	N/A					At Intersec
Cedar Ridge Drive	Cedar Brook lane	End of Street	Private	Local	Asphalt	2	Asphalt	25	None	No	Both	No	25	50	N/A					At Intersec
Red Cedar Lane	Cedar Brook lane	Cedar Ridge Drive	Private	Local	Asphalt	2	Asphalt	25	None	No	Both	No	25	50	N/A					At Intersec
E. Cottage Park	Hanby Lane	Merlot Drive	Cave Junction	Local	Asphalt	2	Asphalt	25	Both	No	Both	One Side	25	70	Good	360'	720'			At Intersec
E. Cottage Park	Merlot Drive	End of Street	Cave Junction	Local	Asphalt	2	Asphalt	25	Both	No	Both	One Side	25	70	Good	318'	636'	1376'	0.13	At Intersec
W.Cottage Park	Highway 199	GreenValley Drive	Cave Junction	Local	Asphalt	2	Asphalt	25	None	No	Both	One Side	30	70	Good	246'	492'	492'	0.1	At Intersec
Daisey Hill Road	River Street	Too Far South	Private	Local	Asphalt	2	Aspht/Dtch	25	None	No	Left	No	40	60	N/A					At Intersec
Daisey Hill Road	Too Far South	End of Street	Private	Local	Aspt/Grvl	2	Ditch	25	None	No	No	No	40	60	N/A					At Intersec
Dogwood Lane	Oregon Caves Highway	Madrona Drive	Private	Local	Gravel	2	None	25	None	No	No	No	20	30	N/A					At Intersec
Dogwood Lane	Madrona Drive	Fir Drive	Private	Local	Gravel	2	None	25	None	No	No	No	20	30	N/A					None
Dogwood Lane	Fir Drive	Oak Drive	Private	Local	Gravel	2	None	25	None	No	No	No	20	30	N/A					None
East Fork Circle	Schumacher Street	Schumacher Street	Private	Local	Asphalt	2	Ditch	25	None	No	No	No	20	40	N/A					At Intersec
Farris Lane	Barlow Street	End of Street	Private	Local	Gravel	2	Gravel	25	None	No	No	No	30	60	N/A					None
Fir Drive	S.OldStage Road	Lilac Lane	Private	Local	Gravel	2	Ditch	25	None	No	No	No	30	60	N/A					None
Fir Drive	Lilac Lane	Manzanita Lane	Private	Local	Gravel	2	Ditch	25	None	No	No	No	30	60	N/A					None
Fir Drive	Manzanita Lane	Hazelnut	Private	Local	Gravel	2	None	25	None	No	No	No	30	60	N/A					None
Fir Drive	Hazelnut	Dogwood Lane	Private	Local	Gravel	2	None	25	None	No	No	No	30	60	N/A					None
Fir Drive	Dogwood Lane	End of Street	Private	Local	Gravel	2	None	25	None	No	No	No	30	60	N/A					None
Frederick Court	Oregon Caves Highway	End of Street	Cave Junction	Local	Asphalt	2	Ditch	25	None	No	No	No	25	50	Fair	500	1000	1000	0.09	

				Road	Pavement	Number	Shoulder	Speed	Sidewalks	Bike	Curbs	On Street	Roadway	R.O.W	Pavement	Footage		Total	Miles	Traffic
Street Name	Segment Name (from)	Segment Name (To)	Jurisdiction	Class	Type	of Lanes	Type	Limit	Left/Right	Lane (Y/N)	Left/Right	Parking	Width	Width	Condition	Road	Lane	Footage	Road	Control
Gamay Drive	Burgandy Lane	Merlot Drive	Cave Junction	Local	Asphalt	2	Asphalt	25	Both	None	Both	One Side	25	60	Good	845'	1690'	1690'	0.16	At Intersect
Golf Club Drive	S. End of Street	Green Valley Drive	Cave Junction	Local	Asphalt	2	Asphalt	25	None	None	Both	One Side	25	60	Good	840'	1680'			At Intersect
Golf Club Drive	Green Valley Drive	Highway 199	Cave Junction	Local	Asphalt	2	Asphalt	25	None	None	Both	One Side	25	60	Good	737'	1474	3154	0.3	At Intersect
GreenValley Drive	W. Hanby Lane	W. Cottage Park	Cave Junction	Local	Asphalt	2	Asphalt	25	None	None	Both	One Side	25	60	Good	720'	1440'			At Intersect
GreenValley Drive	W.Cottage Park	Golf Club Drive	Cave Junction	Local	Asphalt	2	Asphalt	25	None	None	Both	One Side	25	60	Good	1020'	2040'	3480	0.33	At Intersect
Hamilton Ave	Barlow Street	Raymond Street	City/County*	Local	Chip Seal	2	Ditch	25	None	None	No	No	25	50	Poor	607'	1214'			At Intersect
Hamilton Ave	Raymond Street	Highway 199	City/County*	Local	Chip Seal	2	Ditch	25	None	None	No	No	25	50	Poor	607'	1214'	2428'	0.23	At Intersect
E. Hanby Lane	N.OldStage Road	Burgandy Lane	Cave Junction	Collector	Asphalt	2	Asphalt	25	Both	None	Both	Both	30	50	Good	688'	1376'			At Intersect
E. Hanby Lane	Burgandy Lane	Mountain Valley	Cave Junction	Collector	Asphalt	2	Asphalt	25	Both	None	Both	Both	30	50	Good	345'	690'			At Intersect
E. Hanby Lane	Mountain Valley	E. Cottage Park	Cave Junction	Collector	Asphalt	2	Asphalt	25	Both	None	Both	Both	30	50	Good	762'	1524'			At Intersect
E. Hanby Lane	E.Cottae Park	Highway 199	Cave Junction	Collector	Asphalt	2	Asphalt	25	Both	None	Both	Both	30	50	Good	460'	920'	4510'	0.43	At Intersect
W.Hanby Lane	Highway 199	Green Valley Drive	Cave Junction	Local	Asphalt	2	Asphalt	25	None	None	Both	One Side	30	50	Good	246'	492'	492'	0.05	At Intersect
Hazelnut Street	Madrona Drive	Fir Drive	Private	Local	Gravel	1	None	25	None	None	No	No	15	60	N/A					None
Hazelnut Street	Fir Drive	Oak Drive	Private	Local	Gravel	1	None	25	None	None	No	No	15	60	N/A					None
Honeybee Lane	N.Honeybee	S.Honeybee	Cave Junction	Local	Asphalt	2	Ditch	25	None	None	No	No	30	50	Fair	356'	712'	712'	0.07	At Intersect
N.Hussey Ave	W.River Street	Millie Street	Cave Junction	Local	Asphalt	2	Asphalt	25	Left	None	Left	Left	30	60	Fair	340'	680'			At Intersect
N.Hussey Ave	Millie Street	Stevenson Street	Cave Junction	Local	Asphalt	2	Asphalt	25	Left	None	Left	Left	30	60	Fair	270'	540'	1220'	0.12	At Intersect
N.Hussey Ave Alley	W.River Street	Palmer Street	Cave Junction	Private	Gravel	1	Gravel	25	None	None	No	No	25	30	Poor	252'	504'			At Intersect
N.Hussey Ave Alley	Palmer Street	Lister Street	Cave Junction	Private	Asphalt	1	Asphalt	25	None	None	No	No	25	30	Fair	318'	636'	1160'	0.11	At Intersect
S. Hussey Ave	Lister Street	Schumacher Street	Cave Junction	Local	Asphalt	2	Asphalt	25	Right	None	Both	Both	30	60	Fair	636'	1272'			At Intersect
S. Hussey Ave	Schumacher Street	Watkins Street	Cave Junction	Local	Asphalt	2	Asphalt	25	Right	None	Both	Both	30	60	Fair	476'	952'	2224'	0.21	At Intersect
Jonathan Court	S. Junction Ave	End of Street	Cave Junction	Local	Asphalt	2	Ditch	25	None	None	No	No	30	50	Good	242'	484'	484'	0.05	At Intersect
N. Junction Ave	Oregon Caves Highway	Watkins Street	Cave Junction	Local	Asphalt	2	Asphalt	25	Left	None	Partial	Partial	30	60	Good	1150'	2300'			At Intersect
N.Junction Ave	Watkins Street	Lister Street	Cave Junction	Local	Asphalt	2	Ditch	25	Left	None	No	No	30	60	Good	1113'	2226'			At Intersect
N.Junction Ave	Lister Street	E. River Street	Cave Junction	Local	Asphalt	2	Asphalt	25	Left	None	No	No	30	60	Good	712'	1424'	5950'	0.56	At Intersect
S. Junction Ave	Oregon Caves Highway	Raymond Street	Cave Junction	Local	Asphalt	2	Ditch	25	None	None	No	No	30	60	Fair	1050'	2100'			At Intersect
S.Junction Ave	Raymond Street	Barlow Street	Cave Junction	Local	Asphalt	2	Ditch	25	None	None	No	No	30	60	Fair	606'	1212'	3312	0.31	At Intersect
N.Kerby Ave	W. River Street	Palmer Street	Cave Junction	Local	Asphalt	2	Asphalt	25	Left	None	No	No	30	60	Good	320'	640'			At Intersect
N.Kerby Ave	Palmer Street	Lister Street	Cave Junction	Local	Asphalt	2	Asphalt	25	Left	None	Left	No	30	60	Good	320'	640'	1280'	0.12	At Intersect

				Road	Pavement	Number	Shoulder	Speed	Sidewalks	Bike	Curbs	On Street	Roadway	R.O.W	Pavement	Footage		Total	Miles	Traffic
Street Name	Segment Name (from)	Segment Name (To)	Jurisdiction	Class	Type	of Lanes	Type	Limit	Left/Right	Lane (Y/N)	Left/Right	Parking	Width	Width	Condition	Road	Lane	Footage	Road	Control
S.Kerby Ave	Lister Street	Schumacher Street	Cave Junction	Local	Asphalt	2	Asphalt	25	None	None	Right	No	30	60	Good	658'	1316'			At Intersec
S.Kerby Ave	Schumacher Street	Watkins Street	Cave Junction	Local	Asphalt	2	Asphalt	25	None	None	No	No	30	60	Poor	460'	920'			At Intersec
S.Kerby Ave	Watkins Street	End of Street	Cave Junction	Local	Asphalt	2	Asphalt	25	None	None	No	No	30	60	Fair	565	1130	3366'	0.32	At Intersec
Lilac Lane	Madrona Drive	Fir Drive	Private	Local	Gravel	1	None	25	None	None	No	No	15	60	N/A					None
Lilac Lane	Fir Drive	Oak Drive	Private	Local	Gravel	1	None	25	None	None	No	No	15	60	N/A					None
Lindilu Lane	Burgandy Lane	End of Street	Cave Junction	Local	Asphalt	2	Asphalt	25	Both	None	Both	No	25	60	Good	355'	710'	710'	0.07	At Intersec
E.Lister Street	N.Junction Ave	Caves Ave	Cave Junction	Collector	Asphalt	2	Asphalt	25	Left	None	Both	Both	40	60	Good	320'	640'			At Intersec
E.Lister Street	Caves Ave	Highway 199	Cave Junction	Collector	Asphalt	2	Asphalt	25	Left	None	Both	Both	40	60	Good	280'	560'	1200	0.11	At Intersec
W.Lister Street	Highway 199	S.Hussey Ave	Cave Junction	Collector	Asphalt	2	Asphalt	25	Both	None	Both	Both	40	60	Fair	215'	430'			At Intersec
W.Lister Street	S.Hussey Ave	Kerby Street	Cave Junction	Collector	Asphalt	2	Asphalt	25	Both	None	Both	Both	40	60	Fair	444'	888'			At Intersec
W.Lister Street	Kerby Street	S.Sawyer Ave	Cave Junction	Collector	Asphalt	2	Asphalt	25	Both	None	Left	No	40	60	Fair	300'	600'			At Intersec
W.Lister Street	S.Sawyer Ave	Boundray Ave	Cave Junction	Collector	Asphalt	2	Asphalt	25	None	None	No	No	40	60	Fair	410'	820'	2738	0.26	At Intersec
Lurline Lane	Laurel Road	End of Street	Private	Local	Asphalt	2	Ditch	25	None	None	No	No	25	50	N/A					At Intersec
Madrona Drive	Old Stage Road	Lilac Lane	Private	Local	Gravel	2	Gravel	25	None	None	No	No	20	30	N/A					At Intersec
Madrona Drive	Lilac Lane	Manzanita Lane	Private	Local	Gravel	2	Gravel	25	None	None	No	No	20	30	N/A					None
Madrona Drive	Manzanita Lane	Hazelnut	Private	Local	Gravel	1	Gravel	25	None	None	No	No	15	30	N/A					None
Madrona Drive	Dogwood Lane	End of Street	Private	Local	Gravel	1	Gravel	25	None	None	No	No	15	30	N/A					None
Manzanita Lane	Madrona Drive	Fir Drive	Private	Local	Gravel	1	Gravel	25	None	None	No	No	15	60	N/A					None
Manzanita Lane	Fir Drive	Oak Drive	Private	Local	Gravel	1	Gravel	25	None	None	No	No	15	60	N/A					None
Merlot Drive	Burgandy Lane	Gamay Drive	Cave Junction	Local	Asphalt	2	Asphalt	25	Both	None	Both	One Side	25	60	Good	567'	1134'			At Intersec
Merlot Drive	Gamay Drive	E.Cottage Park	Cave Junction	Local	Asphalt	2	Asphalt	25	Both	None	Both	One Side	25	60	Good	283'	566'	1700'	0.16	At Intersec
Millie Street	N.Hussey Ave	N.Sawyer Ave	Cave Junction	Local	Asphalt	2	Ditch	25	None	None	No	No	30	60	Poor	965'	1930'	1930'	0.18	At Intersec
Mountain Valley	Shadowbrook Drive	Tennessee View	Cave Junction	Local	Asphalt	2	Asphalt	25	Both	None	Both	One Side	25	60	Good	300'	600'			At Intersec
Mountain Valley	Tennessee View	Sanger Lane	Cave Junction	Local	Asphalt	2	Asphalt	25	Both	None	Both	One Side	25	60	Good	275'	550'			At Intersec
Mountain Valley	Sanger Lane	Hanby Lane	Cave Junction	Local	Asphalt	2	Asphalt	25	Both	None	Both	One Side	25	60	Good	275'	550'	1700'	0.32	At Intersec
Noah's Way	S.Oldstage Road	End of Street	Cave Junction	Local	Asphalt	2	Asphalt	25	Left	None	Both	One Side	30	60	Good	446'	898'	892'	0.08	At Intersec
Oak Drive	Old Stage Road	Lilac Lane	Private	Local	Gravel	1	Ditch	25	None	None	No	No	30	60	N/A					None
Oak Drive	Lilac Lane	Manzanita Lane	Private	Local	Gravel	1	Ditch	25	None	None	No	No	30	60	N/A					None
Oak Drive	Manzanita Lane	Hazelnut	Private	Local	Gravel	1	Ditch	25	None	None	No	No	30	60	N/A					None
Oak Drive	Hazelnut	Dogwood Lane	Private	Local	Gravel	1	Ditch	25	None	None	No	No	30	60	N/A					None
Oak Drive	Dogwood Lane	End of Street	Private	Local	Gravel	1	Ditch	25	None	None	No	No	30	60	N/A					None

Street Name	Segment Name (from)	Segment Name (To)	Jurisdiction	Road Class	Pavement Type	Number of Lanes	Shoulder Type	Speed Limit	Sidewalks Left/Right	Bike Lane (Y/N)	Curbs Left/Right	On Street Parking	Roadway Width	R.O.W Width	Pavement Condition	Footage Road	Footage Lane	Total Footage	Miles Road	Traffic Control
Old Stage Road	Hanby Lane	Honeybee Lane	Josephine Co.	Collector	Asphalt	2	Ditch	30	None	None	NO	NO	40	60	Fair					At Intersec
Old Stage Road	Honeybee Lane	River Street	Josephine Co.	Collector	Asphalt	2	Ditch	30	None	None	NO	NO	40	60	Fair					At Intersec
Old Stage Road	Addison Lance	South UGB	Josephine Co.	Collector	Asphalt	2	Ditch	30	None	None	NO	NO	40	60	Fair					At Intersec
Old Stage Road	Madrona Drive	Fir Drive	Josephine Co.	Collector	Asphalt	2	Ditch	30	None	None	NO	NO	40	60	Fair					At Intersec
Old Stage Road	Madrona Drive	Oregon Caves Hwy	Josephine Co.	Collector	Asphalt	2	Ditch	30	None	None	NO	NO	40	60	Fair					At Intersec
Old Stage Road	Oregon Caves Hwy	Wells Drive	Josephine Co.	Collector	Asphalt	2	Ditch	30	None	None	NO	NO	40	60	Fair					At Intersec
Old Stage Road	Oak Drive	Fir Drive	Josephine Co.	Collector	Asphalt	2	Ditch	30	None	None	NO	NO	40	60	Fair					At Intersec
Old Stage Road	Laurel Road	Hanby Lane	Josephine Co.	Collector	Asphalt	2	Ditch	30	None	None	NO	NO	40	60	Fair					At Intersec
Old Stage Road	Wells Drive	Addison Lane	Josephine Co.	Collector	Asphalt	2	Ditch	30	None	None	NO	NO	40	60	Fair					At Intersec
Old Stage Road	River Street	Oak Street	Josephine Co.	Collector	Asphalt	2	Ditch	30	None	None	NO	NO	40	60	Fair					At Intersec
Oregon Caves Hwy	Highway 199	Caves Ave	ODOT	Arterial	Asphalt	2	Asphalt	35	None	None	NO	NO	40	60	Good					At Intersec
Oregon Caves Hwy	Caves Ave	Junction Ave	ODOT	Arterial	Asphalt	2	Asphalt	35	None	None	NO	NO	40	60	Good					At Intersec
Oregon Caves Hwy	Junction Ave	Oldstage Road	ODOT	Arterial	Asphalt	2	Asphalt	35	None	None	NO	NO	40	60	Good					At Intersec
Oregon Caves Hwy	Oldstage Road	Frederick Court	ODOT	Arterial	Asphalt	2	Asphalt	35	None	None	NO	NO	40	60	Good					At Intersec
Oregon Caves Hwy	Frederick Court	Dogwood Lane	ODOT	Arterial	Asphalt	2	Asphalt	45	None	None	NO	NO	40	60	Good					At Intersec
Oregon Caves Hwy	Dogwood Lane	Laurel Road	ODOT	Arterial	Asphalt	2	Asphalt	45	None	None	NO	NO	40	60	Good					At Intersec
Oregon Caves Hwy	Laurel Road	East UGB	ODOT	Arterial	Asphalt	2	Asphalt	55	None	None	NO	NO	40	60	Good					At Intersec
Ollis Road	River Street	End of Street	Cave Junction	Private	Asphalt	2	Asphalt	25	None	None	NO	NO	30	50	Good					At Intersec
Palmer Street	Highway 199	Kerby Ave	Cave Junction	Local	Asphalt	2	Asphalt	25	None	None	Both	Both	40	60	Good	653'	1306'	1306'	0.15	At Intersec
Pomeroy Park	Vineyard Palce	End of Street	Private	Local	Asphalt	2	Asphalt	25	None	None	Both	NO	25	50	N/A					At Intersec
Raymond Street	Junction Ave	Sherwood Ave	Cave Junction	Local	Asphalt	2	Ditch	25	None	None	NO	NO	30	50	Fair	340'	680'			At Intersec
Raymond Street	S. Junction Ave	S.Junction Ave	Cave Junction	Local	Asphalt	2	Ditch	25	None	None	NO	NO	30	50	Fair	152'	304'			At Intersec
Raymond Street	S. Junction Ave	Hamilton Lane	City/Coutny*	Local	Gravel	1	Ditch	25	None	None	NO	NO	30	50	Poor	320'	320'	1304	0.15	At Intersec
E. River Street	N.Oldstage Road	Laurel Road	Josephine Co.	Collector	Asphalt	2	Asphalt	25	None	Left	Left	NO	40	50	Good					At Intersec
E. River Street	N.Oldstage Road	N.Junction Ave	Cave Junction	Collector	Asphalt	2	Asphalt	25	None	Left	Both	NO	40	50	Good	1412'	2824'			At Intersec
E. River Street	N.Junction Ave	Caves Ave	Cave Junction	Collector	Asphalt	2	Asphalt	25	None	Left	Both	NO	40	50	Good	360'	720'			At Intersec
E. River Street	Caves Ave	Highway 199	Cave Junction	Collector	Asphalt	2	Asphalt	25	None	Left	Both	NO	40	50	Good	325'	650'	4194'	0.4	At Intersec
W.River Street	Highway 199	Kerby Ave	Cave Junction	Collector	Asphalt	2	Asphalt	25	Right	None	Both	Right	40	50	Good	668'	1336'			At Intersec
W.River Street	Kerby Ave	N.Sawyer Ave	Cave Junction	Collector	Asphalt	2	Asphalt	25	Right	None	Right	Right	40	60	Good	290'	580'			At Intersec
W.River Street	N.Sawyer Ave	Boundray Ave	Cave Junction	Collector	Asphalt	2	Asphalt	25	Right	None	Right	Right	50	60	Good	485'	970'			At Intersec
W.River Street	Boundray Ave	Tracey Lane	Cave Junction	Collector	Asphalt	2	Ditch	25	None	None	NO	NO	30	40	Good	270'	540'			At Intersec
W.River Street	Tracey Lane	Daisey Hill Road	Cave Junction	Collector	Asphalt	2	Ditch	25	None	None	NO	NO	30	40	Good	995'	1990'	5416'	0.51	At Intersec

				Road	Pavement	Number	Shoulder	Speed	Sidewalks	Bike	Curbs	On Street	Roadway	R.O.W	Pavement	Footage		Total	Miles	Traffic
Street Name	Segment Name (from)	Segment Name (To)	Jurisdiction	Class	Type	of Lanes	Type	Limit	Left/Right	Lane (Y/N)	Left/Right	Parking	Width	Width	Condition	Road	Lane	Footage	Road	Control
Redwood Hwy	Oregon Caves Hwy	South UGB	ODOT	Arterial	Asphalt	2	Gravel	30	Right	None	Right	No	70	80	Good					At Intersec
Redwood Hwy	Watkins Street	Oregon Caves Hwy	ODOT	Arterial	Asphalt	4	Asphalt	30	Both	None	Both	No	70	80	Good					At Intersec
Redwood Hwy	Lister Street	Watkins Street	ODOT	Arterial	Asphalt	4	Asphalt	30	Both	None	Both	Left	70	80	Good					At Intersec
Redwood Hwy	Palmer Street	Lister Street	ODOT	Arterial	Asphalt	4	Asphalt	30	Both	None	Both	Both	70	80	Good					At Intersec
Redwood Hwy	River Street	Palmer Street	ODOT	Arterial	Asphalt	2	Asphalt	30	Both	None	Both	Left	70	80	Good					At Intersec
Redwood Hwy	Laurel Road	River Street	ODOT	Arterial	Asphalt	2	Asphalt	30	Partial	None	Partial	No	70	80	Good					At Intersec
Redwood Hwy	North UGB	Laurel Road	ODOT	Arterial	Asphalt	2	Asphalt	45	None	None	NO	NO	70	80	Good					At Intersec
Sanger Lane	Mountain Valley	End of Street	Cave Junction	Local	Asphalt	2	Asphalt	25	Both	None	Both	Right	25	60	Good	390'	780'	780'	0.07	At Intersec
N.Sawyer Ave	W.River Street	Millie Street	Cave Junction	Local	Asphalt	2	Ditch	25	None	None	NO	No	30	60	Good	350'	700'			At Intersec
N.Sawyer Ave	Millie Street	Stevenson Street	Cave Junction	Local	Asphalt	2	Ditch	25	None	None	NO	No	30	60	Good	290'	580'			At Intersec
N.Sawyer Ave	Stevenson Street	End of Street	Cave Junction	Local	Asphalt	2	Ditch	25	None	None	NO	No	30	60	Good	1080'	2160'	3440'	0.33	At Intersec
S.Sawyer Ave	Lister Street	Schumacher Street	Cave Junction	Local	Asphalt	2	Gravel	25	None	None	NO	No	30	60	Good	650'	1300'	1300'	0.12	At Intersec
Schumacher Street	S.Hussey Ave	Kerby Ave	Cave Junction	Local	Asphalt	2	Asphalt	25	None	None	left	Left	30	60	Good	400'	800'			At Intersec
Schumacher Street	Kerby Ave	S.Sawyer Ave	Cave Junction	Local	Asphalt	2	Asphalt	25	Right	None	right	Right	30	60	Good	337'	674'			At Intersec
Schumacher Street	S.Sawyer Ave	Vineyard Place	Cave Junction	Local	Asphalt	2	Asphalt	25	Both	None	Both	Both	30	60	Good	3026	6052'	7526'	0.71	At Intersec
Shadowbrook Ave	E.River Street	End of Street	Cave Junction	Local	Asphalt	2	Ditch	25	None	None	NO	No	25	50	Fair	835'	1670'	1670'	0.16	At Intersec
Sherwood Ave	Barlow Street	Raymond Ave	Cave Junction	Local	Asphalt	2	Ditch	25	None	None	NO	No	25	50	Fair	650'	1300'			At Intersec
Sherwood Ave	Raymond Ave	End of Street	Cave Junction	Local	Asphalt	2	Ditch	25	None	None	NO	No	25	50	Fair	190'	380'	1680'	0.16	At Intersec
Stage Stop Drive	S. OldStage Road	End of Street	Cave Junction	Local	Asphalt	2	Ditch	25	Right	None	both	Right	25	50	Good	525'	1050'	1050'	0.1	At Intersec
Stevenson Street	N.Hussey Ave	N.Sawyer Ave	Cave Junction	Local	Asphalt	2	Ditch	25	None	None	NO	No	30	60	Good	975'	1950'	1950'	0.18	At Intersec
Syria Circle	Burgandy Drive	End of Street	Private	Local	Asphalt	2	Asphalt	25	Both	None	Both	One Side	25	50	N/A					At Intersec
Tennessee View	Mountain Valley	Woodcock Ct	Cave Junction	Local	Asphalt	2	Asphalt	25	Both	None	Both	Right	25	60	Good	260'	520'			At Intersec
Tennessee View	Woodcock Ct	End of Street	Cave Junction	Local	Asphalt	2	Asphalt	25	Both	None	Both	Right	25	60	Good	190'	380'	900'	0.09	At Intersec
Terrace Drive	N.Junction Ave	End of Street	Cave Junction	Local	Asphalt	2	Ditch	25	None	None	NO	No	25	60	Fair	452'	904'	904'	0.09	At Intersec
Too Far South	Daisey Hill Road	End of Street	Cave Junction	Local	Asphalt	2	Asphalt	25	Left	None	Both	No	30	60	Good	383'	766'	766'	0.07	At Intersec
Tracy Lane	W.River Street	End of Street	Cave Junction	Local	Asphalt	2	Ditch	25	None	None	NO	No	25	50	Good	250'	500'	500'	0.05	At Intersec
Vineyard Place	Schumacher St	End of Street	Cave Junction	Local	Asphalt	2	Asphalt	25	None	None	left	No	30	60	Good	476'	952'	952'	0.09	At Intersec
E. Watkins Street	N.Junction Ave	Caves Ave	Cave Junction	Collector	Asphalt	2	Asphalt	25	None	None	left	No	30	50	Good	310'	620'			At Intersec
E. Watkins Street	Caves Ave	Highway 199	Cave Junction	Collector	Asphalt	2	Asphalt	25	Left	None	Both	Right	30	50	Good	280'	560'	1180'	0.11	At Intersec
W.Watkins Street	Highway 199	S.Hussey Ave	Cave Junction	Collector	Asphalt	2	Asphalt	25	Left	None	Both	Right	30	50	Good	215'	430'			At Intersec
W.Watkins Street	S.Hussey Ave	Kerby Ave	Cave Junction	Collector	Asphalt	2	Asphalt	25	None	None	Both	Left	30	50	Good	400'	800'			At Intersec
W.Watkins Street	Kerby Ave	End of Street	Cave Junction	Collector	Asphalt	2	Asphalt	25	None	None	Right	No	30	50	Good	606'	1212'	2442'	0.23	At Intersec
Woodcock Court	Tennessee View	End of Street	Cave Junction	Local	Asphalt	2	Asphalt	25	Both	None	Both	No	25	60	Good	105'	210'	210'	0.02	At Intersec